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October 12, 2017

Ms. Susan M. Pierce
Deputy State Historic Preservation Officer
West Virginia Division of Culture and History
1900 Kanawha Boulevard, East
Charleston, West Virginia 25305-0300

Subject: Section 106 Review – Phase I Historic Architectural Survey Report Revised Assessment of Effects
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
FR: 15-171-MULTI-29 and 15-171-MULTI-30

Dear Ms. Pierce:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed revised assessment of effects architectural survey report conducted for the proposed Atlantic Coast Pipeline (ACP). Revisions are based on the September 1, 2017 letter. The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments on the enclosed document, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed reports, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

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Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **Phase I Historic Architectural Survey Assessment of Effects Report -revised**

PHASE I HISTORIC ARCHITECTURAL SURVEY OF THE ATLANTIC COAST PIPELINE PROJECT

West Virginia Assessment of Effects

15-171-MULTI-9

Prepared by

ERM

October 2017

PHASE I HISTORIC ARCHITECTURAL SURVEY OF THE ATLANTIC COAST PIPELINE PROJECT

West Virginia Assessment of Effects

15-171-MULTI-9

Revised Draft

Prepared for

Atlantic Coast Pipeline, LLC
701 E. Cary Street,
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Prepared by

Environmental Resources Group
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Laura Voisin George, Principal Investigator

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October 2017

ABSTRACT

This report assesses effects from the Atlantic Coast Pipeline, LLC (Atlantic) Atlantic Coast Pipeline (ACP) project (Project) on historic architectural resources eligible for the National Register of Historic Places (NRHP) that were evaluated in the Phase I architectural surveys. Dominion Energy Transmission, Inc. (DETI) will build and operate approximately 600 miles of natural gas transmission pipeline and associated laterals on behalf of Atlantic, which is a company comprised of subsidiaries of Dominion Energy, Inc., Duke Energy, Piedmont Natural Gas, and Southern Company Gas. The pipeline system extends from West Virginia to southern North Carolina, and the Project also will include access roads, meter stations, compressor stations, and other above-ground facilities. This document presents findings for the segment of the pipeline corridor in West Virginia, which is 97.3 miles long, and passes through Harrison, Lewis, Upshur, Randolph, and Pocahontas counties. The Area of Potential Effects (APE) includes the 300-foot-wide survey corridor that will encompass the construction zone and the permanent pipeline right-of-way for the proposed pipeline, the footprints for access roads and other facilities associated with the Project, and areas of potential indirect (visual) effects that lie within line of sight of proposed aboveground facilities and landscape changes due to clearing of vegetation or other impacts associated with construction. The Federal Energy Regulatory Commission is the lead federal agency, and work was conducted pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

The historic architectural surveys were conducted between July 2014 and March 2017. Dovetail Cultural Resource Group (Dovetail) conducted the initial portions of the historic architectural surveys for this Project. ERM conducted additional surveys in response to the re-routing of sections of the Project corridor, and also to comments from the West Virginia Division of Culture and History (WV DCH). Five reports have been submitted between February 2016 and March 2017 reporting the survey findings and recommendations of NRHP eligibility.

In this report, the direct and indirect Project effects are assessed for 12 historic and architectural resources eligible or potentially eligible for NRHP that are located in the Project APE. One resource would be adversely affected by the proposed undertaking. It is PH-0095, a hiking shelter within the Seneca State Forest Historic District. The centerline of the proposed pipeline will pass approximately 10 meters to the south of the structure; permanent removal of vegetation along the corridor would have an adverse effect on the setting of the shelter. It is ERM's recommendation that the Project will have no adverse effect on the remaining 11 NRHP-eligible resources.

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INTRODUCTION

This report assesses effects from the Atlantic Coast Pipeline, LLC (Atlantic) Atlantic Coast Pipeline (ACP) project (Project) on resources eligible for the National Register of Historic Places (NRHP) that were evaluated in the Phase I historic architectural surveys. Dominion Energy Transmission, Inc. (DETI) will build and operate approximately 600 miles of natural gas transmission pipeline and associated laterals on behalf of Atlantic, which is a company comprised of subsidiaries of Dominion Energy, Inc., Duke Energy, Piedmont Natural Gas, and Southern Company Gas. The pipeline system extends from West Virginia to southern North Carolina (Figure 1), and the Project also will include access roads, meter stations, compressor stations, and other above-ground facilities. This document presents findings for the segment of the pipeline corridor in West Virginia, which is 97.3 miles long, and passes through Harrison, Lewis, Upshur, Randolph, and Pocahontas counties. The Area of Potential Effects (APE) includes the 300-foot-wide survey corridor that will encompass the construction zone and the permanent pipeline right-of-way for the proposed pipeline, the footprints for access roads and other facilities associated with the Project, and areas of potential indirect (visual) effects that lie within line of sight of proposed aboveground facilities and landscape changes due to clearing of vegetation or other impacts associated with construction.

The Federal Energy Regulatory Commission (FERC) is the lead federal agency, and work was conducted pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470). Section 106 requires federal agencies to take into account the effects of their undertakings (including the issuance of Certificates) on properties listed in or eligible for listing in the NRHP. DETI, as a non-federal party, is assisting FERC in meeting its obligations under Section 106 by preparing the necessary information, analyses, and recommendations as authorized by 36 CFR 800.2(a)(3). ERM is conducting Phase I cultural resource investigations to gather information and provide recommendations for historic properties that could be affected by the Project in support of the Section 106 consultation process.

The resources discussed in this report were documented during surveys conducted between July 2014 and March 2017. Dovetail Cultural Resource Group (Dovetail) conducted initial portions of the historic architectural surveys for this Project and submitted the original Architectural Reconnaissance Survey, Addendum 1, and Addendum 2 reports (Leisuk and Sylvester 2016a, 2016b; Sandbeck et al. 2016). ERM conducted subsequent surveys and submitted the Addendum 3, Addendum 4, and Addendum 5 reports (Tucker-Laird et al. 2016, 2017; Voisin George et al. 2016) based on rerouting of sections of the Project corridor, and in response to comments from the West Virginia Division of Culture and History (WV DCH).

MANAGEMENT RECOMMENDATIONS

The historic and architectural resources identified in the current APE include 12 that are recommended eligible or potentially eligible for the NRHP, and 63 that are recommended as ineligible. The 12 NRHP-eligible resources are discussed in this report, and each resource's location in the APE is depicted on Project maps in Appendix A. The assessment of effects discussions for those resources that are eligible for the NRHP can be found in the Results Chapter.

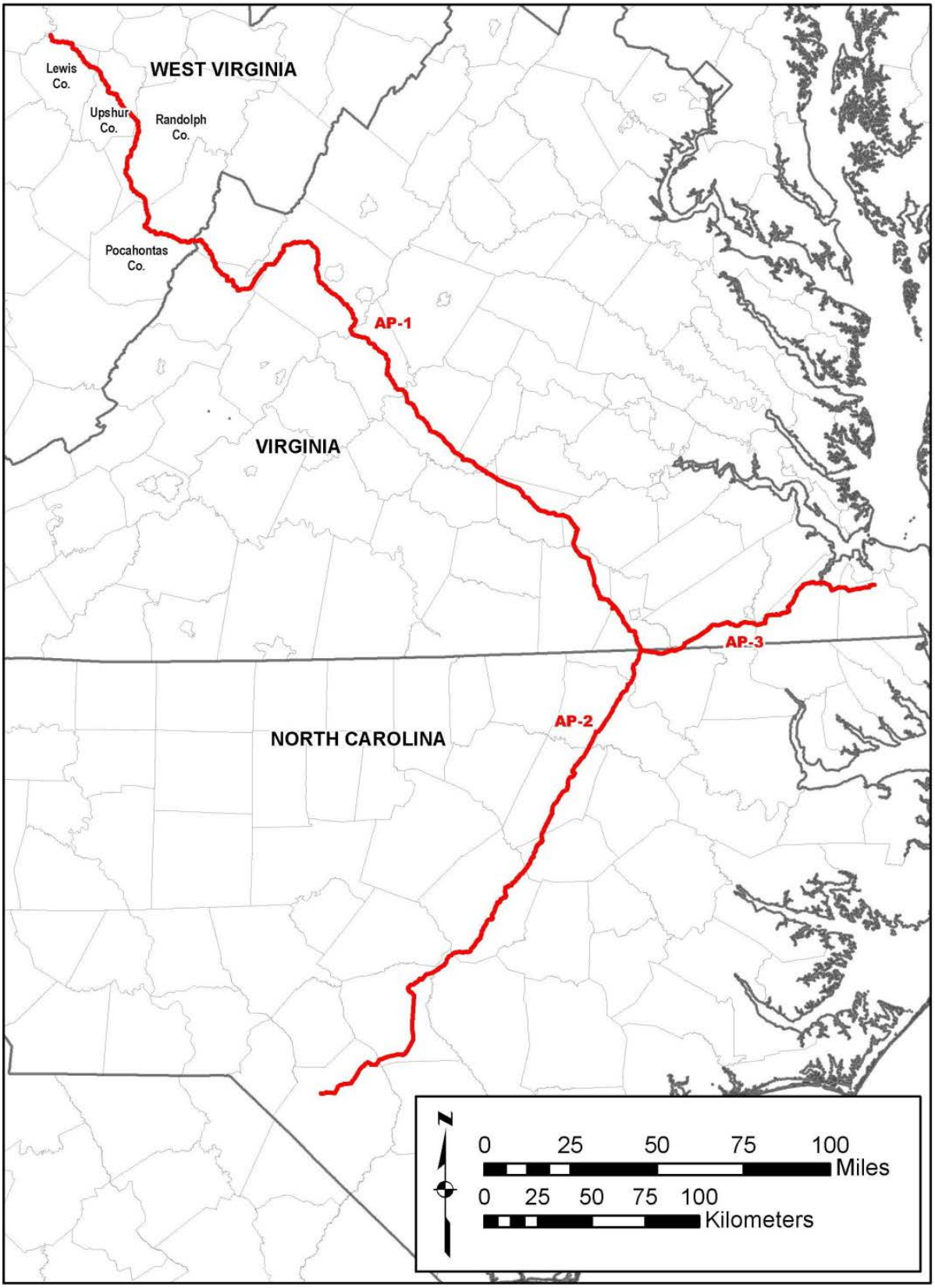

Figure 1. General overview of the Project corridor.

Among the 12 resources eligible or potentially eligible for the NRHP in the APE, one resource would be adversely affected by the proposed undertaking. It is PH-0095, a hiking shelter within the Seneca State Forest Historic District. The centerline of the proposed pipeline will pass approximately 10 meters to the south of the structure; permanent removal of vegetation along the corridor would have an adverse effect on the setting of the shelter. It is ERM's recommendation that the Project will have no adverse effect on the remaining 11 NRHP-eligible resources.

METHODS

BACKGROUND RESEARCH

Before field investigations for historic resources were initiated and in response to changes in the proposed route over the course of the Project, information was collected on previously identified historic resources, including properties listed in or nominated for the NRHP, within a 0.5-mile buffer of the proposed Project corridor. ERM consulted the WVSHPO Interactive Map Viewer to identify resources that might be located within the APE, and to anticipate the types of resources likely to be encountered in the region.

FIELD SURVEY METHODS

An APE is defined as "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist" (36 CFR Part 800.16[d]). The APE for the current Project includes possible areas of direct construction effects within a 300-foot corridor encompassing the centerline of the proposed pipeline, as well as within the footprint of the associated pipeline facilities, and it also includes areas of potential visual effects on identified historic structures from changes to the setting from construction of new facilities, clearing of vegetation, and/or modifications to the landscape. Thus, the APE extends into areas surrounding the Project containing historic resources within line-of-sight of changes that will derive from the proposed undertaking. The APE is depicted on USGS topographic quadrangle maps and on aerials in Appendix A.

Due to public sentiment and the sensitive nature of the Project, ERM architectural historians were at times restricted to conducting survey only from the nearest public right-of-way. Within the parameters limiting survey access, ERM architectural historians surveyed all properties determined to be 50 years or older along the relevant Project segments. Each resource was photographed and marked on the applicable USGS quadrangle map. Digital photographs were taken to record the structures' overall appearance and details. Sketch maps were drawn depicting the relationship of dwellings to outbuildings and associated landscape features. Additional information on the structures' appearance and integrity were recorded to assist in making recommendations of NRHP eligibility. When possible, sufficient information was gathered to determine a resource's eligibility for listing on the NRHP, and what effect the proposed undertaking might have on any resource determined to be eligible. When limited access prevented architectural historians from making a confident NRHP assessment, the resource was assumed to be eligible for the purposes of the Project.

Resources were generally defined to encompass the entire extent of the current parcel boundary. For those resources considered ineligible for the NRHP, Project effects do not need to be assessed, and so for simplicity, those resources are indicated in the Appendix A maps as the locations of the actual structures. Some of those structures lie outside the defined visual APE, but the parcels on which they are located extend into the APE. The Appendix A maps do, however, depict the entire parcel boundary that is the proposed NRHP boundary for resources recommended eligible for the NRHP. Assessment of Project effects for NRHP-eligible resources took into account effects to each element of the resource that contributes to its eligibility, including elements of the landscape within the entire parcel boundary when these contribute to qualities that constitute the resource's significance. West Virginia Historic Property Inventory forms were prepared for the resources identified in the APE.

NRHP EVALUATION

Sufficient information was collected to make recommendations for each identified historic resource regarding eligibility for listing on the NRHP. According to 36 CFR 60.4 (Andrus and Shrimpton 2002), cultural resources eligible for listing on the NRHP are defined as buildings, structures, objects, sites, and districts that have "integrity" and that meet one or more of the criteria outlined below. Criterion D is typically relevant to archaeological sites.

Criterion A (Event). Association with one or more events that have made a significant contribution to the broad patterns of national, state, or local history.

Criterion B (Person). Association with the lives of persons significant in the past.

Criterion C (Design/Construction). Embodiment of distinctive characteristics of a type, period, or method of construction; or representation of the work of a master; or possession of high artistic values; or representation of a significant and distinguishable entity whose components may lack individual distinction.

Criterion D (Information Potential). Properties that yield, or are likely to yield, information important in prehistory or history. Criterion D is most often (but not exclusively) associated with archaeological resources. To be considered eligible under Criterion D, sites must be associated with specific or general patterns in the development of the region. Therefore, sites become significant when they are seen within the larger framework of local or regional development.

"Integrity" is perhaps the paramount qualification of NRHP eligibility, and can be related to any or all of the following (Andrus and Shrimpton 2002):

Location: the place where the historic property (or properties) was/were constructed or where the historic event(s) occurred;

Design: the combination of elements that create the form, plan, space, structure, and style of a property (or properties);

Setting: the physical environment of the historic property (or properties);

Materials: the physical elements that were combined to create the property (or properties) during the associated period of significance;

Workmanship: the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;

Feeling: the property's (or properties') expression of the aesthetic or historic sense of the period of significance; and

Association: the direct link between the important historic event(s) or person(s) and the historic property (or properties).

Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and

properties that have achieved significance within the past 50 years shall not be considered eligible for the NRHP (Andrus and Shrimpton 2002). However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

- Consideration A: A religious property deriving primary significance from architectural or artistic distinction or historical importance; or

- Consideration B: A building or structure removed from its original location, but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or

- Consideration C: A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his or her productive life; or

- Consideration D: A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

- Consideration E: A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

- Consideration F: A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or

- Consideration G: A property achieving significance within the past 50 years if it is of exceptional importance.

Each identified resource was evaluated in relation to these criteria and considerations.

POTENTIAL EFFECTS ANALYSIS

For all historic resources eligible or potentially eligible for the NRHP in the APE, ERM assessed the nature of potential for Project effects through desktop review, field studies, computer modeling, and preparation of photosimulations based on field photography of sight-lines from resources toward the Project. Computer modeling of viewsheds and the topographic relationship of resources to the Project employed Google Earth imaging software with 3-D terrain modeling. When using this software, a pin was placed at the location of resource. Using the altitude feature, which was set to the lowest possible elevation (2 meters, relative to ground), a viewshed analysis was then run. Although the Project will be below ground, analysis was performed as if it was 2 meters above ground in an effort to supply adequate data. The 3-D terrain modeling only captures topography and not vegetation, but because the resulting imagery retains the coloring from the original aerial photographs, the viewer can visualize areas where tree cover might obstruct the view to the Project. The software also generated displays of the viewshed for each resource, depicted on an aerial photograph with the Project corridor overlaid, so that the amount of visual intrusion for each resource can be judged. Finally, field photographs taken from each resource towards the Project were used to prepare photosimulations in which the location and orientation of the Project corridor is overlaid and coded to indicate segments where it would be visible, and where it would be screened by

topography or vegetation. These images are presented in Appendix B among the other figures for each resource.

HISTORIC CONTEXT

The Project crosses eastern and central West Virginia. The topography is primarily steep and mountainous; but a variety of land uses were observed along the route, including farming, cattle grazing, and timbering. The rugged character of the land affected the nature of settlement and land use through the historic period, from the earliest arrival of Europeans.

THE COLONIAL PERIOD

Following the establishment of the Virginia Company of London's colony at Jamestown in 1607, and William Penn's colony at Philadelphia in 1682, subsequent English settlement gradually proceeded westward through the seventeenth century. From the Virginia Tidewater settlements, explorers and traders moved inland beyond the Fall Line after 1650 (Briceland 2013). In Virginia, the colony's growth repeatedly resulted in conflict with Native Americans (which included the Algonquin Powhatan and Pamunkey confederacy; Siouan Monacan, Mannahoac, Saponi, Tutelo, and Occaneechi tribes; and Iroquoian Tuscarora, Nottaway, and Meherrin Indians) in the areas that colonists sought for new farms (Josephy 1968:82; Utley and Washburn 2002:15–29). Penn and his agents in Pennsylvania were able to negotiate more peacefully with the Delaware (Leni Lenape) and Susquehannock Indians to purchase the land for the Philadelphia settlement (Forrest 1998).

The demand for beaver furs in Europe in the late sixteenth century had led French traders in Canada and the Mississippi valley to establish firms that dealt exclusively in furs. In the seventeenth century, English traders entered the fur trade, establishing posts in New York. In 1670 the Hudson's Bay Company began operating from posts along the southern coast of Hudson's Bay, creating competition between the French and English traders and their Native American suppliers (Carlos and Lewis 2008).

The Fur Trade or Beaver Wars (ca. 1630–1680) dramatically altered the distribution of Native American populations in the upper Ohio region (Johnson 2001). In 1654, the Iroquois defeated the Eries, who inhabited the extreme northwestern corner of Pennsylvania along the south shore of Lake Erie. The Iroquois victory destroyed the Eries as a people and opened the upper Ohio Valley to Iroquois war parties (Hunter 1954:338, 1979:588). The Iroquois' objective in defeating groups in western Pennsylvania was to obtain rich hunting lands that still contained substantial beaver populations—highly sought after in the fur trade and over-hunted in lands to the east—and to prevent those groups from trading directly with the French rather than using the Iroquois as middlemen in trade with the English (Hunter 1979:590; Wallace 1986:100–102). Attacks against the Shawnee lasted from 1653 to 1656 and seem to have been unusually bloody; the Iroquois victory over the Shawnee owes in part to the fact that they possessed firearms. Subsequent attacks by the Iroquois effectively depopulated the region (Hunter 1954:338, 1979:588; Swanton 1984[1952]:33, 56, 231).

The Iroquois realized that the French wanted a monopoly in the fur trade, and they realized that the English wanted Indian lands. Because the Iroquois knew they were not strong enough to defeat either European power on their own, they adopted a strategy of playing the rivals against each other to keep each in check and to maintain their own position (Wallace 1986:105). Despite being attacked by the French in 1687, the Seneca were able to maintain their hold on western New York and Pennsylvania. Through a treaty with the British in 1701, the Iroquois established their policy toward Europeans for the rest of the eighteenth century: neutrality with the French and protection from the English so that they could pursue their best advantage as middlemen in the fur trade (Tooker 1979:432). The English colonies at the time viewed the

Iroquois presence as an asset, for they were feared and respected by neighboring Indian groups, who might otherwise attack English settlements (Wallace 1986:106).

For a period of 70 years after the Iroquois' conquest of the Shawnee, the Ohio Valley (including present-day West Virginia, Indiana, lower Michigan, Ohio, Kentucky, and western Pennsylvania) was almost entirely uninhabited. The historic tribes most closely associated with West Virginia are the Shawnee, Delaware, and Cherokee, as well as Iroquoian-speaking groups including the Seneca, Tuscarawas, Susquehannock, and Mingo. Non-resident Indians were present on a frequent but intermittent basis during the early historic period, using the region for hunting and travel and fiercely resisting its settlement by whites. At various times it was within the spheres of influence of the powerful Iroquois Confederation to the north, the Shawnees to the west, and the Cherokees to the south (Maslowski 2010). Freed from the pressure of its former human population, the Ohio country from the late seventeenth and into the eighteenth century became a prime hunting territory. Although the Iroquois prevented permanent settlements, small groups of Shawnee returned frequently to the Ohio Valley to hunt. Some of the scattered bands driven out of the upper Ohio Valley (including Shawnees) drifted back and established settlements in the eighteenth century (Abler and Tooker 1979:505; Hunter 1954:339). The region was criss-crossed with a network of trails that often followed watersheds and highlands rather than the streams. Paths that were oriented east-west were generally used for trade, while north-south paths were used for war and raiding parties (Doherty 1984:36–37).

The discovery and mapping of these routes were a concern to Virginia's Lieutenant Governor Alexander Spotswood. A lieutenant colonel in the British Army, Spotswood had received reports of French outposts being established in the American interior between French holdings in the Great Lakes and the Gulf of Mexico; he feared the possibility of hostile French or Native American attacks through recently-discovered passes in the Blue Ridge Mountains, which had been assumed to be a natural defensive barrier (Hofstra 2004:21). In 1716 Spotswood led an expedition of 63 "Knights of the Golden Horseshoe" from Williamsburg through the Rappahannock River valley, and crossed the Blue Ridge Mountains into the Shenandoah Valley (Strickler 1925:33). Subsequently, Spotswood held talks with the Iroquois in 1721 to bring an end to the Native American raids on Euroamerican settlements on Virginia's frontier. These talks resulted in the 1722 Treaty of Albany in which the Five Nations of the Iroquois recognized the Blue Ridge Mountains as the border between their lands and those of the Virginia Colony.

By the 1720s, an Indian path on the west side of the Blue Ridge, the "Warrior's Path," became the Great Wagon Road used by colonists in search of land to settle. The road stretched from Philadelphia, the leading port for immigration to the North American colonies in the eighteenth century, to Roanoke through the Shenandoah Valley. The road crossed the Potomac at Williamsport, Maryland into what is now the eastern panhandle of West Virginia. Among the early immigrants were Scottish families that had been resettled in Catholic Northern Ireland, who set up farms in Pennsylvania and Maryland. As land claims stretched westward, later immigrants set out for the backcountry frontier of Pennsylvania and Virginia (Mobley 2003). Together with Swiss, Welsh, and Dutch settlers, French Huguenots, and other religious dissenters, the Scots-Irish settlers followed frontiersmen and land speculators in search of affordable land, crossing Pennsylvania to the Great Valley of the Appalachians and southward into the drainages of the upper Potomac River at the beginning of the Shenandoah Valley (Hofstra 2011; Martin 2012). While some became tenants of Virginia's "men of substance," others exercised tomahawk rights (referring to slashes thus made on trees at boundary points), corn rights (planting and cultivating a crop of corn on the land), or settlement rights (clearing land, building a dwelling or "seat," and living on the improved land) to stake claims on attractive

tracts of vacant land (Doherty 1984:54; Williams 2001:10). Initially locating near the Great Wagon Road, some "scattered for the Benefit of the best Lands," forming open-country neighborhoods along waterways. With farmsteads enclosing about 300 acres of small fields with access to springs and water courses, they raised small grains, including wheat and rye, as well as cattle, pigs, and horses, in contrast to the tobacco-centered plantations of Virginia's Tidewater and Piedmont regions (Hofstra 2004:38, 2011).

In Virginia, support for the British occupation of the backcountry began with a series of land orders totaling close to 400,000 acres west of the Blue Ridge, issued by Lieutenant Governor William Gooch between 1730 and 1732. These grants mandated that one settler family be recruited for every 1,000 acres within two years as a condition of receiving the land patents. By 1735 there were as many as 160 families in the region, and within ten years nearly 10,000 Europeans lived in the Shenandoah Valley (Hofstra 2011). Many of the new settlers were Scots-Irish immigrants. This part of the Shenandoah Valley had become known as "The Irish Tract" when Augusta County was created in 1738, with the county's boundaries extending to the "utmost limits of Virginia" and including West Virginia, Kentucky, Ohio, Indiana, Illinois, Michigan, and part of present-day Pennsylvania (Augusta County, Virginia 2007; Hofstra 2004:40–41). Later Scots-Irish and German settlers moved westward along water courses into the Allegheny Mountains (Morten 1911:62). Indian trails through the Alleghenies followed the Little Kanawha, Elk, Gauley, and Williams rivers to the Ohio Country; they continued to be used by Euroamerican immigrants, and many evolved into key routes in the modern highway system (Sharp 1981:14).

The colony of Virginia utilized similar settlement policies for land west of the Alleghenies as had been used for the Shenandoah Valley (Rice and Brown 2014). Grants were made to land speculation companies such as the Greenbrier Company, which was granted 100,000 acres in 1745 in the Greenbrier Valley of present-day Pocahontas and Greenbrier counties; Robert, John, and William Lewis, sons of early Augusta County settler John Lewis, were among the members of the Greenbrier Company (Bailey 2013). When their brother Andrew Lewis prepared a survey of the Greenbrier Company grant in present-day Pocahontas County in 1751, he found Jacob Marlin and Stephen Sewell, who had come from Maryland in 1749, already living at the current site of Marlinton, which became the first British-American settlement west of the Alleghenies (Pocahontas County Historical Society 1981:73; Pocahontas County, West Virginia 2013). Euro-Americans had also settled by 1754 in the Tygart River Valley, near Beverly in present-day Randolph County, but the Files and Tygart families there were attacked by Native Americans during the French and Indian War.

The arrival of British settlers west of the mountains precipitated serious conflicts over territorial claims to the Ohio Valley between Britain, France, and Native Americans (Doherty 1984:47; Rice and Brown 2014). During King George's War in the 1740s, Native American forces fought with the French against the British colonies, primarily in New York and Massachusetts. As a result of the wartime operations of the British navy on the Atlantic, French traders had few trade goods to exchange with or to gift to the Indians (Ross 1938:419). The greater quantity of trade goods offered by English traders at this time persuaded some tribes to ally themselves with Britain instead of France (Providence Plantation Foundation 2014a).

The boundary between Virginia and Pennsylvania was not definitively established until 1779. The disputed region in the upper Ohio Valley and the area known as the Forks of the Ohio (currently the location of Pittsburgh, Pennsylvania), which also was inhabited by Native Americans (Shawnee, Delaware, and Seneca groups as well as mixed villages of those tribes

that were referred to as Mingo Indians), and claimed by the French, became the flashpoint for the French and Indian War (Fort Edwards Foundation 2000; Heinemann et al. 2007:92).

Virginia was making grants to land in the upper Ohio Valley, including a 1749 grant for 200,000 acres to the Ohio Company of Virginia, with another 300,000 acres to be granted once they had built a fort and settled 100 families in the grant; the land was located in the Ohio Valley between the Kanawha and Monongahela Rivers (Heinemann et al. 2007:94; Hofstra 2004:240; Thayer 1921:250). The Ohio Company sent surveyor Christopher Gist to map the land grant, and over two winters, Gist traveled from the headwaters of the Ohio River (near present-day Pittsburgh, Pennsylvania) to the Falls of the Ohio (near present-day Louisville, Kentucky), and then through much of West Virginia (Ohio History Central 2015a).

In 1752, the governor general of New France took action to ensure the territorial integrity of the French empire in North America, to drive the British merchants out of the Ohio Valley, and to re-establish peace with the Indian tribes (Côté 2015). In 1753 he sent an expedition of 1,000 men to build a chain of forts between Lake Erie and the Forks of the Ohio during the summer. When Virginia's Lieutenant Governor Robert Dinwiddie learned of the forts' construction, he received direction from London to take whatever action was necessary to protect British possessions in North America while avoiding offensive actions that could provoke open warfare. When the French refused Dinwoodie's order to withdraw from the Ohio Country, the governor ordered a Virginia regiment under Colonel Joshua Fry, with George Washington appointed lieutenant colonel as second in command, to garrison Fort Prince George on the Ohio River at the site of what was to become Pittsburgh (Ferling 1998:198; National Park Service 2002 [1954]; Ockershausen 1996; Heinemann et al. 2007:94–95). The French meanwhile had constructed their own fort at Pittsburgh, which they named Fort Duquesne. The French met the Virginia regiment en route and defeated them, forcing them to return to Virginia. A second effort to oust the French in 1755 also ended in failure, and settlements on the Virginia frontier were subsequently subjected to sporadic attacks by Indian warriors of tribes allied with the French (Heinemann et al. 2007:95–96; National Park Service 2002 [1954]; Ockershausen 1996).

While some of the frontier settlers fled eastward, numerous forts, stockades, and blockhouses were built as protection (Cook 1940; Manarin 2010). After Washington had been commissioned as a colonel and given command of the provincial army, his headquarters were at Winchester in Frederick County, where Fort Loudoun was built in 1756. Washington urged Virginia's Lieutenant Governor Dinwiddie to make alliances with Native American tribes to the south; and in 1756 Dinwiddie had obtained the support of the Catawbas and Cherokees, with four hundred warriors camped near Winchester. The new forces enabled Virginia officers to lead their raiding parties against hostile tribes (Hofstra 2004:244–245). A 1758 treaty conference at Easton, Pennsylvania, sought to redress the natives' grievances and issued a proclamation prohibiting the movement of British settlers west of the mountains without special authorization (Utley and Washburn 2002:86). Also in 1758, a British army under General John Forbes arrived in the colonies, and together with the provincial army units, crossed Pennsylvania to the Ohio Country (Ferling 1998:203–204). Forbes made peace with the Iroquois, Shawnee, and Delaware warriors, ending their support for the French (Potts and Thomas 2006:13). Besieged by the British and deserted by their Native American allies, with the fort deteriorating and with little food remaining, the French forces abandoned and burned Fort Duquesne in November 1758 (McGrath 2015).

British engagements against the French in the Ohio Country were largely over by 1760. But by the time of the 1763 Treaty of Paris ending the French and Indian War, a new type of Indian

conflict developed on Virginia's western frontier (Twohig 1998:17). At the conclusion of their service supporting British General Forbes, the Cherokee warriors felt slighted at their limited compensation. As the warriors returned southward, Euroamerican settlers did not distinguish between them and the Shawnee Indians that had been making attacks in Augusta County, and turned on the Cherokees as well. Also at this time, Euroamericans in South Carolina executed some Indian hostages, and a period of conflict known as the Cherokee War ensued in 1760–1761, ranging from Virginia to Georgia until the 1761 Treaty of Long Island on the Holston in Virginia, and the 1762 Treaty of Charleston in South Carolina (Heinemann et al. 2007:99).

The smaller scale border warfare between settlers, colonial and state troops, and Native Americans continued intermittently in Virginia's frontier areas until the 1794 Battle of Fallen Timbers and the 1795 Treaty of Greenville (Cook 1940; Potts and Thomas 2006:14–15; Utley and Washburn 2002:115).

Recognizing that it lacked the resources to control the vast interior, England's Proclamation of 1763 established the ridge of the Appalachian Mountains as a boundary between its North American colonial domain and Native American territory, restricted settlement to areas in the east, and imposed regulations intended to control abuse of trade with the Indians. However, Euroamerican settlers were already living west of the Proclamation Line, and in Virginia, individuals and gentry speculators had been anticipating land grants west of the Appalachians. Grievances among the settlers, and perceptions that government policies were favoring the Native Americans and restricting their opportunities, led to instances of vigilantism (Providence Plantation Foundation 2014a). At the Treaty of Fort Stanwix in 1768, the Iroquois granted 2.5 million acres east and south of the Ohio River (known as the Indiana Grant) to Britain; however the Native Americans living in the Ohio Country—which included Delaware, Seneca, and Shawnee tribes—were not parties to this agreement (Ohio History Central 2015a; Potts and Thomas 2006:16). Nevertheless, beginning in 1769, waves of settlers swept into the upper Ohio, Monongahela, Greenbrier, and Kanawha valleys; and by the early 1770s, Euroamericans had crossed the Proclamation Line and were establishing settlements across what was to become West Virginia and Kentucky (Rice and Brown 2014; Utley and Washburn 2002:102). By 1772, settlers had claimed much of the prime valley land, and the Euroamerican settlement of the project region had begun (Davis 2013; Rice 2013; Tenney 2013).

Colonial period conflicts in present-day West Virginia derived from rampant land speculation and overlapping, vaguely worded colonial charters for the territory surrounding the Monongahela Valley. In 1772, the new governor of Virginia, Scottish native John Murray, the Earl of Dunmore, awarded bounty land grants to men who performed military service in the French and Indian War, offering to patent 200,000 acres on behalf of the soldiers. Some of the bounty land overlapped that previously granted by former Governor Dinwiddie and surveyed by George Washington for the Virginia Regiment. Meanwhile, the Walpole Company had received approval from the Board of Trade to create a new western colony to be called Vandalia, embracing 20 million acres on the east side of the Ohio River in present-day West Virginia (Davis 2013; Providence Plantation Foundation 2014b; Utley and Washburn 2002:102).

In an effort to extend Virginia's influence to the forks of the Ohio, Governor Dunmore created the District of West Augusta in 1774 from the northwestern section of Augusta County, which included portions of present-day West Virginia, Ohio, and Pennsylvania; the seat of Augusta County's government was moved from Staunton to Fort Pitt. He incited war with the Shawnee in an effort to distract attention away from the growing discontent among western settlers regarding uncertain land titles and ineffective government. The ploy was partially successful, as

his victory in "Lord Dunmore's War" secured the east side of the Ohio from the Shawnee and won him praise among Virginia's elite. In 1776, the territory of West Augusta petitioned the Continental Congress seeking to become a new state called Westsylvania However, Virginia's and Pennsylvania's representatives did not support this change, and the Continental Congress lacked the authority to create a new state. The District of West Augusta was thus divided into Ohio, Monongalia, and Yohogania counties (Providence Plantation Foundation 2014b; Forbes 2010).

Discontent with British rule was not confined to the western settlements, however. The taxes imposed on the colonies to pay for the French and Indian War chafed the Virginia House of Burgesses, which sent addresses to the King and Parliament stating that they, and not Parliament, had the right to tax and manage their internal affairs (Heinemann et al. 2007:105–106). The Crown only tightened its grip, however, and following a series of protests and skirmishes between colonial militia and British regulars, the Continental army was established at the Second Continental Congress in 1775.

WEST VIRGINIA IN THE AMERICAN NATION

At the onset of the Revolutionary War, a substantial percentage of Virginians remained loyal to Britain, including conservative members of the gentry and Scottish businessmen in Norfolk whose position as middlemen depended on the mercantile system of England. Others remained loyal from principle, believing that small losses of personal liberty were of less value than security of being part of the British empire, and fearing the chaos and mob rule that could result from its absence (Heinemann et al. 2007:129). West of the Blue Ridge Mountains and along the frontier, the population was largely self-sufficient, with few economic ties to England, as the cost for transportation of crops over the mountains to the Tidewater was prohibitive. Nevertheless, some areas of the backcountry were loyal to the King. The western settlers also had reasons to rebel against the Tidewater gentry who had dominated the colony, levying taxes on their products and ordering the construction of roads, but not fully representing the concerns of the western portion of the state (Grymes 2014a).

No major Revolutionary War battles took place in West Virginia, but during the war both the British and the Continental armies made overtures to the Native Americans, particularly to the Six Nations of the Iroquois, resulting in the breakup of the Iroquois League: the Mohawks, Cayugas, Senecas, and Onondagas fought on the side of the British, while the Oneidas and Tuscaroras fought for the Continental army—sometimes fighting against other Iroquois tribes, as at the 1777 Siege of Fort Stanwix (Hofstra 2004:283; Utley and Washburn 2002:105–107). Native Americans allied with the British made raids on settlers in the Monogahela and Ohio River valleys, as well as the Tygart Valley in Randolph County (Rice 1987:11). In 1778 George Rogers Clark was appointed a Lieutenant Colonel and authorized by the Virginia legislature to raise seven militia companies for a campaign against British forts on the western frontier and also to conduct retaliatory raids against Native Americans in the Ohio and Indiana Country. Clark called a conference of Ho-chunk, Sauk, Mesquakie, Potawatomi, and Miami tribes near Kaskaskia and won their allegiance from the British (Potts and Thomas 2006:27).

As part of the development of the former British colonies' Articles of Confederation, in 1781 Virginia ceded to the new United States all of its territory north of the Ohio River, while retaining its rights to the area including present-day Virginia, West Virginia, and Kentucky (Heinemann et al. 2007:133). Although some Native American tribes had fought with the Continental and militia forces during the Revolutionary War, the new United States government subsequently

presumed the Indians were defeated and did not view their councils or nations as equals to be treated with respect and fairness (Utley and Washburn 2002:112). Native American attacks on isolated Euroamerican settlements continued in western Virginia. Bush's Fort, built near Buckhannon for settlers in Upshur County, was destroyed by Native Americans in 1782 (Cook 1940; Tenney 2013). Noah Hadden and his brothers built a fort in 1785 near the mouth of the Elkwater River in Randolph County, after their parents were slain by Indians in 1781 (Brent and Lesser 2010; Ragland 2007:108). Fort Currance (also known as Fort Cassino) was built at Crickard (present-day Mill Creek) near Huttonsville in the 1770s (Rice 1987:5). In 1792 Shawnee Indians killed members of John Waggoner's family at Jane Lew in Lewis County, and in Lorentz in present-day Upshur County, members of the Bozarth family were killed in 1795 (Beckley Post-Herald 1962; Marple 1923).

U.S. military expeditions under inexperienced commanders in 1790 and 1791 against Native American tribes in present-day Ohio and Indiana were unsuccessful. In August 1794 U.S. soldiers led by Anthony Wayne defeated a coalition of Miami, Shawnee, Potawatomi, and Ojibwe tribes at the Battle of Fallen Timbers near present-day Toledo, Ohio. The subsequent Treaty of Greenville in 1795 was signed by representatives of the Miami, Wyandot, Shawnee, Delaware, and other tribes, agreeing to remove from the northwestern part of the present-day Ohio. This effectively ended direct Native American-European conflict in what was to become West Virginia (Ohio History Central 2015b).

During the Revolutionary War, agricultural products from the Shenandoah Valley area were in high demand to help supply the army's needs, including wheat, beef, and hemp for cordage. At the same time, the market for tobacco collapsed, affecting growers in the eastern part of the state most severely. In the years that followed, the prices for commodities and hemp dropped, and tobacco crops grown across the state were largely used to pay taxes. . The imposition of new state taxes were a hardship for backcountry merchants, who had to pay a levy on their merchandise stock, as well as import duties on goods brought from Philadelphia or Baltimore; farmers in the western counties were also allowed to pay their taxes in flour, hemp, or deerskins (Heinemann et al. 2007:140). During this period, land available in the trans-Appalachian West led many with few resources to pursue this opportunity; between 1783 and 1790 the population of Kentucky County expanded from 12,000 to more than 73,000. As settlers flooded into the area, Harrison County was divided from Monongalia County in 1784, with the community of Clarksburg as its county seat, and in 1787 Randolph County was created from Harrison County (Davis 1995; Rice 2013).

The ceding of all the tribes' eastern, central, and southern land in Ohio conveyed a sense of peace and security to settlers in the Kentucky County of Virginia, which became the fifteenth state in 1792. While the U.S. population grew by 35 percent in the 1790s, six times that many were migrating to Kentucky and Tennessee. Virginians were strongly represented among those eager to invest in western land, in a movement described as "Kentucky fever" (Hutchinson 2000). This outmigration from Virginia relieved some of the pressure on land development, easing conditions for those who remained (Hofstra 2004:284).

Until nearly the end of the nineteenth century, when large-scale industry became important, most West Virginians depended upon subsistence farming for their livelihood. Families continued to rely upon their fields and the forests for products commonly used in their foods, shelter, and clothing. Early industries, including grain milling and textile manufacturing, were often farm-related (Rice and Brown 2014). Farms in the Shenandoah Valley produced rye, oats, barley, corn, flax, hemp, and tobacco, but the emphasis was on wheat, with four million

pounds of flour being produced annually in 1790, and more than two and a half times that amount by 1800 (Hofstra 2004:288–289). The increasing settlement west of the Alleghany Mountains also increased the demand for road construction and maintenance between the western part of Virginia and markets at Tidewater ports (Pawlett 2003).

Some farmers west of the Appalachian Mountains looked to the Mississippi River and Spanish-controlled New Orleans at its mouth on the Gulf of Mexico as an alternative connection to world markets. France had ceded control of Louisiana to Spain in 1762 at the end of the Seven Years War. Spain quietly supported the American colonists during the Revolution, sending supplies upstream to Washington's army from New Orleans via the Mississippi and Ohio rivers. After the war, Spain and the United States quarreled over a number of issues related to boundaries and navigation rights along the Mississippi River. To settle these issues, the U.S. negotiated the 1795 Treaty of San Lorenzo, obtaining from Spain (among other things) the right for its citizens to ship goods on the Mississippi River and store them in New Orleans (Cummins 2008:93). After the French Revolution, Napoleon emerged in power and negotiated to regain Louisiana from Spain in 1800. France then revoked American shipping rights through New Orleans (Richard 2003:21). The economic hardship posed by the lack of shipping access from the west, and the risk of losing the allegiance of the new western states and territories was sufficiently critical for President Thomas Jefferson to send commissioners to France to negotiate for the purchase of New Orleans. In response, the French minister conveyed Napoleon's proposal that the U.S. purchase the entire Louisiana territory. The offer was quickly accepted and was ratified by the U.S. Congress in 1803 (Independence Hall Association 2014; Monticello 2015; Turner 1904).

The Virginia General Assembly had passed a bill in 1782 for a general survey of roads between the Blue Ridge Mountains and various port towns, but without funding to accomplish it (Pawlett 2003). In 1806, a privately-owned turnpike was built over the Thornton's Gap pass through the Blue Ridge Mountains between the Valley and Piedmont Virginia (Dickey et al. 2003:40). After the federally-funded National Road was authorized in 1806 to connect eastern markets with the westward-flowing waters of the Ohio River, the Virginia Board of Public Works was created in 1816 to administer the funding of internal improvement projects and oversee the technical and financial aspects of their implementation (McKee 2003; Peyton 2013). Completed in 1821, the National Road's route was similar to the military road built for General Braddock's 1755 campaign, and reached from Cumberland, Maryland to Pittsburgh, Pennsylvania, and continued to Wheeling on the Ohio River (National Park Service 2002 [1954]). Wheeling's strategic position at the confluence of river and road led to its rapid growth as a major inland port for goods and passengers traveling between the Tidewater and eastern cities, and the western territory, and in 1831 Wheeling was declared an inland port of entry, and a U.S. custom house was built in 1859 (Brennan 2013). A river ferry connected Wheeling with Zane's Trace, an important post road opened in 1796 across southern Ohio to Limestone (present-day Maysville), Kentucky, that established Wheeling as an early commercial center for western pioneers (Brennan 2013; Peyton 2013).

In counties that relied on a self-sustaining agriculture, the primitive roads had limited trade. In Harrison (and later Upshur) County, Jacob Lorentz brought the stock for the first store in the county on pack horses from Richmond and Baltimore (Marple 1923). The construction of turnpikes in western Virginia in the 1820s and 1830s improved business, development, and communication; among them was the Staunton and Parkersburg Turnpike between the Shenandoah Valley and the Ohio River (followed by present-day Route 250). Begun in 1838 in competition with the National Road, its construction was placed under the authority of a state

board of directors, and delays resulted as the route came under the supervision of each county it crossed (Staunton-Parkersburg Turnpike Alliance 2014; Sturm 2010a). The turnpike reached Lorentz in present-day Upshur County by 1844 and Parkersburg in 1847, with the last bridges completed in 1850 (Marple 1923; Young 1975). Recent immigrants from Ireland were among the workers who came to central West Virginia during the turnpike's construction, and some settled along its route (Rice 1987:127). Other turnpikes built in present-day Upshur County included the Philippi and Buckhannon, the Clarksburg and Buckhannon, and the Buckhannon and Little Kanawha (Cutright 1977:322). Lewis County became an important commercial and political center, and the town of Jane Lew was established in the 1840s (Gilchrist-Stalnaker 2013). The Northwestern Virginia Turnpike between Winchester and Parkersburg, which rivaled the Staunton and Parkersburg road for access to the Ohio River, had been completed in 1840 and connected with Baltimore instead of Richmond, and its route was later followed by the lines of the Baltimore & Ohio (B&O) and Northwestern Virginia railroads (Sturm 2010b).

Keelboats were operated on the Ohio River from the 1780s until about the beginning of the Civil War, and were used by immigrant families and to ship Ohio Valley products to the west and downriver to New Orleans. In 1811, the first steamboat on the inland rivers, the *New Orleans*, was launched on the Ohio River at Pittsburgh. By the 1830s, there were 450 steam-driven sidewheel and sternwheel boats operating on the Ohio River and its tributaries. Extensive navigation improvements to the rivers began during this period, and steamboats were the major mode of river transportation within the Mississippi River basin until after the Civil War, and competed successfully with railroads until the 1920s (Sutphin 2010).

By the late 1820s, steam-powered locomotives were in use in the U.S., beginning in Pennsylvania (American Rails 2015). Chartered in 1827, The Baltimore and Ohio Railroad (B&O) changed the face of West Virginia forever. Conceived of as an alternate route to Ohio, the B&O was designed to compete with the westward expanding New York Erie Canal and Pennsylvania's canal system. The B&O began passenger and freight operation in 1830, making it the first common carrier railroad in the country. Proving to be an initial success, the line was completed from Baltimore to Harpers Ferry by 1834, to Cumberland by 1842, and finally to Wheeling in 1852. Though the line's revenue came from passenger service, the opening of coal mines in Cumberland during the middle of the nineteenth century allowed coal traffic to Baltimore to become the line's leading source of income. So coveted were the B&O's rail services in Western Virginia that in 1851 the Virginia legislature approved a charter for a railroad to run from the B&O main line near the mouth of Three Fork Creek in Taylor County to Parkersburg (Frey 2010). Operation of the Northwestern Virginia Railroad began in May of 1857, featuring a 104-mile track that ran from Grafton, through Clarksburg, and into Parkersburg. This new line was eventually absorbed by the B&O in 1865, and renamed "The Parkersburg Branch" (Grymes 2014b; Larson 2001:72).

A railroad begun in 1836 as the Louisa Railroad extended west to Staunton in 1854, and together with the turnpikes, it enabled Staunton to develop as the largest town in the upper Shenandoah Valley and become a transportation and industrial center. This line became the Virginia Central Railroad. In 1853 Virginia chartered the Covington & Ohio Railroad to connect the rail line of the Virginia Central at Staunton and the James River & Kanawha Canal at Covington with the Ohio River, but its construction was interrupted by the Civil War (Brown 1985; Grymes 2014b).

The production of coal needed to fuel expanding industry had begun in West Virginia at the end of the eighteenth century. Salt was an important commodity from the establishment of Britain's

North American colonies through Independence (Stealey 2010a). Native Americans had produced salt from salt springs along the Kanawha River, and Euroamerican production began in 1794 at the Kanawha Salines (present-day Malden in Kanawha County) and later near Wheeling (Harlan 1971; Lewis 2012). Coal was mined to fire the salt evaporation furnaces. The Kanawha Valley salt industry over-expanded during the boom years surrounding the War of 1812. As a result, salt prices fell below manufacturing and distribution costs, causing salt companies to fail (Stealey 2010b). Although the salt industry began to decline after the middle of the nineteenth century, the demand for coal continued for other uses, including the production of coal oil for lighting (Lewis 2012). Coal for local use was also mined near the Staunton and Parkersburg Turnpike at Rich Mountain in Randolph County prior to the Civil War, using quicklime to fracture coal from the coal face (Rice 1987:97). Virginia led Pennsylvania in coal production until 1828. West Virginia's extensive coal deposits were noted in the 1835 New and Comprehensive Gazetteer of Virginia, with an early focus on coal banks, as the coal veins near the surface were described (Anderson 1995:67). By the 1840s, the coal mining output in the Allegheny region was greater than in the eastern part of the state (Heinemann et al. 2007:203–204). Drilling for crude oil and natural gas, sometimes as a by-product of wells for salt production, also developed from Pennsylvania to Kentucky in the first half of the nineteenth century (McElwee et al. 2015).

The development of improved transportation brought new settlers to western Virginia. As the population increased, Lewis County was created in 1816 from Harrison County; and Pocahontas County was formed in 1821 from Bath County (as well as land from Randolph and Pendleton counties), with the trading center of Huntersville as its county seat (Harding 1978). There was a low percentage of enslaved persons in the western part of Virginia, many having been brought by plantation owners between 1768 and 1810, as they moved westward when tobacco cultivation had depleted their lands in Tidewater and Piedmont Virginia. Slaveholders were predominantly in four Western Virginia valleys: Shenandoah, South Branch, Greenbrier, and in Kanawha County where enslaved labor was used in the Kanawha Salines salt mines as well as on tobacco plantations (Williams 2001:49). The spas at the mineral springs often relied on slave labor as well. Small farmers throughout the Trans-Allegheny region often worked beside their enslaved workers on farms, in craft occupations, service enterprises, or small manufacturing operations (Stealey 2010c).

THE CIVIL WAR AND STATEHOOD

Slavery became a focus of increasingly contentious national debate in the first half of the nineteenth century. As western territories were organized toward statehood, tension arose over achieving a balance between the number of slave and free states represented in the U.S. Senate. In 1819, the admission of Missouri, a slave state, was opposed until Maine was admitted as a free state, restoring the balance. Additional legislative machinations and hard-fought compromises maintained the union and the peace for forty more years; but by the 1850s, hardliners on both sides of the issue increasingly pushed for a final solution.

In 1859, abolitionist firebrand John Brown, with two of his sons and a force of black and white men, attacked the federal armory at Harper's Ferry, at the easternmost point of present-day West Virginia. They intended to seize the arms and incite enslaved and free blacks to form an army that would force slaveholders to emancipate their slaves. Brown was captured in the unsuccessful raid and tried, convicted, and hanged for murder, conspiracy to incite a slave uprising, and treason against the Commonwealth of Virginia (Heinemann et al. 2007:215–216; Williams 2001:36). For northern abolitionists, the raid and John Brown's impassioned defense

of his actions during his trial served as another push away from measured, rational debate over the issue and toward direct action to end slavery. For slave owners and their supporters, Brown's acts heightened long-standing fears of widespread and coordinated slave insurrections and confirmed to them the growing militancy of those opposed to the institution (World History Group 2015).

Following the election of Abraham Lincoln and the secession of South Carolina from the Union, delegates from the other slave states, including Virginia, called state Secession Conventions in early 1861. The majority of the delegates at Virginia's convention favored remaining in the Union on the condition that Lincoln forswore any coercion of the seceded states. The bombardment of Fort Sumter on April 12, 1861, and Lincoln's subsequent call for troops to suppress the rebellion quickly led to a vote by convention delegates for Virginia to secede. A number of convention delegates from the western counties voted against secession. The Virginia militia soon seized the arsenal at Harper's Ferry, and the government of the Confederate States moved its capital to Richmond in late May of 1861 (Heinemann et al. 2007:223–224).

Western Virginia residents were divided in their allegiance to the Union and Confederate causes, with the majority supporting the Union. After the 1861 Virginia Convention in Richmond called for Virginia's secession, several delegates from its northwestern counties who supported remaining in the Union met in Clarksburg to denounce secession and to call for a division of the state. At a second convention called in Wheeling in June 1861, leaders formed a "Reorganized Government of Virginia," with its capital at Wheeling. This "rump legislature," loyal to the Union, re-established government functions at the state, county, and local level, while the previously-elected office-holders from opposing factions fought one another for control of county and local governmental units, causing anarchy in much of western Virginia. Francis H. Pierpont was elected governor of the Reorganized Government of Virginia on June 20, 1861. He called on President Abraham Lincoln for military aid. The newly elected general assembly immediately began the re-establishment of governmental functions, provided for the raising of military units for federal service, and elected new U.S. senators and representatives to represent Virginia in Washington. Pierpont was re-elected governor in 1862, and moved the Reorganized Government to Alexandria, Virginia, where it continued to govern those parts of Virginia under Union control (Bailey 2014; Williams 2001:75–76).

The establishment of the Reorganized Government of Virginia provided the legal context for the division (or dismemberment) of a portion of Virginia to create a new state. A constitutional convention was called to create a government for the proposed new state, and in April 1862 its constitution was ratified by voters in those counties where federal troops were in control. In 1863 the Willey Amendment to this constitution adopted a scheme for the gradual emancipation of the enslaved. Governor Pierpont then called on the legislature of the Reorganized Government to agree to the formation of West Virginia from the state of Virginia, which was finally approved by President Lincoln, with a new governor and legislature taking office on June 20, 1863. The original proposal for a new state—to be called Kanawha—included thirty-nine counties of northwestern Virginia. Its name was changed to West Virginia, and the constitutional convention added 11 more counties, including those of the Eastern Panhandle, in recognition of the importance of the B&O Railroad for communication and trade, (Bailey 2014; Williams 2001:76–78).

Most of the sizeable military engagements in present-day West Virginia during the Civil War took place within its eastern counties, in particular during the Shenandoah Valley campaigns of

1862 and 1864. The recently-completed turnpikes and rail lines across the western part of Virginia were of strategic importance to both the Union and Confederate armies. Control of the B&O Railroad for the movement of troops and supplies made Grafton in Taylor County a strategic point during the early stages of the Civil War. In May 1861, Confederate forces burned the B&O Railroad bridges west of Grafton, cutting the main railroad line from the west to Washington D.C. In response, the Union sent Federal troops under General George B. McClellan to western Virginia to defend the line and other transportation routes from further Confederate attacks (Brent and Lesser 2010). Grafton's residents were divided in their allegiance to the Union and Confederate causes, with the majority supporting the Union. After Union victories at Rich Mountain (near present-day Beverly) in Randolph County and Corricks Ford in Tucker County, units of the opposing armies skirmished in the Town of Fetterman (now a part of Grafton). Confederate forces were pushed south of Grafton to Philippi, in Barbour County, where Union forces cut off the Confederates' retreat. McClellan established his headquarters at Huttonsville in Randolph County, which were taken over by General Joseph J. Reynolds in command of the First Brigade, Army of Occupation after McClellan's transfer to command the Army of the Potomac (Brent and Lesser 2010; Dilger 2015)

In July 1861, Union forces began construction of Cheat Summit Fort (also known as Fort Milroy) on Cheat Mountain south of Huttonsville, as well as Fort Marrow at Camp Elkwater on the Tygart River Valley floor, commanding the Huttonsville and Huntersville Turnpike (present-day Route 219, south of Huttonsville) leading to the Virginia Central Railroad line. The Cheat Summit Fort was located on the route of the Staunton-Parkersburg Turnpike, guarding the entrance to the Tygart River Valley to the west and barring attempts by the Confederates to cut the Baltimore and Ohio Railroad (Wearmouth and Elliott 2002). Confederate forces attacked the Cheat Summit Fort in September 1861, approaching through the wilderness from the west. Unable to capture the Cheat Summit Fort, however, the Confederates withdrew. Some of Lee's cavalry then skirmished with Union troops south of Fort Marrow, but were unable to assault Camp Elkwater and withdrew. After wintering at Fort Marrow, Union forces mostly abandoned it by April 1862 (Brent and Lesser 2010).

In October 1861, Union forces from Cheat Summit Fort and Camp Elkwater marched on Confederate Camp Bartow, about 12 miles east along the Staunton-Parkersburg Turnpike at present-day Bartow in Pocahontas County. The engagement, known as the Battle of Greenbrier River, was indecisive and the Federal troops withdrew. However, the Confederate commanders lost confidence in the ability of Camp Bartow to withstand a determined Federal assault and abandoned it, moving to winter quarters at Camp Allegheny, a Confederate stronghold about 9 miles further southeast on the Staunton-Parkersburg pike (in present-day Pocahontas County). Federal forces attacked Camp Allegheny in December 1861, but the Confederates retained control of the fort. The Union troops withdrew to winter quarters at the Cheat Summit Fort, remaining until April 1862 (National Park Service 2014; Wearmouth and Elliott 2002).

During July and August 1861, Union troops passed through Weston in Lewis County, which was occupied by Confederate cavalry during November and December (Borchart 1967:31). Skirmishes continued in the region throughout the war. During the Confederate Jenkins Raid in August and September 1862, approximately 550 Confederate troops under the command of General Albert G. Jenkins rode into the Tygart Valley, skirmishing briefly with Federal forces near Huttonsville, before moving on to the outskirts of Buckhannon in Upshur County, where they engaged about 200 Union troops near Water Tank Hill (Tenney 2013). Confederate troops routed Union forces, and Confederate raiders attacked and occupied Buckhannon, where they captured a quantity of small arms and a vast supply of ordnance, stores and clothing. The

following day Jenkins's men continued on and occupied Weston (Dilger 2015; McKinney 2013). In April 1863, Confederate troops recaptured Buckhannon during the Jones-Imboden Raid, after riding from Staunton and through Beverly toward Weston, where they burned oil wells, tanks, and oil boats (Dilger 2015; Swick 2014).

THE EMERGENCE OF A MODERN WEST VIRGINIA

West Virginia was profoundly affected by the problems and tensions of Reconstruction. At the end of the Civil War, West Virginia Governor Arthur Boreman and Radical Republican leaders who dominated the legislature were determined to prevent former Confederates from regaining political power. Repressive legislation provided for the confiscation of property of persons regarded as enemies of the state. The Radical-dominated legislature also enacted the Voters' Test Oaths of 1865 and the Voters' Registration Law of 1866. These measures restricted the right to vote and required state and local officials, as well as attorneys and school teachers, to take oaths of allegiance to West Virginia and the United States. By the end of the 1860s, the anomaly of these stern proscriptions at a time when the federal government assiduously protected the voting rights of African-Americans led to calls for change. In 1871, moderate Republicans joined with Democrats to pass the Flick Amendment to the state constitution, which ended political restrictions on ex-Confederates in West Virginia (Rice and Brown 2014).

In 1863, Lewis County resumed construction on the State Hospital at Weston, which was completed in 1880. It provided employment and income for local workers and businesses, making Lewis one of the most prosperous counties in West Virginia, and until the beginning of World War I, the hospital was the largest single item in the state budget (Borchart 1967:34; Gilchrist-Stalnaker 2013).

In 1867 West Virginia University was founded at Morgantown. It was one of the federal land-grant institutions created under the 1862 Morrill Act, which provided funds from the sale of federal land to support colleges that focused on agriculture and the mechanical arts (engineering) in every state (Library of Congress 2015). Agriculture in West Virginia recovered quickly after the Civil War, with counties in the center of the state sustaining less damage than battlefield areas. Sheep ranching for wool was more profitable than cattle raising at the time, and a woolen mill was built in Weston (Borchart 1967:34). By 1900, West Virginia had 93,000 farms, but the state was on the threshold of major economic and demographic changes. Its rich resources and emerging extractive industries caught the attention of powerful business and financial interests outside the state, and many investors acquired large amounts of land for a small fraction of its real worth. In some cases, state businessmen and politicians became allies of powerful non-resident interests (Rice and Brown 2014).

In 1868 the Virginia Central and Covington & Ohio railroads were consolidated as the Chesapeake & Ohio Railroad (C&O), under railroad magnate Collis P. Huntington, who planned to make the C&O the eastern part of a transcontinental line. The line was completed to the Ohio River at the newly created town of Huntington in 1873 (Chesapeake and Ohio Historical Society n.d). In the late nineteenth and early twentieth centuries, the C&O constructed spur lines to the major coal fields of southeastern West Virginia, providing the bulk of the railroad's freight (Chesapeake and Ohio Historical Society n.d). Branch lines were also constructed to access to timber stands in the remote areas of the Allegheny Mountains. One such branch line was the Greenbrier Division, which followed the Greenbrier River from the main line at Whitcomb in Greenbrier County through Pocahontas to its northern terminus at Winterburn Station in the northeast corner of the county. At Durbin it connected with a branch of the Western Maryland

Railway from Elkins (WVRailroads.net 2012). The planned route of the line is shown on maps as early as 1877, and Clover Lick was in existence by that time (Gray 1877). However, the Greenbrier Division of the C&O Railroad was not constructed until 1901. At that time, the line reached from White Sulphur Springs to Durbin (Rand McNally and Company 1901). The rail line contributed greatly to the development of the Greenbrier Valley, with numerous stations on the line becoming small villages. Stores were established to supply the influx of workers and their families, including the Coyner Brothers Store in Clover Lick, near the Project corridor. Sawmills supplying the West Virginia Pulp and Paper mill at Covington, Virginia were constructed along the line, including a large mill at Cass. Logging railroads were constructed into the surrounding mountains to transport timber back to the mill, including one line that crosses the Project corridor (Pocahontas County Historical Society 1981).

In Lewis County, the Clarksburg, Weston, and Glenville Transportation Company built a rail line in 1879, and in Upshur County, the Buckhannon and West Fork Railroad was built in 1883, both of which were consolidated with the B&O Railroad in the 1890s (Borchart 1967:38). A trunk line of the Coal & Coke Railroad ran through Upshur County as well. An extension of the West Virginia Central and Pittsburgh Railroad reached Elkins in Randolph County in 1889 (Rice 1987:81). However, the economic slowdown leading to the financial panic of 1893 inhibited railroad construction nationwide (Hennen 1991).

The ever growing network of railroads greatly altered the scale of resource extraction. Logging tram lines provided access to West Virginia's vast resources of hardwoods and softwoods, including Eastern white pine and red spruce (used at the turn of the twentieth century for making paper), initiating a timber boom in central West Virginia that lasted into the first two decades of the twentieth century (Carvell 2013; Dixon 2010; Hennen 1991; McNeel 2013). Lumbermen who had spent a generation in the Pennsylvania forests migrated to West Virginia, giving rise to new towns and expanding old ones. Pocahontas County's population almost doubled by 1900 (Hennen 1991). By reducing the cost of transporting bulky goods to market, railroads also spurred investment in the area's coal and quarried stone resources, stimulating the growth of communities such as Clarksburg, whose population expanded from 4,050 in 1900 to 27,869 in 1920. Many of those who came to work in West Virginia's coal mines were immigrants from Europe (Cutright 1977:330; Davis 1995:4).

The coal and lumber camps paid cash wages, representing the first major form of non-agricultural work in the mountains. West Virginia's mountain families began to shift from the traditional, personalized agricultural economy to one more dependent on the demands and fluctuations of the national marketplace (Hennen 1991). In contemporary periodicals and urban newspapers, their traditional mountain culture was depicted as primitive, barbaric, and violent. One example is the portrayal of the Hatfield-McCoy feud of the 1880s in southwestern West Virginia and Kentucky. Capital investment in manufacturing in West Virginia increased fourfold between 1870 and 1900 (Rice and Brown 2014). Timber production in West Virginia reached its peak in 1909, and by the 1920s, the majority of the virgin timber was gone and the timber boom was over, leaving large areas of clearcut wasteland, devastated by poor logging practices, flooding, and fires (Hennen 1991; Rice and Brown 2014). As residents of the small lumber towns left for new opportunities, these once busy villages often faded into dispersed communities with familial, religious, or cultural ties rather than economic ones.

The depletion of woodland both created a need for an alternative fuel source and left the land cleared for subsurface mining. In the early 1870s, investors became interested in large coal seams in the Roaring Creek District southwest of Elkins in Randolph County, and exhibited at

the 1876 Centennial Exposition in Philadelphia the largest single piece of coal ever shipped by train. Due to this publicity, the Roaring Creek area developed rapidly in the following decade, with the construction of a line of the West Virginia Central and Pittsburgh Railroad to its coal field (Rice 1987:98). Coal mines were established in Harrison County by the 1880s, with eight mines operating by the end of the 1880s, and the West Fork Valley mines developed in the 1890s (Anderson 1995:67; Davis 1995:4). A coal field and also coke production was developed at Mount Clare in Harrison County, about 10 miles north of Jane Lew (Anderson 1995:67). Coal was first mined commercially at Lorentz in Upshur County by the Pleasant Valley Coal Company in 1901. The community of Adrian nearby developed as a major mining center, with other communities following close behind (Tenney 2013).

Beginning in 1897, large quantities of oil and natural gas were discovered under Lewis County, creating an overnight boom (Gilchrist-Stalnaker 2013). Jane Lew became a shipping center for gas well supplies and pipes (Borchart 1967:36). Drilling for oil began in Harrison County in 1890, with wells opened in the Salem area (about 10 miles north of the village of Benson) at the turn of the twentieth century (Davis 1995:4). Some farmers who had received sufficient income from leases and royalties for oil rights, ceased farming leaving their land uncultivated and in some cases moving to towns. However, interest in agriculture and stock raising revived in the 1910s (Borchart 1967:35).

The development of West Virginia oil and gas industries led to the development of other industries in the counties of the project corridor as well. Numerous glass plants were established at Wheeling in the 1820s and 1830s, at the time that the less labor-intensive process for press-molding glass was being introduced (Doherty 1984:38). The state's natural resources included plentiful silica sand and limestone to produce glass, and by the end of the nineteenth century, technology enabled the use of its reserves of natural gas for fuel, and West Virginia became a leader in the production of window glass (Hardman 1995:66; West Virginia Humanities Council 2014). In 1899, a window glass plant was opened near Clarksburg in Harrison County, with others opening in the following decades, producing marbles, containers, and tableware, in addition to windows. A steel mill was built, as was a zinc smelting plant. Spur railroad lines made Clarksburg in Harrison County the distribution center for the central portion of the state (Davis 2013; Hardman 1995:66). Between 1890 and 1920, mechanical improvements—especially in the bottle-making process—changed glass production so that large-scale production became typical (Nash 2009:43). By 1920, the Clarksburg factory of the Hazel Atlas Glass Company had 15 acres of floor space, and employed 1,200 people (Six 2011). West Virginia produced 3 percent of the glass manufactured in the U.S. in 1890; by 1915 the state produced 12 percent (Nash 2009:44). In the 1920s, Prohibition reduced the demand for bottles and barware. By the time the industry rebounded in the late 1930s, 22 percent of the country's glass plants were located in West Virginia, with more than half of the nation's glass production located in the tri-state upper Ohio Valley region (Lewis 2010; Nash 2009:45).

Poor working conditions in West Virginia's mines and factories led to the rise of a strong labor movement, beginning the 1880s. Labor unions had existed in the United States since 1794. As technological change began to undermine the craft system of production at the end of the nineteenth century, some national unions moved toward an industrial structure, including the coal mining industry. In 1886, national trade unions formed the American Federation of Labor, with the Federation of Organized Trades and Labor Unions formed in 1881 as a lobbying organization (History.com 2009). In 1890, the United Mine Workers of America (UMWA) was created in Columbus, Ohio, with a district formed in Wheeling that focused its efforts on

unionizing West Virginia's coal mines. Many West Virginia mine workers and their families lived in mine company housing, traded at company stores, worshiped in churches built by the company, and received part of their pay in company scrip. The coal operators insisted that because they relied on distant markets, they could not afford to pay union wages and continue in business, and they convinced political and judicial authorities and most of the state's daily press that their struggle against the union was a battle for the state's economic survival. The coal operators also organized associations and hired labor spies and heavily armed mine guards, many of whom carried the force of public authority as deputy sheriffs (Thomas 2010).

In 1912, in the neighboring Paint Creek and Cabin Creek stream valleys of the eastern Kanawha coalfield, attempts to gain recognition of the UMWA and adoption of a union contract resulted in violent conflict and a workers' strike. These attempts to recognize the UMWA also introduced strike breakers protected by mine guards, and led to the eviction of striking workers from their company housing before the strike was settled in 1913 (Williams 2001:130–131). Some smaller-scale industrial disputes and instances of wrecked machinery occurred in the central West Virginia mines, such as those in Harrison County (Houchin 2015). During World War I, the boom in coal production and the labor shortage gave the union leverage in negotiations with mine owners, while supportive federal agencies inhibited anti-union activities (Williams 2001:143).

Labor unions were not confined to the mining industry during this period. West Virginia's glass workers organized into three strong craft unions, based on their specializations, by the 1880s. Many of the glass workers were French, Belgian, and German immigrants who passed the craft on to their sons, and their tight control of production provided strong incentive for glass companies to mechanize their plants in the early twentieth century. The unions fought bitter strikes but failed to prevent the introduction of technology by the 1920s. Legislation protecting the right to organize unions during the 1930s revived the glass workers' organizations and boosted union membership among West Virginia's 13,000 glass workers (Lewis 2010).

After the expansion of wartime production, the coal industry contracted, reflecting the decrease in U.S. coal consumption due to alternative energy sources and more efficiency energy use (Williams 2001:144). By the 1930s, the industry was sliding toward bankruptcy from the Great Depression's impact on the already depressed coal market (Williams 2001:148). A large proportion of the state's natural resources were exported to neighboring states and other regions, with little home market (Williams 2001:149–150). By the late 1930s, productivity, employment, and wages rose again, and during World War II, the industry boomed. Strip mining became common in Harrison County, and deep mine and strip mine operations contributed to Upshur's economy (Anderson 1995:68; Tenney 2013). But after the war, the coal industry faced growing competition from other fuels, with industry and union leaders promoting rapid modernization of the mines, which increased productivity and wages, but decreased the number of miners and shrank union rolls, and contributed to the impoverishment of Appalachia, as unemployment spread through the region (Thomas 2010).

Following the 1911 passage of the Weeks Act, which enabled the federal government to purchase over 19 million acres in 124 national forests to protect the headwaters of rivers and watersheds, the Monongahela National Forest was designated in 1920. One third of its 900,000 acres is located in Pocahontas County (Forest History Society 2015; Pocahontas County, West Virginia 2015). During the Great Depression, the Civilian Conservation Corps (CCC) built camps in central West Virginia, performing re-forestation, fire control and land reclamation, as well as state park and battlefield development (McNeel 2013; Rice 1987:140). In Pocahontas

County, the CCC carried out the original development of Droop Mountain Battlefield and Watoga state parks, Seneca State Forest, and Edray Fish Hatchery (McNeel 2013). In Randolph County, Camp Hutton was established in 1935 near the intersection of U.S. 250 (the Staunton-Parkersburg Turnpike) and State Road 26, four miles southeast of Huttonsville near the base of Cheat Mountain. In addition to firefighting and tree planting, CCC workers at this camp participated in surveying and telephone line extension (West Virginia State CCC Museum Association 2002).

In 1943, Elkins, in Randolph County, was selected as the headquarters of the Army's West Virginia Maneuver Area that spanned Randolph, Tucker, Preston, Grant, and Pendleton counties, with 16,000 soldiers participating in eight week training programs for field operations in terrain thought to resemble European topography, including artillery, assault climbing, and improvised bridge crossings (Rice 1987:124).

At the beginning of the twentieth century, migration from rural areas to cities—one of the dominant trends in the nation—was also in progress in West Virginia. But by the mid-twentieth century, mechanization, foreign competition, and emergence of a global economy contributed to fundamental changes in West Virginia industry. Many traditional industries experienced decline and the state was confronted with technological unemployment. As thousands of miners and other workers lost their jobs and left the state, West Virginia's population fell from 2,005,552 in 1950 to 1,860,421 in 1960. Scores of once-thriving mining towns lost so many families that they became ghost towns. Further population losses occurred in the 1960s and 1980s (Rice and Brown 2014).

Environmental concerns arising in the late 1960s and 1970s further pressured West Virginia's mining and manufacturing industries. Strip- or surface mining, as a means of removing coal, gained importance during the energy crisis of the 1970s. Environmental concerns about strip mining and continued complaints over the destructive practices of coal operators led to threats by the federal government in the early 1990s to take over regulation of surface mining in the state. However, West Virginia Governor Gaston Caperton and the legislature appropriated more funding for the employment of additional state inspectors, and averted federal intervention (Rice and Brown 2014). Most of the state has resources that could be extracted by stripping methods, including manganese and low-grade iron ore deposits in its eastern mountain ranges (Williams 2001:201). By the late 1990s, mountaintop removal, the most profitable and arguably the most damaging form of surface mining, had become common and led to sharp public debate (Rice and Brown 2014). In addition, the clear-cutting of forests and water and air pollution associated with mining have become contentious issues, in part because of their impact on the state's growing tourism industry (Williams 2001:201–202).

Although mining and manufacturing dominated West Virginia's economy during the late nineteenth and twentieth centuries, agriculture continued to thrive in the shadow of the coal and oil fields. Despite the mountainous terrain, the region's soils proved quite fertile. Corn, wheat, oats, hay, potatoes, apples, peaches, plums, cherries, grapes, tomatoes, and melons were among the chief agricultural exports, and remain so through the present day (U.S. Department of Agriculture 2009). Moreover, livestock value in the state in the mid twentieth century represented about a quarter of all farm revenues (Sperow 2012). By 1994, the amount of acreage devoted to farming in West Virginia was less than 35 percent of what it had been in 1900. Most operations were commercial rather than subsistence farms. Three fourths of agricultural income came from livestock, including cattle and calves, poultry, and dairy products. Apples, peaches, and tobacco remain important commercial crops (Rice and Brown 2014).

In recent years, West Virginia has become home to a number of technology-related facilities for federal agencies into the state, which are concentrated in West Virginia's high technology corridor along Interstate 79 from Morgantown to Weston. These include the FBI's Criminal Justice Information Systems (CJIS) in Clarksburg, the Department of Defense's Biometric Identity Management Agency, the National White Collar Crime Center, NASA's Independent Verification and Validation facility, the National Oceanic & Atmospheric Administration, the National Energy Technology Laboratory, and the National Institute for Occupational Safety and Health. The new facilities have boosted employment at universities, health care centers, and engineering firms in the area (Cook 2013; Shelor 2014).

RESULTS

This chapter presents the assessment of Project effects on historic architectural resources eligible for the NRHP that were evaluated in the Phase I architectural surveys. It includes descriptions of 12 historic and architectural resources eligible or potentially eligible for NRHP that are located in the current Project APE, together with an assessment of the Project's direct and indirect effects on them. The 63 resources in the APE that are recommended ineligible for the NRHP are summarized in Table 1. An additional 35 resources that have been surveyed over the course of the Project are no longer in the APE due to Project changes; they are summarized in Table 2.

TABLE 1

Summary of Resources in the APE Recommended as Ineligible for the NRHP

Name/HPI#	Map Sheet (Appendix A)	Description	Report(s)
Harrison County			
HS-0680	Sheet 2	Gothic Revival residence, ca. 1880	Original Survey
HS-0688	Sheet 1	Garska/Morris Farm, I-house, ca. 1870	Addendum 1; Addendum 3
HS-0691	Sheet 1	Moser/Clemens Farm, Queen Anne residence, ca. 1890	Addendum 1; Addendum 3
HS-0692	Sheet 1	Lewis/Coffindaffer Farm, I-house, ca. 1880	Original Survey
HS-0884 and 46HS121	Sheet 1	Mt Lebanon Baptist Church and Cemetery, 1831	Original Survey
Lewis County			
LE-0006*	Sheet 4	Cozat-Lawson House, ca. 1810	Addendum 4
LE-0134	Sheet 1	Armstrong House, vernacular residence	Original Survey
LE-0136	Sheet 2	Bigley/Green House, vernacular residence	Original Survey
LE-0137	Sheets 2 & 3	Wymer Farm, vernacular residence	Original Survey
LE-0138	Sheet 2	Vernacular residence	Original Survey
LE-0140	Sheet 2	Vernacular residence	Original Survey
LE-0141	Sheet 3	Vernacular residence	Original Survey
LE-0142	Sheet 3	Folk Victorian residence	Original Survey
LE-0144	Sheet 4	Vernacular residence	Original Survey
LE-0146	Sheet 4	Vernacular residence	Original Survey
LE-0157	Sheet 2	Vernacular residence	Addendum 1; Addendum 3
LE-0159	Sheet 5	Vernacular residence	Addendum 1; Addendum 3
LE-0160	Sheet 3	Ranch house, ca. 1965	Addendum 2
LE-0161	Sheet 3	Ranch house, ca. 1960	Addendum 2
LE-0162	Sheet 3	Vernacular residence	Addendum 2
LE-0175	Sheet 3	Vernacular residence, ca. 1900	Addendum 3
Pocahontas County			
PH-0037-0060	Sheet 17	Clover Lick Depot/B&O rail station	Addendum 3
PH-0037-0061*	Sheet 17	Gardner House, 1908	Addendum 3
PH-0037-0062	Sheet 17	Grace Episcopal Church Site	Addendum 3

TABLE 1

Summary of Resources in the APE Recommended as Ineligible for the NRHP

Name/HPI#	Map Sheet (Appendix A)	Description	Report(s)
PH-0037-0063	Sheet 17	School, 1898	Addendum 3
PH-0037-0064	Sheet 17	L.T. Coyner House, ca. 1903 Prefabricated upright and wing house	Addendum 5
PH-0076	Sheet 17	Logging railroad bed segment	Addendum 3
PH-0402	Sheet 14	Farm and gable-ell residence, ca. 1890	Addendum 3
PH-0462	Sheet 17	Folk Georgian Revival, ca. 1900	Addendum 5
PH-0470	Sheet 17	I-house, ca. 1900	Addendum 5
PH-0490	Sheet 17	Upright and Wing style residence, ca. 1940	Addendum 5
PH-0491	Sheet 18	Four-square residence, circa 1900	Addendum 3
PH-0519	Sheet 19	Gable-ell residence, circa 1900	Addendum 3
PH-0892	Sheet 17	Pole Barn, ca. 1960–1970	Addendum 3
PH-0893	Sheet 17	Gabled barn, ca. 1950	Addendum 3
PH-0894	Sheet 17	Two barns and other agricultural buildings, ca. 1940–1960	Addendum 3
PH-0895	Sheet 17	Vernacular side-gabled house, ca. 1900-1920	Addendum 3
PH-0897	Sheet 19	Lumber railroad, Route 92	Addendum 3
PH-0898	Sheet 19	Vernacular front-gabled house, partially destroyed by fire	Addendum 3
PH-0899	Sheet 19	House, north of Frost	Addendum 3
PH-0904	Sheet 15	Vernacular residence, ca. 1950	Addendum 4
PH-0905	Sheet 15	Colonial Revival residence, ca. 1920	Addendum 4
PH-0954	Sheet 25	Vernacular Barn, ca. 1940	Addendum 5
Randolph County			
RD-0894	Sheet 13	Vernacular front-gabled house, ca. 1960	Addendum 3
RD-0911	Sheet 14	Vernacular residence, ca. 1955	Addendum 4
Upshur County			
46-UP-331	Sheet 9	Simmons Cemetery	Original Survey
UP-0113 and 46UP348	Sheet 5	Lorentz Methodist Church and Cemetery, Gothic Revival church/vernacular cemetery, 1913/1837	Addendum 5
UP-0809*	Sheet 5	Craftsman residence, ca. 1910–1930	Original Survey
UP-0810	Sheet 6	Minimal Traditional residence, ca. 1940	Original Survey
UP-0811	Sheet 6	Vernacular residence, ca. 1920	Original Survey
UP-0817	Sheet 5	Minimal Traditional residence, ca. 1940	Addendum 2
UP-0818	Sheet 5	Modern	Original Survey; Addendum 5
UP-0819	Sheet 5	Minimal Traditional residence, ca. 1940	Addendum 2
UP-0820	Sheet 5	Ranch-style residence, ca. 1940	Addendum 2
UP-0821	Sheet 5	Residence, ca. 1940	Addendum 2

TABLE 1

Summary of Resources in the APE Recommended as Ineligible for the NRHP

Name/HPI#	Map Sheet (Appendix A)	Description	Report(s)
UP-0822	Sheet 5	Residence, ca. 1910	Addendum 2
UP-0823	Sheet 5	Farm and residence, ca. 1940	Addendum 2
UP-0824	Sheet 6	Farm and residence, ca. 1900	Addendum 2
UP-0826	Sheet 6	Residence, ca. 1990	Addendum 2
UP-0827	Sheet 7	House and farm, ca. 1930	Addendum 2
UP-0828	Sheet 8	Ranch house, ca. 1960	Addendum 2
UP-0829	Sheet 8	Craftsman residence, ca. 1930	Addendum 2
UP-0831	Sheet 7	Abandoned rail line	Addendum 3

* No longer extant

TABLE 2

Summary of Surveyed Resources No Longer in the Current APE

Name/HPI#	Map Sheet (Appendix A)*	Description	Report(s)	Recommendation
Harrison County				
HS-0684	Sheet 1	Paugh Farm, ca. 1890	Addendum 3	Unassessed
HS-0693	Sheet 1	Sowell farm, 1886	Addendum 3	Unassessed
Lewis County				
LE-0053	Sheet 1	Hog Camp Run Arch Bridge, 1921	Addendum 3	Not Eligible
LE-0124	Sheet 2	Vernacular residence, ca. 1915	Addendum 3	Not Eligible
LE-0125	Sheet 2	Lightburn House, ca. 1880	Addendum 3	Unassessed
LE-0126	Sheet 2	Lightburn Bridge, ca. 1880	Addendum 3	Unassessed
LE-0127	Sheet 2	IOOF and Rebekah Lodge, ca. 1940–1960	Addendum 3	Unassessed
LE-0139	Sheet 2	Schoolhouse converted to residence, ca. 1910	Original Survey	Not Eligible
LE-0145	Sheet 4	House, 451 Laurel Lick Road, ca. 1900	Original Survey	Not Eligible
LE-0158	Sheet 4	Log residence, ca. 1890	Addendum 1 & 3	Not Eligible
Pocahontas County				
46-PH-36	-	Camp Allegheny Battlefield, Staunton-Parkersburg Turnpike, 1861	Original Survey	Potentially Eligible
PH-0397	Sheet 15	I-house, residence and commercial use, ca. 1900	Addendum 3	Not Eligible
PH-0398	Sheet 15	Big Springs Presbyterian Church, ca. 1880	Addendum 3	Not Eligible
PH-0867	-	House, Thornwood Road, ca. 1960	Original Survey	Not Eligible
PH-0868	-	House and Farm, 861 Simmons Road, ca. 1890	Addendum 1	Not Eligible
PH-0891	Sheet 15	Commercial building, ca. 1960–1970	Addendum 3	Not Eligible

TABLE 2

Summary of Surveyed Resources No Longer in the Current APE

Name/HPI#	Map Sheet (Appendix A)*	Description	Report(s)	Recommendation
PH-0896	Sheet 18	Vernacular front-gabled house, ca. 1920	Addendum 3	Not Eligible
Randolph County				
46RD28	-	Cheat Mountain Battlefield, Staunton-Parkersburg Turnpike, 1861	Original Survey	Potentially Eligible
46RD725	-	Brick Church Cemetery, Bell Crouch Road, 1820	Original Survey	Not Eligible
RD-0807	-	House, Seneca Trail, 1901	Original Survey	Potentially Eligible
RD-0808	-	House, Ward Flat Road, 1890	Original Survey	Not Eligible
RD-0809	-	Farm, Becky Creek Road, ca. 1920	Original Survey	Not Eligible
RD-0810	-	House, Becky Creek Road, ca. 1910	Original Survey	Not Eligible
RD-0811	-	House, Bell Crouch Road	Original Survey	Not Eligible
RD-0812	-	Becky Creek Cabin Rentals, ca. 1930	Original Survey	Not Eligible
RD-0813	-	House, 3985 Becky Creek Road, 1947	Original Survey	Not Eligible
RD-0814	-	House, 4195 Becky Creek Road, 1928	Original Survey	Not Eligible
RD-0886	-	House, 224 Beverly Pike, 1908	Addendum 1	Not Eligible
RD-0887	-	Myles Lumber Company, Beverly Pike, ca. 1960	Addendum 1	Not Eligible
RD-0888	-	House, Beverly Pike, 1918	Addendum 1	Not Eligible
RD-0911	-	Vernacular residence, ca. 1955	Addendum 4	Not Eligible
Upshur County				
UP-0055	-	Bassel House, 99 Edminston Road, 1849	Addendum 1	Not Eligible
UP-0814	-	WVDOT Division of Highways & Equipment Division, Brushy Fork Road, ca. 1940	Addendum 1	Not Eligible
UP-0815	-	High Life Lounge, Weston Road, ca. 1910	Addendum 1	Not Eligible
UP-0816	-	Coal & Coke Railway/Baltimore & Ohio Railroad, 1890	Addendum 1	Potentially Eligible

* Some resources are too far from the current Project components to depict on current map sheets.

The 12 historic and architectural resources eligible or potentially eligible for NRHP that are located in the current Project APE are summarized in Table 3. Each resource is discussed below, and assessed in relation to possible direct impacts resulting from Project construction, as well as alterations to the resources' setting or viewshed that could result in a loss of integrity. One resource would be adversely affected by the proposed undertaking. It is PH-0095, a hiking shelter within the Seneca State Forest Historic District. The centerline of the proposed pipeline will pass approximately 10 meters to the south of the structure; permanent removal of vegetation along the corridor would have an adverse effect on the setting of the shelter. It is ERM's recommendation that the Project will have no adverse effect on the remaining 11 NRHP-eligible resources.

TABLE 3

Summary of Resources in the APE Recommended as Eligible or Potentially Eligible for the NRHP

Name/HPI#	Map Sheet (Appendix A)	Description	Report(s)	Project Effect
Lewis County				
LE-0004 and 46LE61	Sheet 3	Broad Run Baptist Church and Cemetery, 1787	Addendum 2 & 3	No adverse effect
Pocahontas County				
PH-0037-0058	Sheet 17	Rail bed of the former Greenbrier Division of the Chesapeake & Ohio Railroad (current Greenbrier River Trail)	Addendum 3	No adverse effect
PH-0037-0065	Sheet 17	Coyner Brothers Store, ca. 1904 front-gable commercial building	Addendum 5	No adverse effect
PH-0092	Sheet 18	Ca. 1934 trail system developed by CCC in Seneca State Forest	Addendum 3	No adverse effect
PH-0095	Sheet 18	Seneca Hikers Shelter, log trail shelter, stone fireplace, ca. 1934	Addendum 3	Adverse effect
PH-0461	Sheet 17	Folk Victorian, ca. 1890	Addendum 5	No adverse effect
PH-0471	Sheet 17	Folk Victorian residence, ca. 1890	Addendum 3	No adverse effect
PH-0902	Sheet 14	West Virginia Pulp and Paper Company logging railroad	Addendum 4	No adverse effect
PH-0903	Sheet 15	Folk Victorian, ca. 1890, Bungalow, ca. 1960	Addendum 4	No adverse effect
Upshur County				
UP-0825#	Sheet 6	Residence, ca. 1940	Addendum 2	No adverse effect
UP-0830	Sheet 5	WWII training airfield structures	Addendum 3	No adverse effect
Buckhannon Civil War Study Area	Sheets 5 & 6	6,500 acre study area	Addendum 5	No adverse effect

Assumed eligible for Project purposes (inaccessible)

LE-0004 AND 46LE61

The Broad Run Baptist Church, located northwest of Jane Lew and east of the unincorporated community of Lightburn, is one of the oldest congregations in Lewis County and is associated with a number of early settlers of the Hacker's Creek community in the late eighteenth and early nineteenth century. The church was formed about 1808 and the first church was erected on the site in 1817; burials in the adjacent cemetery had begun about 1800. The current sanctuary is the fourth church built on this site.

The Broad Run Baptist Church is situated approximately 0.1 miles east of the proposed Project on the southeast slope of a gently rolling landscape, on the north side of the Broad Run stream (Appendix A, Sheet 3). The end-gabled Gothic Revival sanctuary with an apse at its west end is similar in design to numerous churches of the period in rural areas in West Virginia; however, they are usually of frame construction. The decision to build the Broad Run church of brick may reflect a desire for a more fire-proof material. The church was completed in 1887, and has a stone foundation, a painted brick exterior and an exterior brick chimney on its south elevation with an arched chimney cap (Appendix B, Figure 1). Its roof has alternating sections of square

and hexagonal slate tiles. The stained glass windows installed in 1926 are of lancet form, each with two operable panels (the upper light is a pivot, and the lower sash is hinged at the top); Plexiglas panels installed in 2015 to protect the exterior of the stained glass windows have rendered them inoperable (Appendix B, Figure 2). The sanctuary's pews and other church furniture also were installed in 1926. In the 1950s–1960s, the sanctuary's balcony was converted for the use of nursery classes and a pastor's study, being returned to congregational use in 1984 (Appendix B, Figure 3). The vestibule was added to its east side in 1987, with the church's paneled double-leaf doors, flanking double-hung stained glass windows, and pointed arch transom window bearing the name "Broad Run Baptist Church" being transferred from the original façade to the east façade of the vestibule (Appendix B, Figures 4 – 6).

A one-story annex wing was added at the sanctuary's north façade in 1966, providing classroom, restroom, and kitchen space, as well as an indoor baptistry. The flat-roofed annex is clad with yellow brick, with a recessed entrance adjacent to the sanctuary building having a wood door with a large central glazed panel and sidelight panels, and one-over-one double-hung windows with wood sash (Appendix B, Figure 7). A two-story gabled fellowship hall with classroom and office space at the lower level, was added to the annex wing in 1999. It is clad with red brick, and has an asphalt shingle roof and one-over-one double-hung vinyl windows. The church is in good condition. A circa 1920–1940s one-story side-gabled structure formerly used for Sunday school classes is sited on an updated foundation of concrete masonry units located at the edge of the parking lot to the north of the sanctuary and its wings; it is now used for the church's outreach programs. A metal lattice bell tower was built to the east of the annex wing in 1983.

The Broad Run Cemetery is located to the east-northeast of the church and is operated by the separate Broad Run Baptist Cemetery Association, which is not associated with the church. The cemetery is recorded as archaeological site 46LE61 with the WV DCH. The cemetery is situated on a moderately flat plain with a soft slope to the southeast, surrounded by a gently rolling landscape. The cemetery and surrounding land is well kept and manicured. A chain link fence encloses the cemetery with an entrance defined by a set of brick gateposts. While a handful of headstones are significantly weathered or broken, most are in good condition and well maintained (Appendix B, Figure 8).

Broad Run Church Cemetery holds about 2,500 internments, with approximately 400 from the nineteenth century, 1,720 from the twentieth century, and about 380 from the twenty-first century. Dominant surnames include Jackson, Lightburn, Cox, Skidmore, Butcher, Clem, Clemons, Gaston, Reed, Smith, and Neely. The earliest grave is from 1800 and the most recent grave is from 2015. Located in the center of the cemetery at the top of the gentle slope is a low stone masonry enclosure with a gate that houses the Isaac Jackson family plot (Appendix B, Figure 9). In the center of the enclosure's wall, a large pillar with the inscription "1893" has the names of those buried here, including members of the Carr, Jackson, and Bailey families, who are all descendants of Isaac Jackson.

There are two structures associated with the cemetery: a circa 1960s one-story gabled brick maintenance building at the southeast corner of the parking lot adjacent to the cemetery, and a small gabled brick structure on the north bank of the Broad Run stream that serves as a changing room for the adjacent baptismal pond (Appendix B, Figure 10). The structure has the date 1908 inscribed at its gable end.

The several accounts of the early history of Broad Run Church differ somewhat in details, but all confirm that the itinerant minister John Carney was instrumental in the establishment of the congregation. Elder Carney organized Good Hope Church on Duck Creek, about 4 miles north of Broad Run around 1805. Carney also ministered to a group of settlers in the Broad Run community, then known as White Oak Flats. These included Jacob Minter, Alexander West and others, who had come to the Hacker's Creek District from Fauquier County, Virginia in the late eighteenth century. They had belonged to a church called Broad Run, and they chose that name for their new congregation. These two groups merged, perhaps as early as 1808, but it was not until 1817 that they constructed their first church at the current site of Broad Run Baptist Church on land donated for the purpose of a church and cemetery by John Brown. The first building was a log structure, 24 feet wide and 33 feet long (Borchart 1967; Broad Run Baptist Church Bicentennial Committee [BRBCBC] 2004; Cook n.d.; Smith 1920).

The church soon outgrew this small building, and a somewhat larger frame building was erected. It too, was rather cramped, having a low ceiling and small windows. Therefore, a more attractive and comfortable meeting house was built in 1873 by Silas K. Bailey measuring 40 feet by 60 feet and costing $2,500. Unfortunately, this building was destroyed by fire 10 years later, and the current brick structure was erected and dedicated in 1887 (BRBCBC 2004:5–6).

According to Smith (1920:161), the Broad Run Church was highly influential in West Virginia religious history. Its ministers traveled throughout the state sermonizing to small gatherings, conducting baptisms, and forming new churches. These new churches became part of the Broad Run Association, which included about half of the current state of West Virginia. Among the pastors of the church prior to the Civil War were John Goss, John J. Waldo, Benjamin Holden, Carr Bailey, and Anthony Garrett.

One of its best known pastors is Joseph A. J. Lightburn, both for his role in the Broad Run Baptist Church and Broad Run Association, and for his friendship with Thomas "Stonewall" Jackson. Lightburn and Jackson both moved to the Jane Lew-Weston area in their youth, and both families operated mills. When the young men became friends, the Lightburn family loaned books to Tom Jackson, who had had a limited opportunity to pursue a formal education. Joseph Lightburn also introduced Jackson to the Bible, and Jackson attended services at the Broad Run Baptist Church with the Lightburn family. After Jackson was accepted to West Point in 1842, Lightburn enlisted in the army during the Mexican-American War. At the close of the war, Lightburn returned to farming and the milling business in Lewis County, and was drawn to the ministry, being licensed to preach at the Broad Run Baptist Church in 1859. The Civil War interrupted his religious pursuits, and he served in the Union army, attaining the rank of brigadier general.

Lightburn returned to Broad Run after the war, where he was ordained minister in 1867; he was the church's pastor during the construction of the 1887 sanctuary (Appendix B, Figure 11). He pastored at the church and at others in the area including West Milford, Mt. Lebanon, West Fork, and Freeman's Creek. He died in 1905 and is buried in the Broad Run Cemetery (BRBCBC 2004:6).

The Broad Run Baptist Church cemetery contains a Jackson family plot. Sited in the middle of the cemetery, at the top of the slope and surrounded by a low wall of massive stone masonry, it has an inscribed pillar dated 1893 at its west side. The Broad Run cemetery plot encloses members of the Isaac Jackson family, who were related to Thomas Jackson through the Minter Bailey family, whose members include Isaac Jackson's wife Hepzibah, and Thomas' uncle

David's wife Juliet. However, Thomas "Stonewall" Jackson, who died as a result of wounds received at the Battle of Chancellorsville in 1863, is not buried here. The Jackson family plot's stone enclosure at the Broad Run Baptist Church's cemetery resembles a similar wall in the Bailey family cemetery in Lewis County (Joe Obidzinski, AmeriCorps Member, Heritage Programming, WVU Jackson's Mill Farmstead, personal interviews and e-mails, 19–25 June, 2016.)

NRHP Assessment: In its April 2016 *Architectural Reconnaissance Survey of the Atlantic Coast Pipeline Project Corridor, Addendum II,* Dovetail Cultural Resources Group recommended the Broad Run Baptist Church not eligible for the NRHP under Criterion A, B, or C (Lesiuk and Sylvester 2016b). The associated cemetery was recommended potentially eligible by the West Virginia State Historic Preservation Office (2010) under Criterion A for its significant associations with the settlement of the county and Criterion C for funerary art under Criteria Consideration D. Dovetail concurred with that recommendation.

In a letter reviewing Lesiuk and Sylvester (2016b) dated June 1, 2016, the WV SHPO did not concur with Dovetail's recommendation that the church was not eligible for the NRHP. WV SHPO requested additional documentation of the church's interior and an evaluation of the church's relationship with the history of the local community.

As a result of this request from the WV SHPO, ERM carried out additional architectural assessment of the church. ERM has concluded that the building is of a relatively common design, and its integrity has been compromised by the construction of the 1987 vestibule entrance and the relocation of the older stained glass windows into the new vestibule. This new construction and relocation of the windows has resulted in a lack of distinction between the historic fabric of the 1887 sanctuary and the later addition. In addition, the 1966 annex is incompatible with the original church in design, materials, and scale. Therefore, it is ERM's recommendation that the Broad Run Baptist Church is ineligible for the NRHP under Criterion C.

ERM recommends that the Broad Run Church is eligible for the NRHP under Criterion A and Criteria Consideration A based on the central role of the church in the community of Hacker's Creek, beginning with its association with the earliest settlers to the region, who arrived as a group from Fauquier County, Virginia. The church was one of the first institutions established in the area approximately 200 years ago, and its members were instrumental in the political, religious, and social history of the community. The church served a critical secular function as the organizing framework for cultural and political life in the community from the earliest period of Euroamerican settlement. The church also played an important part in the development of West Virginia, serving as a base for the itinerant ministers of the Broad Run Association, who provided critical support to settlers in the remote areas of state. In disseminating Broad Run Association ministers and establishing congregations across the state, the church left a significant imprint on settlement patterns and social networks in West Virginia. In addition, the church is eligible for the NRHP under Criterion B for its association with two distinguished Civil War generals, Confederate General Thomas "Stonewall" Jackson and Union Brig. General Joseph Lightburn, the latter of whom served the church and the association from 1869 until his death in 1905 and is buried in Broad Run Cemetery. Furthermore, ERM concurs with the previous recommendations (Lesiuk and Sylvester 2016b; WV SHPO 2010) that the associated Broad Run Church Cemetery is eligible under Criteria A and C. The proposed NRHP boundary for LE-0004 and 46LE61 is depicted in Appendix B, Figure 12.

Assessment of Effects: The Project corridor lies approximately 350 feet west of the proposed NRHP boundary of the Broad Run Church and Cemetery (see Appendix B, Figure 12). The pipeline passes through open fields and maintained yards in an area with numerous other linear features such as roads and overhead transmission lines. The results of the 3-D terrain modeling and viewshed analysis utilizing Google Earth imaging software are illustrated in Appendix B, Figures 13 and 14. A photographic view from the resource toward the Project showing the location of the corridor is shown in Appendix B, Figure 15. They indicate that the view of the Project is either obstructed by topography or screened by trees. Therefore, it is anticipated that the Project corridor will cause only a minimal change, if any, in the viewshed from the resource, and ERM recommends that there will be no adverse effect on this resource from the proposed undertaking.

PH-0037-0058

The resource is the rail bed of the former Greenbrier Division of the Chesapeake & Ohio Railroad (C&O), which was converted to the Greenbrier River Trail in the 1980s. The trail is well manicured and cared for, and has thick forest throughout the trail.

The Chesapeake & Ohio in West Virginia was begun before the Civil War as the Covington & Ohio Railroad to connect the Virginia Central at Staunton with the Ohio River near the mouth of the Kanawha, but construction was interrupted by the war. In 1868 the Virginia Central and Covington & Ohio were consolidated as the Chesapeake & Ohio Railroad (C&O), under railroad magnate Collis P. Huntington, who planned to make the C&O the eastern part of a transcontinental line. The line was completed to the Ohio River at the newly created town of Huntington in 1873 (Chesapeake and Ohio Historical Society n.d).

In the late nineteenth and early twentieth centuries, the C&O constructed spur lines to the major coal fields of southeastern West Virginia, providing the bulk of the railroad's freight (Chesapeake and Ohio Historical Society n.d). The branch lines also provided access to timber stands in the remote areas of the Allegheny Mountains. One such branch line was the Greenbrier Division, which followed the Greenbrier River from the main line at Whitcomb in Greenbrier County through Pocahontas to its northern terminus at Winterburn Station in the northeast corner of the county. At Durbin it connected with a branch of the Western Maryland Railway from Elkins (WVRailroads.net 2012). The planned route of the line is shown on maps as early as 1877, and Clover Lick was in existence by that time (Gray 1877). However, the Greenbrier Division of the C&O Railroad was not constructed until 1901. At that time, the line reached from White Sulphur Springs to Durbin (Rand McNally and Company 1901).

The rail line contributed greatly to the development of the Greenbrier Valley, with numerous stations on the line becoming small villages. Sawmills supplying the West Virginia Pulp and Paper mill at Covington, Virginia were constructed along the line, including a large mill at Cass. A smaller band mill was constructed at Clover Lick when the larger mills began to close for lack of timber in the 1910s and 1920s. A map of the vicinity of Clover Lick surveyed in 1921–1922 (U.S. Geological Survey [USGS] 1924) shows numerous structures located on both sides of the ri**v**er (Appendix B, Figure 16). A siding extended across the river, just below the village and continued about 0.5 miles before terminating. The piers for the bridge crossing the river on this siding remain in the river and were previously identified as part of a logging railroad that followed the east side of the river (resource PH-0076). A lumber railroad is shown running north from the siding along the east side of the Greenbrier River and up Laurel Run, and likely served the mill at Clover Lick. The siding was apparently used to allow trains to pass on their runs up

and down the river during the height of the lumber boom (Pocahontas County Historical Society 1981:170–172). As the timber supply was depleted and trucks and cars began to replace rail travel after World War II, traffic on the Greenbrier Division began to decline. The Clover Lick Station was closed in 1952, and passenger service on the line was discontinued in 1959. Freight service finally ended in December 1978, and track removal was completed in 1981. The C&O sold the right-of-way to the state of West Virginia for future rail service, but the line was eventually converted to a rail trail (Pocahontas County Historical Society 1981:172–174).

PH-0037-0058 was previously surveyed by Gil Willis in 1986 for the Pocahontas County Historic Landmarks Commission. The survey did not note whether the resource was eligible for the NRHP or not. Currently, in the vicinity of the Project, it is a graveled surface that is slightly raised, and is cut into the adjacent slope, with a drainage ditch between the bed and the slope. The path was cleared at the time of survey and retains integrity as a railroad bed (Appendix B, Figure 17).

NRHP Assessment: Although converted to a multi-modal trail, the Greenbrier River Trail retains the form of the Greenbrier Division rail bed, which played an important role in the development of the Greenbrier Valley in the early twentieth century. The trail extends along most of the length of the former railroad and highlights its historical nature. ERM recommends the railroad bed of the former Greenbrier Division of the C&O railroad eligible under Criterion A at the local level for its significance in the areas of Transportation and Commerce. The resource is not considered eligible under Criterion B, as it is not specifically associated with individuals of historical importance. It also is not considered eligible under Criterion C, as the removal of the tracks has compromised the resource's integrity as an engineering structure.

Assessment of Effects: The proposed Project will cross the former rail bed as an open cut, before being routed under the Greenbrier River, resulting in a direct effect on the multi-modal trail (Appendix B, Figure 18). The contours and surfacing of the circa 1980s multi-modal trail will be restored after the Project's construction is completed. The Project also will have an indirect visual effect on the resource due to the removal of vegetation in the corridor, which will alter the viewshed along a short section of the trail. The results of the 3-D terrain modeling capturing two sight lines are presented in Appendix B, Figures 19 and 20. The findings of the viewshed analysis are shown in Appendix B, Figure 21, illustrating areas with a potential view to the Project. Photographic views capturing two vantage points from the resource toward the Project, and showing the location of the corridor are shown in Appendix B, Figures 22 and 23. These images indicate that the Project will create visual effects perceptible over a small area of the resource's length. Because the former railroad line crosses other linear features such as roads and overhead transmission lines along its entire extent, the viewshed change deriving from the Project would constitute one among many modern intrusions into the setting of the resource, and it will not affect its overall integrity. Therefore, ERM recommends that the proposed undertaking will not constitute an adverse effect.

PH-0037-0065

Sited at the intersection of Back Mountain Road (Route 1) with Edray Road and Laurel Run Road (Route 1-4) in Clover Lick, the resource is approximately 0.25 miles south of the proposed Project (Appendix A, Sheet 17). It is located on a floodplain, approximately 360 feet west of the Greenbrier River. The area surrounding the resource is rural with the smaller town lots of Clover Lick quickly giving way to forested expanses and agricultural fields.

The Coyner Brothers' Store was constructed ca. 1904 by Dr. John Ligon and local carpenters (Willis 1986b). It was operated by Samuel Godfrey Coyner (1869–1946) who moved from Augusta County, Virginia to Pocahontas County with his brothers, Luther T. and Julius J. Coyner in 1900. The Staunton paper reported in May of that year that J.J. Coyner had built a store house at Clover Lick and planned to go into the lumber business. However, a year later, the Coyner Brothers advertised a 12-horsepower Peerless engine and a Geiser sawmill for sale (*Staunton Spectator and Vindicator* 4 May 1900:1, 10 May 1901:2). The store provided supplies to the loggers, farmers, and other residents of Clover Lick during the timber boom of the early twentieth century. It also served as a post office for the fledgling community. Samuel Coyner married Myrtle Varner in 1906 and is listed in the 1910 census in Pocahontas County as a merchant operating a general store. He was 40 years old at the time, and he and his wife had a one-year-old boy. Between 1901 and 1929, Clover Lick was the site of at least three sawmills. Unlike the store at nearby company town Cass, which was operated by the lumber company, the Coyner Store appears to have operated independently. At least two other stores operated in the vicinity in 1910, including that of Max Curry, who was a neighbor of J.J. Coyner. Samuel Coyner moved back to his farm in Augusta County in 1917, where he remained until his death in 1946, according to his obituary in the Richmond *Times Dispatch*. It is not clear if the other Coyner brothers stepped in to operate the store after 1917, but Luther and Julius are listed as farmers in the 1920 census. Julius died in 1924 and is buried in the Coyner Cemetery in Clover Lick. Luther died in 1940 and is also buried in the Coyner Cemetery (Ancestry.com n.d.; FindAGrave.com n.d.; Willis 1986b).

According to the original survey (Willis 1986b), the two-story front-gable structure has Greek Revival elements; however, ERM did not identify architectural features associated with the Greek Revival style. The structure retains most of the elements described during the original survey; however, a new standing seam metal roof has been added and concrete block piers have replaced the stone and mortar foundation throughout. The wood frame structure is clad in drop siding (Appendix B, Figures 24 and 25). Windows are six-over-six double-hung wood sash with wood surrounds on the original block and on the one-story side-gable addition attached to the north elevation of the original block. Nine-over-nine double-hung wood sash windows are found on the shed-roof additions on the north and south elevations of the original block. The lower sash of one of the oversized six-over-six windows on the rear (west) elevation of the original block has been replaced by a smaller nine-light sash and wood infill. The east-facing façade features a rebuilt shed-roof porch that spans the entire length of the façade, including the additions on either side of the original block; the porch is supported by milled lumber and features wood decking and steps. There are three entries on the primary (east) façade. The main entry is through a single-leaf wood panel door on the original block with a four-light transom. A single-leaf wood panel door on the south side of the primary façade allows for entry into the one-story shed roof wing on the south elevation. Materials of the wing are consistent with the main block. Diagonal-boarded double doors on the north end of the primary façade allows for entry into the one-story side-gable wing on the north elevation. A central single-leaf wood panel rear entry is on the west end of the original block; it features a two-light transom. Entry can also be gained through a single-leaf wood panel door on the west end of the northern shed-roofed addition. A second-story central single-leaf wood panel door also is centered on the west gable end of the original block, but there are no steps to access it. Decorative scroll work brackets are visible on the west where the shed-roof wings join the primary block.

NRHP Assessment: The Coyner Brothers Store is a good example of an early twentieth century rural general store that is closely associated with the railroad and lumber boom of the period in Pocahontas County. The Coyners arrived in Clover Lick soon after the completion of the

Greenbrier Division of the C & O Railroad attracted logging and sawmill operations to the area, transforming the isolated farming community into a bustling industrial village. The store and post office served as a social and commercial center for a diverse population that included local farmers and immigrants that came to work in the mills. Although two other stores operated in the vicinity in 1910, neither are known to be standing, leaving the Coyner Brothers' Store as the sole remaining example in the town. Like many other communities in West Virginia, as timber resources in the area were depleted, Clover Lick declined nearly as fast as it had grown, leaving many of its buildings abandoned. Although much of the historic character of the village has been lost, the remaining houses from the late nineteenth and early twentieth century, along with the railroad depot, provide sufficient setting to convey the significance of Coyner Brothers' Store to the town's heyday.

ERM recommends that PH-0037-0065 is eligible for the NRHP under Criterion A for its association with the commercial and social development of the Clover Lick community during the logging boom of the early twentieth century (Appendix B, Figure 26). As a post office and general store, the building was an important part of the community, serving as a center for social as well as commercial life. ERM recommends PH-0037-0065 not eligible under Criterion C. The original block represents an uncommon example of a rural store from the turn of the twentieth century and retains much of its original fabric, including doors, most windows, and wall cladding; however, the series of additions to the north and south elevations and the rebuilt porch have dramatically changed the scale and proportions of the resource, affecting its integrity of design and feeling. ERM also recommends that PH-0037-0065 is not eligible under Criterion B. Although the Coyner family played an important role in the early history of Clover Lick, the operator of the store, Samuel Coyner, moved away in 1917 and spent the remainder of his life in Augusta County, Virginia. His brothers remained in Clover Lick, but it is not known what role they played in the subsequent history of the store. No evidence was found that the Coyner brothers attained individual significance as merchants within the context of early twentieth century lumber towns.

Assessment of Effects: The results of the 3-D terrain modeling and viewshed analysis utilizing Google Earth imaging software are illustrated in Appendix B, Figures 27 and 28. A photographic view from the resource toward the Project showing the location of the corridor, almost entirely screened by trees, is shown in Appendix B, Figure 29. The corridor to the north is screened by trees on the north side of Back Mountain Road at its bend, and also on Glade Run's banks as it approaches the Greenbrier River; trees adjacent to the former rail bed/multi-modal trail on the west side of the river provide additional screening (see Appendix B, Figure 26). The resource would have a limited view to the northeast of the pipeline corridor cut on the east bank of the Greenbrier River, particularly at leaf-fall in the autumn and winter, presenting a minimal indirect effect on the structure and its historic viewshed. Because this will only entail a minor change to the resource's setting, ERM recommends that the Project will have no adverse effect on PH-0037-0065.

PH-0092

The resource is a portion of hiking trail located in the Seneca State Forest and is in the corridor of the proposed Project (Appendix A, Sheet 18). The packed-earth hiking trail follows the natural ridgeline at the north end of Thorny Creek Mountain, with the terrain descending on either side of the trail. It follows the natural topography, but also responds to forest features such as fallen trees across its original path. The trail is marked with yellow blazes on trees and

is well maintained overall (Appendix B, Figure 30). The proposed pipeline will likely cross the trail three times along a section approximately 0.5 miles in length.

Most of the hiking trails within the Seneca State Forest were constructed by the Civilian Conservation Corps (CCC) in circa 1934. Some of the trails were originally developed for horseback riding. The Seneca Hikers Shelter adjacent to this trail (see PH-0095) was also constructed by the CCC, and indicates the presence of a trail in this location at the time the shelter's location was selected (Boger 2008a). Seneca State Forest was established in 1924 and is the oldest state forest in West Virginia. The initial purpose of the forest was for timber and wildlife conservation, but public campgrounds were added beginning in 1928. State funds for development of the forest were lacking in the late 1920s and early 1930s, but with the creation of the CCC in 1933 work camps were established for youth and the unemployed who constructed buildings, trails, and other facilities, and also planted seedlings, and performedother conservation work (Pocahontas County Historical Society 1981:85). Camp Seneca opened near the resource in June of 1933 at the intersection of State Highway 28 and Seneca Lake Road. Winter quarters were constructed on the east side of Highway 28. The camp's projects included construction of truck trails, forest stand improvements, reduction of fire hazards, and the construction of rustic cabins for the public (Harr 1992).

The section of trail crossed by the Project corridor is part of the Allegheny Trail, a 330-mile north-south hiking trail that runs the length of the state. The Allegheny Trail was initiated in 1975, and all but 20 miles have been completed. Other portions of the trail were built by the West Virginia Scenic Trails Association, which currently maintains the trail (Ballman 2014). It is likely that this section of trail dates to the 1930s, given its association with the Seneca Hikers Shelter (PH-0095) that was also built in the 1930s. The 1975 trail likely tied in to this existing section of trail.

NRHP Assessment: According to Jean Boger's (2008a) survey of New Deal resources for the West Virginia State Historic Preservation Office, the Seneca State Forest hiking trails are a contributing resource to an eligible Seneca State Forest Historic District under Criteria A and C. The section of trail crossed by the corridor has been subject to erosion and the deposition of new forest duff, as well as changes resulting from trees falling across the trail. However, the overall design of the trails in the state forest is preserved, and it is ERM's recommendation that the trails have retained sufficient integrity as a contributing resource to the eligible Seneca State Forest Historic District under Criterion A for its association with the CCC and the development of outdoor recreation in the twentieth century. The trails do not represent an outstanding example of a particular design or work of a master, nor are they associated with the life of any person significant in the past, and ERM therefore recommends the resource does not contribute to the historic district under Criteria B and C.

Assessment of Effects: Approximately 0.5 miles of the resource is within the Project APE (Appendix B, Figure 31), and due to the narrow ridgeline, there are likely to be three intersections between the trail and the Project's centerline. The construction of the pipeline and the removal of vegetation along the corridor could result in change in the density of the tree cover in this section of the trail. Further vegetation removal would be necessary for the proposed access road. The results of the 3-D terrain modeling capturing two sight lines are presented in Appendix B, Figures 32 and 33. The findings of the viewshed analysis are shown in Appendix B, Figure 34, illustrating areas with a potential view to the Project. Photographic views capturing two vantage points where the Project crosses the resource, and showing the location of the corridor are shown in Appendix B, Figures 35 and 36. These images indicate

that there would be visual effects from the removal of vegetation, but they would be limited in extent. Restoration of this section of the trail and/or the construction of a different trail alignment at this location is recommended following the Project's construction. Trail maintenance and re-building are ongoing aspects of a hiking trail, and changes in the natural environment are an integral part of its historic setting. However, irrespective of the post-construction restoration of the trail, impacts from the Project would affect only a small percentage of the resource's total length. Such construction impacts would not affect the overall integrity of the resource, and particularly if measures are taken to restore this section of trail to a more "natural" state following construction, the proposed undertaking would not constitute an adverse effect.

PH-0095

The resource located in the Seneca State Forest of Pocahontas County, West Virginia, is in the corridor of the proposed Project (Appendix A, Sheet 18). It is known as the Seneca Hikers Shelter and is situated alongside the Loop Road on a ridge that is within 10 meters of the forest access road. The area to the east of the shelter has been cleared and mowed, with woods on the descending slopes to the north and south. The ridge climbs gently to the west, and generally descends to the east.

The resource has a foundation and floor of stacked fieldstones, and a chimney of fieldstone with exceptional masonry. The open shelter of post and beam log construction with partial log walls has a gabled entrance bay that projects from the side-gabled asphalt shingle roof. The roof is of post and beam construction using planed tree trunks (Appendix B, Figure 37).

The Seneca Hikers Shelter was constructed by the Civilian Conservation Corps (CCC) circa 1934, as part of a system of trails in the Seneca State Forest (Boger 2008b). The Seneca State Forest was established in 1924 and is the oldest state forest in West Virginia. The initial purpose of the forest was for timber and wildlife conservation, and few public facilities were developed prior to the creation of the CCC in 1933. The CCC established work camps for youth and the unemployed who were tasked to construct buildings, trails, and other facilities, plant seedlings, and perform other conservation work (Pocahontas County Historical Society 1981:85). Camp Seneca opened in June of 1933 at the intersection of State Highway 28 and Seneca Lake Road. Winter quarters were constructed on the east side of Highway 28. According to Harr (1992), the camp's projects included construction of truck trails, forest stand improvements, reduction of fire hazards, and the construction of rustic cabins for the public. The Seneca Hikers Shelter is not mentioned specifically, but it appears to match the design and materials of typical CCC construction in the 1930s.

NRHP Assessment: According to Jean Boger's (2008b) survey of New Deal resources for the West Virginia State Historic Preservation Office, the shelter is a contributing resource to an eligible Seneca State Forest Historic District under Criteria A and C. The structure is in good condition and does not appear to have been altered since 2008. It is ERM's recommendation that the shelter has retained sufficient integrity as a contributing resource to the eligible Seneca State Forest Historic District under Criterion A for its association with the CCC and the development of outdoor recreation in the twentieth century. The Seneca Hikers Shelter is of exceptional masonry, especially for the area, and it is ERM's recommendation that PH-0095 is also a contributing resource to the historic district under Criterion C. The resource is not associated with the life of any person significant in the past, and ERM therefore recommends that PH-0095 is not a contributing resource to the historic district under Criterion B.

Assessment of Effects: The results of the 3-D terrain modeling and viewshed analysis utilizing Google Earth imaging software are illustrated in Appendix B, Figures 39 and 40. A photographic view showing where the Project would run through the resource is shown in Appendix B, Figure 41. The corridor's centerline at the Loop Road will pass approximately 10 meters to the south of the structure. The permanent removal of vegetation along the corridor will likely have an adverse effect on the view from the shelter (Appendix B, Figure 38). Further, a proposed access road will encroach upon the resource, where additional vegetation removal will be necessary. The setting of the resource is important given its connection to the development of recreation in the state's natural areas in the early twentieth century; however, changes in the natural environment are an integral part of its historic setting. The maintenance of a vegetative buffer between the shelter and the corridor to the extent possible is recommended.

PH-0461

Located on 26-acre parcel on North Back Mountain Road, near Edray Road at Gardener Road in Clover Lick, PH-0461 is a two-story dwelling with several outbuildings. The dwelling is vacant, but the land continues to function as a livestock farm. The dwelling was built ca. 1890. Several small outbuildings are visible on aerial images; however, the property was viewed from a distance as it was not accessible at the time of survey. As a result, the associated outbuildings were not visible. Several attempts were made to find access, but a gated private driveway separates the dwelling from the public right of way. The dwelling is approximately 0.5 miles south/southeast of the proposed pipeline (Appendix A, Sheet 17). The rural residence is located in a small community located in the Monongahela National Forest, north of Edray Road and west of Gardener Road. The dwelling is sited on a low hill above open pastureland, with mature trees at its north and northwest sides. Clover Creek flows to the southwest and Glade Run runs to the northeast. Historically, Clover Lick was accessible by rail; however, the railroad infrastructure was removed and converted to a hiking trail.

Originally surveyed in 2011 (Greenawalt and Stack 2011), no apparent material or structural changes have occurred at PH-0461 since that time. The two-story gabled-ell features Folk Victorian elements, such as herringbone clapboard at the main southeast façade's two-story porch's gable front, a jigsawn balustrade on the second floor of the porch, and turned wood post supports with fretwork brackets (Appendix B, Figures 42 and 43). The dwelling likely was constructed ca. 1890, during the post-Civil War railroad and logging boom along the Greenbrier River (Price 1901). It appears that the original block includes the entire cross-gable and hipped-roof section, which features consistent materials such as windows and doors and seamless design. The rear one-story gable was likely added later after a central heating system was added, as no visible chimneys or stove pipes are apparent. This observation is based on scale and materials differing between units. No available historic maps pre-dating 1940 are available at this time, and no information is available from the Pocahontas County tax assessor. The original block features internal brick chimneys within the hipped roof section and on the ridge line at the east end of the side-gable wing. The continuous stone foundation appears to be sandstone. The roof of the original block is covered with asphalt shingles, and the roof of the rear gabled addition is clad in standing seam metal. The partial-width two-story front gable porch is covered by the cross-gable portion of the dwelling; its design and materials appear to be original. Fenestration on the façade is symmetrical. The windows on the original block consist of two-over-two double-hung wood sash with simple cornices, and the rear gable addition features six-over-six wood windows. All windows appear original but are in need of repair. Primary entry on the south-facing façade is through a single-leaf wood panel door with a

single-light transom; another centered door is above it to access the second floor of the porch. Entry also can be gained through one of two single-leaf wood panel doors (one with two lights), each with a single-light transom, on the west elevation. Another single-leaf wood panel door with two lights (a different style than that on the original block) is found on the west elevation of the rear addition. The entire dwelling is clad in weatherboard siding and it appears to be in fair condition. A small one-story gable building is shown on a map, but the building is not accessible to photograph from the available access point. Based on aerial images, the house was briefly occupied during the early 2000s, with no occupancy since 2005. James Christopher Hankins is listed as the property owner since 2000. A fence was put up during this period, but was demolished by cattle within several years. Cattle continue to gaze the surrounding areas.

NRHP Assessment: PH-0461 is a gabled-ell dwelling that features Folk Victorian elements. No visible modern exterior modifications have been made to the original block with the exception of asphalt roofing. The dwelling appears to have at least one addition, but it does not obscure the scale and massing of the original block, which still conveys its historic feeling. The dwelling does demonstrate a particular type and interpretation of the Folk Victorian (Queen Anne) style. While the exterior condition of the building is fair, it retains sufficient integrity of materials, design, and feeling to be considered eligible for the NRHP under Criterion C. The resource also displays integrity of setting and is imbued with the sense of place associated with Clover Lick's period of development in the late nineteenth century. The historic research carried out for this Project did not identify any events or persons significant to history associated with the resource. Therefore, it is ERM's opinion that PH-0461 is not eligible for the NRHP under Criterion A or B.

Assessment of Effects: The proposed Project will not have a direct effect on the resource. The resource is oriented toward the southeast, and it is located near the broad top of a low hill, with a screen of mature trees on the northwest side of the dwelling (Appendix B, Figures 44). The results of the 3-D terrain modeling and viewshed analysis utilizing Google Earth imaging software are illustrated in Appendix B, Figures 45 and 46. A photographic view from the resource toward the Project showing the location of the corridor, obscured by trees, is shown in Appendix B, Figure 47. The view from the resource toward the proposed Project, which crosses agricultural fields in the bottomland to the north, is interrupted by a band of woods on the north slope of the hill. The Project corridor is expected to cause no significant change in the resource's viewshed from the resource, and therefore ERM recommends that there will be no adverse effect on this resource from the proposed undertaking.

PH-0471

The resource, located on Edray Road/Route 1, is approximately 0.1 miles south of the proposed Project (Appendix A, Sheet 17). It is situated on the northwest side of the road, and is on a mostly level site near the foot of a south-facing slope at the southeast end of a low hill. The slopes to the west and northwest are wooded. To the south is the bottom land of Clover Creek, which follows the contour of the low hill and bends to the north for its confluence with Glade Run. The community of Clover Lick on the west side of the Greenbrier River lies to the east and southeast.

The resource is a circa 1880–1890, two-story, vernacular I-house with three bays and a stone masonry foundation (Appendix B, Figure 48). The original block has weatherboard siding and a weathered roof composed of asphalt sheeting. There are two on-peak, interior brick chimneys on the northeast and southwest elevations. The primary entrance is centered on the southeast elevation and is filled with a paneled wooden front door with a single, rectangular transom light

above. The façade also includes four original two-over-two, double-hung, wooden sill windows on the first floor and five of these on the second floor. The resource also includes a wrap-around porch on the southeast and northeast elevations with turned posts, pierced baluster panels, and vertical wood siding as skirting. The wrap-around porch is connected to a shed-roof addition with wider, clapboard siding and two wooden paneled doors, one of which on the northwest elevation has three lights. The shed roof of this addition extends past the original block and above the roof slope of another shed-roof addition attached to the original block on the rear (northwest elevation) of the house. This older addition features a standing seam metal roof, weatherboard siding on the northwest elevation, T1-11 siding on the southwest elevation, and two, two-over-two, double-hung, wooden sill windows on the southwest elevation, and two on the northwest elevation (Appendix B, Figure 49). The northwest elevation of the addition also includes an exterior brick chimney, with lighter colored replacement brick above the roof line. Both the northeast and southwest elevations of the original block have two, two-over-two, double-hung, wooden sill windows on the first and second floor, and at in the gable ends there is an enframed pair of small, rectangular fixed windows on either side of a section of wood siding; the siding may have replaced a central light in an earlier three-part window. The northwest elevation includes a two-over-two, double-hung, wooden sill window on the first floor and three on the second. The house is in good condition. Adjacent to the house are a storage structure, outhouse, and an accessory structure. Northwest of the house is a circa mid-twentieth century shed-roofed storage structure composed of wide, vertical boards with a corrugated metal roof. It has two, wooden hinged doors on the northwest elevation (Appendix B, Figure 50). Southwest of the house is a gabled accessory structure clad in horizontal siding and Bricktex with clipped corners and a pair of wooden plank doors (Appendix B, Figure 51). It has a standing seam metal roof. Next to the accessory structure is an early to mid-twentieth century outhouse with a hinged, wooden door and an asphalt sheeting clad shed roof. It has replacement vertical wooden siding (Appendix B, Figure 52). All the accessory structures are in good condition.

NRHP Assessment: PH-0471 is a vernacular house with Victorian details. The resource was previously surveyed by Justin Greenawalt and Mary Stack for Skelly and Loy, Inc. in 2011 and was assessed as potentially eligible for the NRHP under Criterion C. Although its roof has been replaced and it has two additions with some updated materials, the most significant changes are confined to the rear portions of the dwelling and do not detract from the resource's historic feeling as the façade is viewed from the public roadway. The outbuildings are not contemporary with the original block of the house; however, they are historic, and do not compromise the setting or feeling of the dwelling. For these reasons, it is ERM's recommendation that PH-0471 has maintained its historical integrity, making it eligible for the NRHP under Criterion C. The historic research carried out for this Project did not identify any significant events or personages associated with the resource, making it ineligible for the NRHP under Criteria A and B.

Assessment of Effects: The proposed Project will not have a direct effect on the resource. The corridor to the north is screened by trees at the confluence of Clover Creek and Glade Run, as well as on the north side of Back Mountain Road. The nearby proposed access road utilizes an already existing road, which will not constitute a viewshed change (Appendix B, Figure 53). The pipeline will be laid under the Greenbrier River, with its corridor cut resuming on the east bank approximately 0.2 miles to the northeast of the resource. Due to the intervening topography at the south end of the low hill, and the screen of trees on the north side of the Glade Run/Clover Creek confluence as it joins the Greenbrier River, the tree cut for the proposed Project may be visible on the opposite side of the river to the northeast only after leaf-fall in the autumn and

winter, presenting a minimal indirect effect on the structure and its historic viewshed. Therefore, ERM recommends that the Project will have no adverse effect on PH-0471.

PH-0902

The resource is a portion of the former West Virginia Pulp and Paper Company (WVP&PC) logging railroad west of U.S. 219 near Linwood, West Virginia, northwest of the road's intersection with Route 66 to Snowshoe (Appendix A, Sheet 14). The surrounding area is comprised of wooded ridges and ridge spurs, with widely-spaced farms and homes mostly in the bottomlands, and a few businesses at the Linwood intersection. The railroad grade follows the contour lines of a ridge spur on the south flank of Middle Mountain, on the north side of Big Spring Fork.

The railroad grade is overgrown, and railroad ties cannot be seen without close inspection (Appendix B, Figures 54 and 55). The railroad ties and track may be original, but the date cannot be determined. Erosion from the adjacent slope has covered the rails and rail bed at its intersection with an existing dirt access road that crosses the resource within the Project corridor.

An earlier report (Tucker-Laird et al. 2016) estimated that the line was constructed ca. 1900 and possibly abandoned in the 1940s, but further research has determined that the line was constructed beginning in 1910 and was completed to Bergoo, near Webster Springs in 1914. It was abandoned following flood damage in 1985 (Sparks 1911; Steelhammer 2012). The railroad was part of the Greenbrier, Cheat and Elk (GC&E) Railroad, which was owned by the WCP&PC. The GC&E also included the earlier line from Cass to Spruce and a line along Shavers Fork north from Spruce to Cheat Junction. The western branch that crosses the Project was constructed to bring pulp wood from the Elk River Valley to a mill at Spruce, constructed in 1904. The mill processed the timber and sent it to the WVP&PC paper mill in Covington, Virginia. Topographic maps for Mingo and Cass in 1924 and 1925 show the route of the line, which ran west from Spruce through Big Cut, with a 4,012-foot pass that was considered the highest point on an interstate railroad east of the Mississippi when it was acquired by the Western Maryland Railroad in 1927 (Sparks 2011).

The WVP&PC was one of the largest lumber operations in West Virginia (McNeel 1981:170–171). At one time it owned approximately 170,000 acres in Pocahontas, Randolph, and Webster counties to supply its lumber and pulpwood operations. The company's operations peaked in 1920, and by the late 1920s, activity had already begun to slow. The GC&E was purchased by the Western Maryland Railroad in 1927 and continued in use for small logging operations and coal hauling (Smith and Deike 1988). The Western Maryland became part of CSX Transportation and the West Virginia State Rail Authority purchased the GC&E line from them in 1997. The state contracted with the Durbin and Greenbrier Valley Railroad to operate excursion trains over portions of the line, and in 2012, plans were unveiled to use the rails from the Spruce to Bergoo line that was abandoned in 1985 to reconstruct portions of the line from Cass to Bemis through Durbin to create a loop excursion line. The Spruce to Bergoo line would be converted to a rail trail (Steelhammer 2012).

NRHP Assessment: It is ERM's recommendation that this resource is not eligible for the NRHP under Criterion C, since it does not display significant engineering features. However, the railroad was a principal component of the West Virginia Pulp and Paper Company's operation at Cass, which was the single largest contributor to the economic development of the region in the early twentieth century. The rails, ties and rail bed are intact, in relatively good condition, and

retain their historical setting. Therefore, ERM recommends the resource eligible for the NRHP under Criterion A for its association with events significant in the history of Pocahontas County. The railroad is not directly associated with any significant persons, and it is not recommended eligible for the NRHP under Criterion B.

Assessment of Effects: The resource is crossed perpendicularly by the proposed Project corridor and access road (Appendix B, Figure 56). Project plans involve open-cut construction through PH-0902, which would necessitate disturbing a short segment of the rail bed, including its ties and track. An existing dirt access road that crosses the resource also will be improved for use in the Project, probably with gravel paving. The existing road has already affected the setting of the resource in the location of the proposed pipeline crossing, and improving the road with gravel is not considered to constitute an adverse effect. Effects from the pipeline itself would include both direct effects to the rail bed as well as indirect visual effects from clearing of vegetation along the corridor. The results of the 3-D terrain modeling and viewshed analysis utilizing Google Earth imaging software are illustrated in Appendix B, Figures 57 and 58. A photographic view from the resource along the Project corridor to the south-southwest, is shown in Appendix B, Figure 59. There are no trees to be removed in the immediate location of the proposed pipeline crossing. However, the tree cut to the north and south would be visible to some extent from certain vantage points along the rail corridor. It is ERM's recommendation that such changes to the setting do not constitute an adverse effect, as views of the tree cut from the resource would be limited due to topography, and would represent a minor modern change to the landscape among many modern elements already present in the viewshed along the length of the resource. It is also ERM's recommendation that direct effects to the rail bed from pipeline construction would not rise to the level of adverse effect because the portion of the resource at issue is relatively small in proportion to the length of the overall resource. Construction plans call for disturbance of 135 feet of the rail bed; given that the railroad extends for 35 miles between Spruce and Bergoo, the proposed impacts would affect approximately 0.07 percent of the overall resource.

PH-0903

The resource is located at 900 Old Huttonsville Turnpike Road, near Linwood, West Virginia, northwest of the intersection with Route 66 to Snowshoe, and east of the former West Virginia Pulp and Paper Railroad (resource PH-0902, above). It is bounded to the west by Middle Mountain and to the east by Old Huttonsville Turnpike Road, which runs parallel to U.S. 219. The resource is situated at the base of ridge spurs to the west and northwest, whose lower slopes have been cleared; the gently rolling terrain slopes gradually to the east-southeast. The surrounding area is comprised of wooded ridges and ridge spurs, with widely-spaced farms and homes mostly in the bottomlands, and a few businesses at the Linwood intersection.

PH-0903 consists of a complex of residences and agriculture buildings, with the center of the complex approximately 0.3 miles east of the proposed Project (Appendix A, Sheet 15). The date of construction for the buildings within the complex ranges from the late nineteenth century to mid-twentieth century. The resource has a number of fencing systems that delineate areas for specific land uses. Adding to the network of fencing within the complex is a livestock circulation network. There are dirt and gravel circulation trails that run throughout the complex that aid in migrating livestock from one grazing field to the next. A small, man-made pond is located south of what today is the main house, built ca. 1940, on the property. There are a total of 16 structures within the complex, 13 of which are historic (Appendix B, Figures 60 and 61).

The oldest house within the complex was built ca. 1890 per owner supplied information. The house has a gable front and wing plan with Folk Victorian style elements (Appendix B, Figures 62 and 63). The foundation of the house features rusticated ashlar masonry with concrete infill. There is a lattice cover over the foundation on the rear wing on the south elevation of the building. The house is clad in horizontal vinyl siding and has a standing seam metal roof. There are three chimneys on the house, two located on the central massing of the house and the third on the rear wing of the house. The chimneys on the central massing of the house are off center; they are brick and concrete, respectively. The third chimney is located within the ridgeline of the rear wing and it is brick. The front of the house is the northeast elevation. The gable end portion of the house on the northeast elevation has a bargeboard that is decorated with carved wood bulls-eyes. The gable ends have five-sided attic vents with rectangular lower portions and triangular tops. There are three-sided window bays on the first and second story of the gable front portion of the house, creating a turret-type look. The windows on the second floor of the main block and in the bay are all wood two-over-two, double-hung with entablatures. The wing portion of the northeast elevation has a shed roof porch with a gable front entry. The roof on the porch is standing seam metal and the floor is wood. The porch posts and banister are all decorated with flat, jigsaw cut trim. The porch foundation is covered in lattice. There is a single window on the first floor of the wing portion of the house that is two-over-two. The door on the façade appears to be original and is a two-panel wood door. The northwest elevation of the house has two, two-over-two double-hung wood windows with entablatures on both the first and second stories.

Approximately 250 feet northeast of the ca. 1890 house on the property is the second house on the property, and now serves as the main house in the complex. The house was constructed ca. 1940 (Appendix B, Figure 64). The bungalow has a concrete block foundation and was built with a side-gable massed plan. The one-and-a-half story house is clad in wavy edge asbestos, and the roof is standing seam metal with exposed rafters and attic vents in the gable ends. There is a single brick chimney along the roof ridgeline. The primary entrance is on the southeast elevation, accessed via poured concrete steps featuring iron hand rails. The front screened door has an X-brace design with open screen above, and the inner door is wood panel with paned lights. The first story of the house has a group of three, one-over-one vinyl windows on either side of the door. The second story, gable front dormer has exposed rafters and a standing seam metal roof with a weathervane attached at the ridge. There are two pairs of one-over-one vinyl windows on the southeast elevation of the dormer. The northeast elevation of the house has two one-over-one vinyl windows and a single horizontal sliding window. The second story of the northeast elevation has a single one-over-one vinyl window.

The northwest elevation of the house has a single one-over-one vinyl window as well as paired one-over-one vinyl windows. Between the windows is an X-brace door with split screen, behind which is a wood panel door with a single light. The southwest elevation of the house has an extending wall with a standing seam shed metal roof with exposed rafters on the first story (Appendix B, Figure 65). The extended wall has a set of three, one-over-one vinyl windows. The remaining three windows on the first story of the house are also one-over-one vinyl windows. The second story of the southwest elevation has a single, one-over-one vinyl window and paired one-over-one windows. Approximately 22 feet northwest of the house is an associated, single-story outbuilding (Appendix B, Figure 66). The outbuilding has a wood foundation and standing seam metal front gable roof with exposed rafters. The outbuilding is clad in horizontal drop wood siding. The southeast elevation of the outbuilding has two doors made of horizontal lumber on hinges with wood door surrounds. There is a set of wood steps leading up to one door. On the southwest elevation of the outbuilding are two windows. One

window has a hinged wood cover. The northwest elevation of the building has a single drop siding door on a hinge. The northeast elevation of the building is void of openings.

The remaining outbuildings are all scattered across the property and range in age. The first barn on the property, constructed ca. 1960, is located 215 feet from the main house (Appendix B, Figure 67). The barn has a concrete foundation and standing seam metal front gable roof. The barn is clad in a mix of board and batten siding and vertical lumber siding. The southeast elevation of the barn has two vertical lumber doors that are set on a track. Along the roof ridge is an overhanging light. The northeast elevation of the barn has two fixed windows with six lights. The southwest elevation is a duplication of the northeast elevation. The northwest elevation of the barn abuts an adjacent outbuilding, but there is a single boarded up window visible. Approximately 220 feet northwest of the first barn is the second barn on the property constructed ca. 1960 (Appendix B, Figure 68); this single-story barn has a corrugated metal gable front roof with a shed-roof addition on the northeast façade. The barn has a stone foundation and is clad in vertical lumber siding. The southeast elevation of the barn has two vertical wood doors on hinges; there are no windows on the other elevations. The northeast elevation has an enclosed wood pen located under the shed roof. The third barn, constructed ca. 1960, on the property is located along the roadside approximately 1,050 feet from the main house (Appendix B, Figure 69). The barn is two stories and has a concrete foundation. The gambrel roof on the barn is clad in corrugated metal and there is a shed-roof extension on the southeast elevation. The southwest elevation of the barn has two fixed-pane windows with six lights on the first story. The second story has two open window casings. In between the two open windows on the second story is a double X-brace design. On the southwest elevation of the barn under the shed roof, are two vertical lumber barn doors on hinges. The southeast elevation of the barn has a single vertical lumber door on a track. The northeast elevation of the barn has two fixed, six-light windows on the first story. The second story of the barn has another two, fixed-light windows. Irregularly placed on the elevation is an X-brace door on a hinge. Under the shed roof, is a vertical lumber door set on a track. Above the door is a smaller vertical wood door on a hinge. The second outbuilding on the property is located approximately 330 feet northwest of the first house on the property. This outbuilding, constructed ca. 1990s, has a concrete foundation and was constructed with concrete block (Appendix B, Figure 70). The outbuilding has a corrugated metal front gable with a small offset metal chimney. The gable end of the building is horizontal wood. The door is on hinges and is made of vertical wood. There is small single-pane window on the southwest elevation.

There are several other structures on the property that are being used for agricultural purposes. After review of historic aerial photographs, it appears that construction of most of these did not begin until the 1970s. Shed 1, sits approximately 180 feet northwest of the first house on the property and was constructed ca. 1970s. The shed is a single-story, vertical lumber structure with a corrugated metal shed roof and concrete foundation. The northeast elevation of the structure has a set of four, vertical lumber barn doors on hinges. The second shed on the property is immediately adjacent to the previously mentioned shed to the northwest. This shed was constructed ca. 1970s. This shed, Shed 2, is also clad in vertical lumber and has a corrugated metal shed roof. The foundation is concrete. There is a vertical lumber door on the northeast elevation of the structure (Appendix B, Figure 71). The outhouse on the property sits approximately 40 feet southwest of the 1890s house on the property. This outhouse has a wood foundation and horizontal wood siding. The corrugated metal shed roof on the outhouse is partially deteriorated. There is a single wood door on the south elevation. The chicken coop on the property is located approximately 45 feet northwest of the outhouse. The chicken coop was constructed post 1980. The structure has both a concrete and wood foundation and is clad

in vertical board and batten siding. The structure has a corrugated metal front-gable roof. There are two one-over-one window frames on the southwest elevation of the structure. The third shed on the property is located immediately west of the 1890s house on the property. This shed was constructed ca. 1970s (Appendix B, Figure 72). The shed has a standing seam front gable metal roof and is clad in horizontal wood siding. The foundation of the structure is concrete. The entry is location on the southwest elevation and consists of a vertical lumber door. The fourth shed on the property is located approximately 640 feet northwest from the 1890s house (see Appendix B, Figure 70). The shed was constructed ca. 1970s. The foundation of the shed consists of wood piers. The structure is clad in vertical lumber and has a standing seam metal front-gable roof. The entry to the shed is beneath a vertical lumber roof and is located on the west elevation. Immediately adjacent to the first barn on the property is the fifth shed. The shed was constructed ca. 2000. The shed has a mixed log and lumber framing system, with log posts and lumber bracing. The exterior of the shed is clad in standing seam metal. The roof on the shed is a standing steam metal front gable. There is an addition to the northwest of the shed that has a standing seam metal shed roof. The structure is used for both storage as well as cars (see Appendix B, Figure 67). Southeast of the 1890s house are a root cellar and a well house. The root house was constructed ca. 1960 and sits in the side of a hill. The foundation of the structure is concrete block. The portion of the cellar that sits at ground level is clad in clapboard siding. The structure has standing seam front-gable roof. The door to the structure is a plain wood door on the northwest elevation. There is a six-over-six window on both the northeast and southwest elevations. The portion of the structure that is built into the hill side has a standing seam metal shed roof (Appendix B, Figure 73). The well house on the property has a wood pier foundation. The building is cladded in horizontal wood and has a standing seam front gable roof. The entry to the structure is located on the northwest elevation. There is a single vent visible on the northeast elevation (Appendix B, Figure 74).

NRHP Assessment: The diverse grouping of houses and accessory buildings help to show the evolution of the agricultural business over time at PH-0903. Two periods of agricultural development in West Virginia are represented by the farmstead, which includes the dwelling houses and associated outbuildings and grounds. The 1890s house is a relatively substantial dwelling with folk architectural elements that suggests an effort to present a stylish and respectable home. Although the original barn and other early outbuildings have been replaced, the existing structures are typical of a late nineteenth- to early twentieth century-farmstead, including animal shelters, sheds for storing farm equipment, and a root cellar for food storage. Some elements typical of such farms are missing, however, such as grain storage, a smokehouse, and a springhouse. The second period of development dates to the World War II era, when a number of amenities were becoming available to rural West Virginia residents. Store-bought foods made root cellars and smokehouses less important, while mechanized farming increased the need for equipment sheds. Beef cattle and hay became principal farm products around the mid twentieth century, and the construction of two new barns in the 1960s likely reflects the need for increased livestock facilities. The chicken coop is typical of an increase in poultry production in West Virginia in the second half of the twentieth century (Sperow 2012). A second residence was frequently built on older farms in a more modern style for younger families to occupy, and the old homestead was eventually abandoned when older generations passed away. The preservation of family homesteads as cultural markers in rural Appalachia is documented by Williams (1991).

The farmstead at PH-0903 illustrates the evolution of rural West Virginia farms during the twentieth century, from traditional subsistence-based farms, to more market-oriented specialized farms. A second dwelling was constructed to accommodate new generations of

family, while the old homeplace was preserved. Food storage and preparation buildings gave way to equipment sheds and cattle barns. As a good example of agricultural developments in the region for nearly a century, ERM recommends PH-0903 eligible for the NRHP under Criterion A.

Although the PH-0903 complex represents vernacular design spanning nearly a hundred years and does not exhibit high artistic value as the work of a master, the ca. 1890 and ca. 1940s dwellings are good examples of period architectural styles and have had few material and structural changes. Not only do the dwellings retain significant integrity, the agricultural landscape remains intact, preserving the historic setting and feeling of the resource. Although the barns and outbuildings have seen various changes to their original design and building footprints, they aid in conveying the evolution of a farm through time and create a sense of place. It is therefore ERMs opinion that the complex also be considered eligible for the NRHP under Criterion C. The historic research carried out for this Project did not identify any significant personages associated with his resource, therefore, the resource is recommended as not eligible for the NRHP under Criterion B.

Assessment of Effects: The proposed Project will not have a direct effect on the resource. The Project corridor is routed near the crest of the ridge spur to the west of the resource. The results of the 3-D terrain modeling and viewshed analysis utilizing Google Earth imaging software are illustrated in Appendix B, Figures 75 and 76. A photographic view is presented in in Appendix B, Figure 77 showing how the Project corridor will be obscured by topography and vegetation behind the primary dwelling. Due to the change in elevation and intervening vegetation, the Project corridor will not be visible except from particular vantage points within the resource boundary (see Appendix B, Figure 76). An existing dirt and chip road across the cleared terrain approximately 0.05 miles south of the dwelling will be used as an access road for the proposed Project (see Appendix B, Figure 61). Improvement or widening of this road may entail the removal of adjacent trees; however the wooded section of the road is also at a higher elevation than the historic structures, partially screened from view. Therefore, it is ERM's recommendation that the Project will not have an adverse effect on this resource.

UP-0825

The resource at 221 Lick Run Road in Buckhannon, West Virginia, is located in a draw between two ridge spurs, and accessed by a tree-lined private drive (Appendix A, Sheet 6). It is set back approximately 0.2 miles from the road, and was not accessible for survey. In aerial photographs, the area surrounding the structures has been cleared, with wooded slopes rising above it. The surrounding area includes mid-twentieth century family farms to the southwest, and a denser concentration of mid- to late twentieth century homes on the northeast side of the road, south of the resource.

The gabled dwelling with a rear addition appears on historic aerial photographs from at least 1957. There are a few mature trees on its north side. A barn and four additional accessory structures to the north, northeast, and northwest of the dwelling are also visible in aerial photographs. The dwelling is approximately 0.1 miles south of the proposed Project.

NRHP Assessment: As the resource could not be evaluated for NRHP eligibility, the proposed Project will consider it to be eligible until it can be assessed.

Assessment of Effects: The proposed Project will not have a direct effect on UP-0825. The corridor will pass to the northeast of the property at the northern end of the cleared area at the

top of the hollow. From aerial photographs, this end of the hollow is wooded (Appendix B, Figure 78). The Project corridor's removal of the trees on the ridge spur's slopes to the east of the dwelling are likely to be partially visible from the resource, particularly after leaf-fall in the autumn and winter has defoliated the trees next to the dwelling. The results of the 3-D terrain modeling and viewshed analysis utilizing Google Earth imaging software are illustrated in Appendix B, Figures 79 and 80. Although the viewshed analysis shows the potential for visual effects over a large area, the 3-D model shows that only a limited segment of the corridor would be visible as it descends the slope east of the resource. The tree cut would be visible on the hillside, but would be obscured by tree cover as the corridor follows the crest of the landform heading south. It is ERM's recommendation that the modest changes to the setting of the resource from the Project would not rise to the level of an adverse effect.

UP-0830

The resource includes two structures associated with a World War II-era air strip, and it is located in a proposed contractor yard on the south side of Brushy Fork Road/County Road 7, on a large open site that slopes very gently to the Brushy Fork stream approximately 0.15 miles to the south; the site currently appears to be used for hay production (Appendix A, Sheet 5). Low hills rise on the north side of County Road 7 and on the south side of the stream. The area has a light density of modest homes, many from the first decades for the twentieth century and from mid-century, and the circa 1990s Buckhannon Seventh Day Adventist Church is located on an elevated site to the north-northeast. A deteriorated asphalt-paved access drive passes between the two structures to a parking area on the south side of the westerly building, and continues south on the former location of the Lewis Flying Field airport. No evidence of the former runway to the south was found.

Built on farmland belonging to "Lum" Lewis in approximately 1940 as a grass landing strip, UP-0830 served during World War II (WW II) as a pilot training base for the 49th College Training Detachment of the Army Air Cadet Training Program. In the early 1940s, the Army Air Corps was scrambling to provide training to thousands of cadets that would be needed for the war effort. With facilities lacking to accommodate the backlog of pilot trainees, the Flying Training Command instituted the College Training Program (CTP) that would combine academic classes with two weeks of pilot training at colleges and universities. The program was launched in March 1943 with over 50 schools nationwide participating, including Wesleyan College in Buckhannon. Nearly 100,000 men entered the program during its short history. By May 1944, the need for additional pilots had waned and the program was discontinued (Ashcroft 2005:37).

Approximately 350 cadets were enrolled in the initial class of the Wesleyan College CTP. The intense training program included courses in mathematics, physics, geography, and military history. Additional cadets arrived at Wesleyan in the summer of 1943, and eventually 700 men would participate in the program there. The landing strip on Brushy Fork was expanded in 1943 with the construction of two half-mile runways of graded, packed soil for the thirteen "Army cub airplanes" stationed at the field (Tenney and Tenney 2008). The two structures were reported to have been built as a hangar and a machine shop at the time of the runway expansion (Tenney and Tenney 2008:36). No formal name for the training field was found for the period of the CTP, but in 1944, soon after the program was discontinued, the Brinkerhoff Flying Service was offering civilian flight training at "Lewis Flying Field at Buckhannon." After WW II, an aviation program for returning servicemen on the G.I. bill was located at the field through 1955, and private flight training schools continued through the 1970s. The runways were expanded

and paved, and small private aircraft were stored in the hangar building (Steve Weaver, telephone interview, June 27, 2016; Rich Clemons, telephone interview, June 27, 2016).

The field was identified as Brushy Fork Airport in 1966, but had been renamed Lewis Field by 1979 (USGS 1966, 1979). During the 1980s, the Lewis Field airport continued in use, with minimal operations provided by the farm's caretaker, such as pumping gas. The caretaker and his family lived in a now-demolished house on the north side of the machine shop building which was recorded as 46UP343 in the archaeological survey for the current Project. The house, which predated the establishment of the air strip, was reported to be a typical early twentieth century one-story vernacular dwelling with a tin roof, six rooms, with a porch in front and a kitchen in back. The caretaker was reported to have raised cattle and cut the hay on the air field. After the caretaker's death and his family's departure, the structure was unoccupied and became dilapidated; it was reported to have been demolished at the turn of the twenty-first century. A new Upshur County Regional Airport was built on a hilltop approximately 0.3 miles to the northwest in the mid-1990s, and the Lewis Field airport was closed to prevent interference with its traffic pattern (Steve Weaver, telephone interview, June 27, 2016).

The one-story gabled clear-span hangar building has brick masonry piers with an inset vertical channel, and the building has an infill of grooved concrete blocks; both materials are painted red. The fascia at its cornice line, clad with asbestos cement siding, exhibits horizontal elements of the Moderne design associated with ships and airplane facilities in the 1930s and 1940s. It has a tin roof, and its gable ends are also clad with asbestos cement siding, with two pairs of window openings at the north gable end filled with deteriorated plywood panels. A pair of hinged doors fabricated from wood planks fill an opening on the east elevation. The south façade's entrance facing the former airfield is closed by four tiers of paired tin panels on overhead tracks, enabling an almost full-width opening at this façade (Appendix B, Photo 81). A one-story shed-roofed office wing at the west façade has a wainscot of brick piers with grooved concrete block infill, and asbestos cement siding above (Appendix B, Photo 82). It has pairs of sliding windows on its west side, including both aluminum and vinyl units, and updated Masonite doors at the north and south ends; the door at the south façade of the wing has a large upper opening filled with an engineered wood panel. Its finishes are considerably weathered, and it is in overall fair condition.

Southeast of the hangar on the opposite side of the access drive is the machine shop building. This oversized gabled wood-framed structure is clad with corrugated metal panels and has a standing seam metal roof. Updated corrugated metal panels fill the east and west gable ends. Its doors are mounted on a metal overhead track that extends beyond the north façade, allowing a full width opening on that side. The current doors on its west elevation are fabricated of corrugated metal panels attached to a frame; it is unclear whether the weathered existing doors are hinged or attached to the overhead track (Appendix B, Photo 83). The original section's posts have fieldstone footings: together with its location immediately to the south of the demolished house, this older construction technique suggests that the machine shop might have been adapted from an earlier barn structure. The building appears to have been adapted for agricultural use following the closure of the air field, and it has had a number of additions, including full-width one-story shed-roofed bays on its east and south elevations. A personnel door fabricated from plywood is located at the west end of the south addition, and inside the north end of the addition on its east elevation, there are two piers of brick masonry that rise to the height of the ceiling plate and may previously have supported another sliding door. The structure's shed roof has been further extended at the east and south elevations creating covered storage or equipment shelters, supported by in-ground posts, some of which are

dressed tree trunks (Appendix B, Photo 84). Another shed-roofed enclosed addition has been constructed at the north end of the eastern addition, extending beyond the plane of the machine shop's north façade, and the west end of the southern addition is also enclosed. The exterior finishes are considerably weathered, and the roofs of the additions are sagging. The structure is in overall fair to poor condition.

NRHP Assessment: The masonry hangar building was constructed and served during the former air field's World War II use as a military pilot training program, and its design has Moderne elements expressive of that period. With the closure of the airfield and lack of maintenance of its runways, the hangar building's visual context has been diminished; however it is ERM's recommendation that UP-0830 retains sufficient integrity for eligibility for the NRHP under Criteria A and C. The maintenance shop appears to have been a more vernacular structure, and possibly represents the adaptive reuse of an earlier barn, which has been subsequently altered and its exterior is considerably deteriorated. Because of the changes to the maintenance shop, it no longer conveys the feeling of the resource's WW II-era period of significance. Even with the changes to the maintenance shop and the loss of the caretaker's house, however, the resource serves as a visible reflection of the effect of World War II training facilities on local communities and Upshur County's participation in the Air Corps College Training Program. The parallel pilasters of the hangar are characteristic of the Moderne style common on transportation facilities of the era.

Assessment of Effects: No adverse effect to the resource will result from the property's use as a contractor yard during construction associated with the proposed Project (Appendix B, Figure 85). The buildings will be left standing, and all materials temporarily stored on site will be removed after construction of the pipeline. Because there is no vegetation around the building to be removed, there will be no adverse visual impact on the property. The results of the 3-D terrain modeling capturing sight lines toward the proposed pipeline corridor to the south and west are presented in Appendix B, Figures 86 and 87, and the findings of the viewshed analysis are shown in Appendix B, Figure 88, illustrating areas with a potential view to the Project. As the 3-D models show, a prominent hill entirely blocks the view of the Project to the south, while only a small area to the west has a potential view, with the remainder obscured by hills. However, the photographic view to the west illustrates that vegetation as well as topography entirely screens the view to the Project (Appendix B, Figure 89). The photographic view to the south confirms that the view would be entirely obscured (Appendix B, Figure 90).

BUCKHANNON CIVIL WAR STUDY AREA

The Buckhannon Civil War Study Area is 6,500-acre area around the town of Buckhannon associated with military activity during the Civil War. It was defined as part of an effort by the West Virginia GIS Technical Center of West Virginia University and the West Virginia Historic Preservation Office to map the locations of Civil War actions in West Virginia (Brewer and Donaldson 2011). The boundary is based on research from primary and secondary sources, but did not involve on-the-ground survey. Where "a definitive location could not be established, a polygonal area was digitized that most closely represented all known landmarks and features detailed in the battle accounts," according to the study methodology. In addition to the Study Area, there is a mapped proposed National Register area consisting of two polygons in Buckhannon proper. A small portion of the Project's visual APE falls within the Buckhannon Civil War Study Area in two locations: in the northwest corner of the Study Area where U.S. 48 enters Buckhannon from the west (Appendix B, Figures 91–96), and in the southwest corner along County Road 14 near Light Chapel Road (Stoney Run-Atlas Spruce Fork) (Appendix B,

Figures 97–101). A portion of the APE for a temporary contractor yard also falls within the western part of the Study Area on the south side of Brushy Fork Road (Appendix A, Sheets 2 and 3).

No major engagements were fought in Upshur County, but troops from both sides traveled through the area, skirmishing occasionally, as the territory changed hands. For most of the war, the Union Army maintained control of Upshur County. However, in August and September 1862, approximately 550 Confederate troops under the command of General Albert G. Jenkins marched through central West Virginia, capturing several hundred prisoners, and destroying Union supplies and public records. On August 30, 1862, his troops engaged about 200 Union troops commanded by a Captain Marsh on the outskirts of Buckhannon. The Union forces were routed; more than a dozen Union soldiers were killed during the battle and about 20 more were taken prisoner. Captain Marsh was among those taken prisoner. The Confederate troops then entered the city and, according to General Jenkins's journal, destroyed everything of value. The following day, the Confederate troops left the town and headed for Weston. Confederate troops again recaptured the town on April 28, 1863 during General John D. Imboden's Raid. Imboden led 3,400 Confederate soldiers from Staunton, Virginia toward Wheeling in an effort to destroy portions of the B & O Railroad and disrupt the Restored Government of West Virginia at Wheeling. His line of march took him through Beverly to Buckhannon, where he was joined by an additional 1,200 men under General William E. Jones. The raid continued into Wirt County where an oil field was destroyed. However, the raid was not effective in breaking up the railroad or unseating the Union government (The Villages Civil War Study Group n.d.).

NRHP Assessment: U.S. 48 follows the route of the Staunton-Parkersburg Turnpike, which was the main travel route through Buckhannon during the Civil War (CivilWarTrails.org n.d.). The views toward the Project corridor from the Civil War Study Area in this location are of a 4-lane divided highway and a parallel two-lane road (the old route of U.S. 48) flanked by a mix of modern businesses, warehouses, residences, pastures, and woodland (see Appendix B, Figures 91 and 92; Appendix B, Figures 102–105). No Civil War military action is known to have taken place in the vicinity of Stony Run Road and Light Chapel Road. Action during the skirmish 1862 action in Buckhannon appears to have occurred well to the northeast. Views to the Project from County Road 14 are along a rural road with numerous modern residences and a mix of open spaces and forest (Appendix B, Figure 106). From the modern subdivision north of Stony Run Road the view to the Project is of large, recently-built houses set amid a mix of open fields and scattered trees. The corridor is not visible from Grant Lane within the subdivision because of an intervening ridge. A transmission line cuts through the Civil War Study Area from the northeast and parallels the Project corridor for about 0.2 miles to the southwest of the resource (see Appendix B, Figures 97 and 98; Appendix B, Figures 107–110). No military action is known to have taken place along Brushy Fork Road in the vicinity of the temporary contractor yard. In any case, the temporary workspace will have no effect on the resource because no vegetation or buildings will be removed, and the area will be returned to its former appearance after its use during the construction phase of the Project.

The Buckhannon Civil War Study Area has not been determined eligible for the NRHP, and no evidence was encountered within the Project APE to suggest that this portion the Study Area has sufficient integrity to be considered eligible. However, because the entire study area was not examined, an accurate assessment could not be carried out. Further research and evaluation is necessary to make a recommendation of eligibility. Therefore, ERM recommends that for the purposes of Section 106 review for this Project, the resource be treated as potentially eligible for the NRHP (Appendix B, Figure 111).

Assessment of Effects: The area of direct effects for the Buckhannon Civil War Area is limited to one location where the corner of a proposed contractor yard extends into the western edge of the resource. No structures or vegetation will be removed from this area, and it will be returned to its former appearance after construction is completed. Therefore, there would be no direct effect to the resource from the Project.

The area of visual effects from the Project extends into the Buckhannon Civil War Area in two locations: one in the northwest corner and one in the southwest corner of the area (see Appendix B, Figure 111). The Project corridor passes through both wooded and open areas in these locations, and land use includes warehouses, rural residences, modern subdivisions, commercial buildings, and farms. In the northwest part of the Civil War Area, the tree cut for the corridor is potentially visible where it crosses a wooded ridge on the north side of U.S. 48, about 0.8 miles northwest of the Civil War Area boundary. This area is heavily developed and includes cleared industrial sites, a limited access highway, and existing utility lines. South of U.S. 48, the route would be screened by topography (Appendix B, Figures 112–114). In the southwest part of the Civil War Area, photosims indicate that the corridor would be screened from view on public rights of way by topography and vegetation (Appendix B, Figures 115 and 116). Sections of the corridor may be visible from portions of the Civil War Area that are located on private land in the Deer Creek Ridge subdivision off Stony Run Road, but these areas were not accessible during the survey (Appendix B, Figures 117). The corridor in this area passes through cleared land with a few scattered trees, so changes to the viewshed would be minimal. An existing powerline cut also runs through this area. Because much of the Buckhannon Civil War Area has been impacted by modern intrusions, and based on the minimal impact to the viewshed from the Civil War Area toward the project from 3-D modeling and photosimulation, it is ERM's assessment that the proposed Project will have no adverse effect on the Buckhannon Civil War Area.

SUMMARY AND RECOMMENDATIONS

Direct and indirect Project effects were assessed for 12 historic and architectural resources eligible or potentially eligible for the NRHP that are located in the Project APE. One resource would be adversely affected by the proposed undertaking. It is PH-0095, a hiking shelter within the Seneca State Forest Historic District. The centerline of the proposed pipeline will pass approximately 10 meters to the south of the structure; permanent removal of vegetation along the corridor would have an adverse effect on the setting of the shelter. It is ERM's recommendation that the Project will have no adverse effect on the remaining 11 NRHP-eligible resources.

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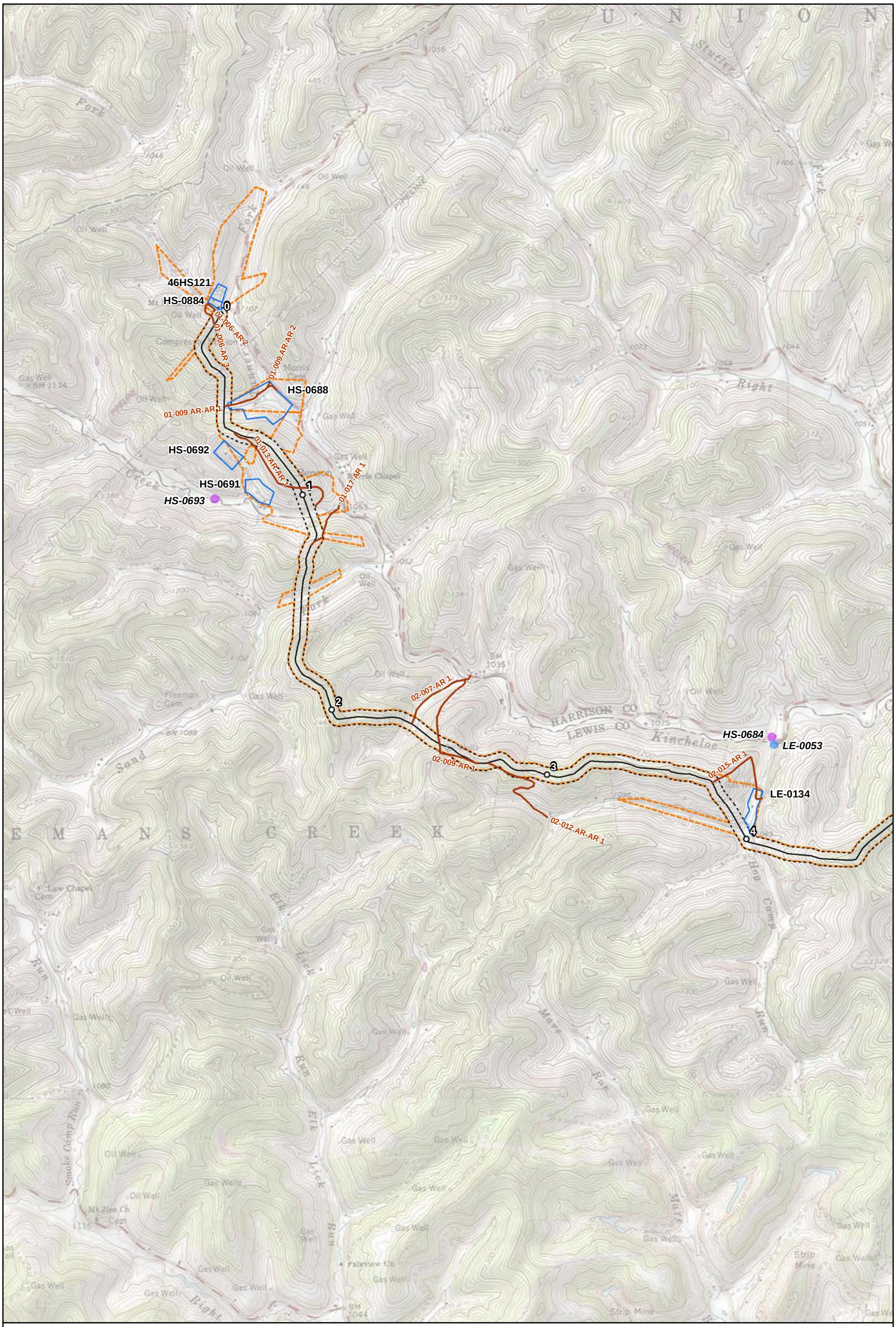
APPENDIX A – PROJECT MAPS DEPICTING HISTORIC RESOURCE LOCATIONS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HARRISON CO
LEWIS CO
EMANS CREEK
PIPELINE
Oil Well
Gas Well
Gas Wells
Strip Mine
Law Chapel Cem
Freeman Cem
Mt Zion Ch Cem
Fairview Ch
Kinchelow
Right Fork
Elk Lick Run
Smoke Camp Run
Sand Lick Run
Mores Run
Holly County
0 0.25 0.5 0.75 1 Miles
0 0.25 0.5 0.75 1 Kilometers
Sheet 1 of 25
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Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
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Unassessed
Resources Inside APE - NRHP Status:
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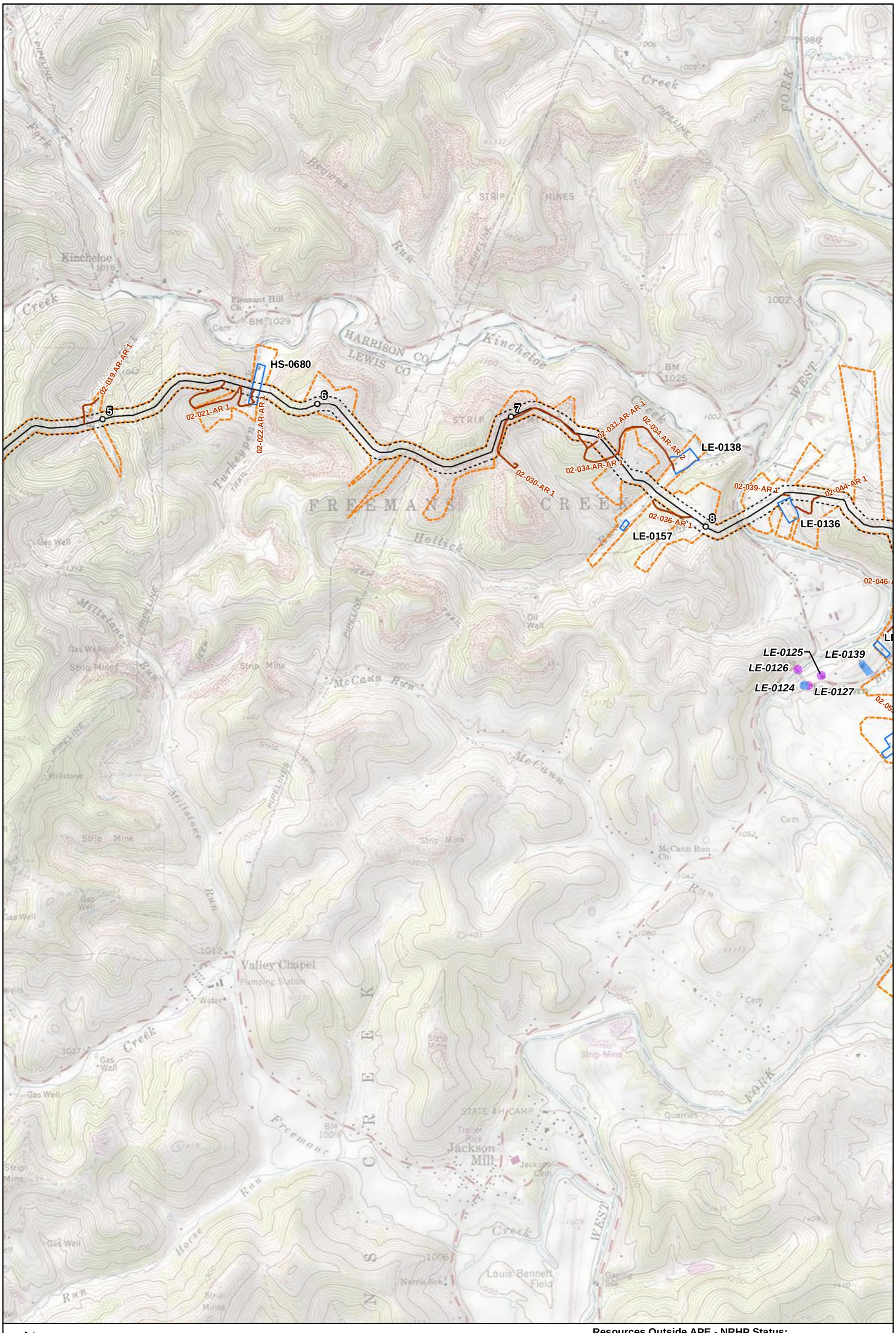
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02-031-AR-1
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02-036-AR 1
02-039-AR 1
02-044-AR 1
5
6
7
8
Kincheloe
Pleasant Hill Ch
Cem
BM 1029
HARRISON CO
LEWIS CO
Kincheloe Creek
BM 1025
WEST FORK
FREEMANS CREEK
Hollick
Gas Well
Millstone Run
Strip Mine
McCann Run
Oil Well
McCann Run Ch
Valley Chapel
Pumping Station
Water
Freeman Creek
Jackson Mill
STATE 4-H CAMP
Louis Bennett Field
Norris Sch
Quarries
Cem
0 0.25 0.5 0.75 1 Miles
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Sheet 2 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
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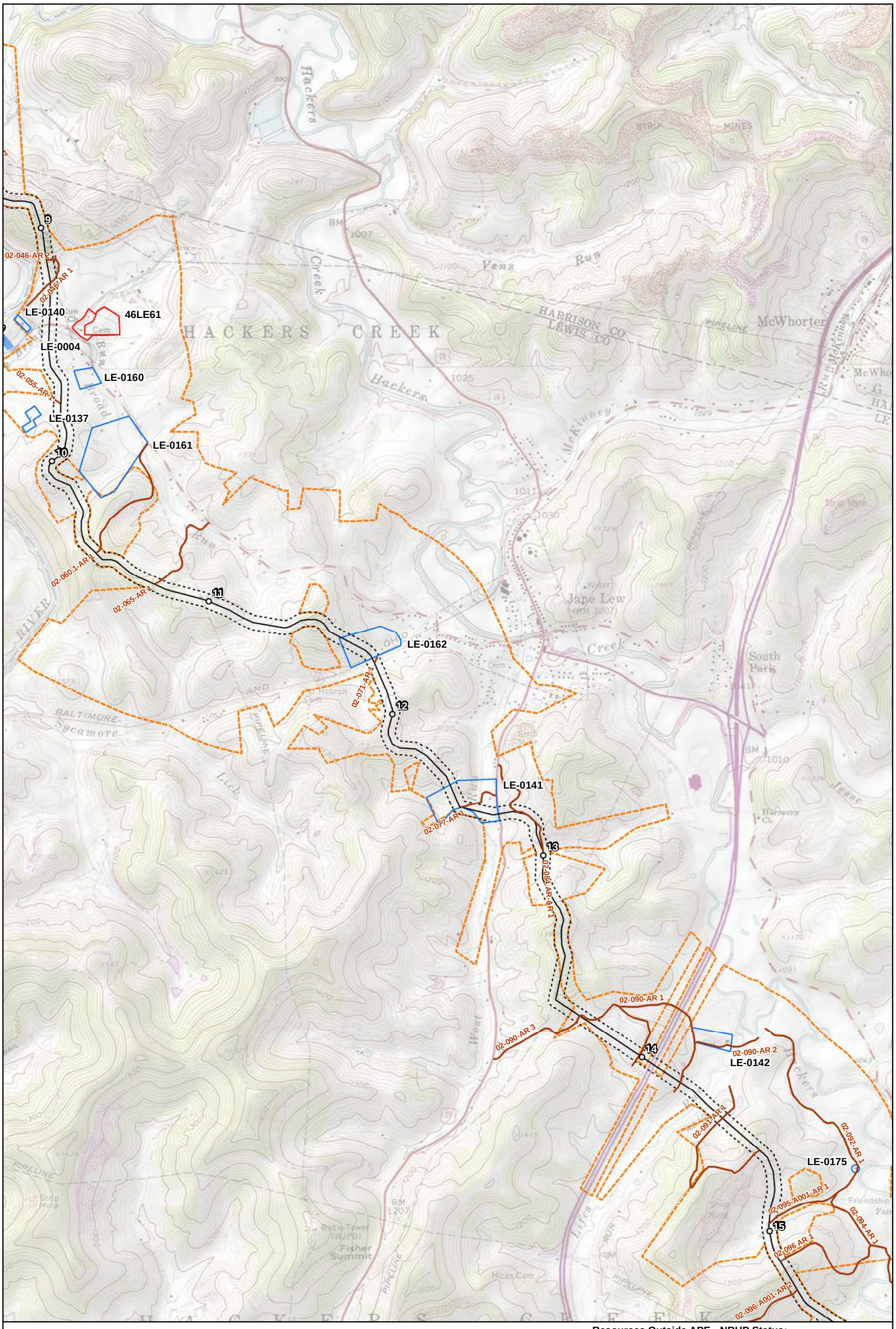
HACKERS CREEK
Hackers Creek
Vens Run
HARRISON CO
LEWIS CO
McWhorter
Jane Lew
South Park
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LE-0140
46LE61
LE-0004
LE-0160
LE-0137
LE-0161
LE-0162
LE-0141
LE-0142
LE-0175
02-046-AR 2
02-046-AR 1
02-055-AR 1
02-060.1-AR 1
02-065-AR 1
02-071-AR 1
02-077-AR 1
02-084-AR-AR 1
02-090-AR 1
02-090-AR 3
02-090-AR 2
02-091-AR 1
02-092-AR 1
02-095-A001-AR 1
02-094-AR 1
02-096 AR 1
02-096-A001-AR 2
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Sheet 3 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
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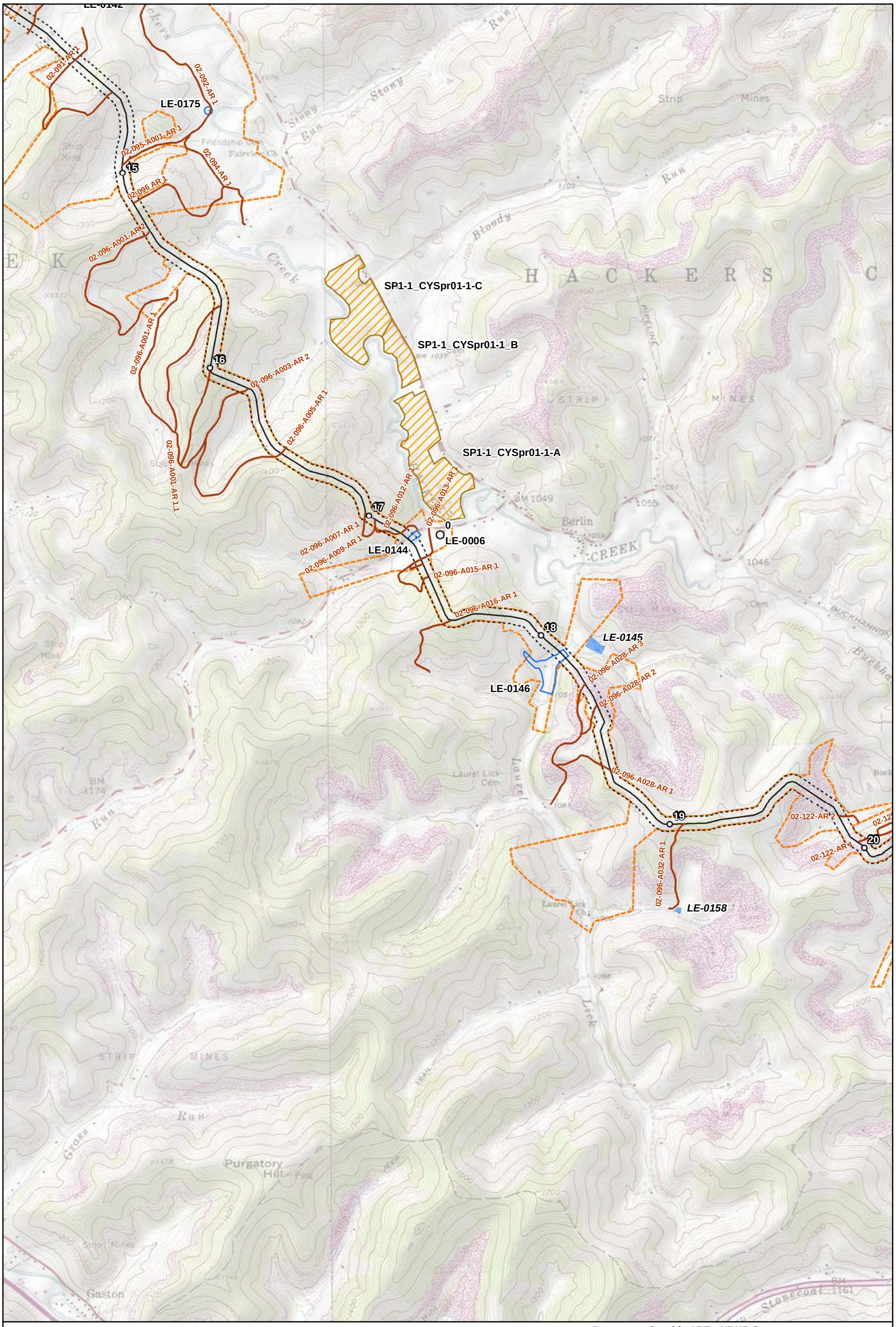
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02-096-A001-AR 1
16
02-096-A003-AR 2
02-096-A005-AR 1
02-096-A001-AR 1.1
17
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02-096-A013-AR 1
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02-122-AR 2
02-122-AR 1
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Stony Run
Bloody Run
Strip Mines
Friendship Ch
Fairview Ch
Creek
HACKERS
PIPELINE
STRIP MINES
BM 1049
1055
Berlin
CREEK
1046
Cem
BUCKHANNON
Laurel Lick Cem
Laurel Lick Ch
Laurel Lick
TRAIL
JEEP
Run
Grass
Purgatory Hill
Gaston
Stonecoal
0 0.25 0.5 0.75 1 Miles
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Sheet 4 of 25
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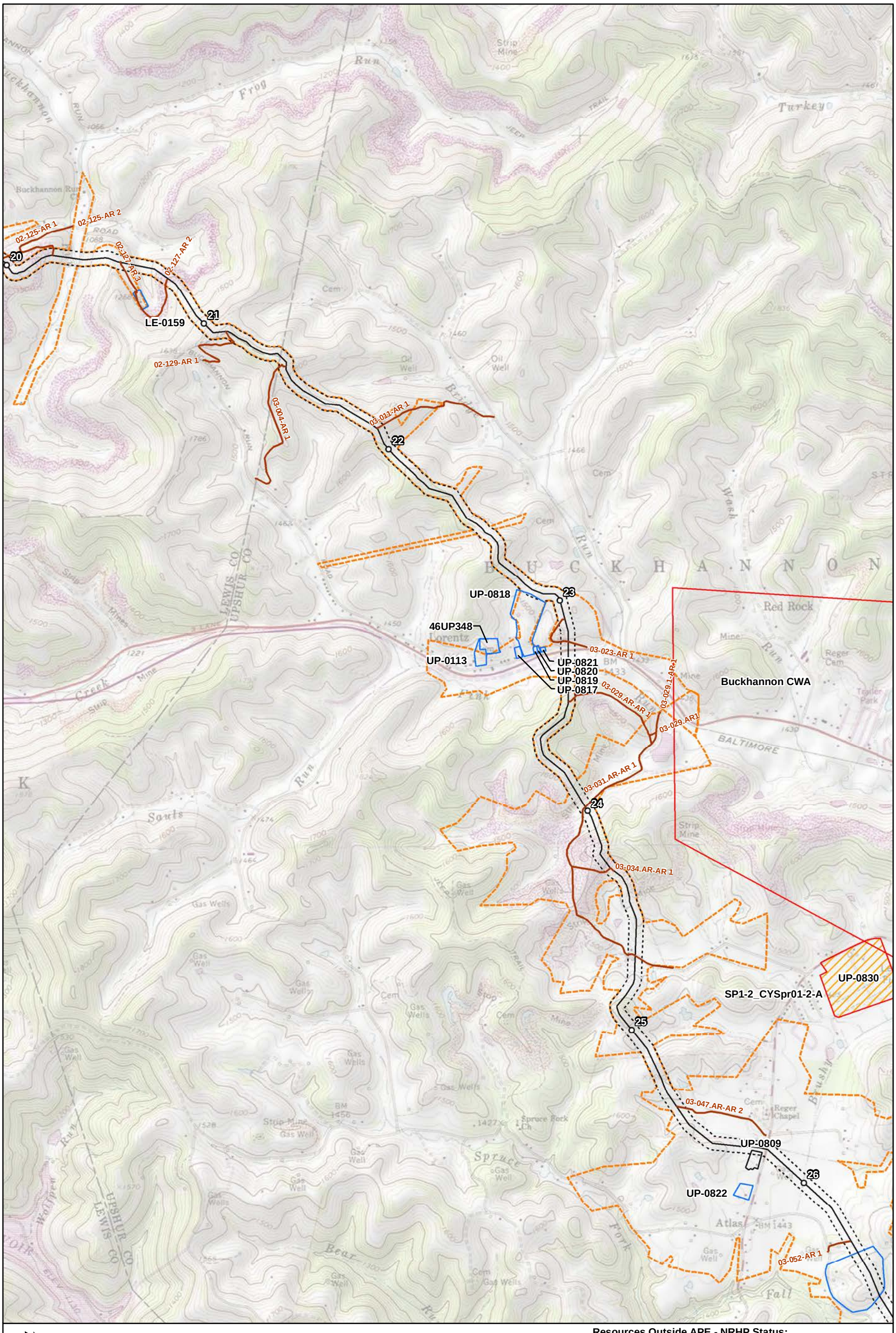
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03-034.AR-AR 1
03-047.AR-AR 2
03-052-AR 1
Frog Run
Turkey Run
Buckhannon Run
Strip Mine
Oil Well
Cem
Gas Wells
Red Rock
Reger Cem
Reger Chapel
Trailer Park
Spruce Rock Ch
Lorentz
Sours
Atlas
Spruce
Bear Fork
Fall
BALTIMORE
JEEP TRAIL
ROAD
LEWIS CO
UPSHUR CO
BUCKHANNON
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Sheet 5 of 25
Mileposts
Corridor Centerline
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Access Roads
Contractor Yards
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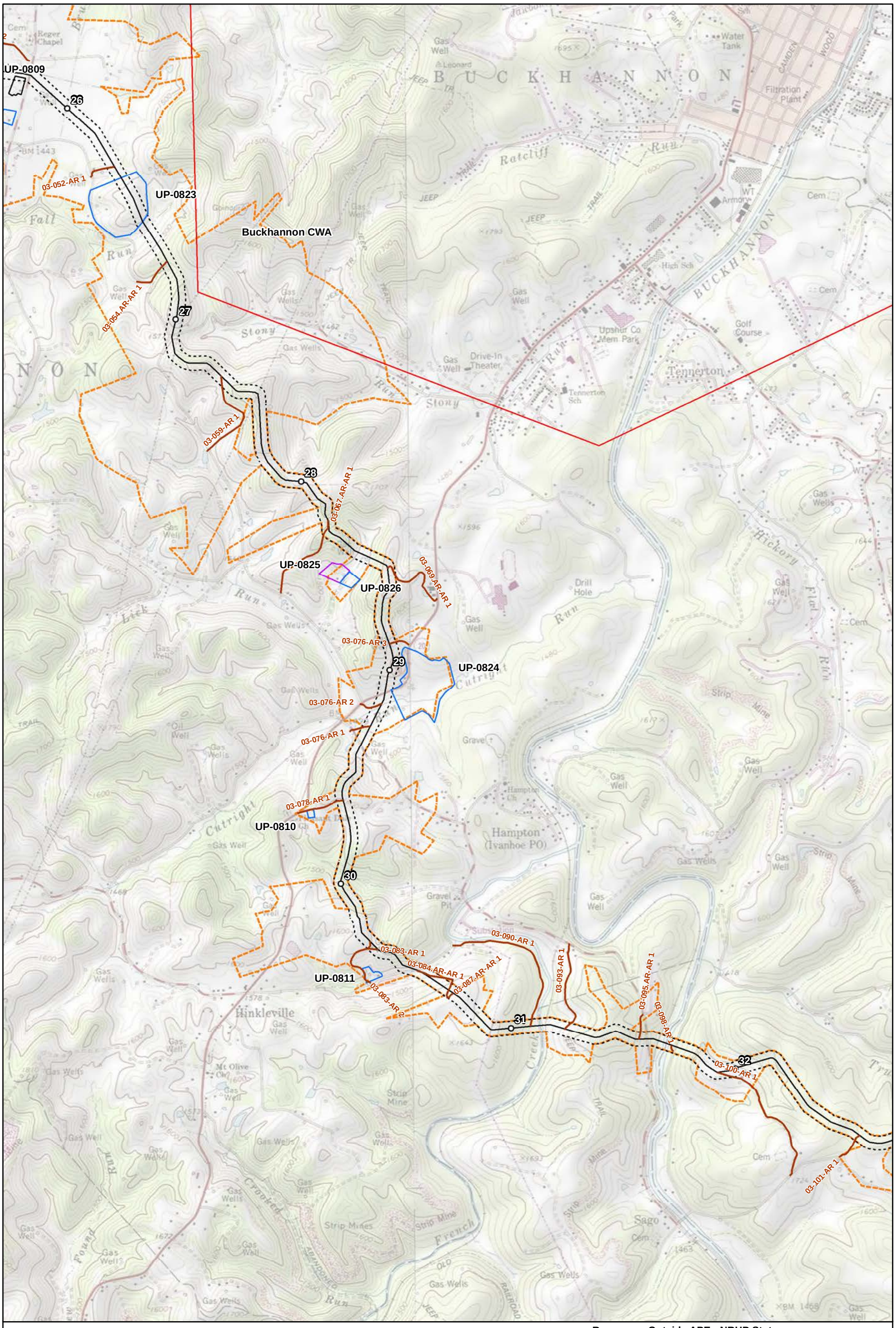

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- Access Roads
- Contractor Yards
- Visual APE

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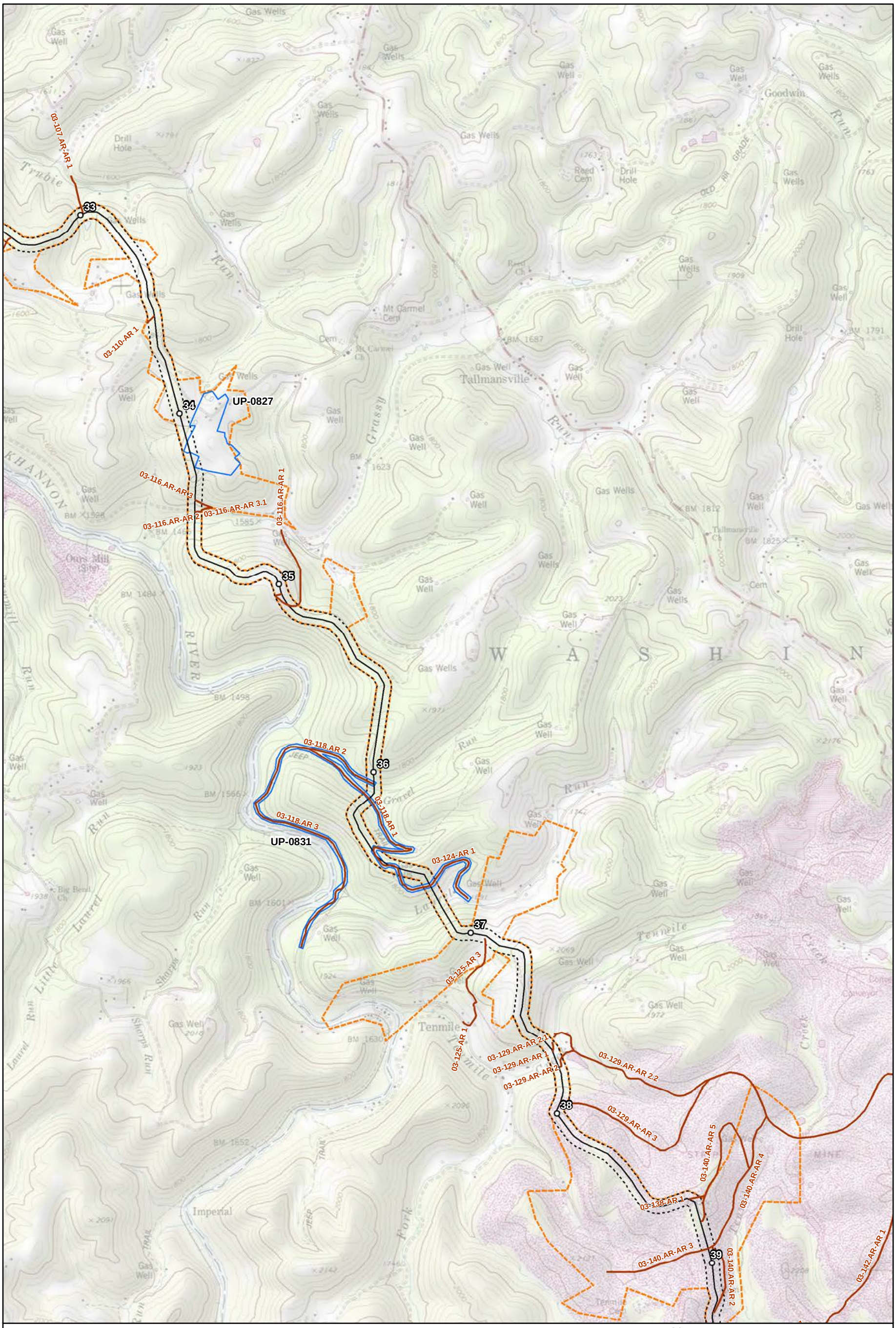
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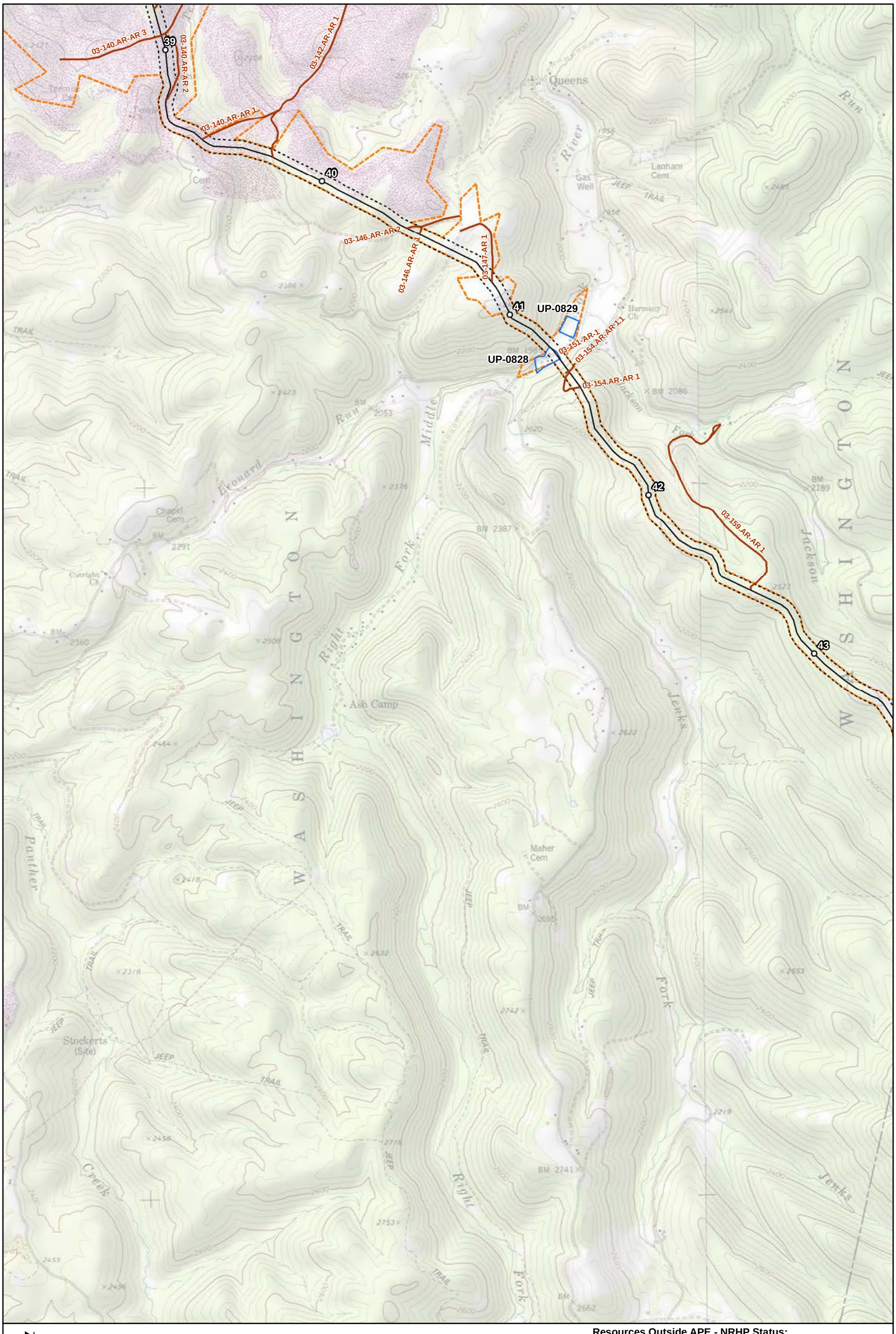
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Lanham Cem
Gas Well
Harmony Ch
Chapel Cem
Ash Camp
Maher Cem
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Right Fork Middle Run
Jackson Run
Jerks Fork
Panther Creek
Leonard Run
Courtright Ch
WASHINGTON
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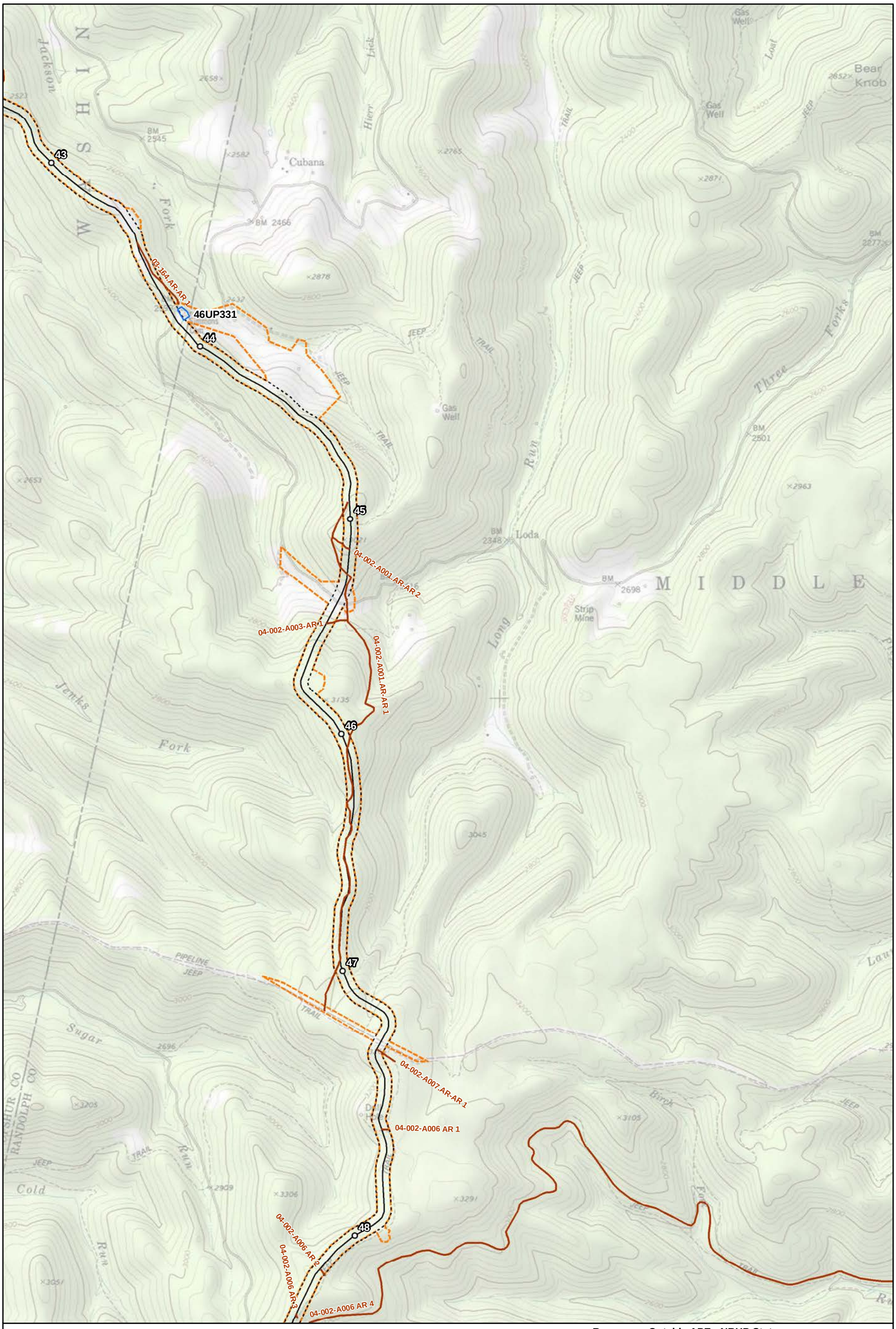
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Loda
Bear Knob
Gas Well
Strip Mine
Jackson
Hicks
Long
Three Forks
Jenks
Sugar
Cold
Birch
Run
Fork
TRAIL
JEEP
PIPELINE
BM 2545
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BM 2348
BM 2698
BM 2501
BM 2277
N I C H O L A S
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RANDOLPH CO
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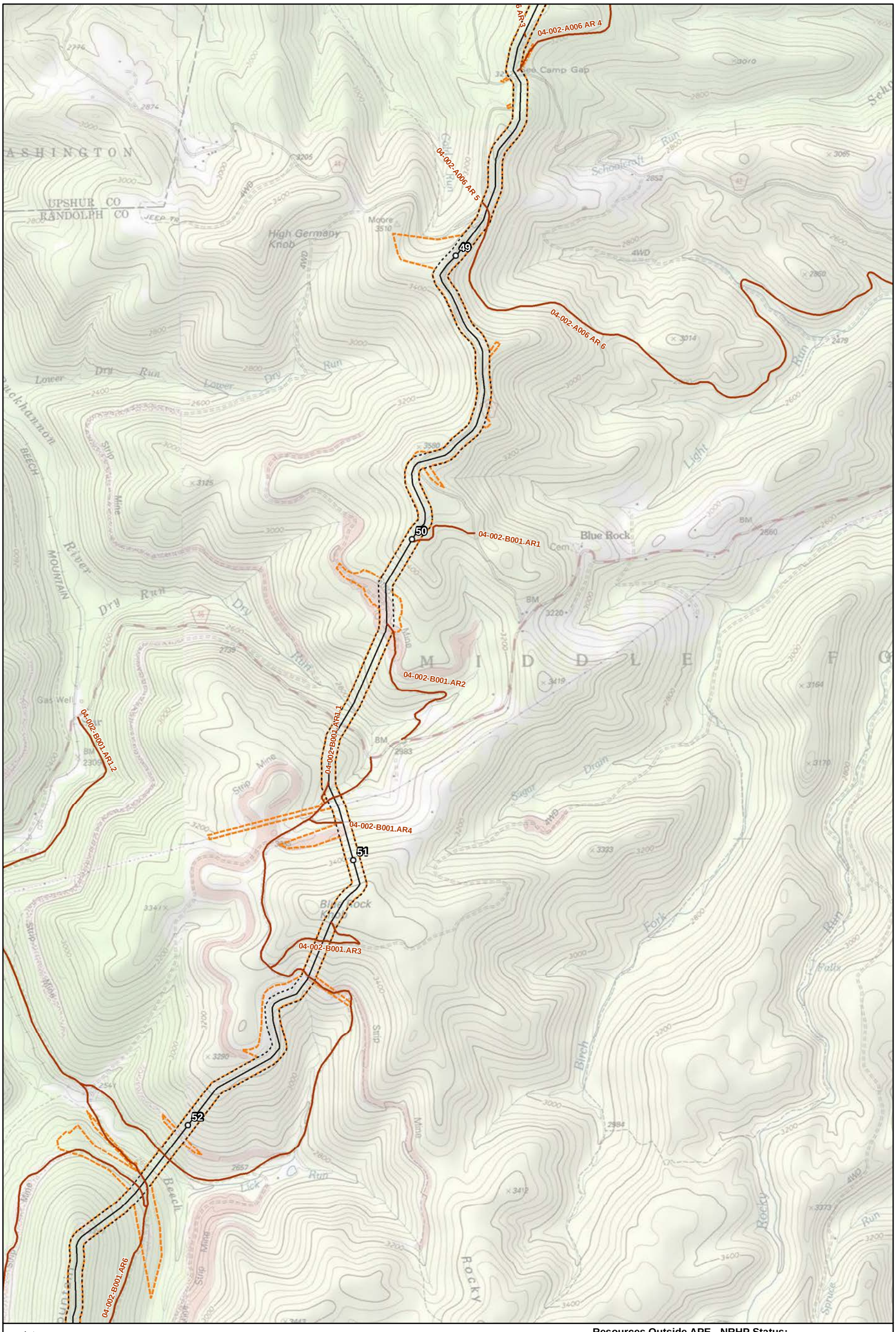
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Dry Run
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Schoolcraft Run
Cole Run
Sugar Run
Light Run
Rocky Run
Beech Lick Run
Middle Fork
Mountain
Strip Mine
4WD
JEEP TR
Gas Well
Cem
BM
0 0.25 0.5 0.75 1 Miles
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Sheet 10 of 25
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Corridor Centerline
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Access Roads
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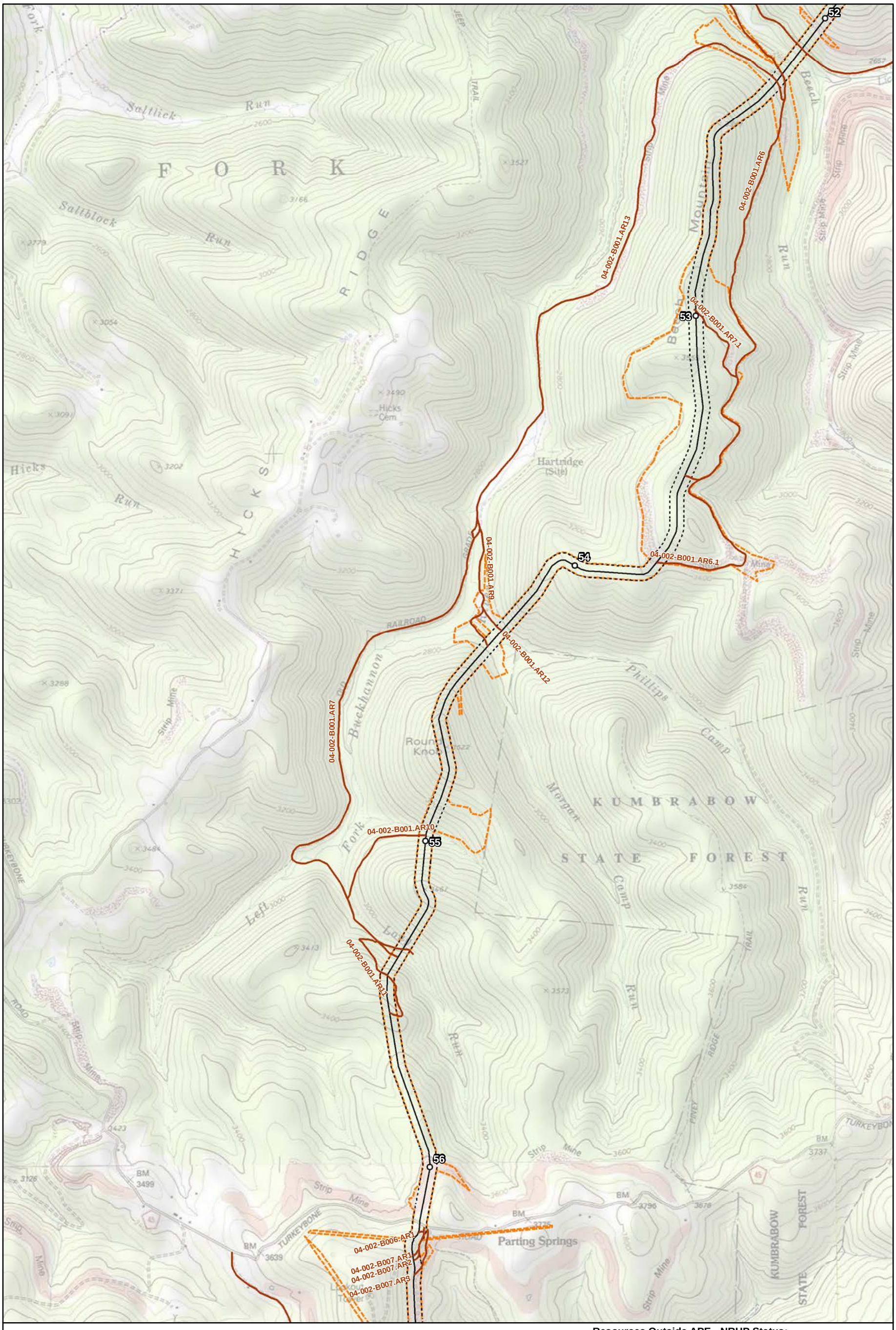
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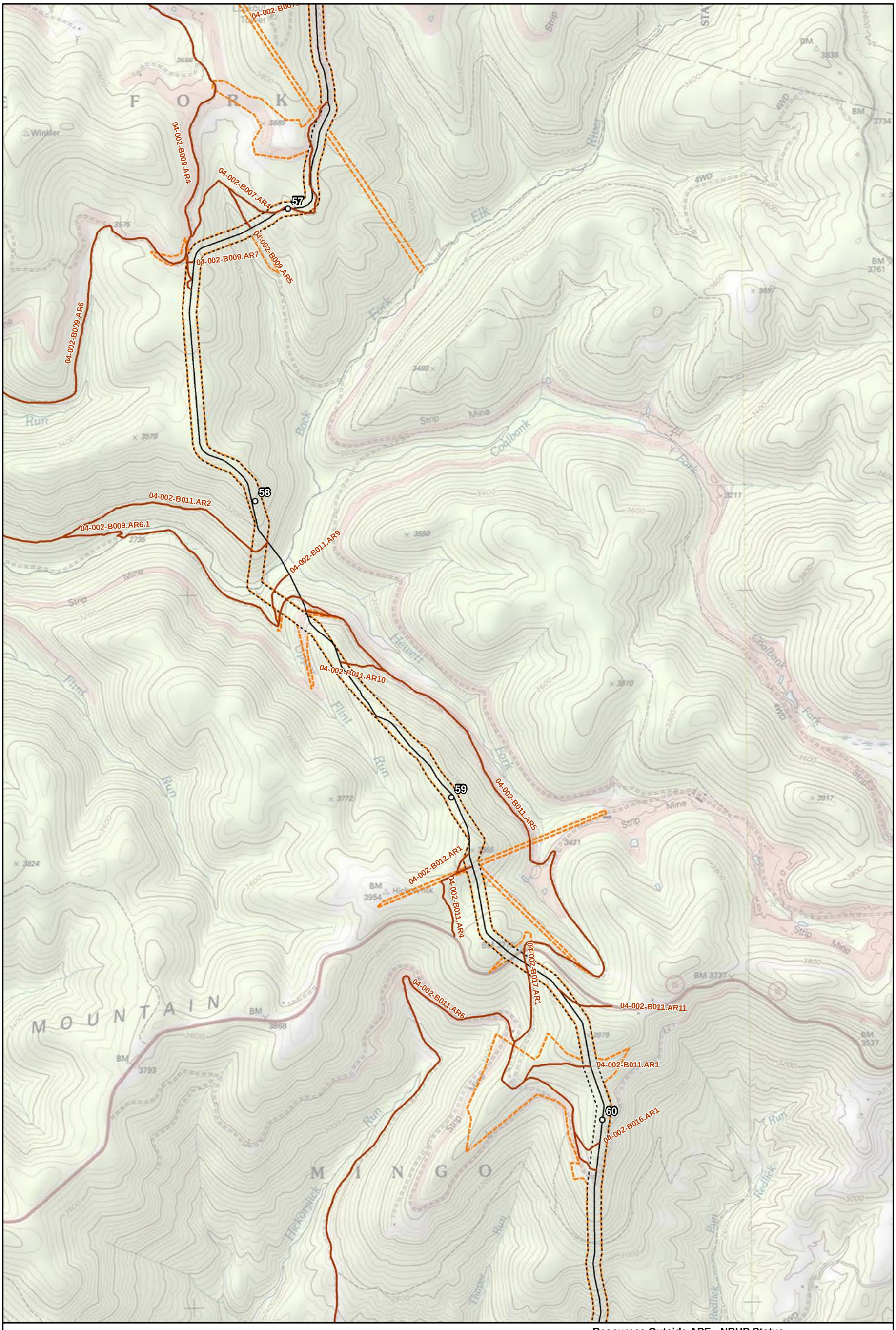
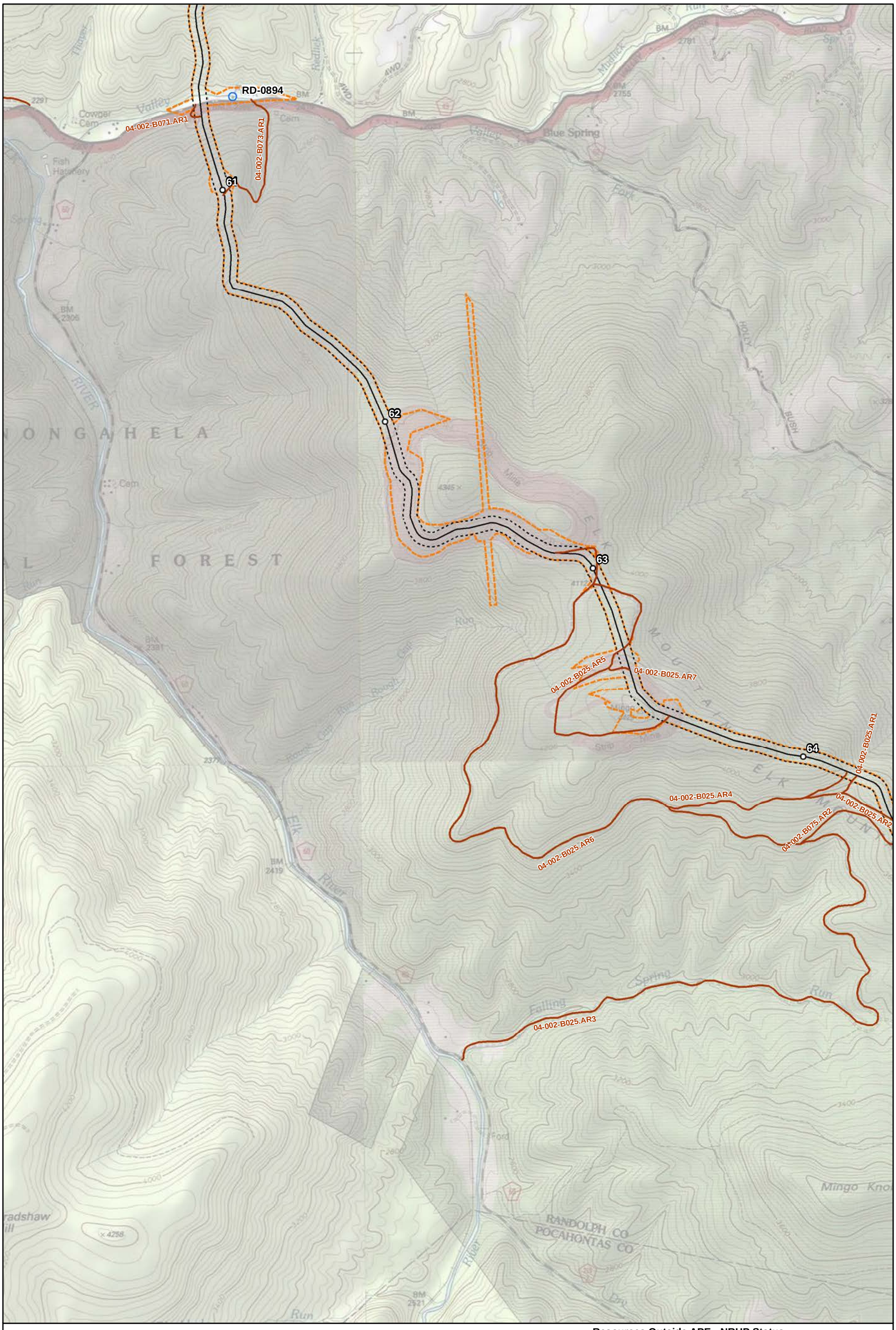
04-002-B001.AR13
04-002-B001.AR6
04-002-B001.AR7.1
04-002-B001.AR9
04-002-B001.AR6.1
04-002-B001.AR12
04-002-B001.AR7
04-002-B001.AR10
04-002-B001.AR11
04-002-B006.AR1
04-002-B007.AR1
04-002-B007.AR2
04-002-B007.AR3
Saltlick Run
Saltblock Run
Hicks Run
Beech Mountain
Buckhannon Fork
Left Fork
Morgan Camp Run
Phillips Camp Run
Hartridge (Site)
Hicks Cem.
Parting Springs
Strip Mine
KUMBRABOW STATE FOREST
TURKEYBONE RIDGE
FORK RIDGE
0 0.25 0.5 0.75 1 Miles
0 0.25 0.5 0.75 1 Kilometers
Sheet 11 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant


04-002-B009.AR4
04-002-B007.AR4
57
04-002-B009.AR5
04-002-B009.AR7
04-002-B009.AR6
04-002-B011.AR2
04-002-B009.AR6.1
58
04-002-B011.AR9
04-002-B011.AR10
59
04-002-B011.AR5
04-002-B012.AR1
04-002-B011.AR4
04-002-B017.AR1
04-002-B011.AR6
04-002-B011.AR11
04-002-B011.AR1
60
04-002-B016.AR1
F O R K
M O U N T A I N
M I N G O
Elk River
Fork
Run
Strip Mine
Coalbank Fork
Flint Run
Hewett Run
Hickory Flat
Redlick Run
Winkler
BM 3838
BM 3734
BM 3761
BM 3954
BM 3737
BM 3527
BM 3793
BM 3868
4WD
0 0.25 0.5 0.75 1 Miles
0 0.25 0.5 0.75 1 Kilometers
Sheet 12 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant



0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 13 of 25

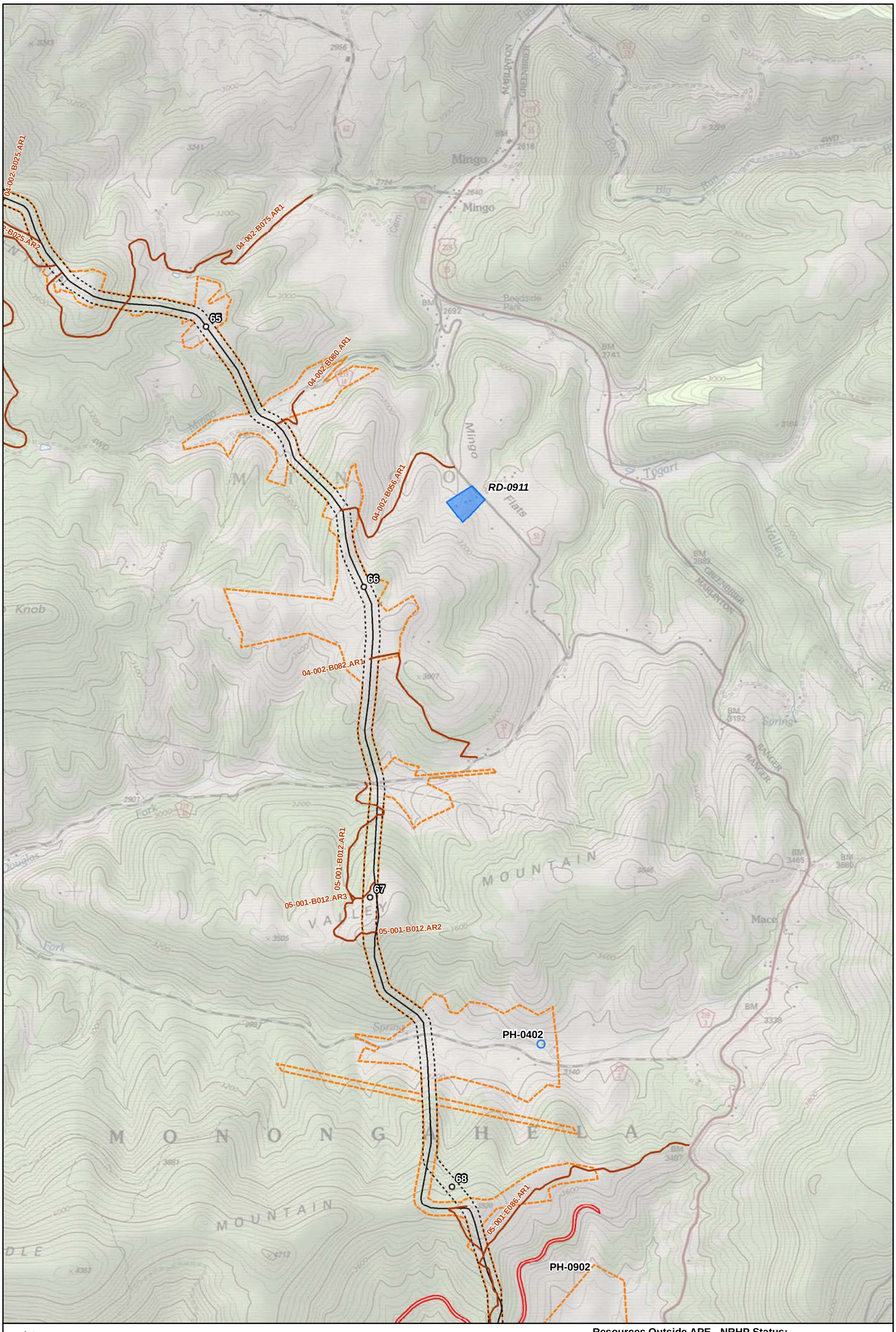
- Mileposts
- Corridor Centerline
- 150 foot buffer
- Access Roads
- Contractor Yards
- Visual APE

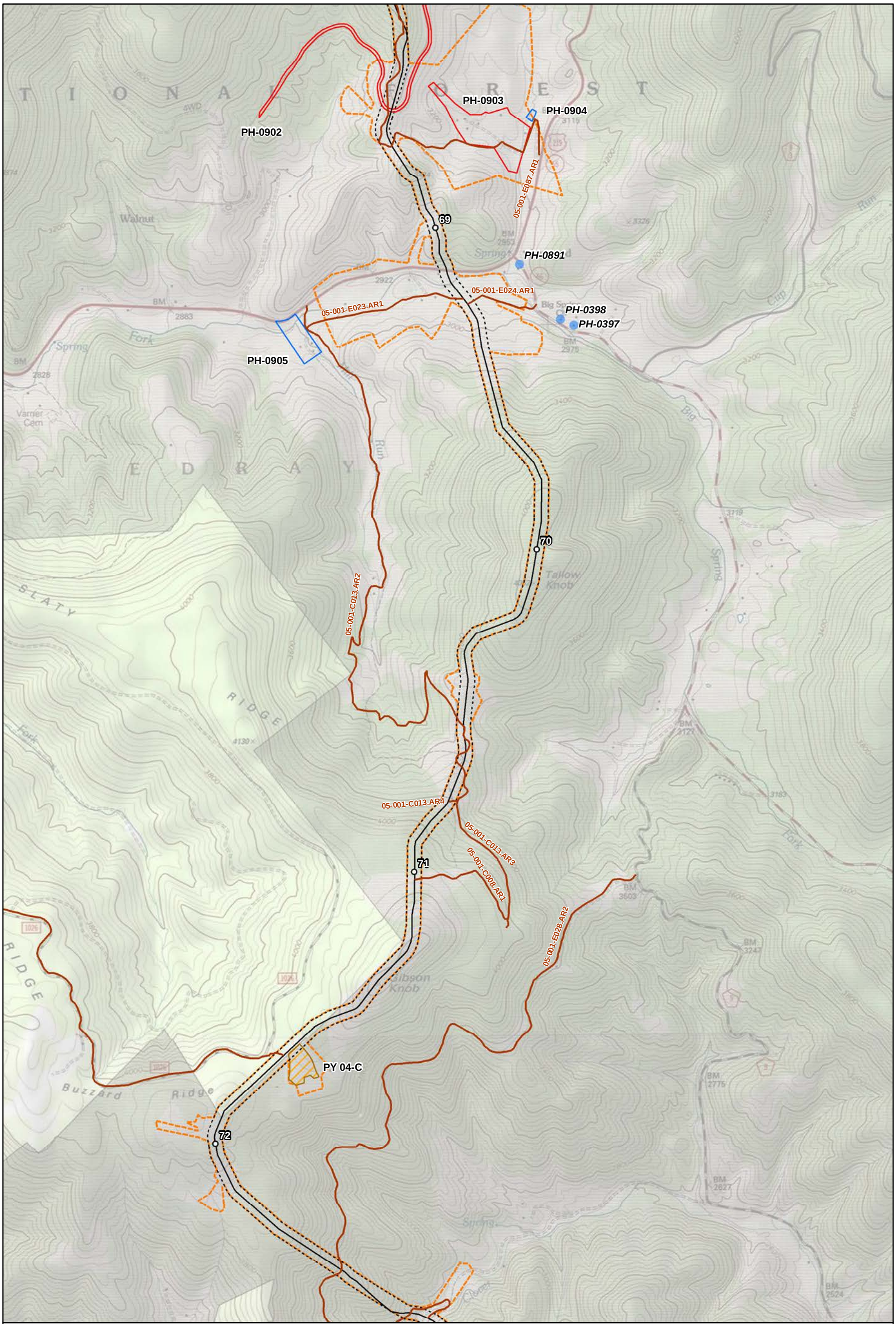
Resources Outside APE - NRHP Status:

- Ineligible
- Unassessed

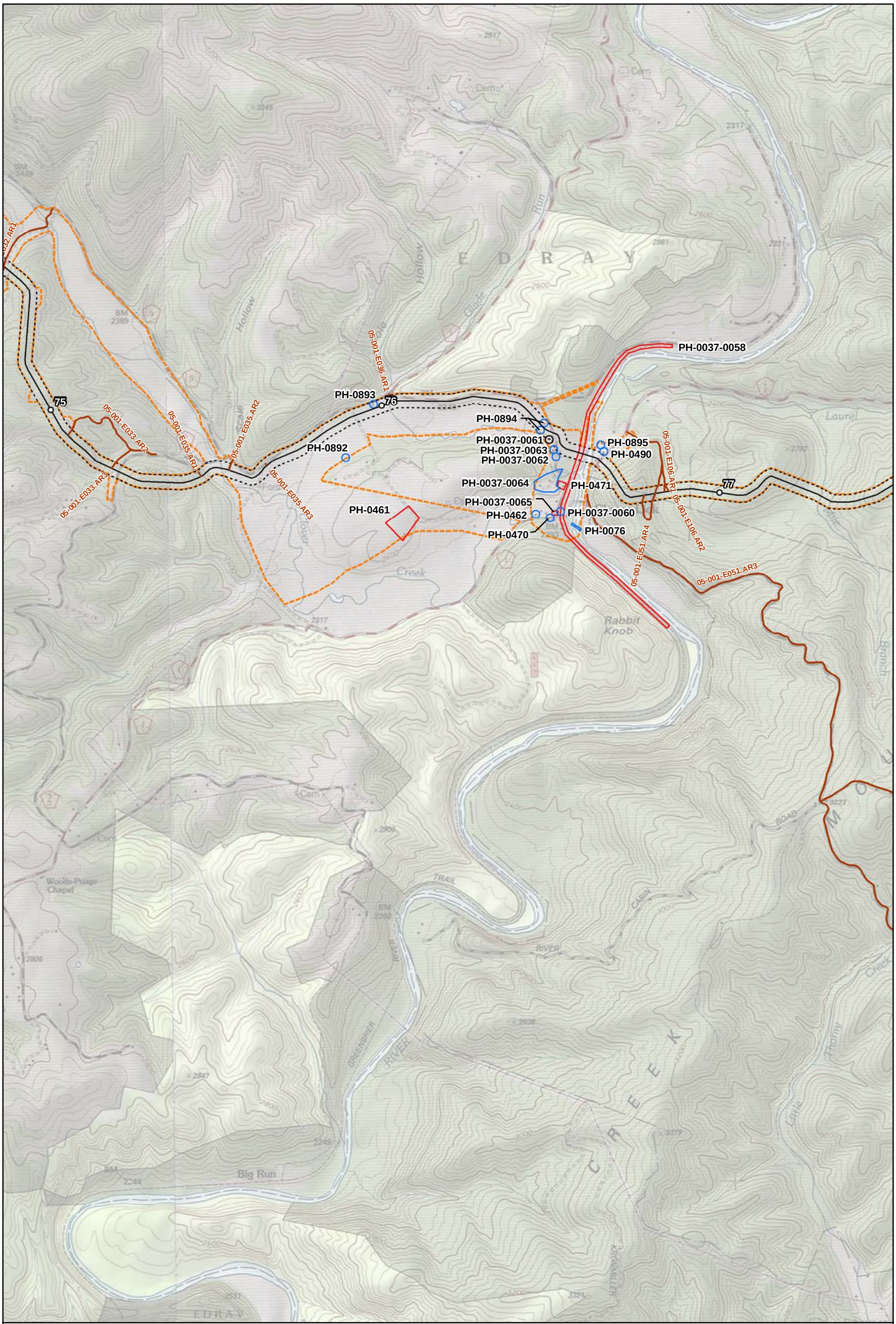
Resources Inside APE - NRHP Status:

- Eligible
- Assumed Eligible
- Ineligible
- Not Extant


04-002-B025.AR1
04-002-B025.AR2
04-002-B075.AR1
65
04-002-B080.AR1
04-002-B056.AR1
RD-0911
66
04-002-B082.AR1
05-001-B012.AR1
05-001-B012.AR3
67
05-001-B012.AR2
PH-0402
68
05-001-E086.AR1
PH-0902
Mingo
Mingo
Boardside Park
Tyggart
Valley
Flats
Fork
MOUNTAIN
MONONGAHELA
Mace
Spring
Knob
Douglas
Big Run
Greenbrier
Marlinton
Ranger
0 0.25 0.5 0.75 1 Miles
0 0.25 0.5 0.75 1 Kilometers
Sheet 14 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant


PH-0902
PH-0903
PH-0904
69
PH-0891
05-001-E087.AR1
05-001-E024.AR1
05-001-E023.AR1
PH-0398
PH-0397
PH-0905
70
05-001-C013.AR2
71
05-001-C013.AR4
05-001-C013.AR3
05-001-C008.AR1
05-001-E028.AR2
PY 04-C
72
0 0.25 0.5 0.75 1 Miles
0 0.25 0.5 0.75 1 Kilometers
Sheet 15 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant


72
73
74
05-001-E028.AR3
05-001-E032.AR1
N O N G A H E L A
O N A L F O R E S T
M T N
CLOVERLICK
Mallett Knob
Gay Knob
Chestnut Flat
MNF
E D R A Y
Laurel
Cem
0 0.25 0.5 0.75 1 Miles
0 0.25 0.5 0.75 1 Kilometers
Sheet 16 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant



N

0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 17 of 25

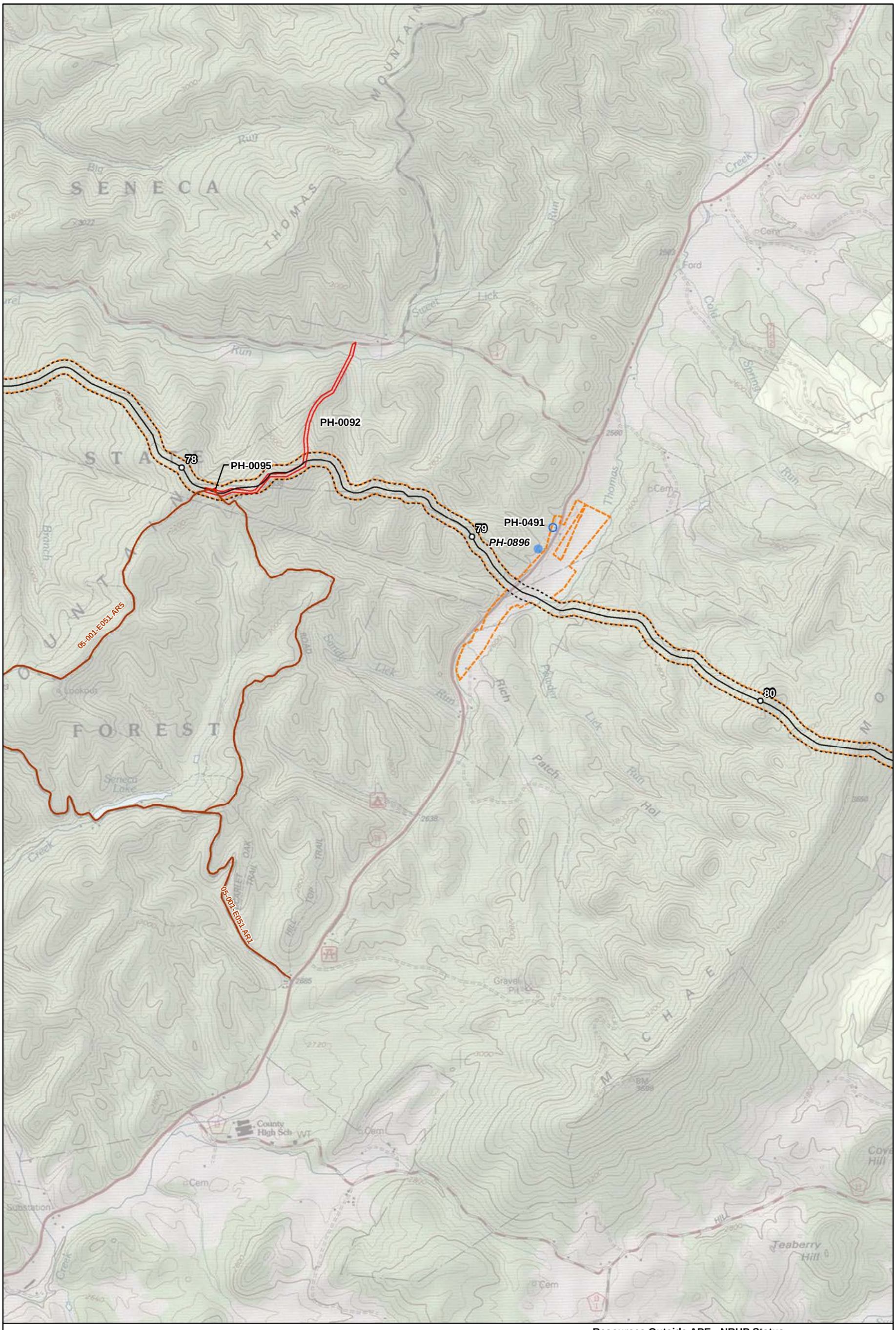
- Mileposts
- Corridor Centerline
- 150 foot buffer
- Access Roads
- Contractor Yards
- Visual APE

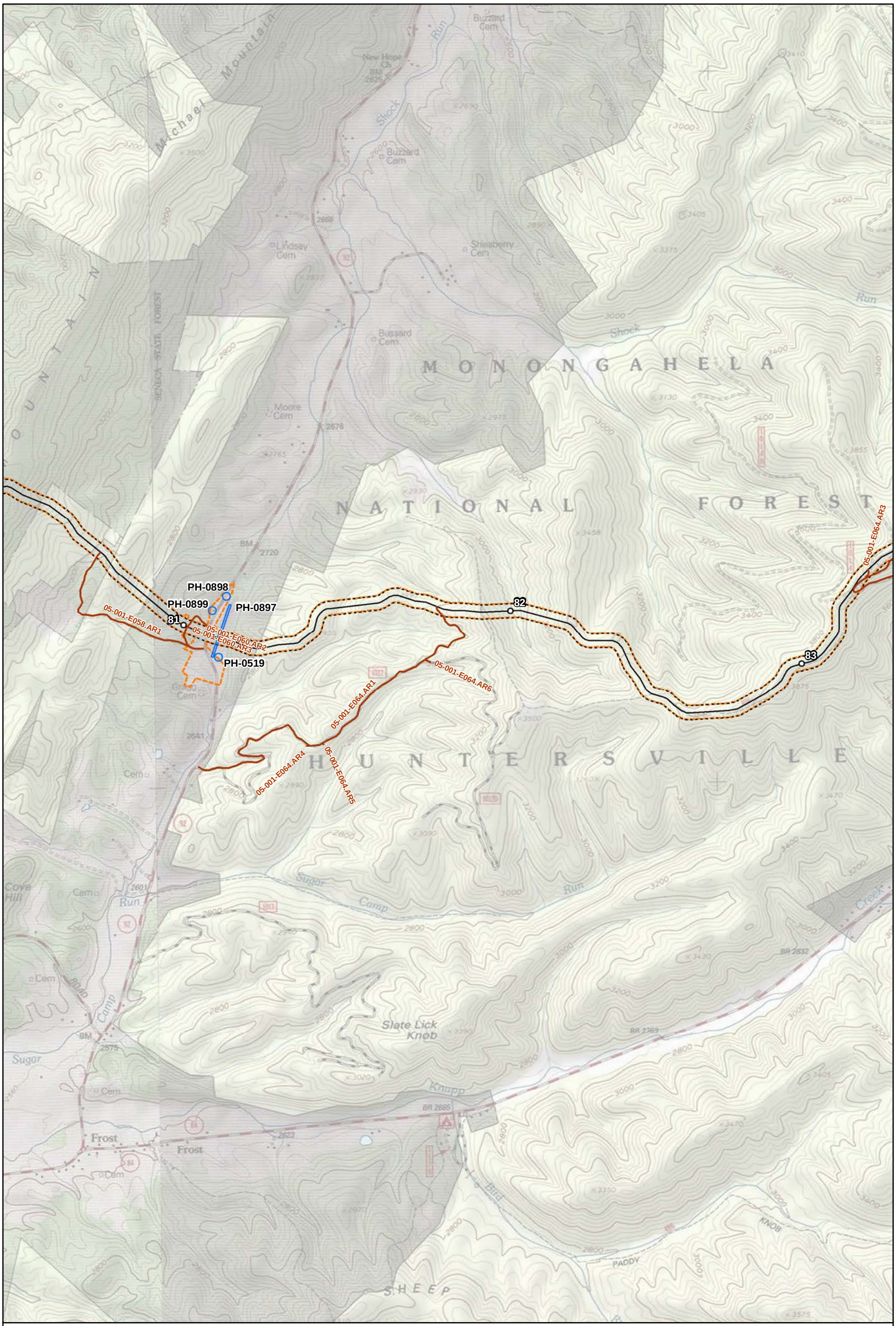
Resources Outside APE - NRHP Status:

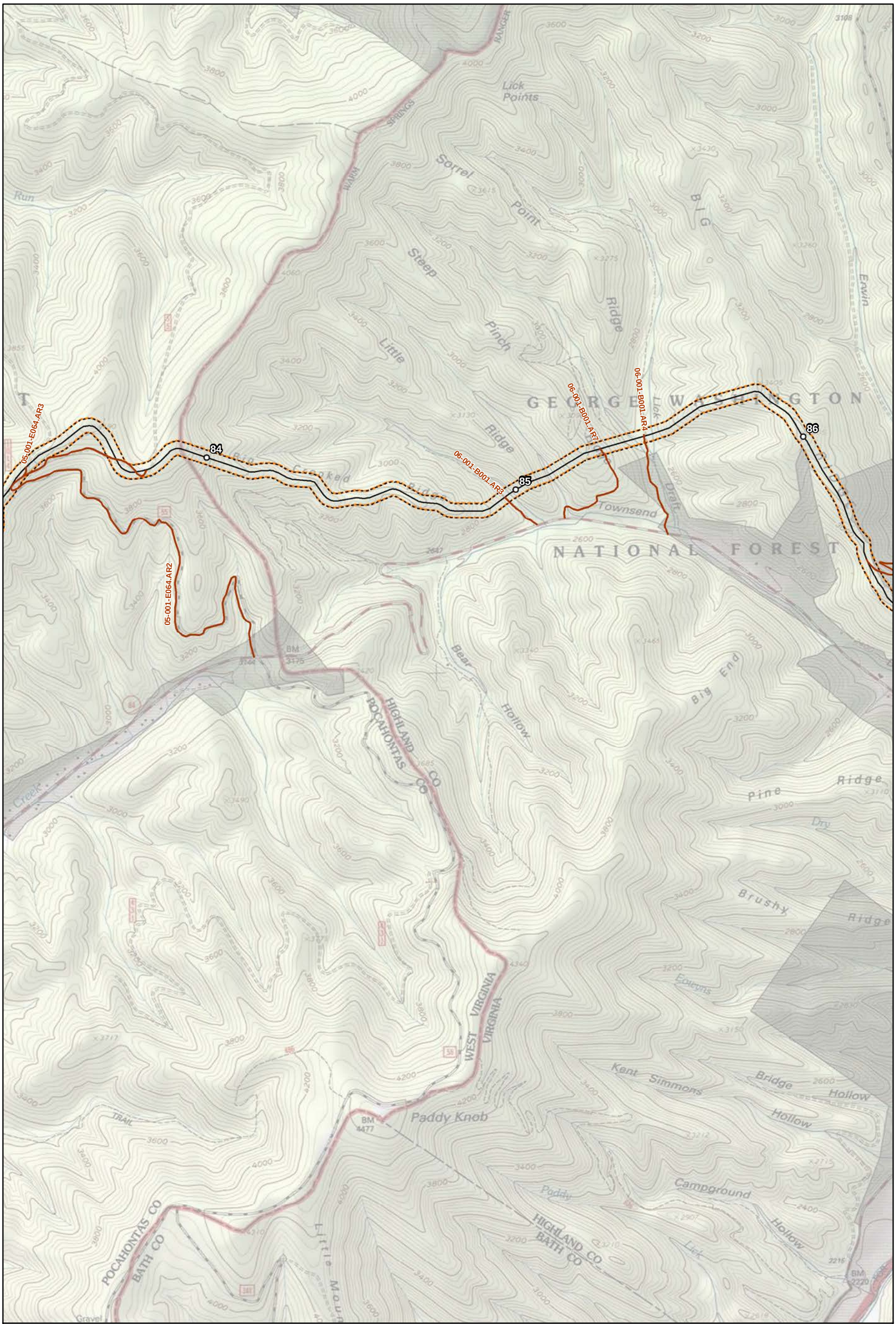
- Ineligible
- Unassessed

Resources Inside APE - NRHP Status:

- Eligible
- Assumed Eligible
- Ineligible
- Not Extant


PH-0092
78
PH-0095
79
PH-0491
PH-0896
80
05-001-E051.AR5
05-001-E051.AR1
SENECA
STATE
FOREST
MOUNTAINS
THOMAS
Big
Run
Sweet
Lick
Cold
Creek
Ford
Cem
Rich
Patch
Hol
Thomas
Seneca
Lake
County
High Sch
WT
Substation
Teaberry
Hill
Gravel
Pit
2638
2885
0
0.25
0.5
0.75
1
Miles
Kilometers
Sheet 18 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant


PH-0898
PH-0899
PH-0897
PH-0519
81
82
83
05-001-E058.AR1
05-001-E060.AR2
05-001-E060.AR3
05-001-E064.AR1
05-001-E064.AR3
05-001-E064.AR4
05-001-E064.AR5
05-001-E064.AR6
MONONGAHELA
NATIONAL FOREST
HUNTERSVILLE
SHEEP
Michael Mountain
Shock Run
Buzzard Cem
Lindsay Cem
Shinaberry Cem
Bussard Cem
Moore Cem
Frost
Frost Cem
Slate Lick Knob
Knapp
Sugar Camp Run
Coye Hill
Paddy Knob
0 0.25 0.5 0.75 1 Miles
0 0.25 0.5 0.75 1 Kilometers
Sheet 19 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant



N

0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 20 of 25

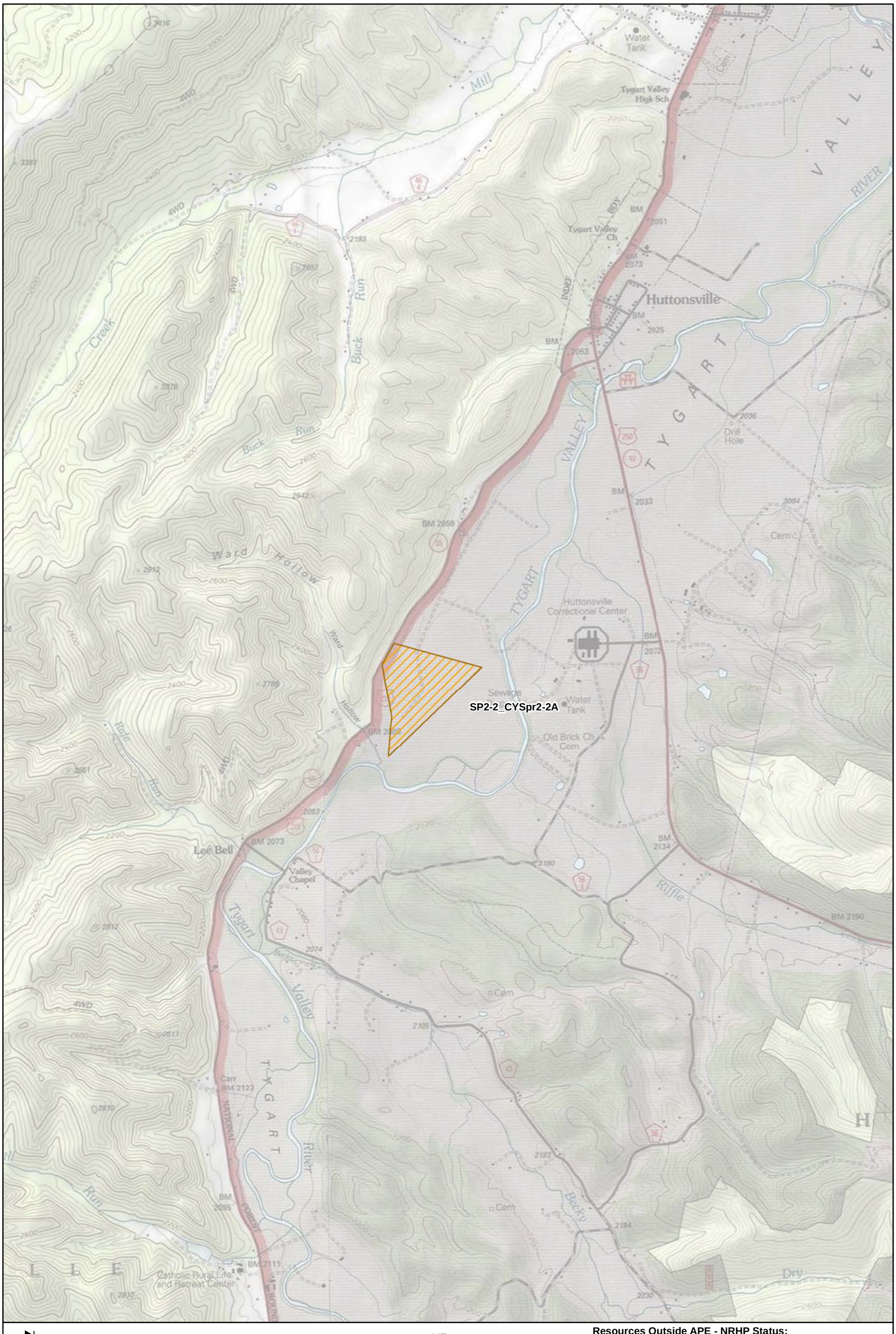
- Mileposts
- Corridor Centerline
- 150 foot buffer
- Access Roads
- Contractor Yards
- Visual APE

Resources Outside APE - NRHP Status:

- Ineligible
- Unassessed

Resources Inside APE - NRHP Status:

- Eligible
- Assumed Eligible
- Ineligible
- Not Extant



0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 21 of 25

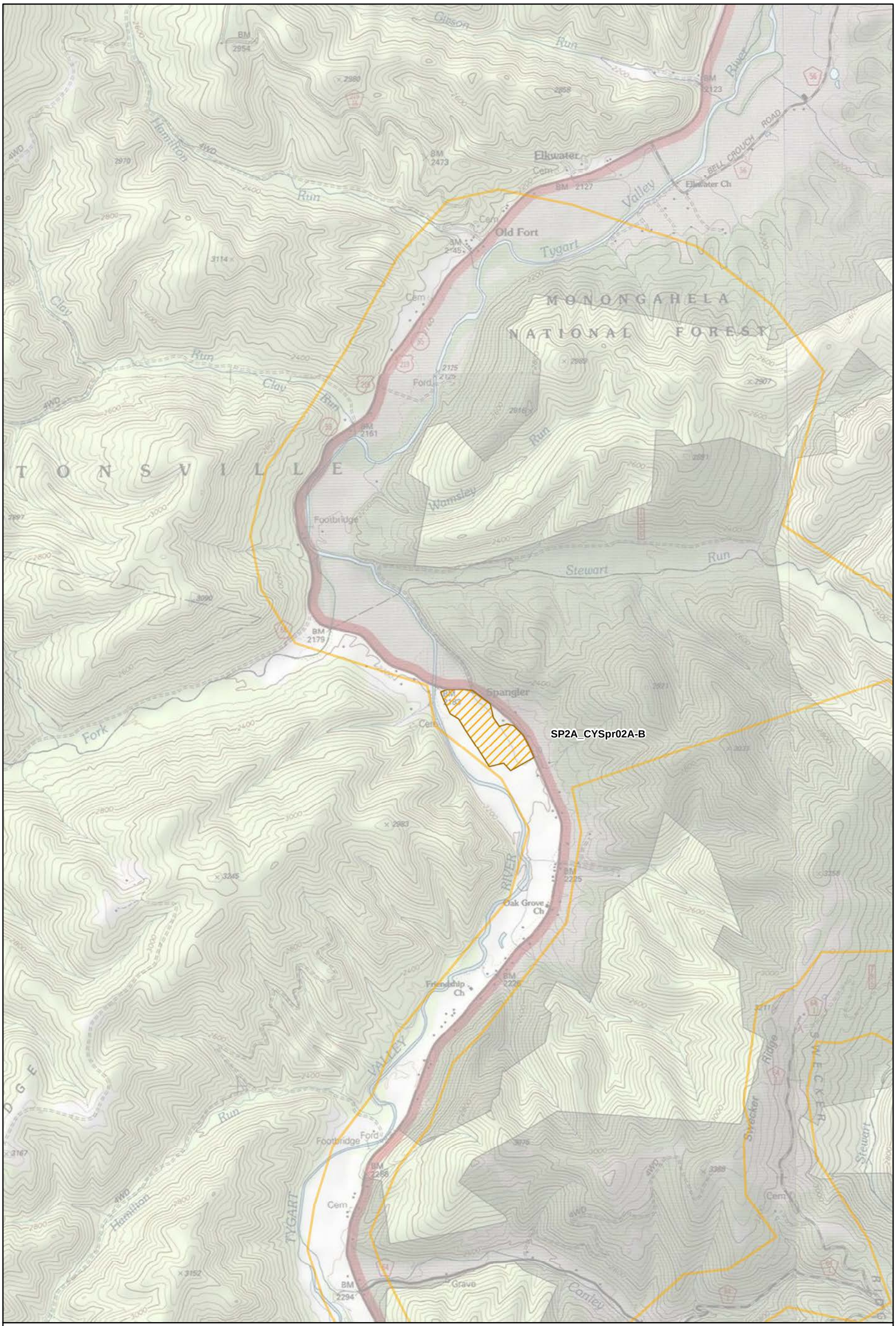
- Mileposts
- Corridor Centerline
- 150 foot buffer
- Access Roads
- Contractor Yards
- Visual APE

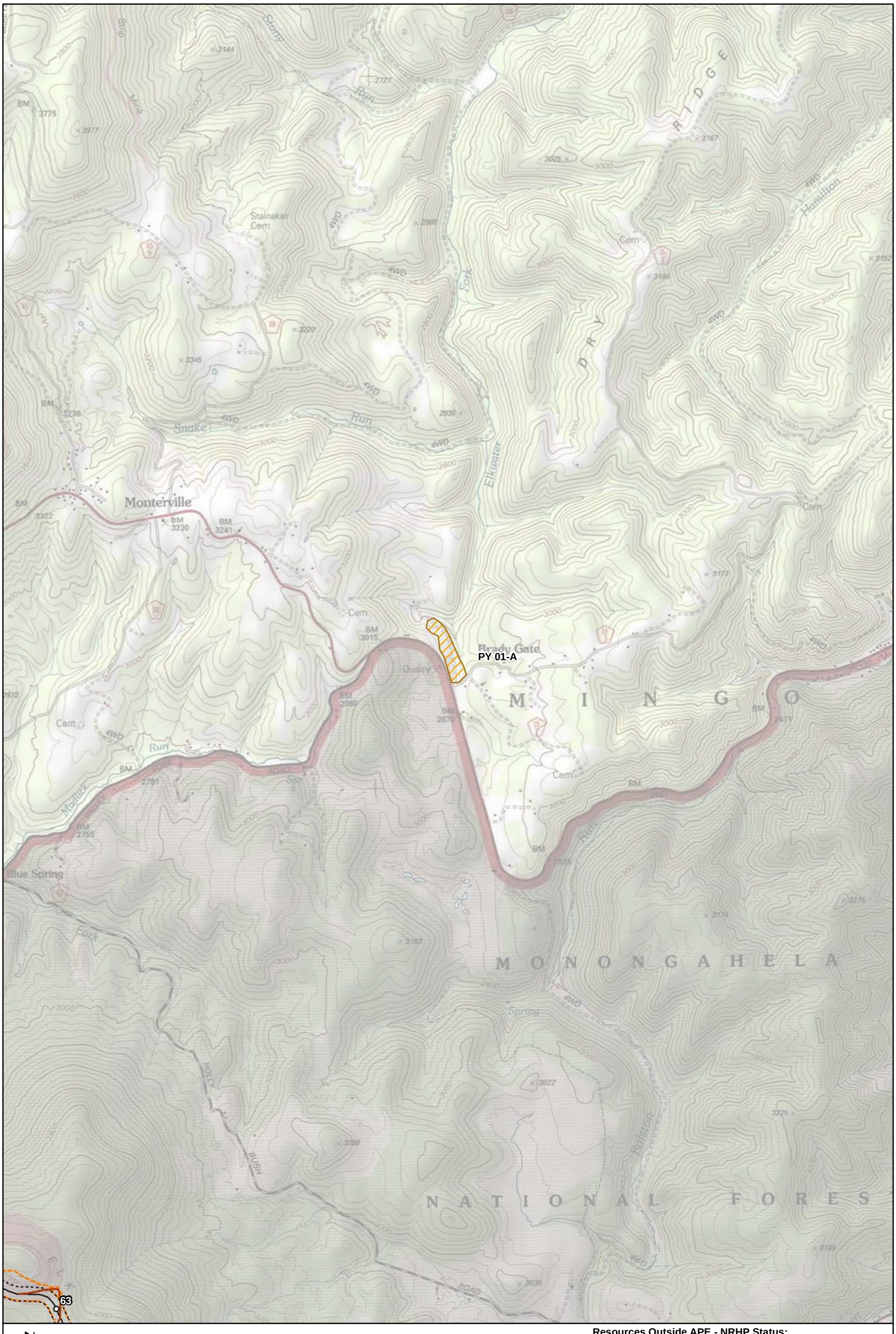
Resources Outside APE - NRHP Status:

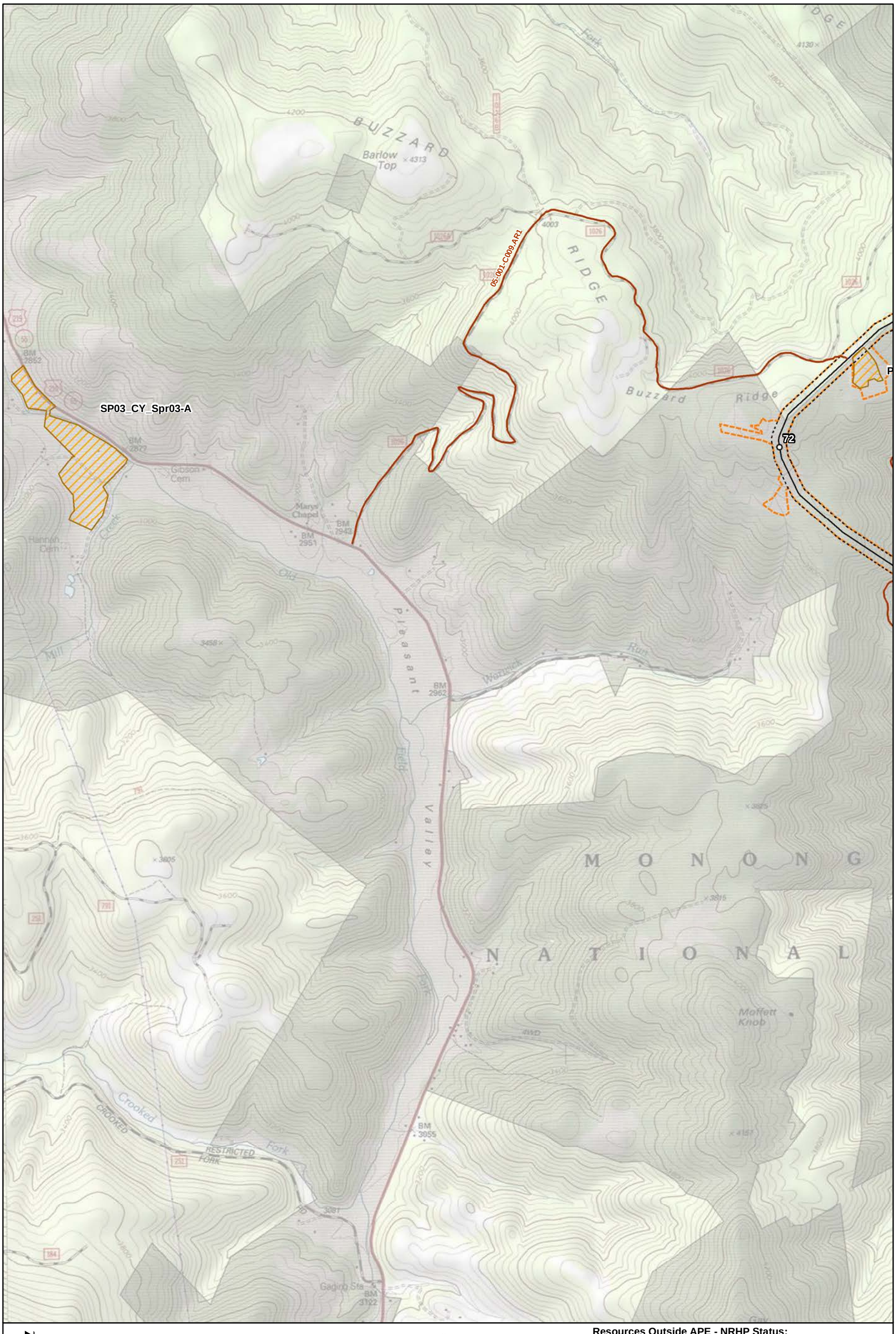
- Ineligible
- Unassessed

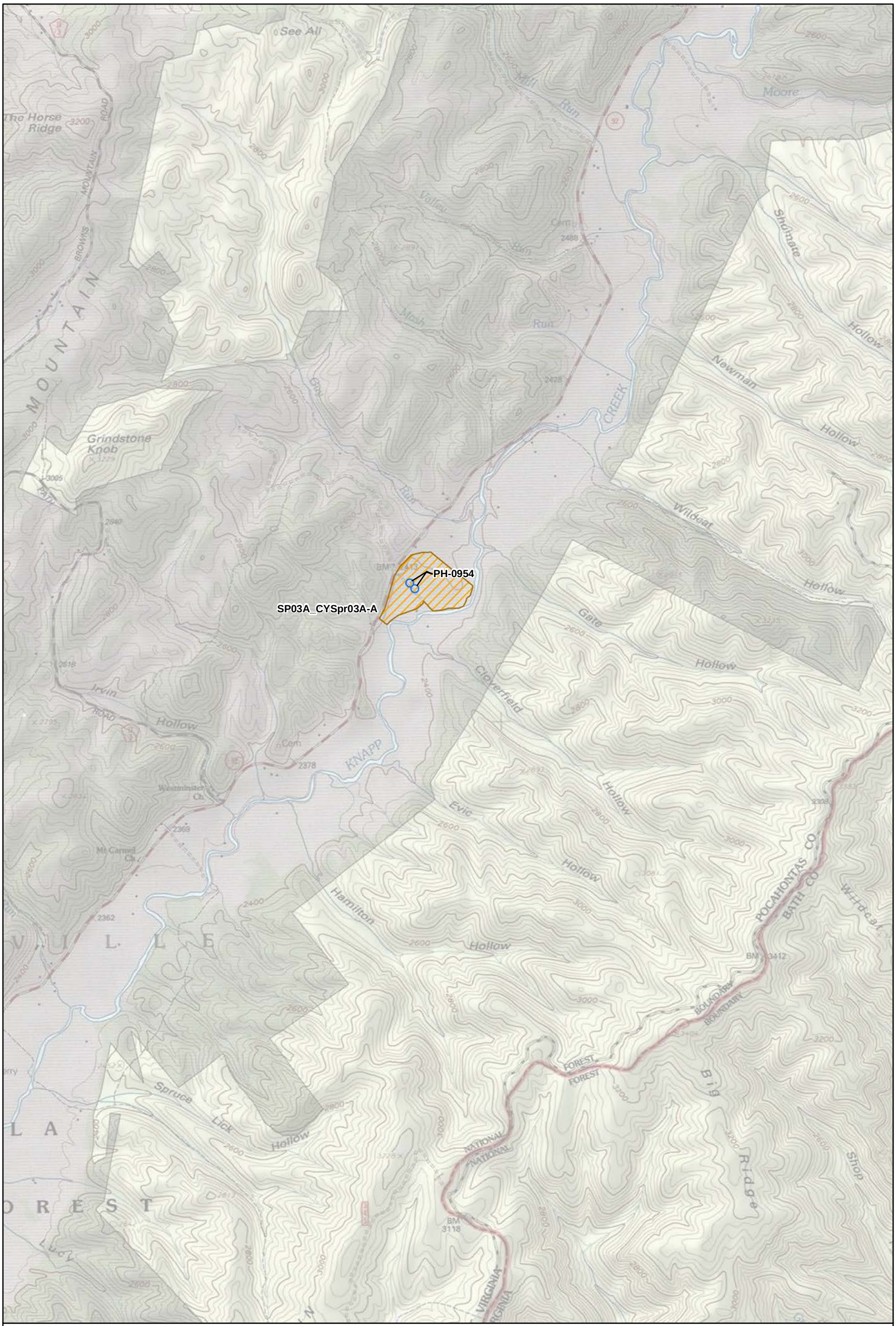
Resources Inside APE - NRHP Status:

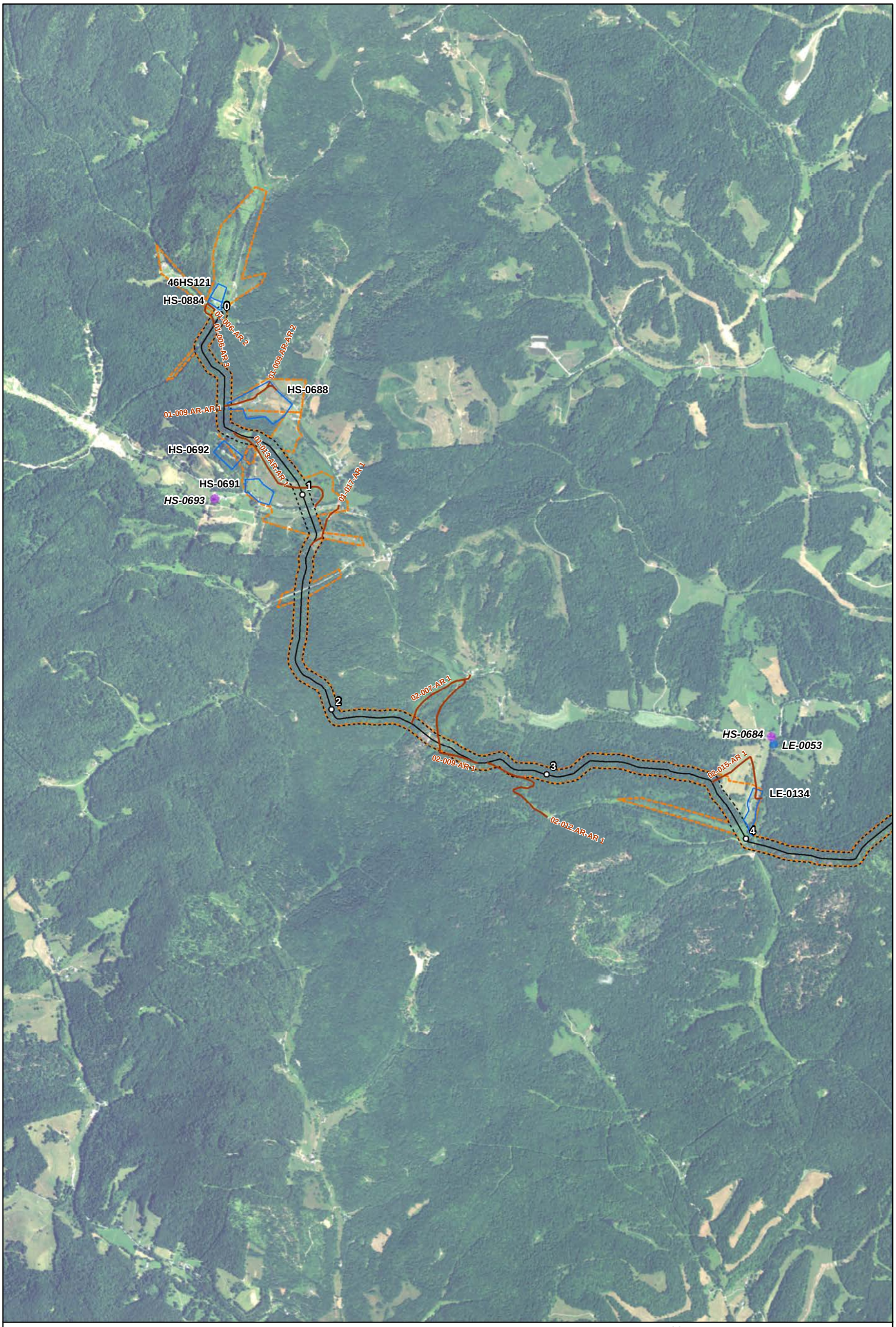
- Eligible
- Assumed Eligible
- Ineligible
- Not Extant


Gibson Run
BM 2954
Hamilton 4WD
Run
BM 2473
Elkwater Cem
BM 2123
River
BELL CROUCH ROAD
Elkwater Ch
BM 2127
Valley
Old Fort
Cem
BM 2145
Tygart
MONONGAHELA
NATIONAL FOREST
Clay Run
Ford
2175
2125
BM 2161
TONSVILLE
Run
Wamsley
Footbridge
Stewart Run
BM 2179
Spangler
Cem
SP2A_CYSpr02A-B
Fork
RIVER
BM 2225
Oak Grove Ch
Friendship Ch
VALLEY
Ridge
SWECKER
Stewart
Footbridge Ford
BM 2258
Cem
TYGART
Hamilton 4WD
BM 2294
Grave
Camley
0 0.25 0.5 0.75 1 Miles
0 0.25 0.5 0.75 1 Kilometers
Sheet 22 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant


PY 01-A
Monterville
Brady Gate
Stalnaker Cem
Blue Spring
Stony Run
Snake Run
Dry Fork
Elkwater Fork
Hamilton Ridge
Mudlick Run
Holly Bush Road
Robison Run
Spring
Cem
Quarry
BM 3775
BM 3322
BM 3230
BM 3241
BM 3238
BM 3015
BM 2950
BM 2870
BM 2755
BM 2791
BM 2471
3144
3167
3220
3345
3186
3152
3177
3027
3035
3225
3162
3275
3183
2935
2727
2868
3025
3000
2800
2600
4WD
ROAD
M I N G O
M O N O N G A H E L A
N A T I O N A L F O R E S
63
0 0.25 0.5 0.75 1 Miles
0 0.25 0.5 0.75 1 Kilometers
Sheet 23 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant


SP03_CY_Spr03-A
05-001-C009.AR1
72
Buzzard Ridge
Barlow Top
Pleasant Valley
Crooked Fork
Mill Creek
Mary's Chapel
Gibson Cem
Hannah Cem
Warwick Run
Old Field Fork
Moffett Knob
MONONG NATIONAL
Gaging Sta
BM 2852
BM 2872
BM 2943
BM 2951
BM 2962
BM 3055
BM 3122
0 0.25 0.5 0.75 1 Miles
0 0.25 0.5 0.75 1 Kilometers
N
Sheet 24 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant


PH-0954
SP03A_CYSpr03A-A
See All
The Horse Ridge
Mill Run
Moore
Valley
Run
Cem
Shumate
Hollow
Newman
Hollow
Mash
Run
Grindstone Knob
CREEK
Wildcat
Hollow
Gate
Hollow
Irvin
ROAD
Hollow
Cloverfield
KNAPP
Evic
Hollow
Hollow
Hamilton
Hollow
POCAHONTAS CO
BATH CO
Spruce
Lick
Hollow
FOREST
FOREST
Big
Ridge
Shop
VIRGINIA
0 0.25 0.5 0.75 1 Miles
0 0.25 0.5 0.75 1 Kilometers
Sheet 25 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant



N

0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 1 of 25

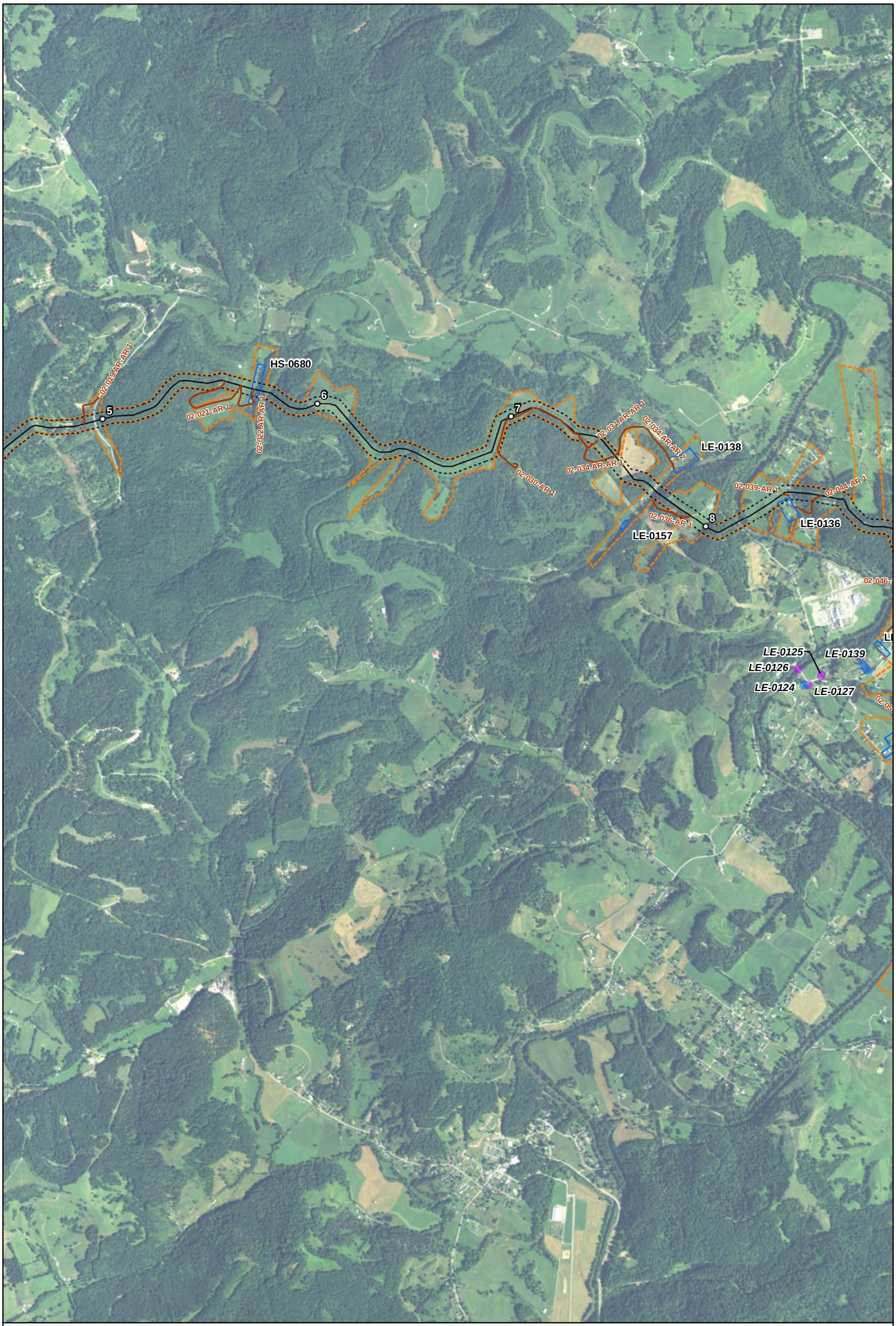
- Mileposts
- Corridor Centerline
- 150 foot buffer
- Access Roads
- Contractor Yards
- Visual APE

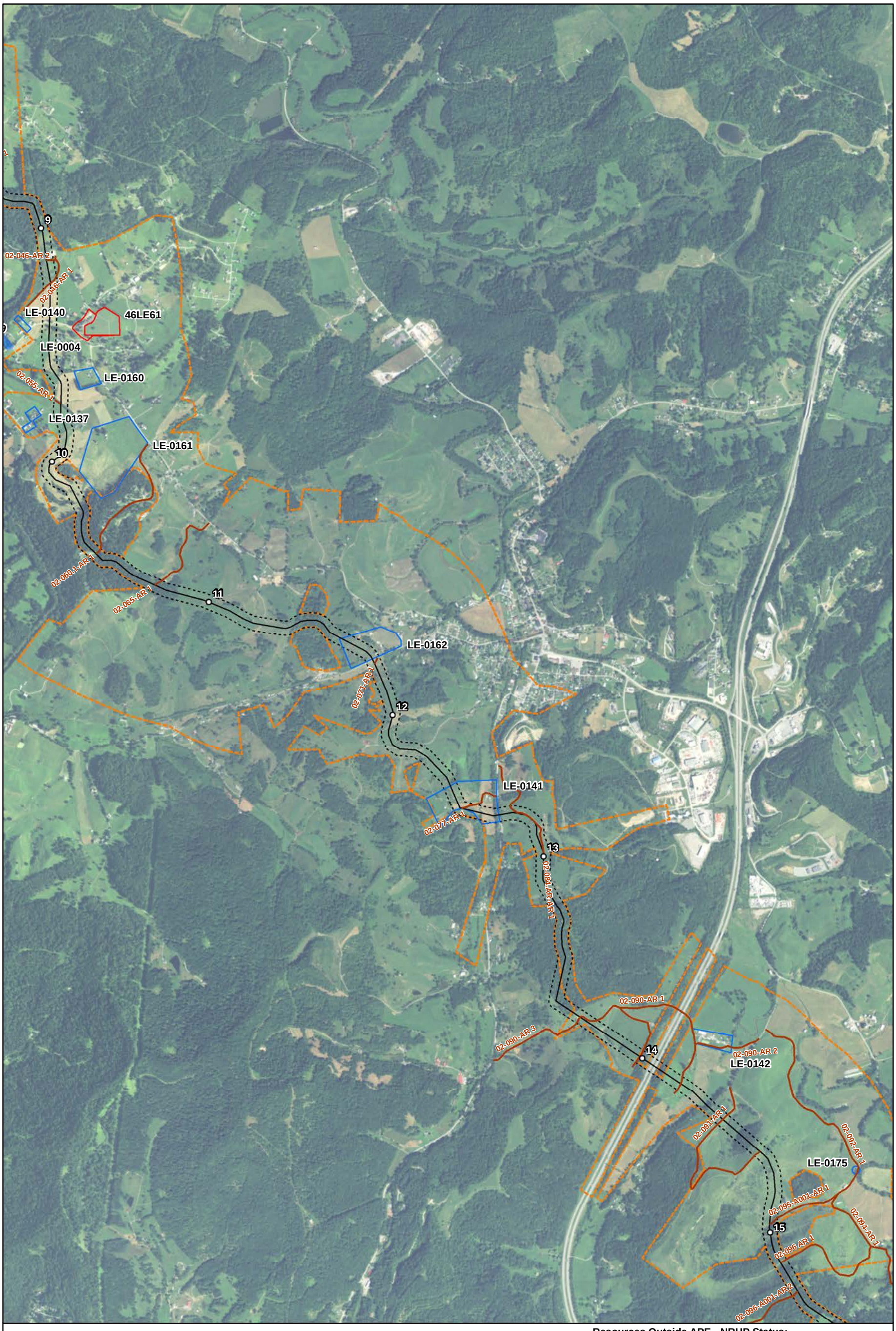
Resources Outside APE - NRHP Status:

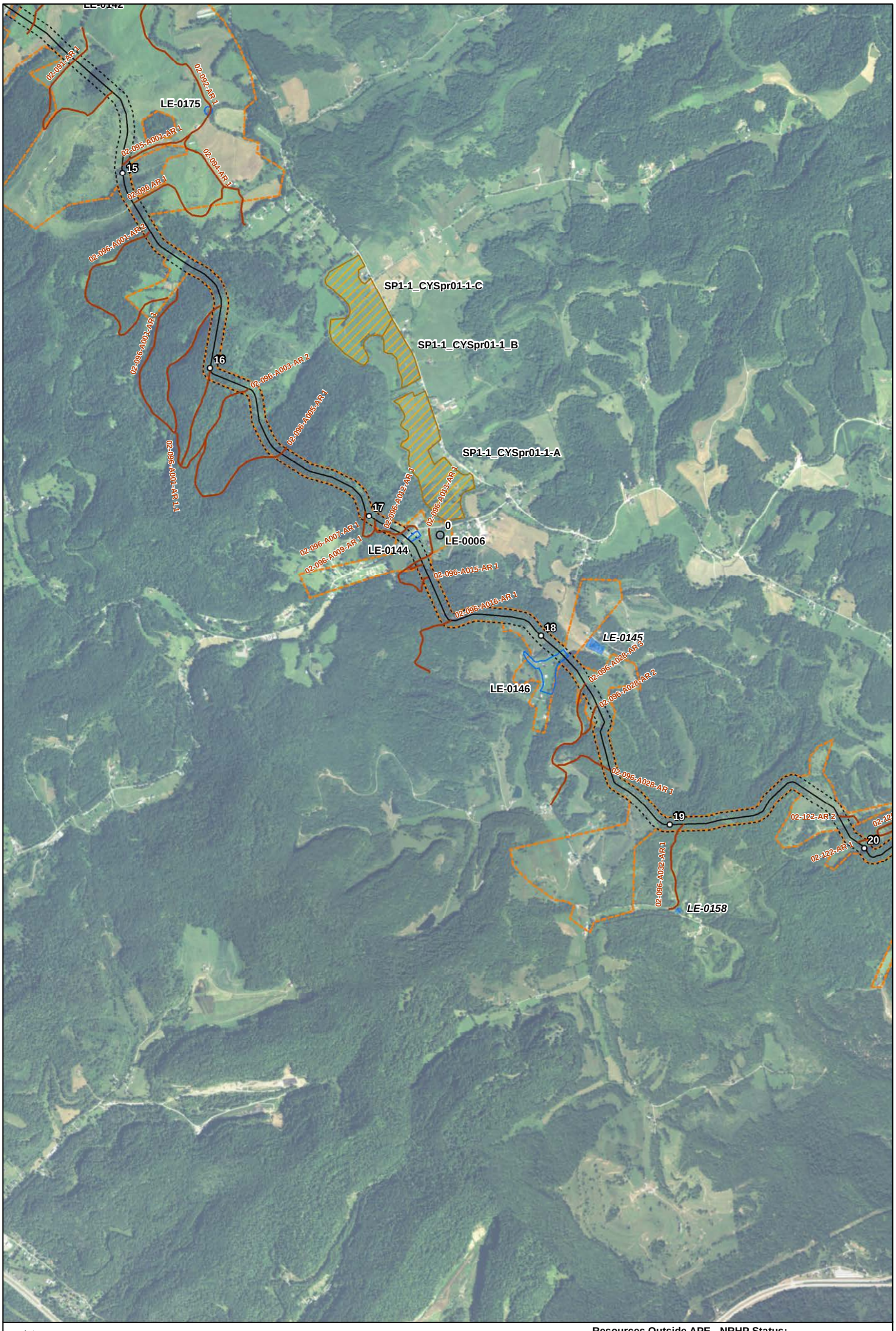
- Ineligible
- Unassessed

Resources Inside APE - NRHP Status:

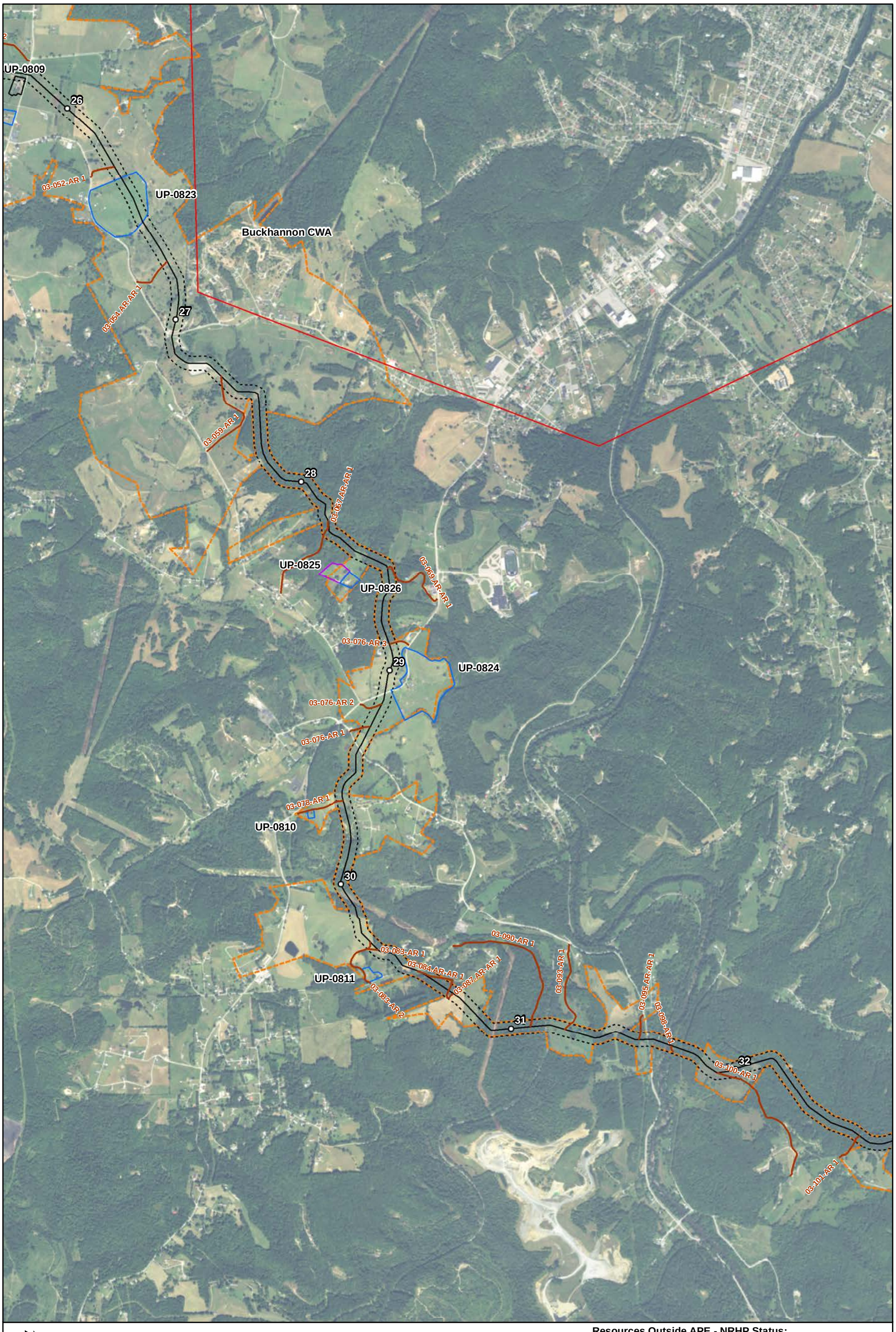
- Eligible
- Assumed Eligible
- Ineligible
- Not Extant


02-019-AR-AR 1
HS-0680
5
6
7
02-021-AR 1
02-022-AR-AR 1
02-030-AR 1
02-031-AR-AR 1
02-034-AR-AR 2
02-034-AR-AR 1
LE-0138
02-039-AR 1
02-044-AR 1
02-036-AR 1
8
LE-0157
LE-0136
LE-0125
LE-0139
LE-0126
LE-0124
LE-0127
0 0.25 0.5 0.75 1
Miles
0 0.25 0.5 0.75 1
Kilometers
Sheet 2 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant


9
02-046-AR 2
02-046-AR 1
LE-0140
46LE61
LE-0004
LE-0160
02-055-AR 1
LE-0137
LE-0161
10
02-060.1-AR 1
02-065-AR 1
11
LE-0162
02-071-AR 1
12
LE-0141
02-077-AR 1
13
02-084-AR-AR 1
02-090-AR 1
02-090-AR 3
14
02-090-AR 2
LE-0142
02-091-AR 1
02-092-AR 1
LE-0175
02-095-A001-AR 1
15
02-094-AR 1
02-096 AR 1
02-096-A001-AR 2
N
0 0.25 0.5 0.75 1 Miles
0 0.25 0.5 0.75 1 Kilometers
Sheet 3 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant


LE-0142
02-091-AR 1
02-092-AR 1
LE-0175
02-095-A001-AR 1
02-094-AR 1
15
02-096 AR 1
02-096-A001-AR 2
SP1-1_CYSpr01-1-C
SP1-1_CYSpr01-1_B
02-096-A001-AR 1
16
02-096-A003-AR 2
02-096-A005-AR 1
SP1-1_CYSpr01-1-A
02-096-A001-AR 1.1
02-096-A012-AR 1
02-096-A013-AR 1
17
0
LE-0006
02-096-A007-AR 1
02-096-A009-AR 1
LE-0144
02-096-A015-AR 1
02-096-A016-AR 1
18
LE-0145
02-096-A028-AR 3
02-096-A028-AR 2
LE-0146
02-096-A028-AR 1
19
02-122-AR 2
20
02-122-AR 1
02-096-A032-AR 1
LE-0158
N
0 0.25 0.5 0.75 1
Miles
0 0.25 0.5 0.75 1
Kilometers
Sheet 4 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant


20
21
22
23
24
25
26
LE-0159
02-125-AR 1
02-125-AR 2
02-127-AR 3
02-127-AR 2
02-129-AR 1
03-004-AR 1
03-011-AR 1
03-023-AR 1
03-029.1-AR 1
03-029.AR-AR 1
03-029-AR1
03-031.AR-AR 1
03-034.AR-AR 1
03-047.AR-AR 2
03-052-AR 1
UP-0818
46UP348
UP-0113
UP-0821
UP-0820
UP-0819
UP-0817
UP-0809
UP-0822
UP-0830
Buckhannon CWA
SP1-2_CYSpr01-2-A
0 0.25 0.5 0.75 1
Miles
0 0.25 0.5 0.75 1
Kilometers
Sheet 5 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant


UP-0809
26
03-052-AR 1
UP-0823
Buckhannon CWA
03-054-AR-AR 1
27
03-059-AR 1
28
03-067-AR-AR 1
UP-0825
UP-0826
03-069-AR-AR 1
03-076-AR 3
29
UP-0824
03-076-AR 2
03-076-AR 1
03-078-AR 1
UP-0810
30
03-090-AR 1
03-083-AR 1
03-084-AR-AR 1
03-087-AR-AR 1
UP-0811
03-083-AR 2
03-093-AR 1
03-095-AR-AR 1
03-099-AR 1
31
32
03-100-AR 1
03-101-AR 1
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0 0.25 0.5 0.75 1
Miles
0 0.25 0.5 0.75 1
Kilometers
Sheet 6 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
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Unassessed
Resources Inside APE - NRHP Status:
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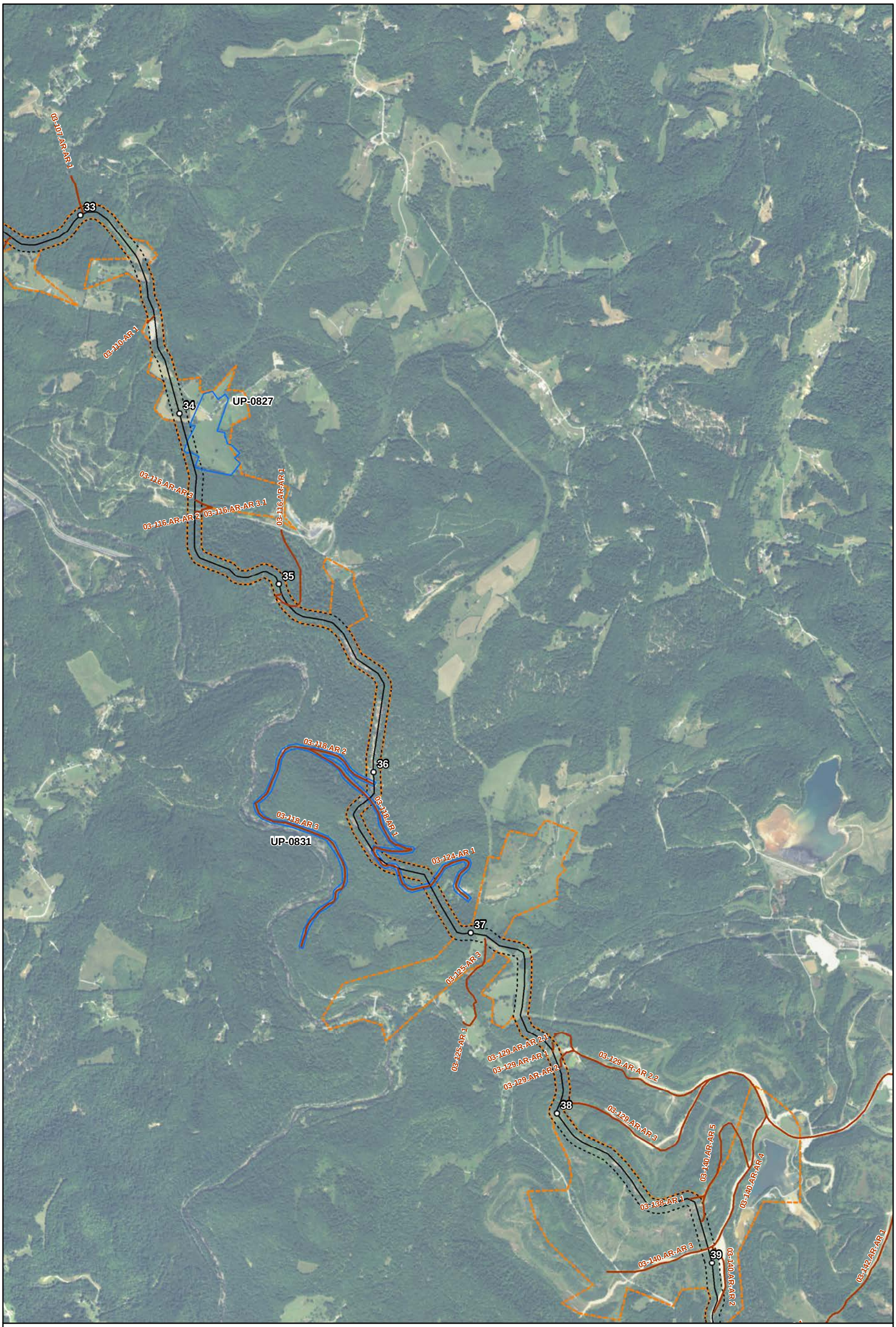
Assumed Eligible
Ineligible
Not Extant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03-110-AR 1
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UP-0827
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03-116.AR-AR 1
35
03-118.AR 2
36
03-118.AR 3
UP-0831
03-118.AR 1
03-124-AR 1
37
03-125-AR 3
03-125-AR 1
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03-129.AR-AR 1
03-129.AR-AR 2
03-129.AR-AR 2.2
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03-129.AR-AR 3
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03-140.AR-AR 3
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03-140.AR-AR 2
03-142.AR-AR 1
N
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Miles
0 0.25 0.5 0.75 1
Kilometers
Sheet 7 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant

0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 8 of 25

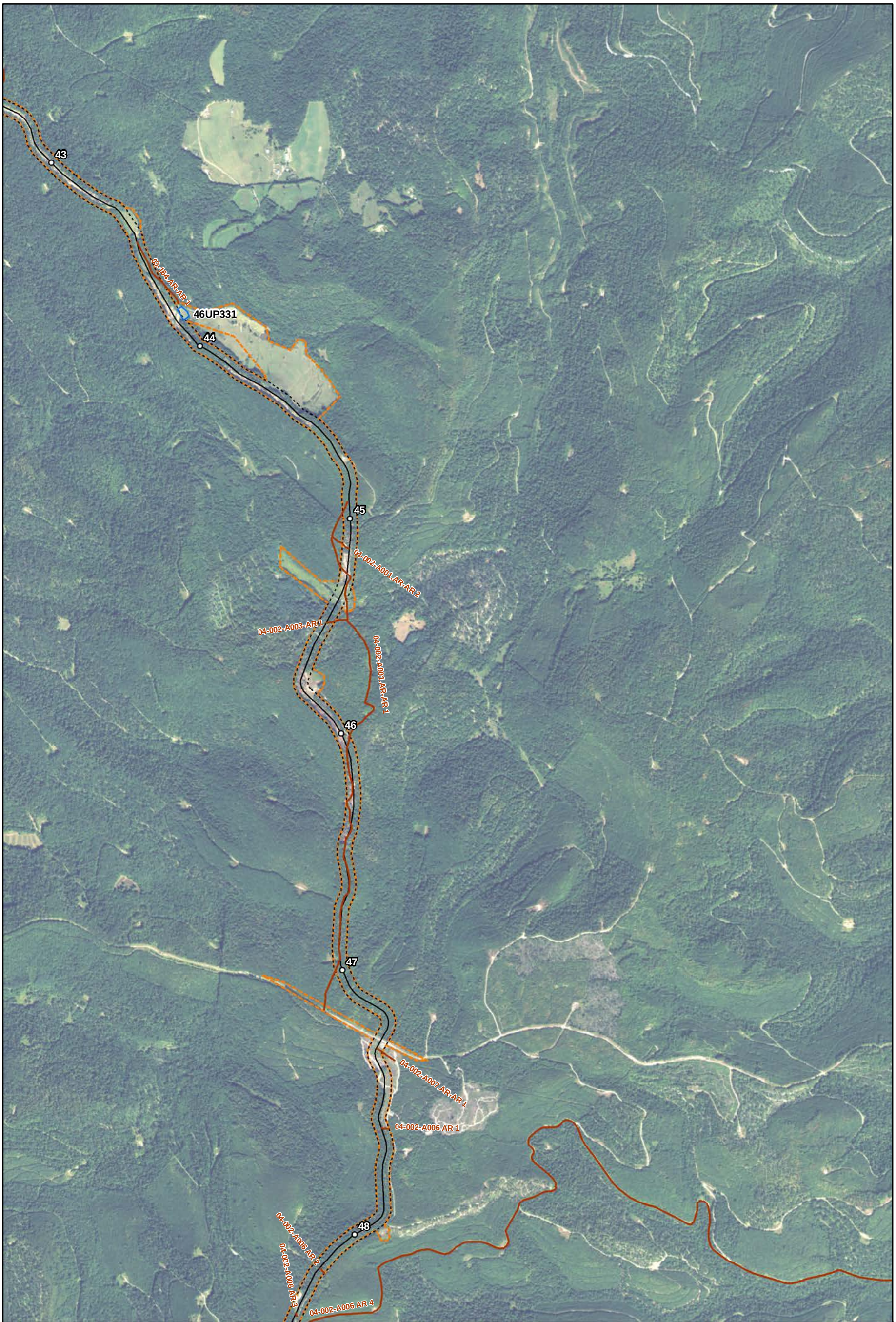
- Mileposts
- Corridor Centerline
- 150 foot buffer
- Access Roads
- Contractor Yards
- Visual APE

Resources Outside APE - NRHP Status:

- Ineligible
- Unassessed

Resources Inside APE - NRHP Status:

- Eligible
- Assumed Eligible
- Ineligible
- Not Extant



0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 9 of 25

- Mileposts
- Corridor Centerline
- 150 foot buffer
- Access Roads
- Contractor Yards
- Visual APE

Resources Outside APE - NRHP Status:

- Ineligible
- Unassessed

Resources Inside APE - NRHP Status:

- Eligible
- Assumed Eligible
- Ineligible
- Not Extant

N

0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 10 of 25

- Mileposts
- Corridor Centerline
- 150 foot buffer
- Access Roads
- Contractor Yards
- Visual APE

Resources Outside APE - NRHP Status:

- Ineligible
- Unassessed

Resources Inside APE - NRHP Status:

- Eligible
- Assumed Eligible
- Ineligible
- Not Extant

N

0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 11 of 25

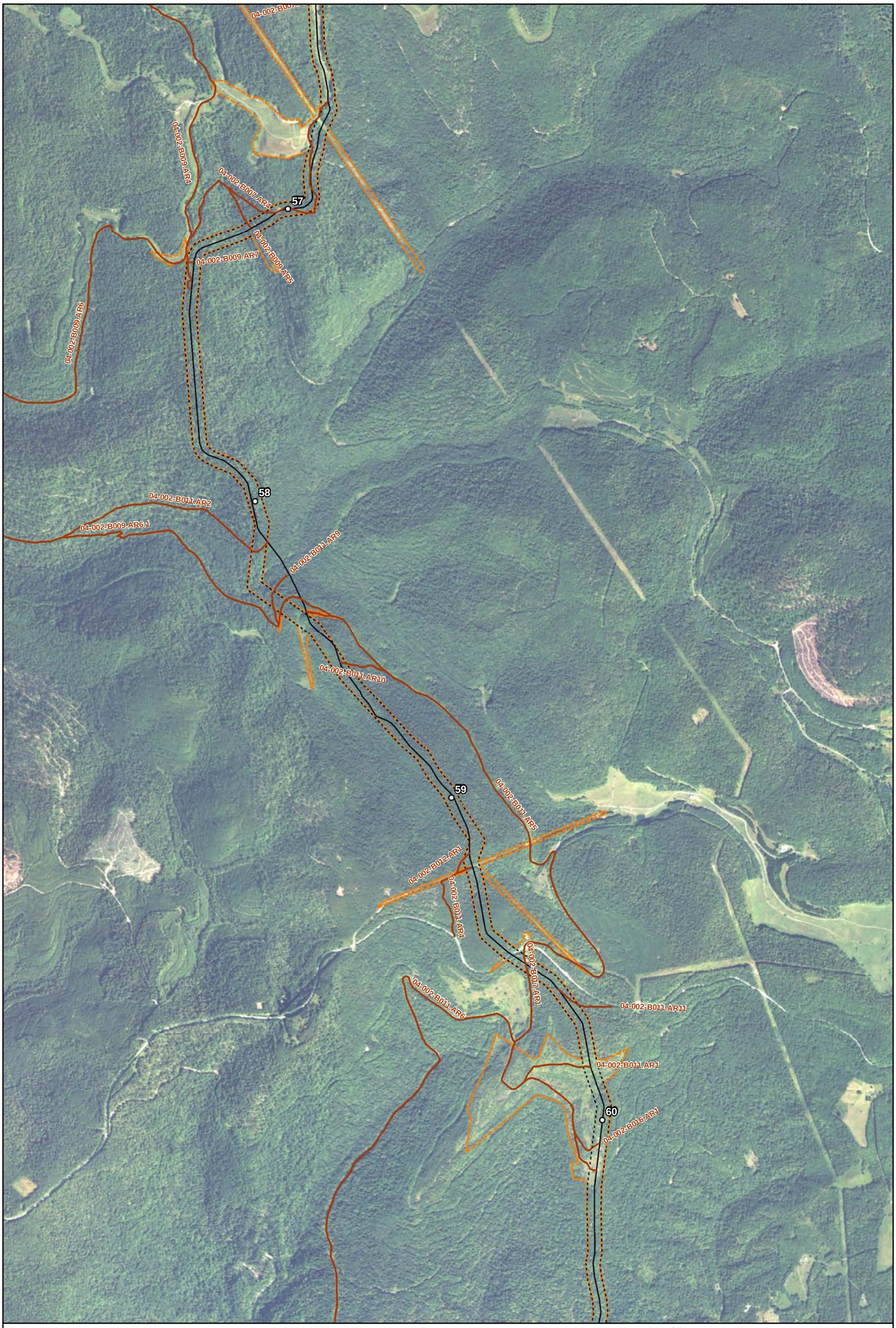
- Mileposts
- Corridor Centerline
- 150 foot buffer
- Access Roads
- Contractor Yards
- Visual APE

Resources Outside APE - NRHP Status:

- Ineligible
- Unassessed

Resources Inside APE - NRHP Status:

- Eligible
- Assumed Eligible
- Ineligible
- Not Extant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04-002-B016.AR1
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Miles
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Kilometers
Sheet 12 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant

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04-002-B025.AR2
04-002-B075.AR2
04-002-B025.AR6
04-002-B025.AR3

N

0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 13 of 25

Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE

Resources Outside APE - NRHP Status:
Ineligible
Unassessed

Resources Inside APE - NRHP Status:
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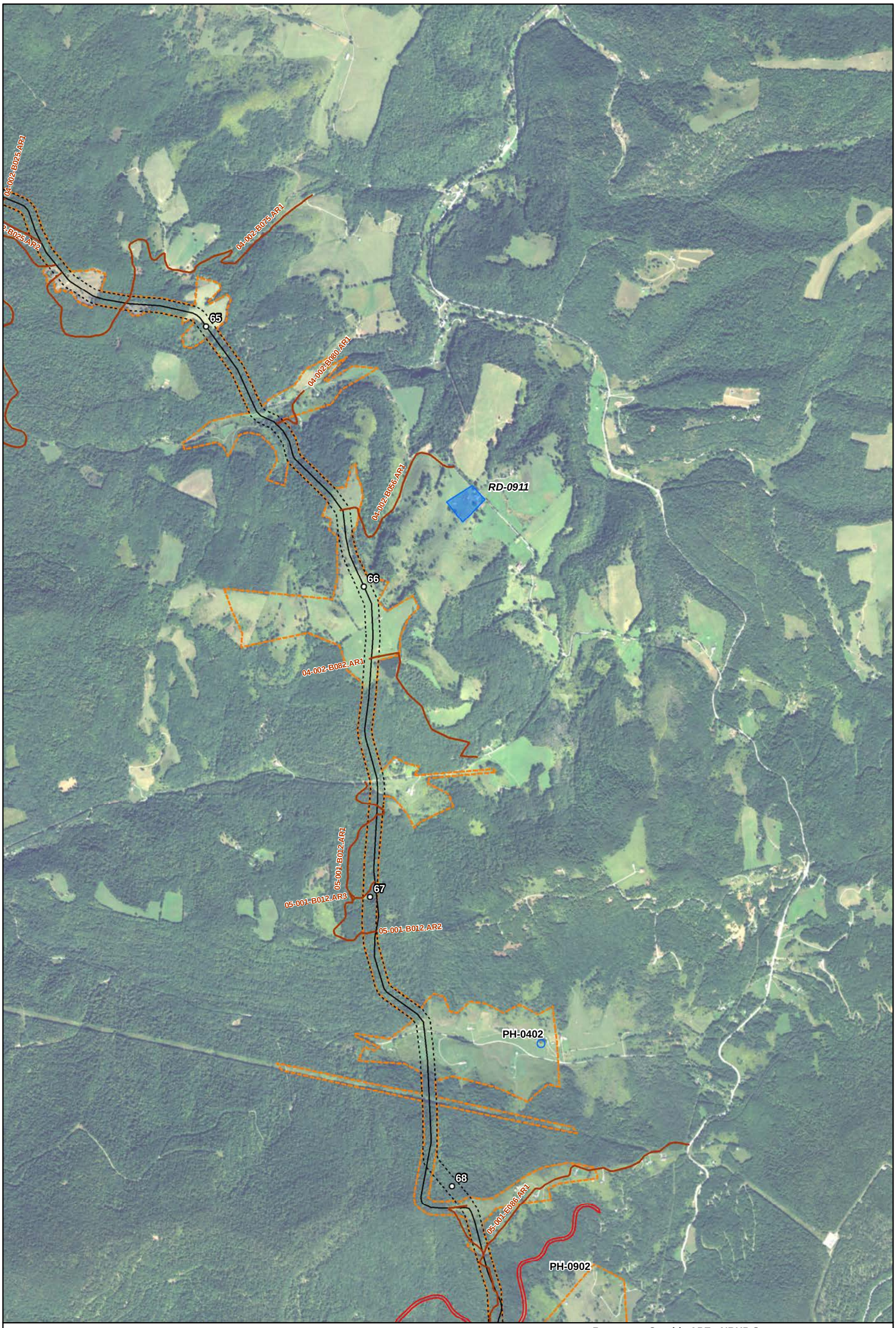
Assumed Eligible
Ineligible
Not Extant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04-002-B080.AR1
04-002-B036.AR1
RD-0911
66
04-002-B082.AR1
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PH-0402
68
05-001-E086.AR1
PH-0902
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Miles
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Kilometers
Sheet 14 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
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Ineligible
Unassessed
Resources Inside APE - NRHP Status:
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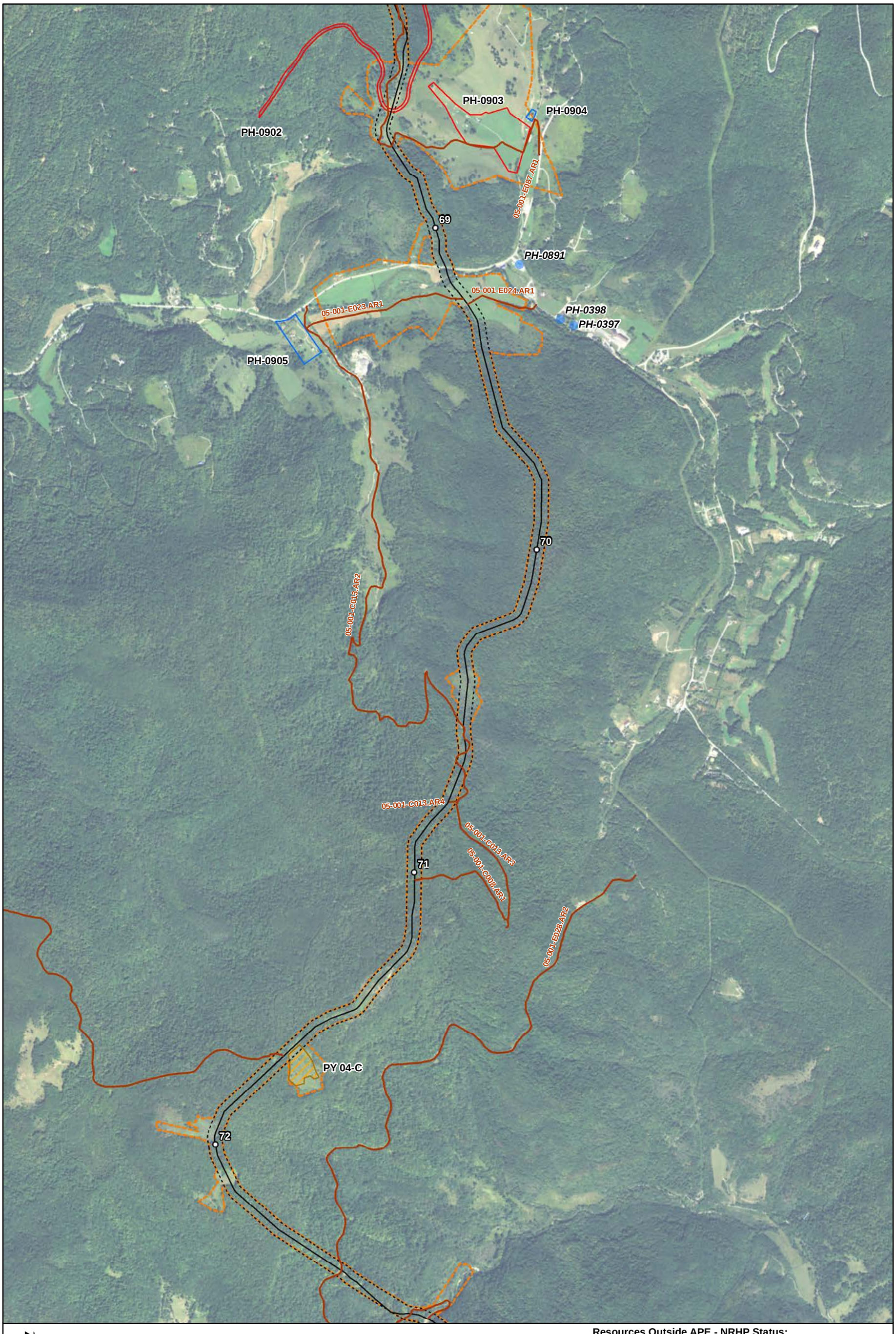
Assumed Eligible
Ineligible
Not Extant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PH-0903
PH-0904
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PH-0891
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PH-0398
PH-0397
PH-0905
70
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05-001-C013.AR4
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71
05-001-C008.AR1
05-001-E028.AR2
PY 04-C
72
0 0.25 0.5 0.75 1
Miles
0 0.25 0.5 0.75 1
Kilometers
Sheet 15 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant

N

0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 16 of 25

Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE

Resources Outside APE - NRHP Status:
Ineligible
Unassessed

Resources Inside APE - NRHP Status:
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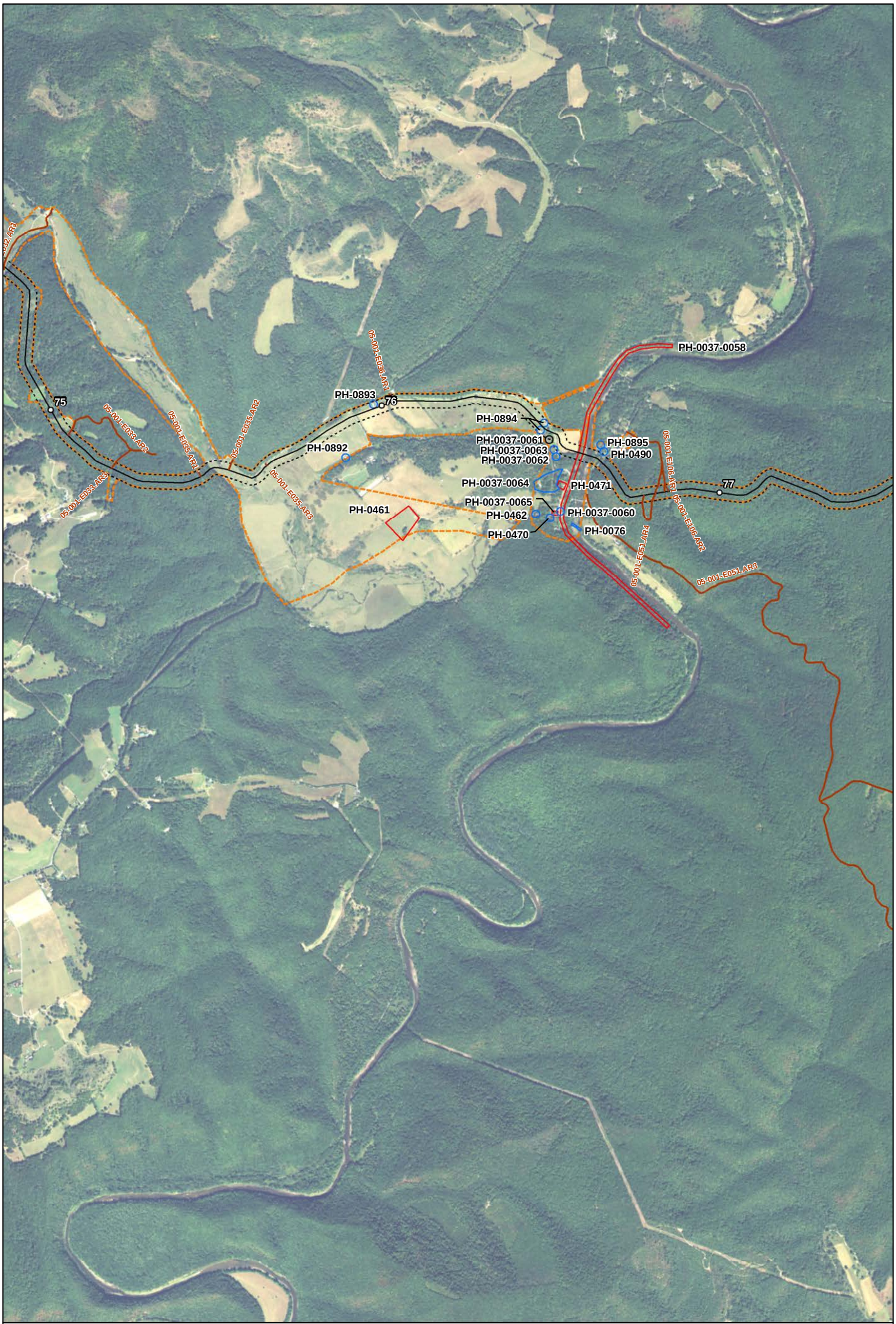
Assumed Eligible
Ineligible
Not Extant



0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 17 of 25

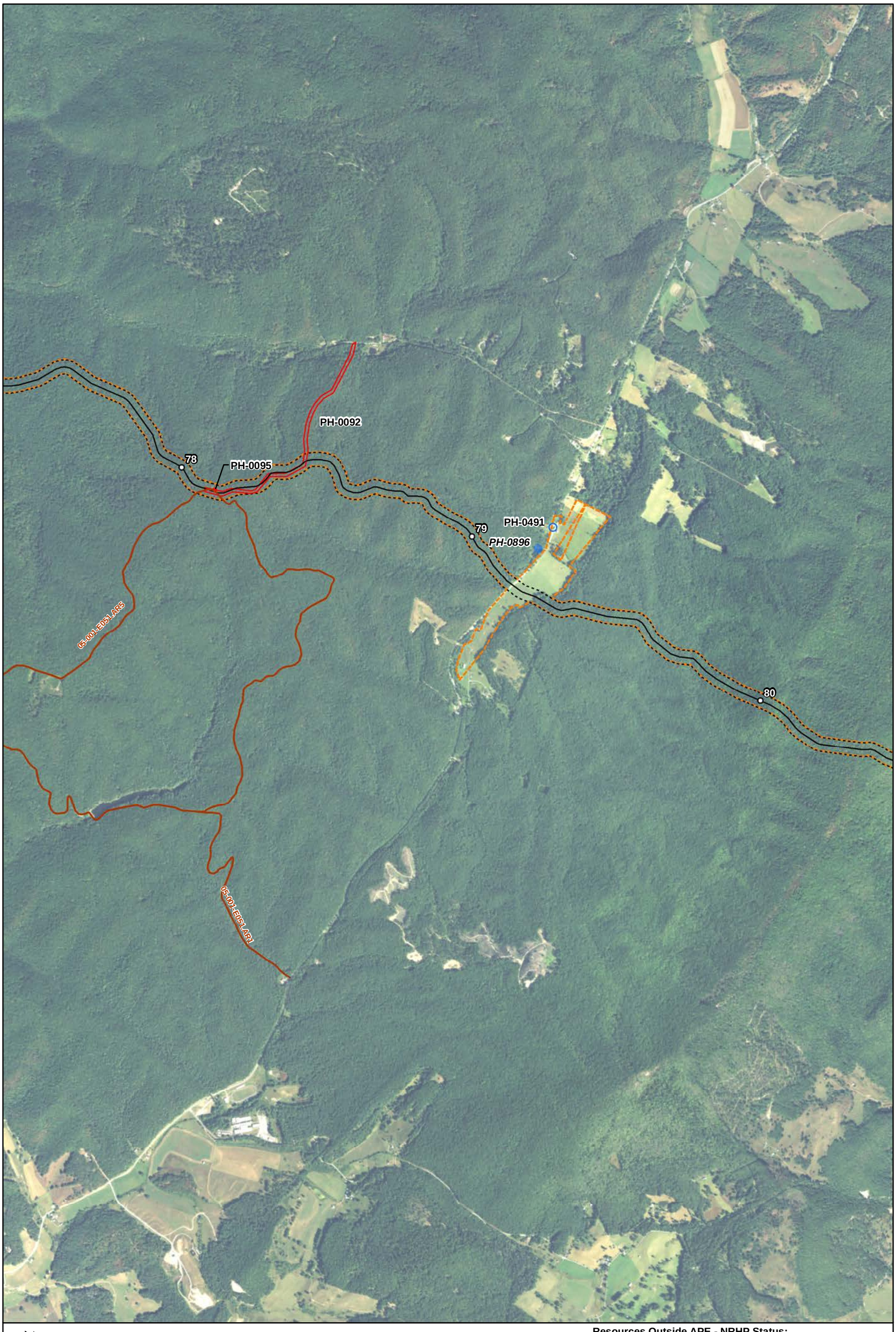
- Mileposts
- Corridor Centerline
- 150 foot buffer
- Access Roads
- Contractor Yards
- Visual APE

Resources Outside APE - NRHP Status:

- Ineligible
- Unassessed

Resources Inside APE - NRHP Status:

- Eligible
- Assumed Eligible
- Ineligible
- Not Extant



0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 18 of 25

- Mileposts
- Corridor Centerline
- 150 foot buffer
- Access Roads
- Contractor Yards
- Visual APE

Resources Outside APE - NRHP Status:

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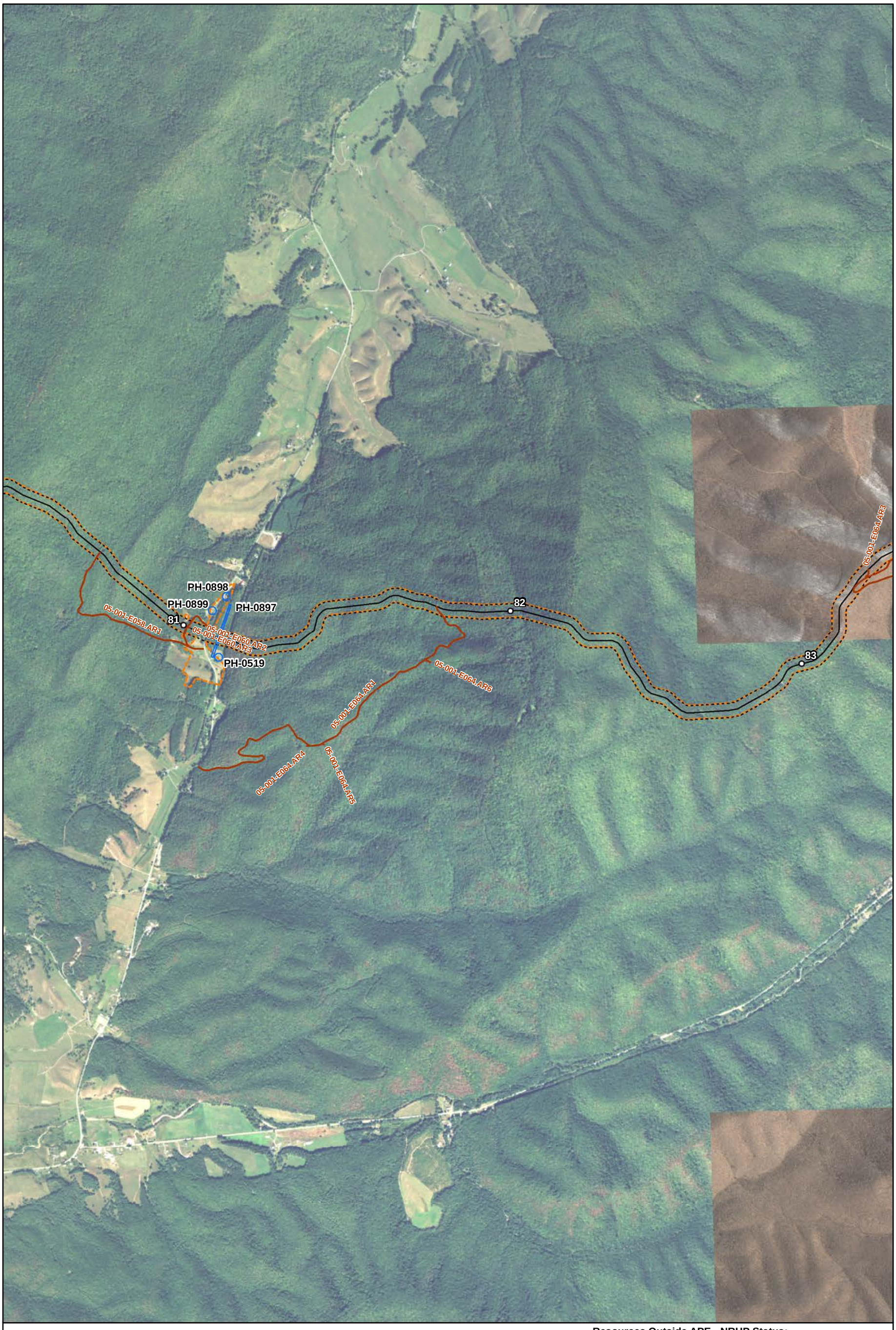
- Unassessed

Resources Inside APE - NRHP Status:

- Eligible
- Assumed Eligible
- Ineligible
- Not Extant



N

0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 19 of 25

Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE

Resources Outside APE - NRHP Status:
Ineligible
Unassessed

Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant

N

0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 20 of 25

- Mileposts
- Corridor Centerline
- 150 foot buffer
- Access Roads
- Contractor Yards
- Visual APE

Resources Outside APE - NRHP Status:

- Ineligible
- Unassessed

Resources Inside APE - NRHP Status:

- Eligible
- Assumed Eligible
- Ineligible
- Not Extant

SP2-2_CYSpr2-2A

N

0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 21 of 25

Mileposts

Corridor Centerline

150 foot buffer

Access Roads

Contractor Yards

Visual APE

Resources Outside APE - NRHP Status:

Ineligible

Unassessed

Resources Inside APE - NRHP Status:

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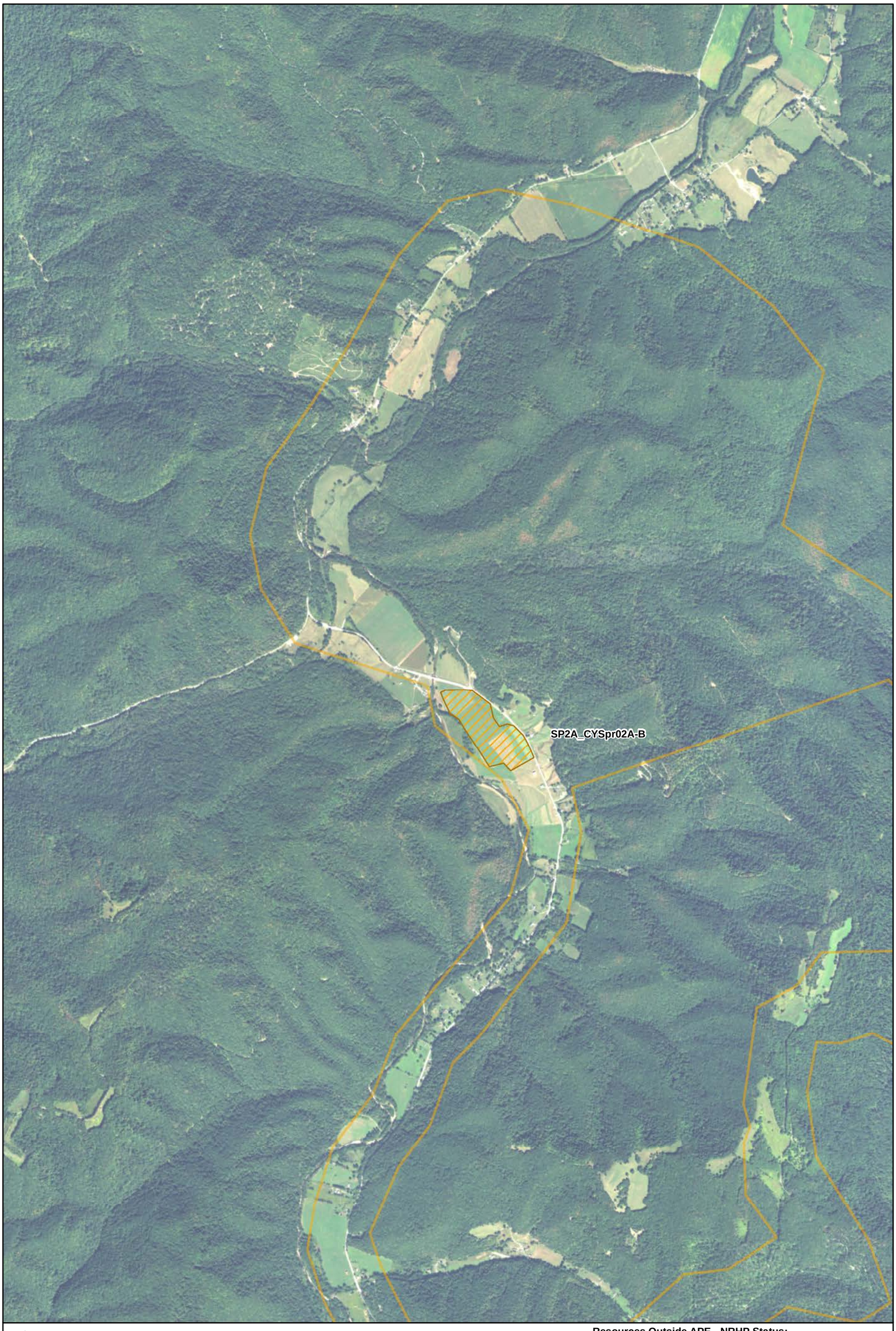
Assumed Eligible

Ineligible

Not Extant



0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 22 of 25

Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE

Resources Outside APE - NRHP Status:
Ineligible
Unassessed

Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant

PY 01-A

63

0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 23 of 25

Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE

Resources Outside APE - NRHP Status:
Ineligible
Unassessed

Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant


05-001-C009.AR1
SP03_CY_Spr03-A
72
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Miles
0 0.25 0.5 0.75 1
Kilometers
N
Sheet 24 of 25
Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE
Resources Outside APE - NRHP Status:
Ineligible
Unassessed
Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant

0 0.25 0.5 0.75 1 Miles

0 0.25 0.5 0.75 1 Kilometers

Sheet 25 of 25

Mileposts
Corridor Centerline
150 foot buffer
Access Roads
Contractor Yards
Visual APE

Resources Outside APE - NRHP Status:
Ineligible
Unassessed

Resources Inside APE - NRHP Status:
Eligible
Assumed Eligible
Ineligible
Not Extant

APPENDIX B – RESOURCE PHOTOS

Figure 1. LE-0004, view of Broad Run Baptist Church, facing north-northwest.

Figure 2. LE-0004, Broad Run Baptist Church, sanctuary interior, facing west.

Figure 3. LE-0004, sanctuary interior and balcony, facing east.

Figure 4. LE-0004, view of east façade of church, facing west.

Figure 5. LE-0004, interior of vestibule, showing former entrance, facing southwest.

Figure 6. LE-0004, view of east façade of church in 1954, facing west.

Figure 7. LE-0004, view of Broad Run Baptist Church Annex, facing south-southwest.

Figure 8. LE-0004 and 46LE61, view of Broad Run Cemetery, facing southwest.

Figure 9. LE-0004 and 46LE61, view of Jackson family plot, Broad Run Cemetery, facing southwest.

Figure 10. LE-0004 and 46LE61, baptismal pond and masonry dam, facing southwest.

Figure 11. Photo of Gen. Joseph Lightburn (center foreground) standing in front of church with congregation, facing northwest.

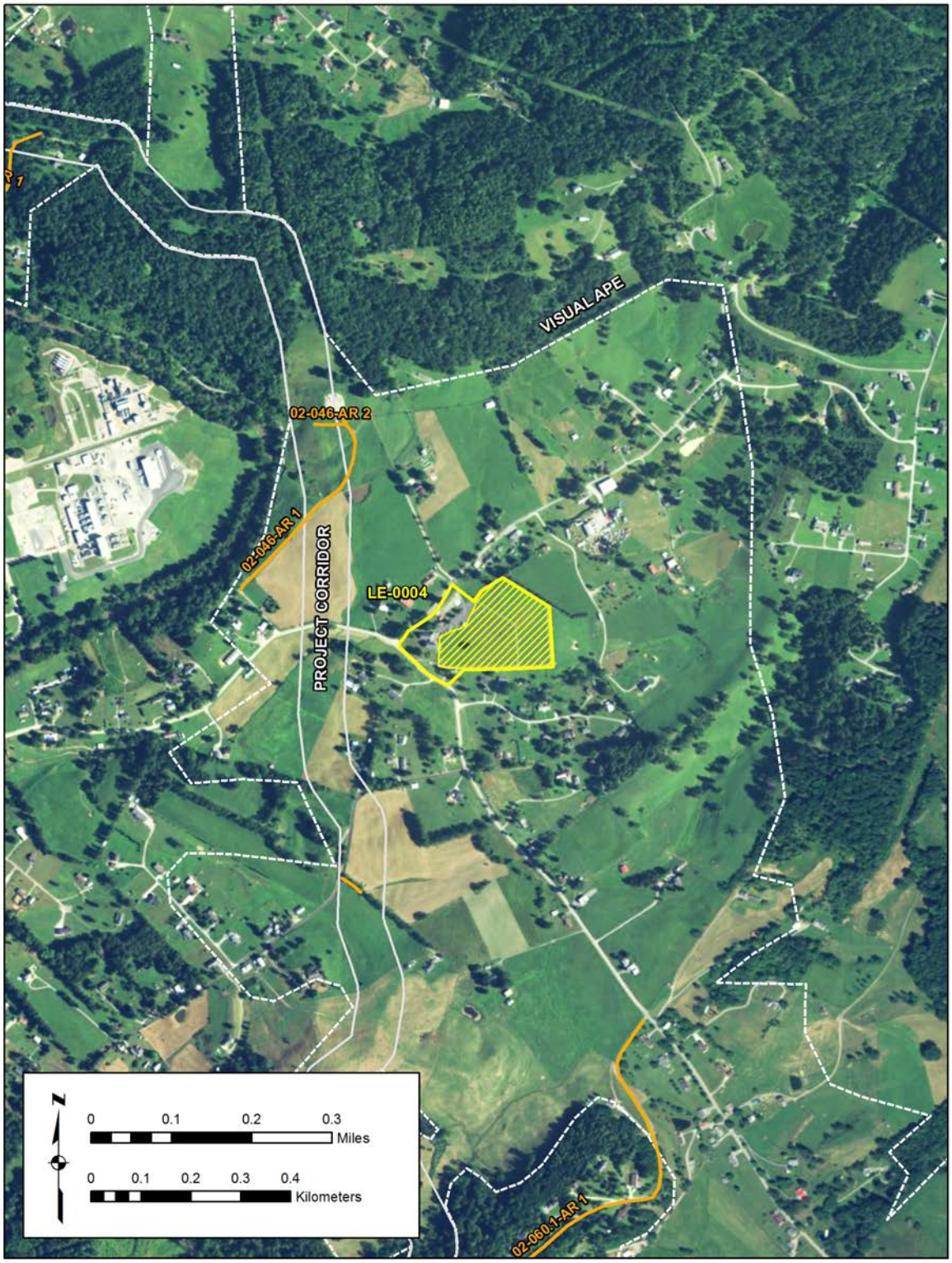

Figure 12. LE-0004, proposed NRHP boundary in relation to the Project corridor.

Figure 13. LE-0004, 3-D terrain model.

Figure 14. LE-0004, viewshed.

Figure 15. LE-0004, photo simulation.

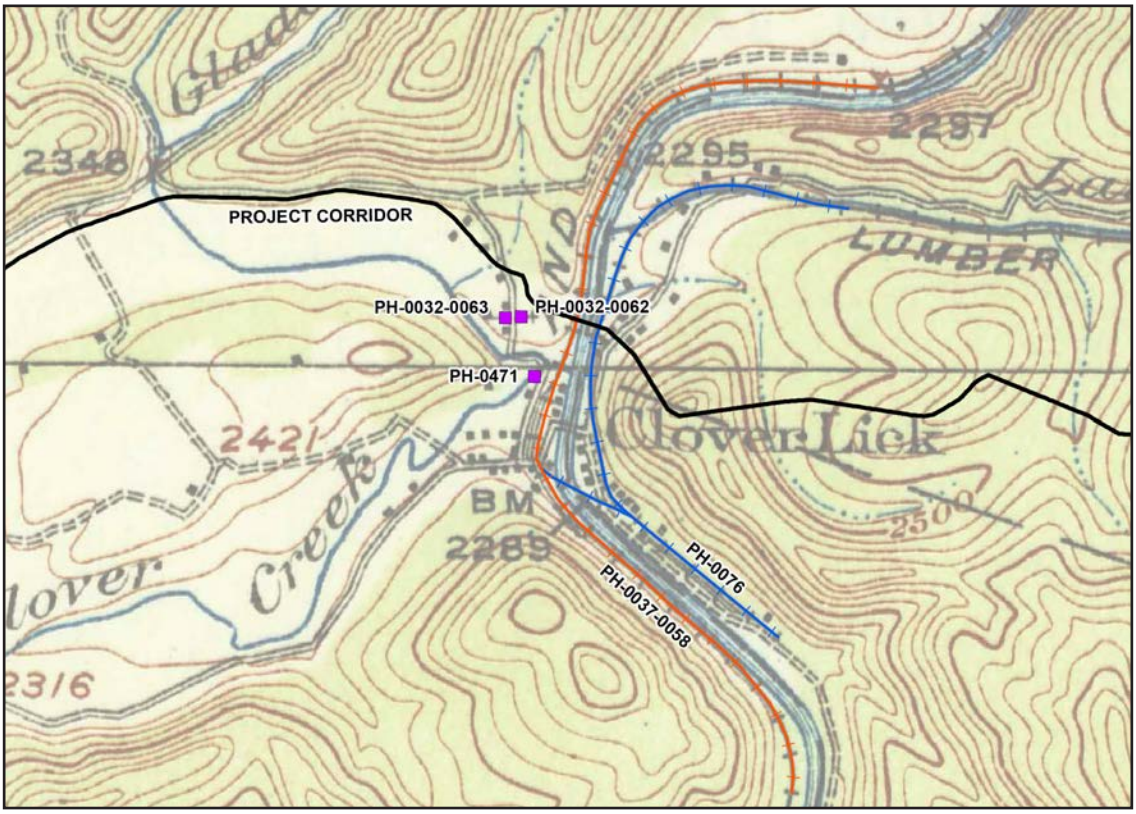

Figure 16. Topographic map surveyed in 1922 showing the Greenbrier Division of the C&O Railroad (PH-0037-0058) in the vicinity of Clover Lick, West Virginia (USGS 1924).

Figure 17. PH-0037-0058, facing south.

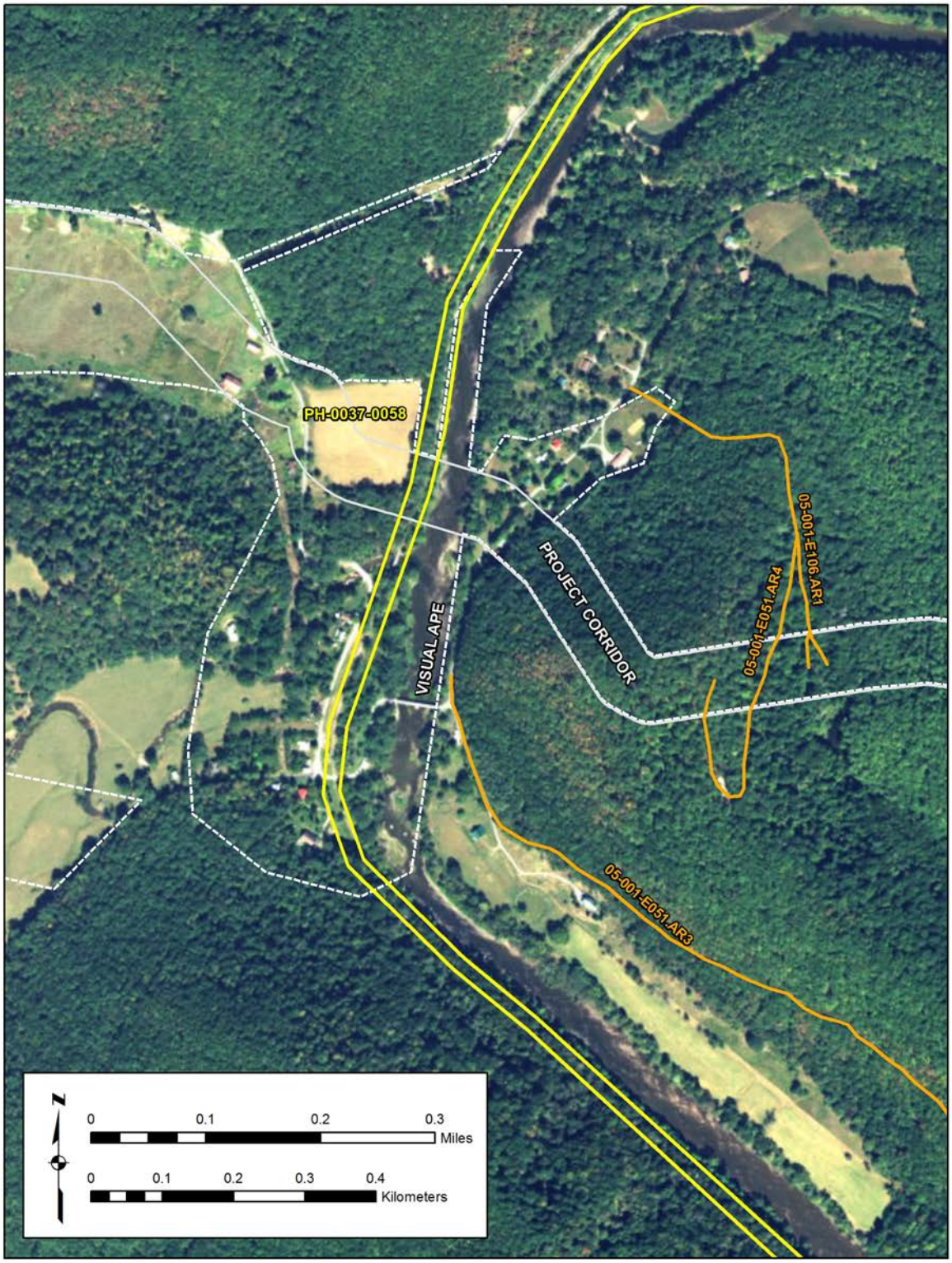

Figure 18. PH-0037-0058, proposed NRHP boundary in relation to the Project corridor.

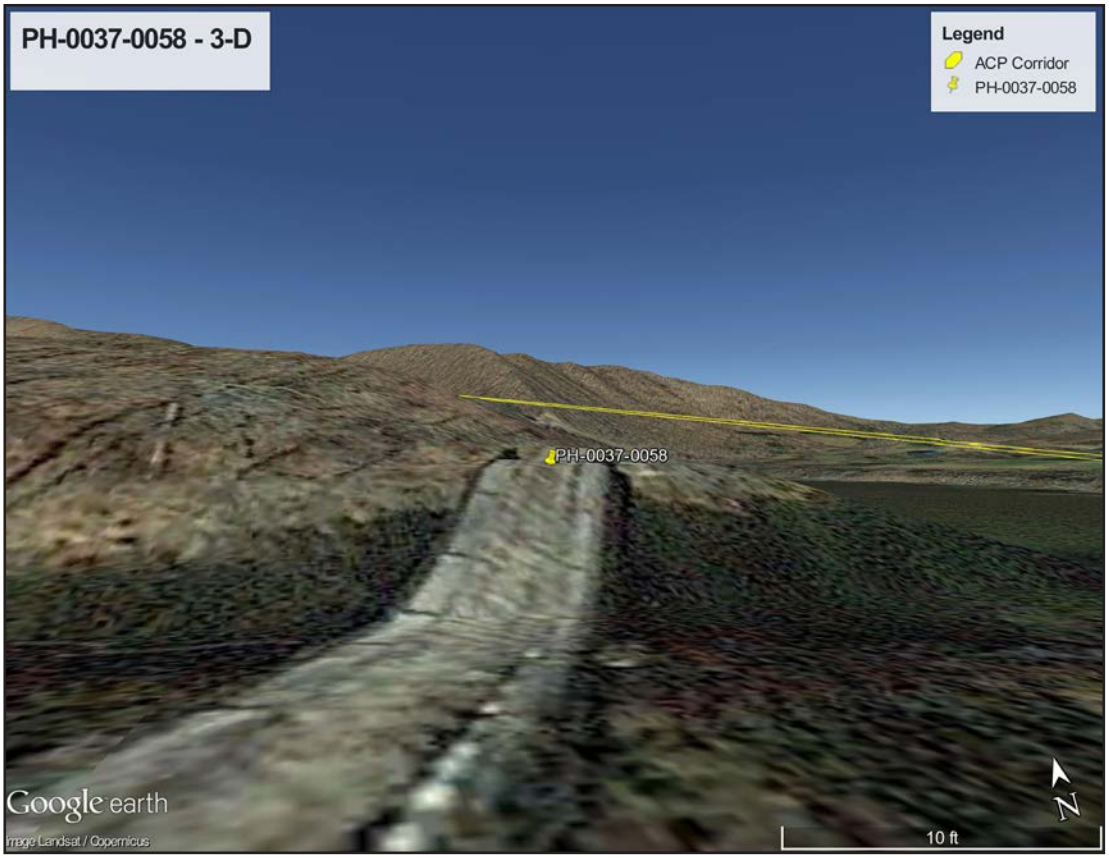

Figure 19. PH-0037-0058, 3-D terrain model.

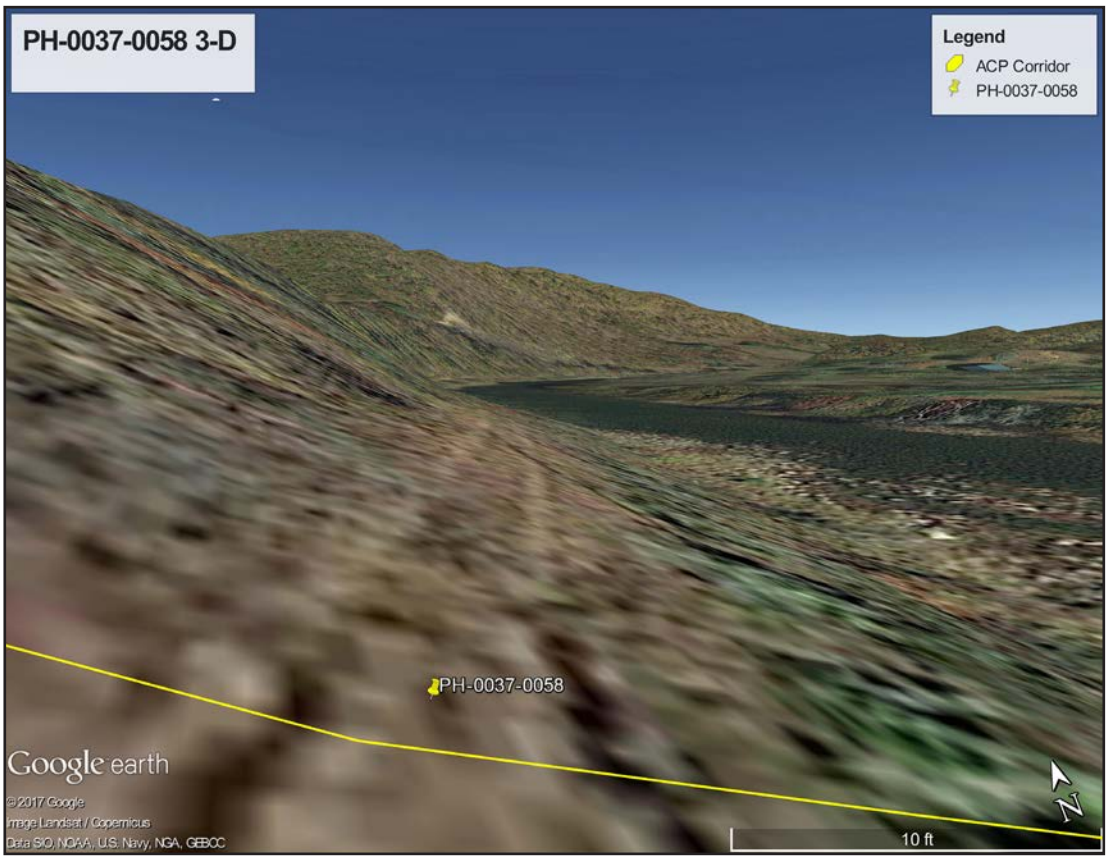

Figure 20. PH-0037-0058, 3-D terrain model at crossing.

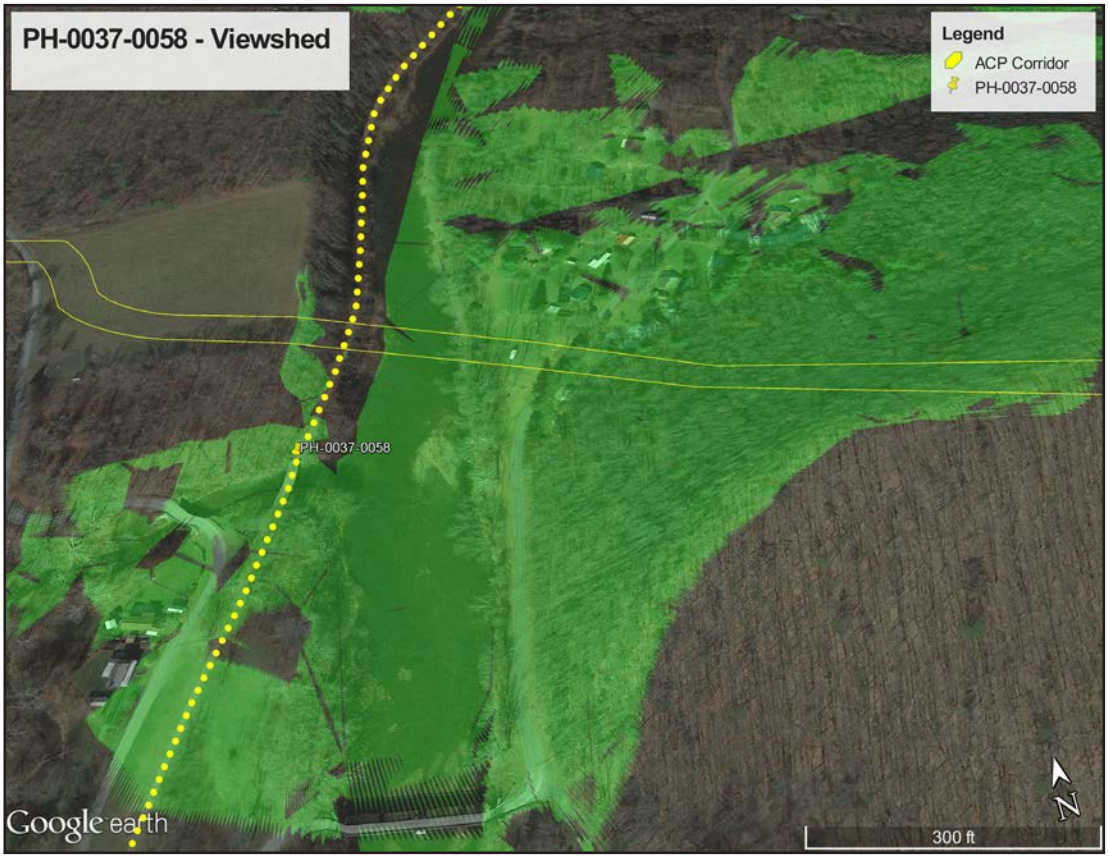

Figure 21. PH-0037-0058, viewshed.

Figure 22. PH-0037-0058, photo simulation.

Figure 23. PH-0037-0058, photo simulation at crossing.

Photo 24. PH-0037-65, store, facing west.

Photo 25. PH-0037-65, store, facing east.

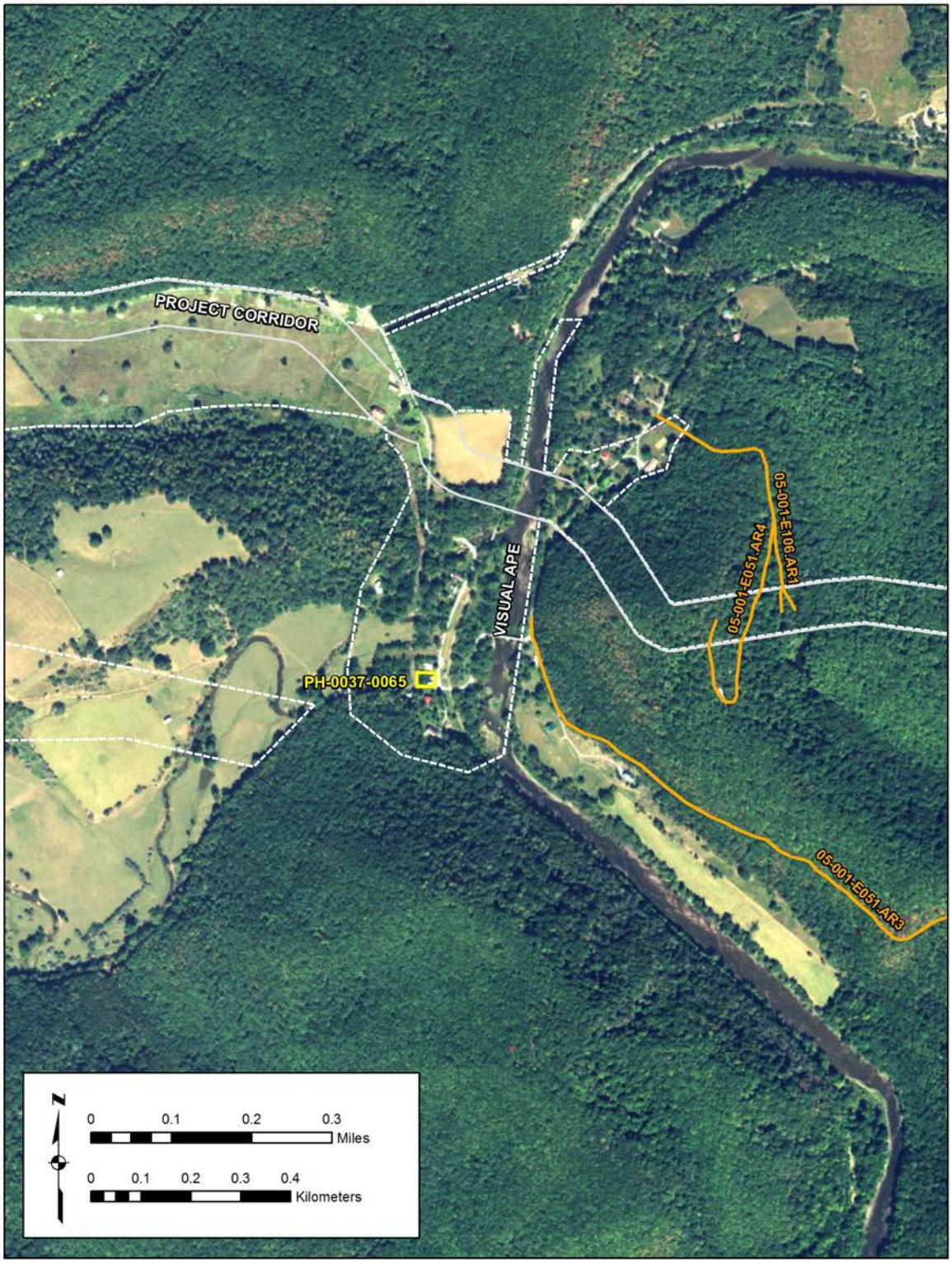

Figure 26. PH-0037-0065, proposed NRHP boundary in relation to the Project corridor.

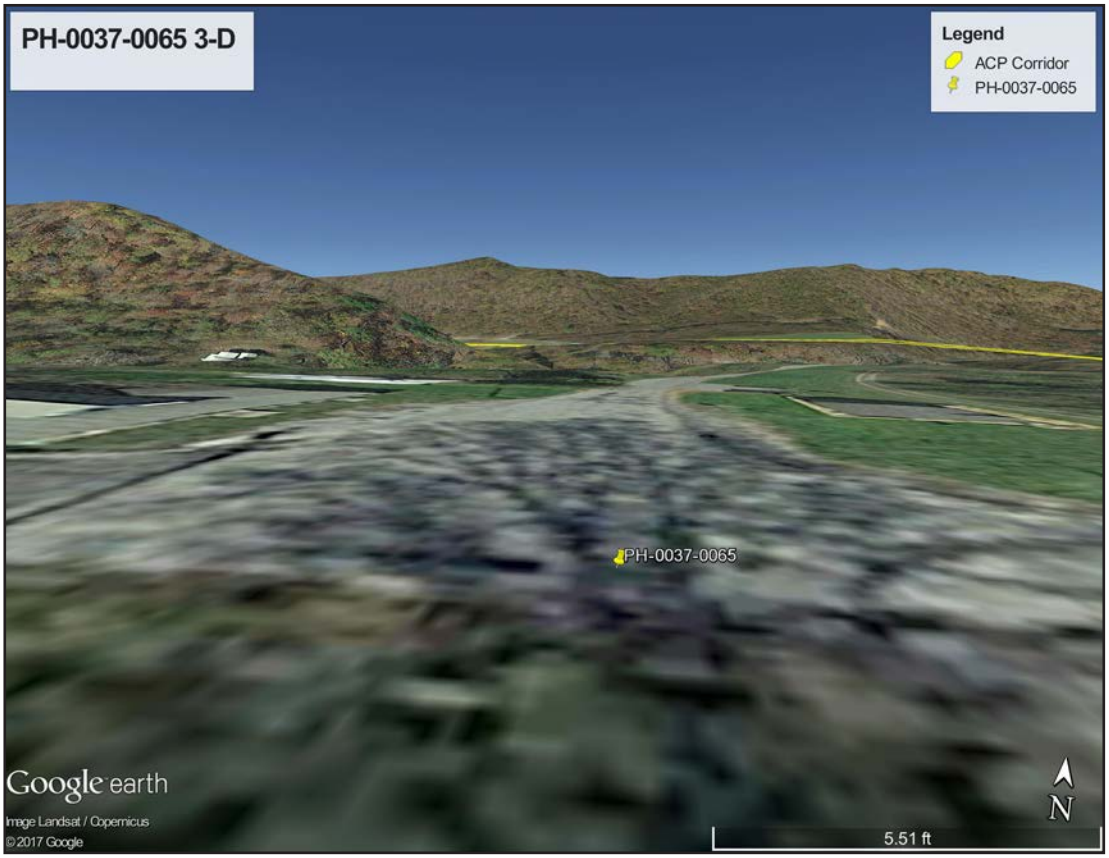

Figure 27. PH-0037-0065, 3-D terrain model.

Figure 28. PH-0037-0065, viewshed.

Figure 29. PH-0037-0065, photo simulation.

Figure 30. PH-0092, facing east.

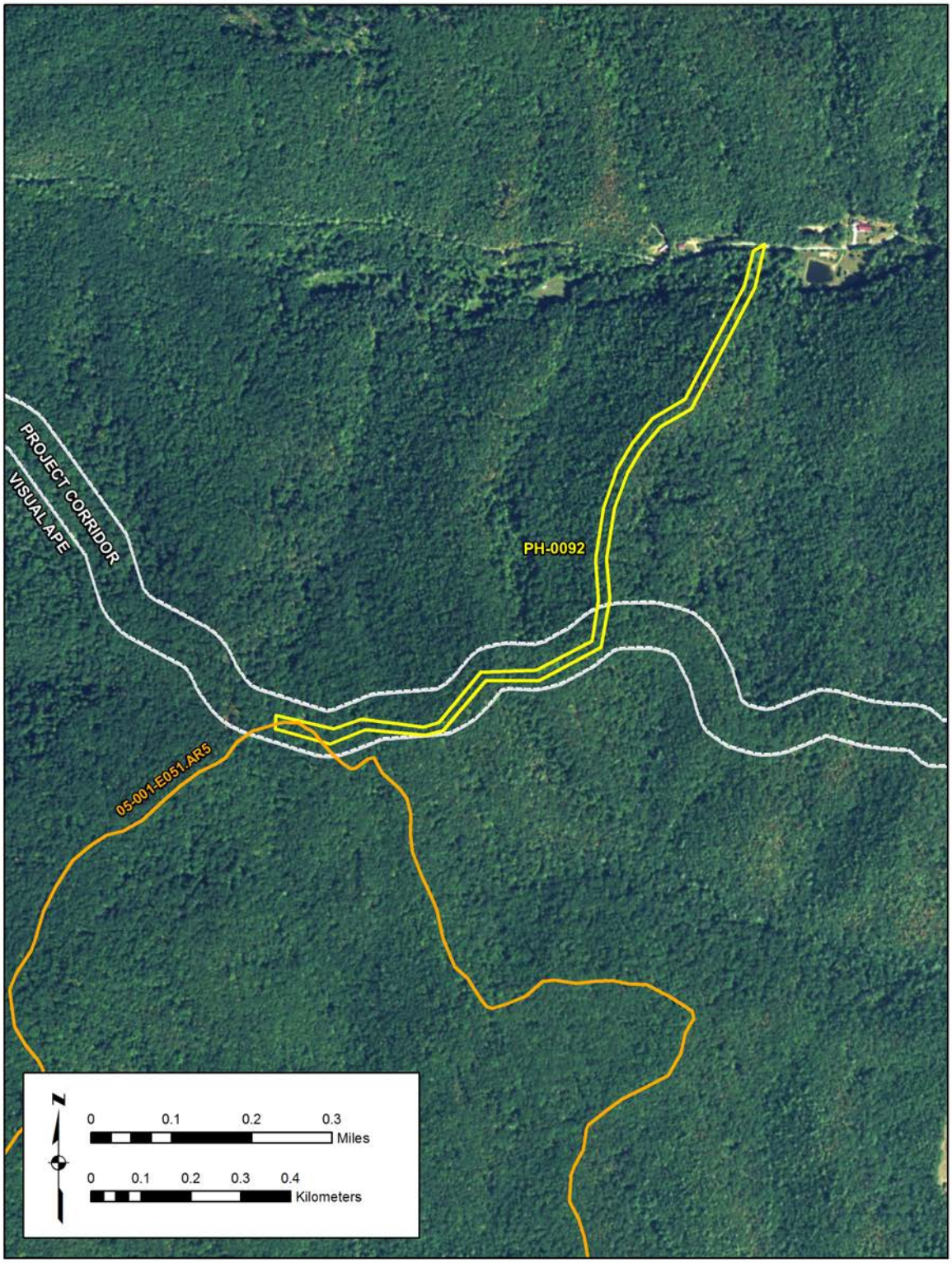

Figure 31. PH-0092, proposed NRHP boundary in relation to the Project corridor.

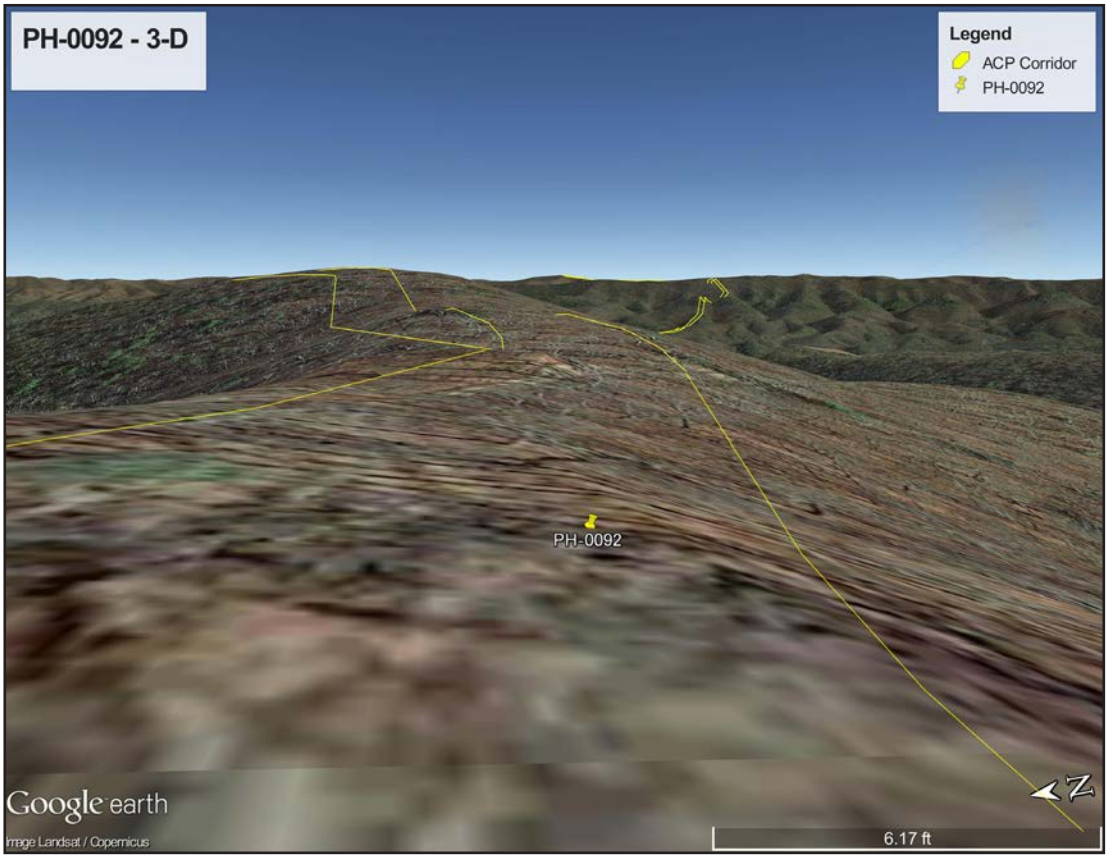

Figure 32. PH-0092, 3-D terrain model.

Figure 33. PH-0092, 3-D terrain model at crossing.

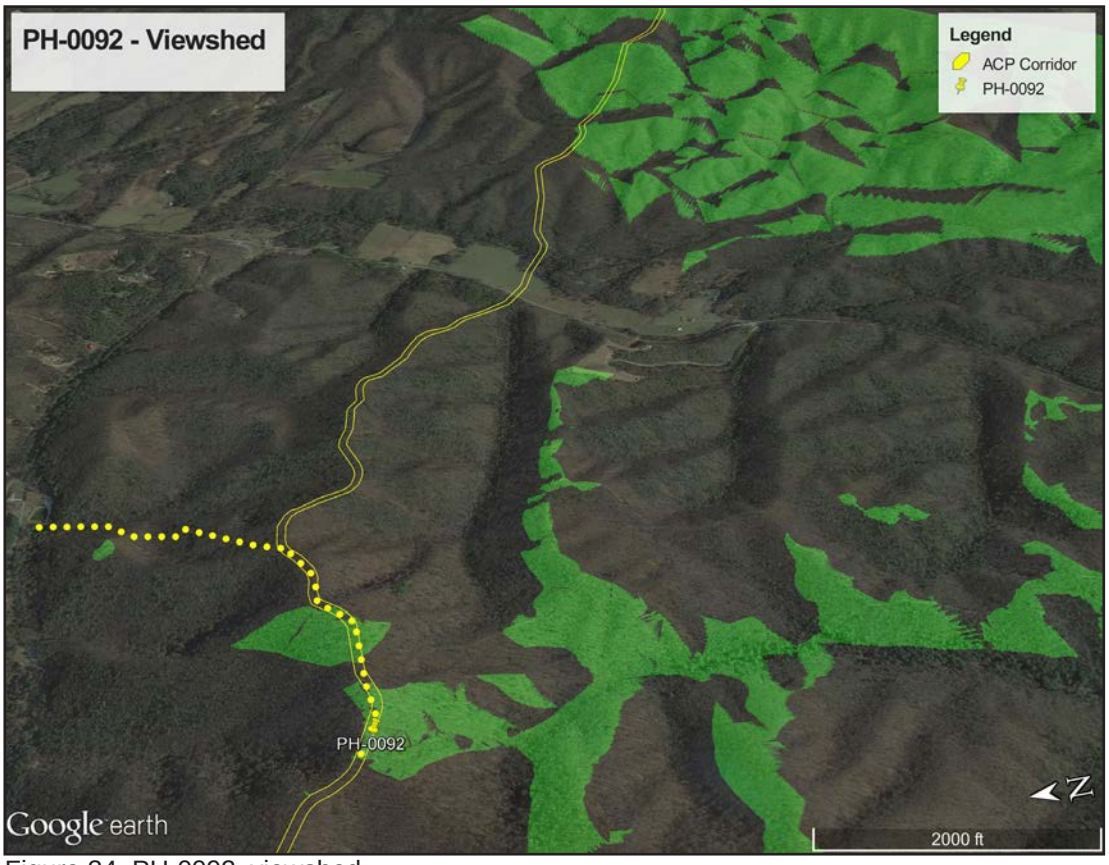

Figure 34. PH-0092, viewshed.

Figure 35. PH-0092, photo simulation.

Figure 36. PH-0092, photo simulation at crossing.

Figure 37. PH-0095, facing east.

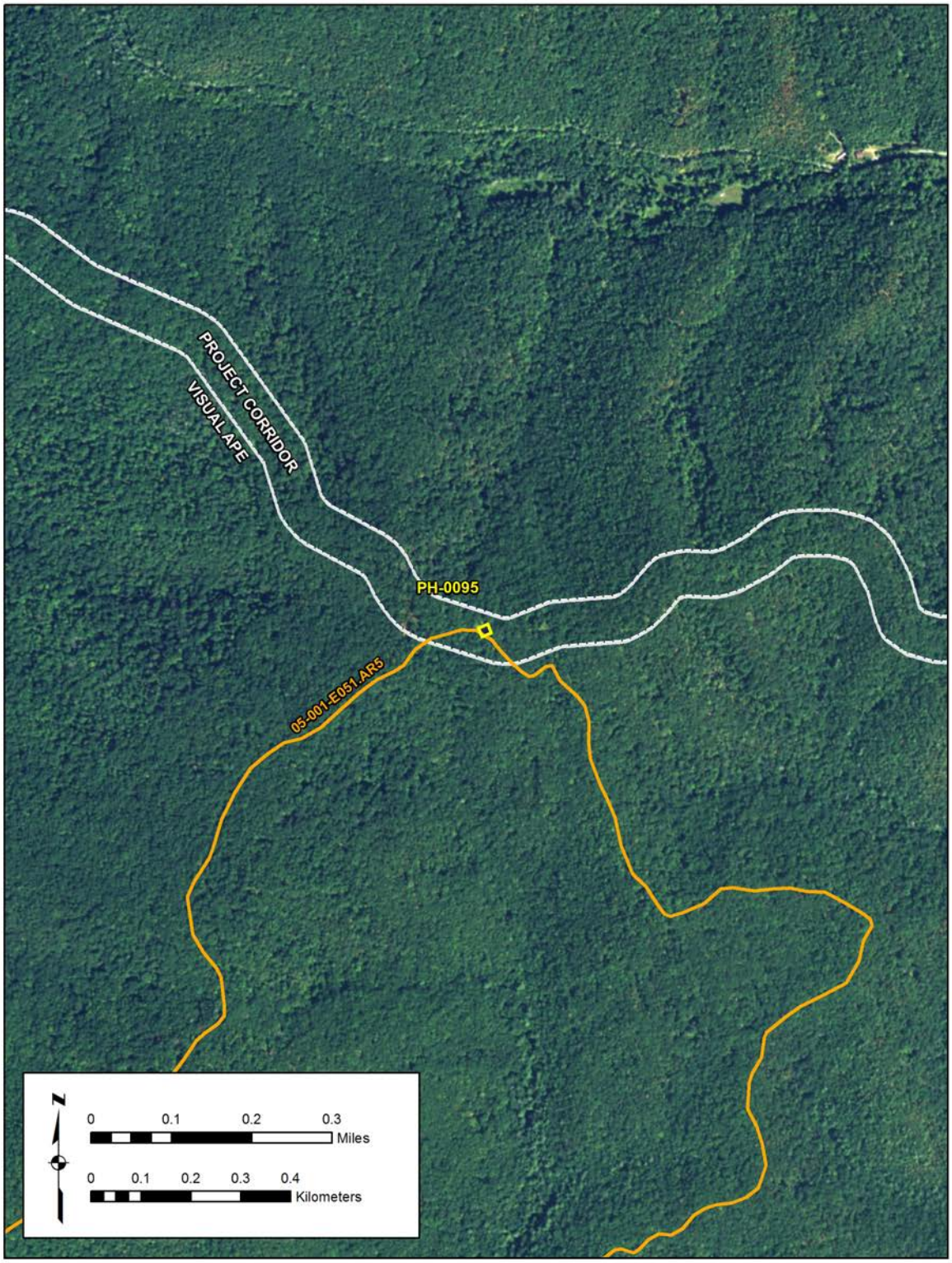

Figure 38. PH-0095, proposed NRHP boundary in relation to the Project corridor.

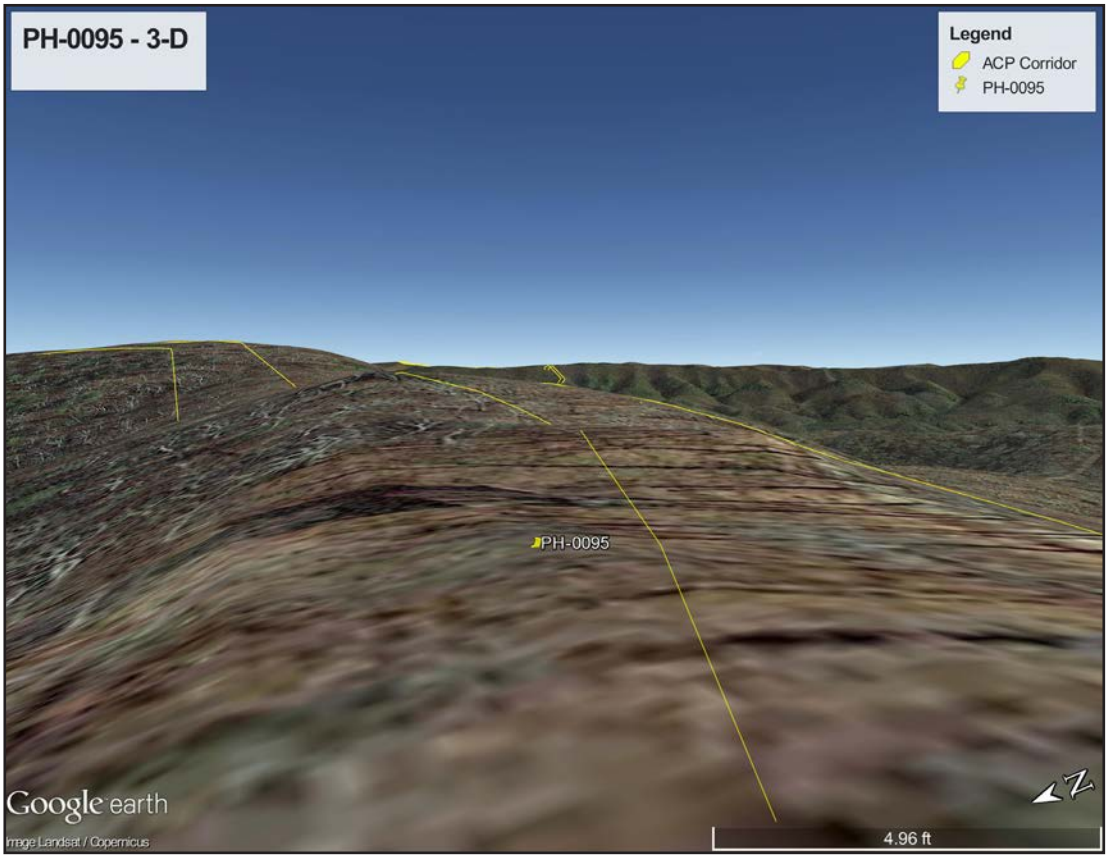

Figure 39. PH-0095, 3-D terrain model.

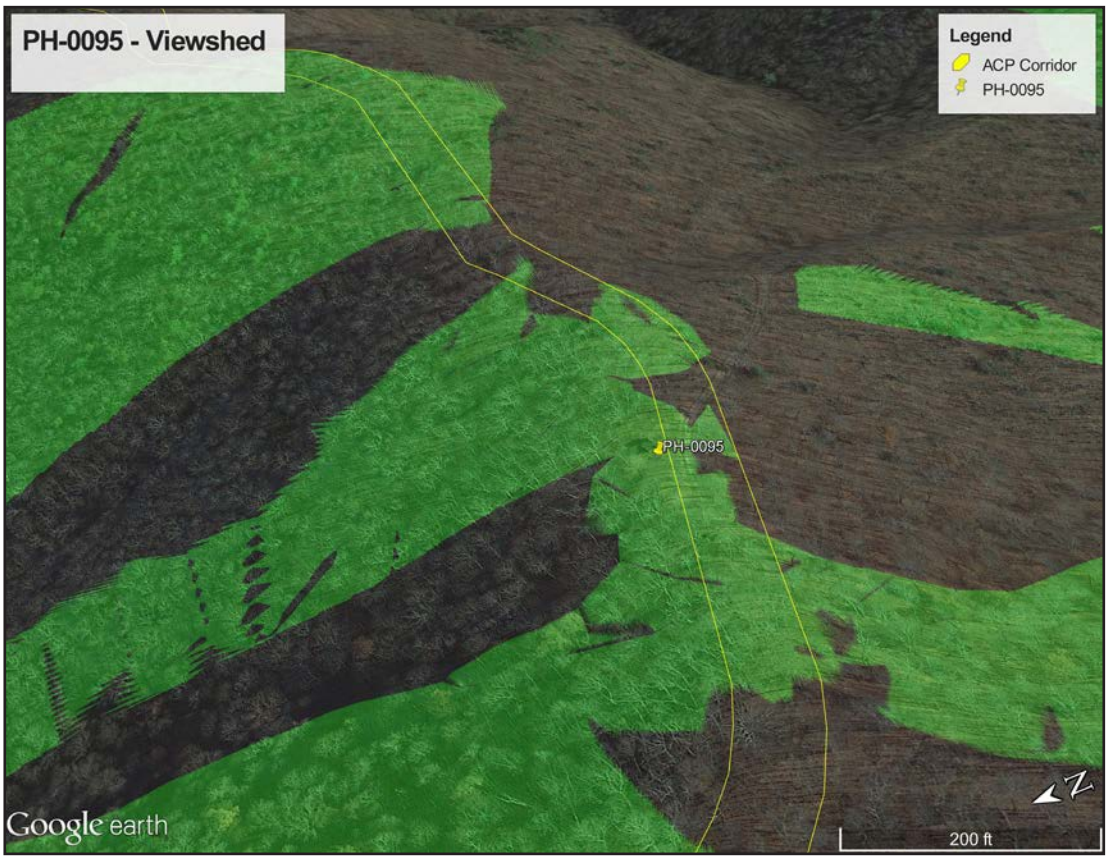

Figure 40. PH-0095, viewshed.

Figure 41. PH-0095, photo simulation.

Figure 42. PH-0461, dwelling, facing north.

Figure 43. PH-0461, dwelling, facing north.

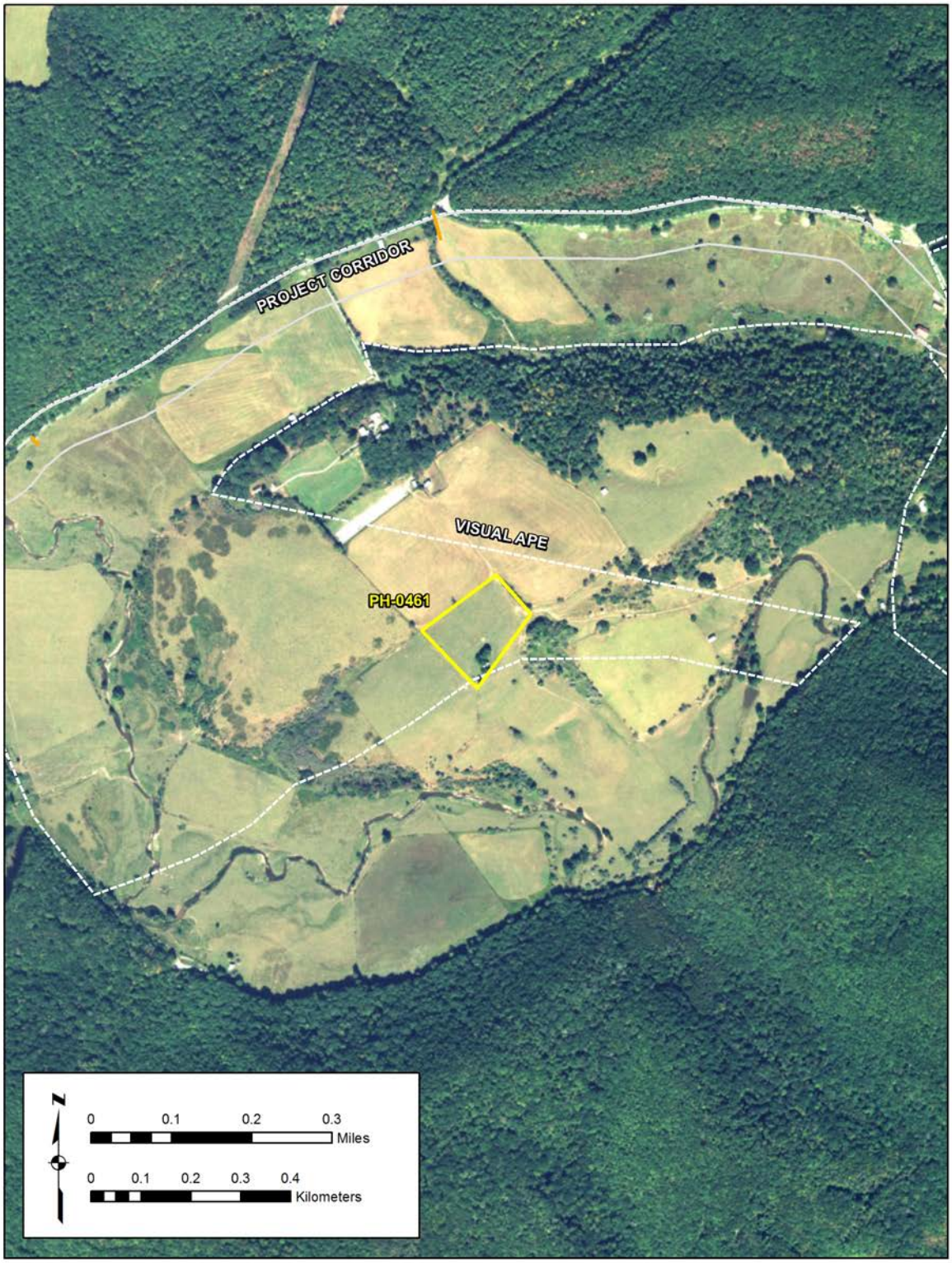

Figure 44. PH-0461, proposed NRHP boundary in relation to the Project corridor.

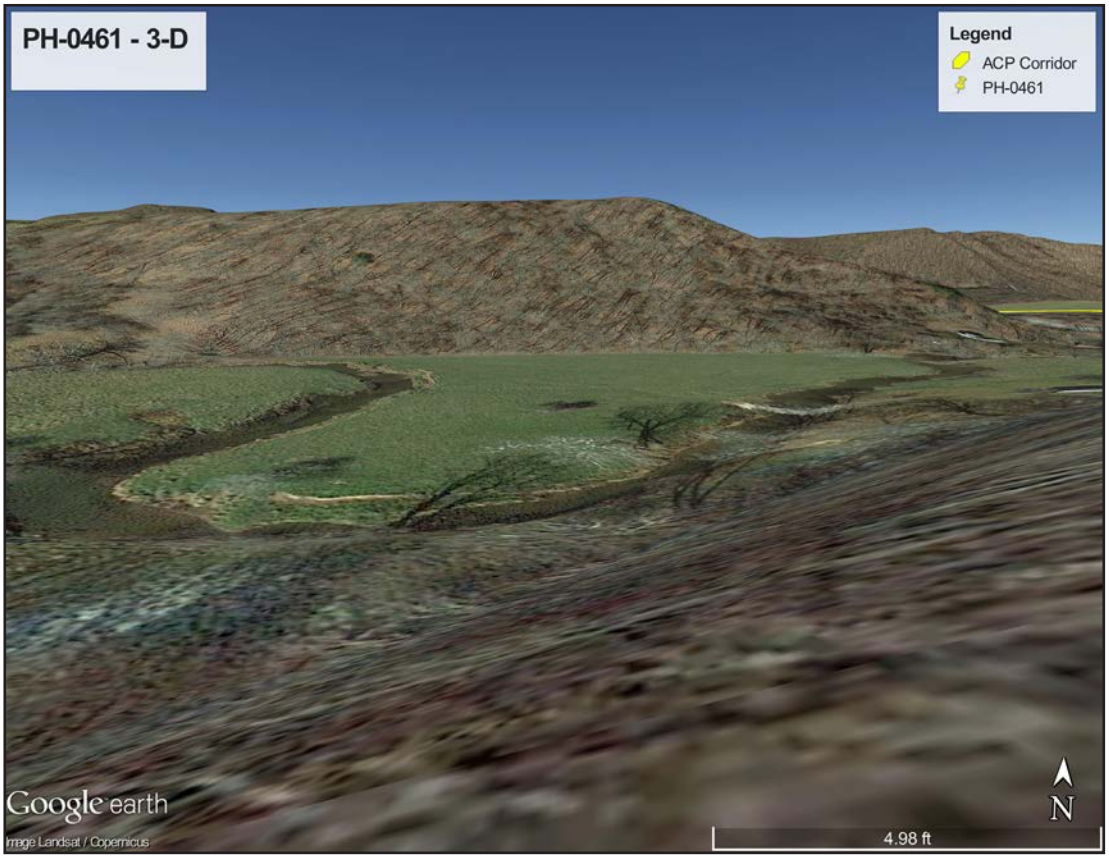

Figure 45. PH-0461, 3-D terrain model.

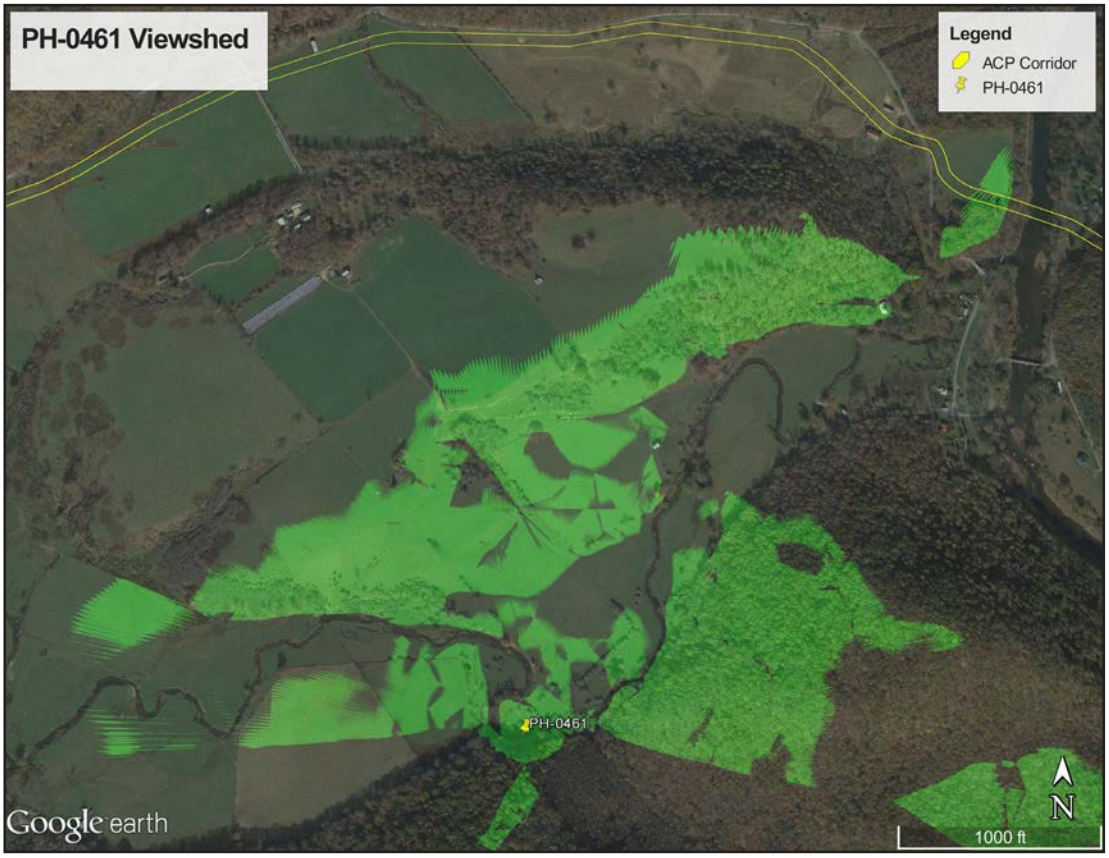

Figure 46. PH-0461, viewshed.

Figure 47. PH-0461, photo simulation.

Figure 48. PH-0471, southwest elevation, facing north.

Figure 49. PH-0471, northwest and southwest elevations, facing east.

Figure 50. PH-0471, storage structure, facing east.

Figure 51. PH-0471, accessory structure, facing northwest.

Figure 52. PH-0471, outhouse structure, facing west.

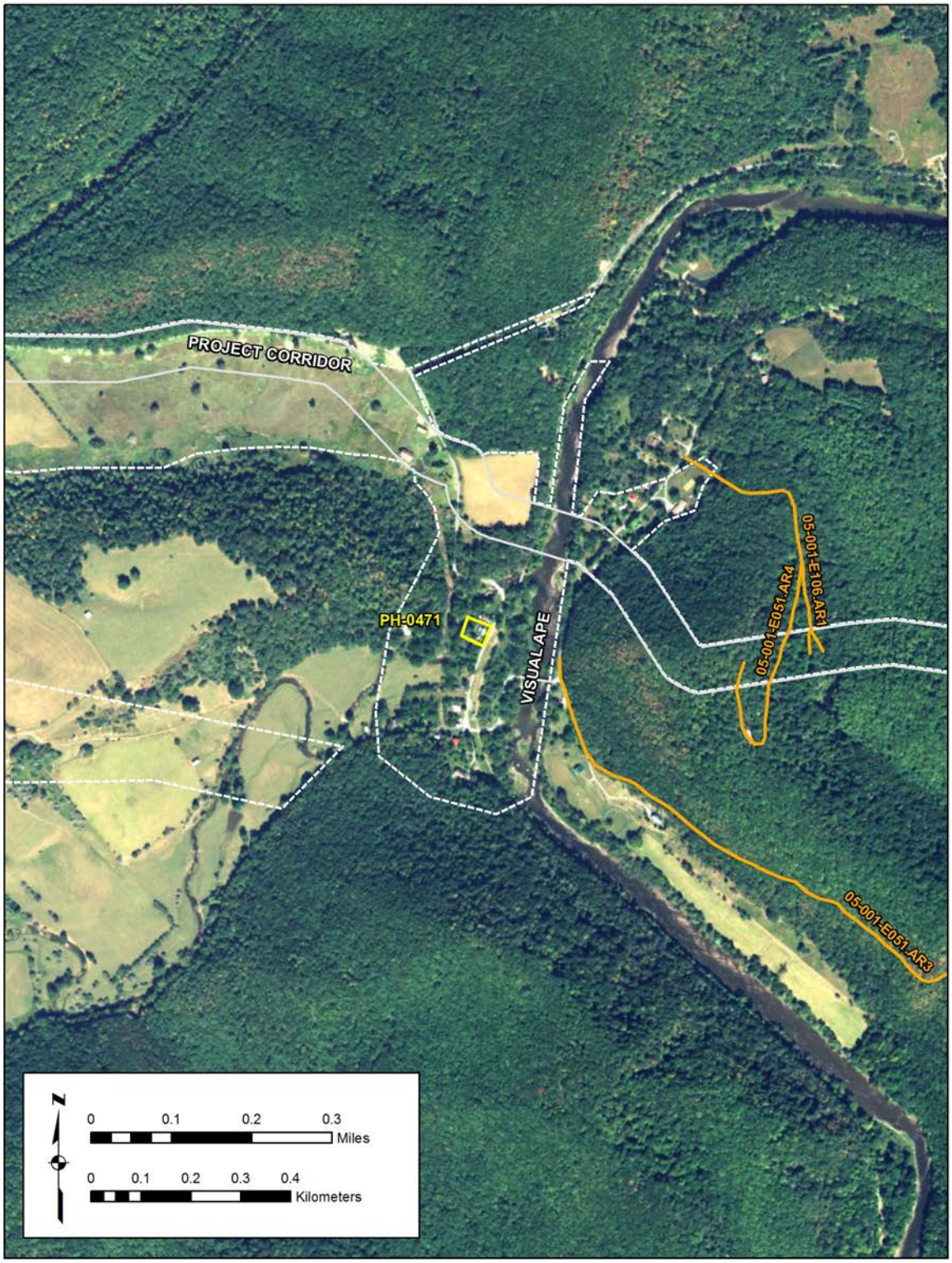

Figure 53. PH-0471, proposed NRHP boundary in relation to the Project corridor.

Figure 54. PH-0902, pulp and paper railroad, facing northwest.

Figure 55. PH-0902, pulp and paper railroad, facing southeast.

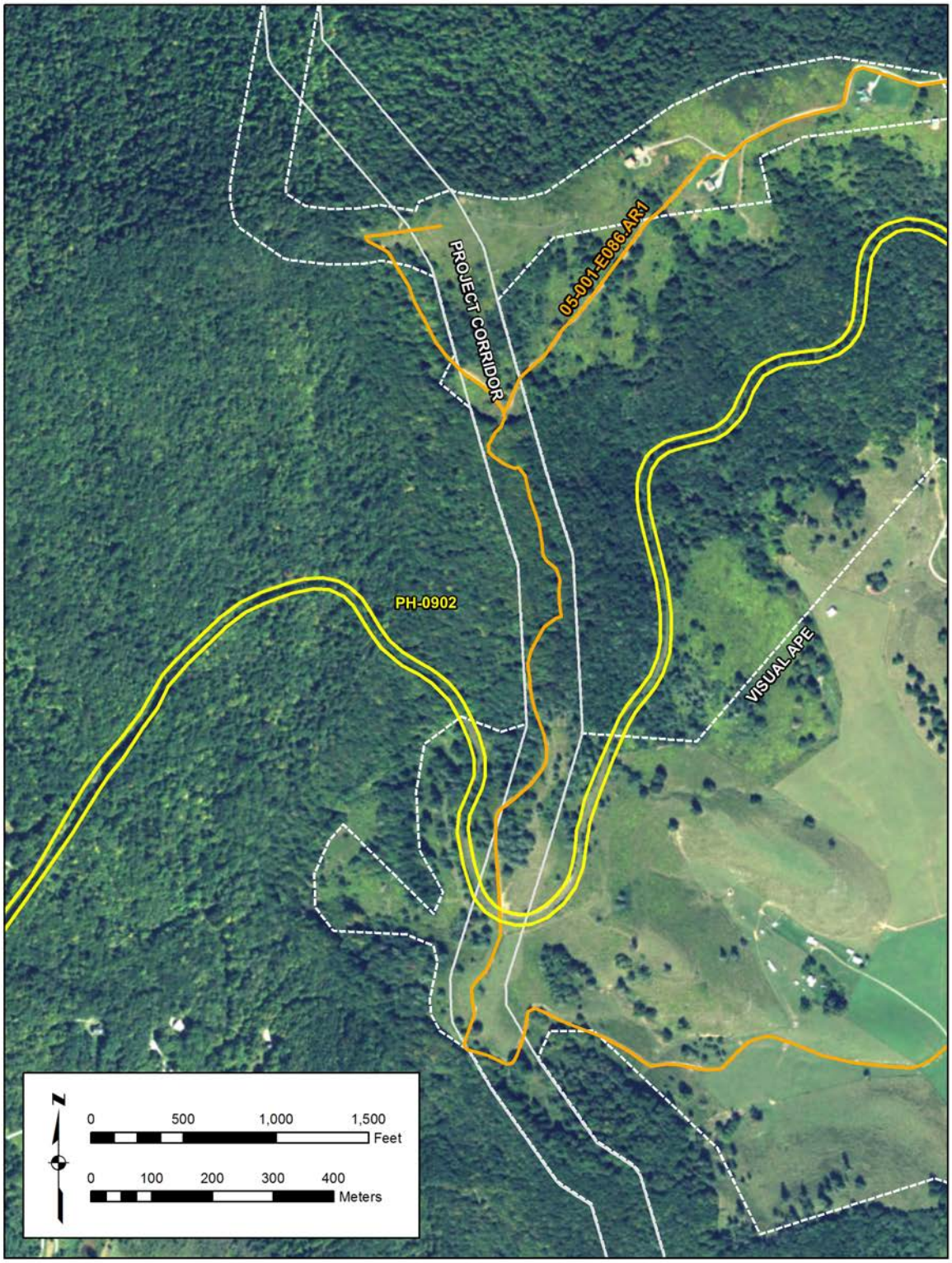

Figure 56. PH-0902, proposed NRHP boundary in relation to the Project corridor.

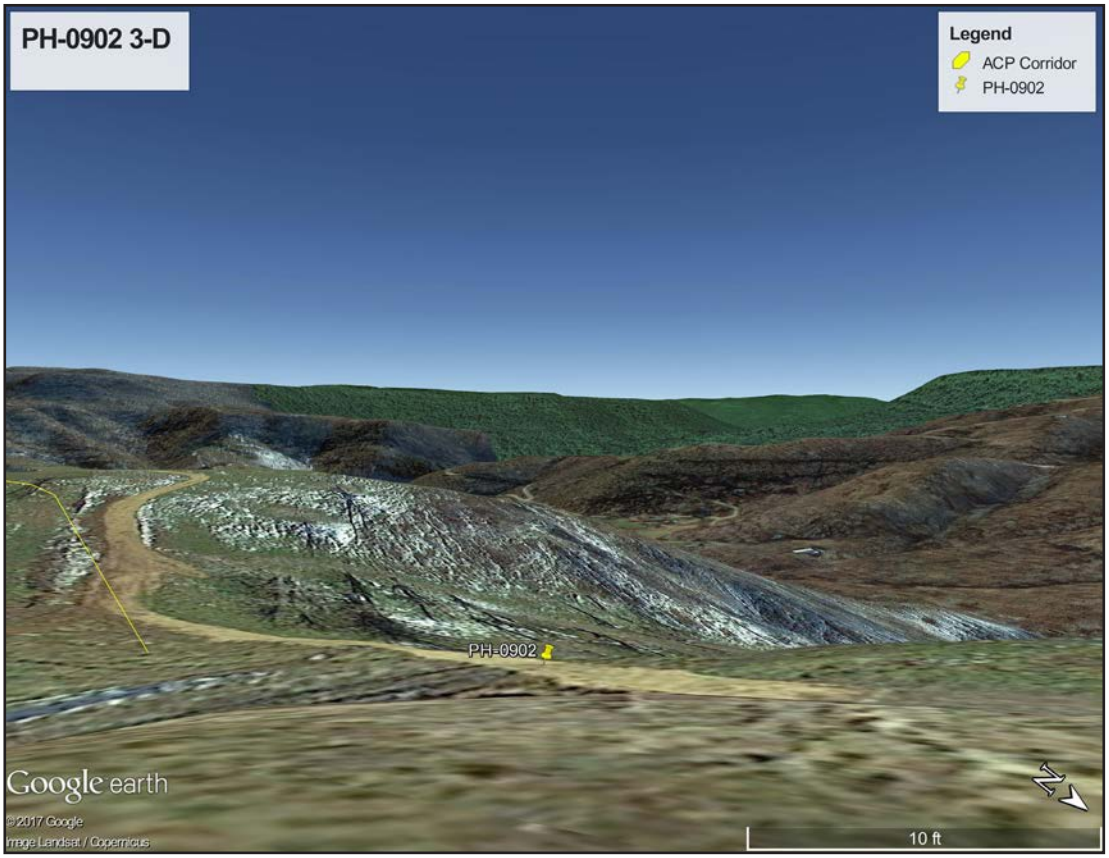

Figure 57. PH-0902, 3-D terrain model.

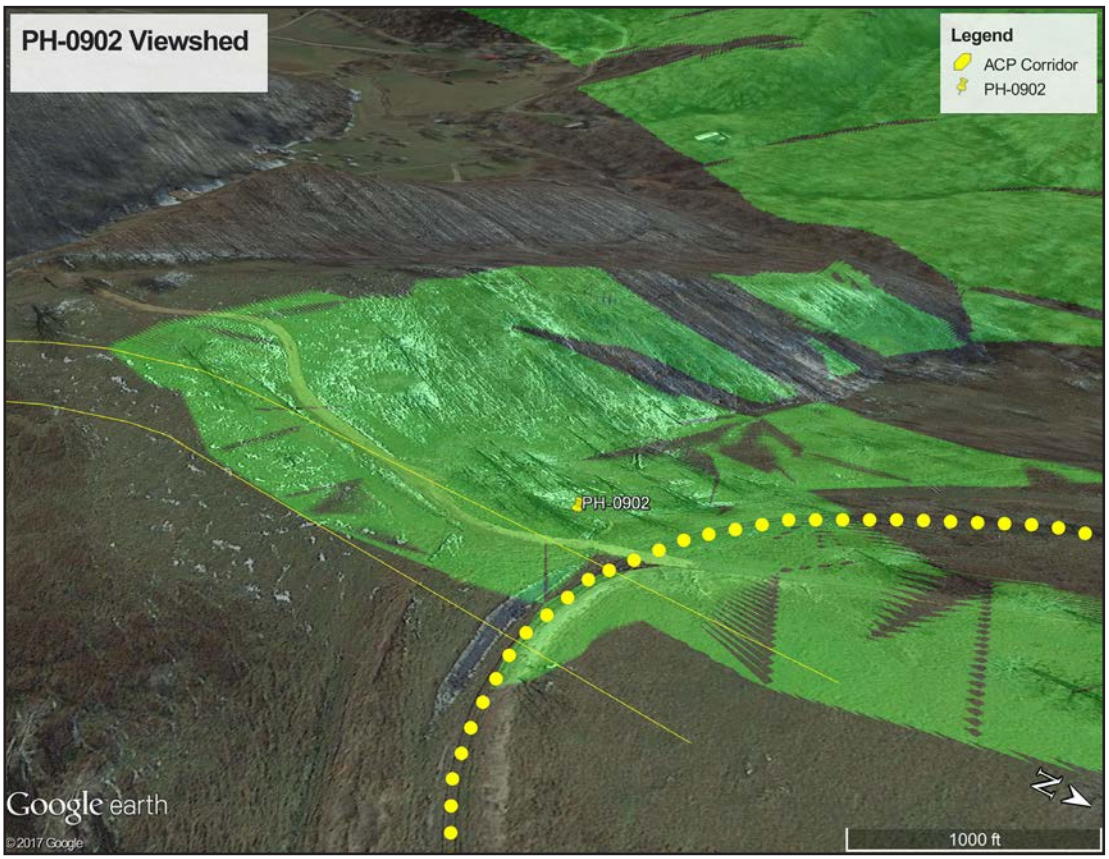

Figure 58. PH-0902, viewshed.

Figure 59. PH-0902, photo simulation.

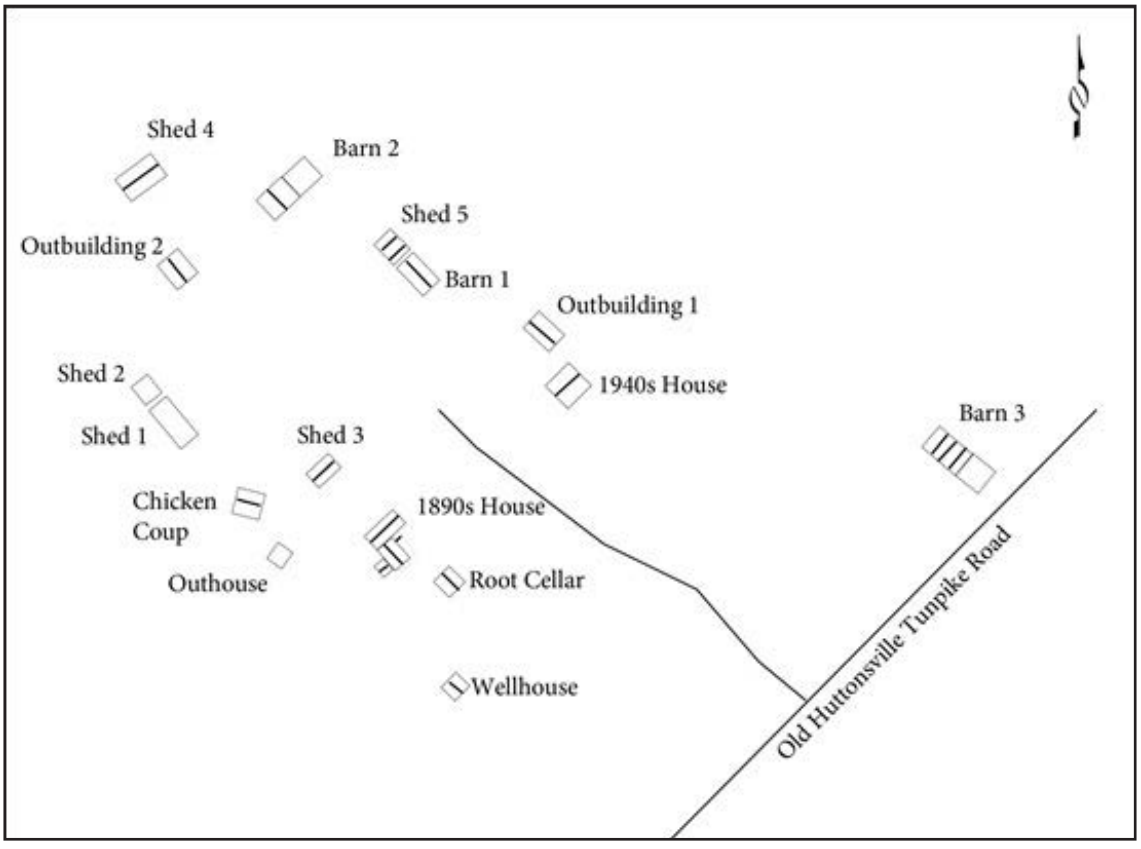

Figure 60. PH-0903, sketch map.

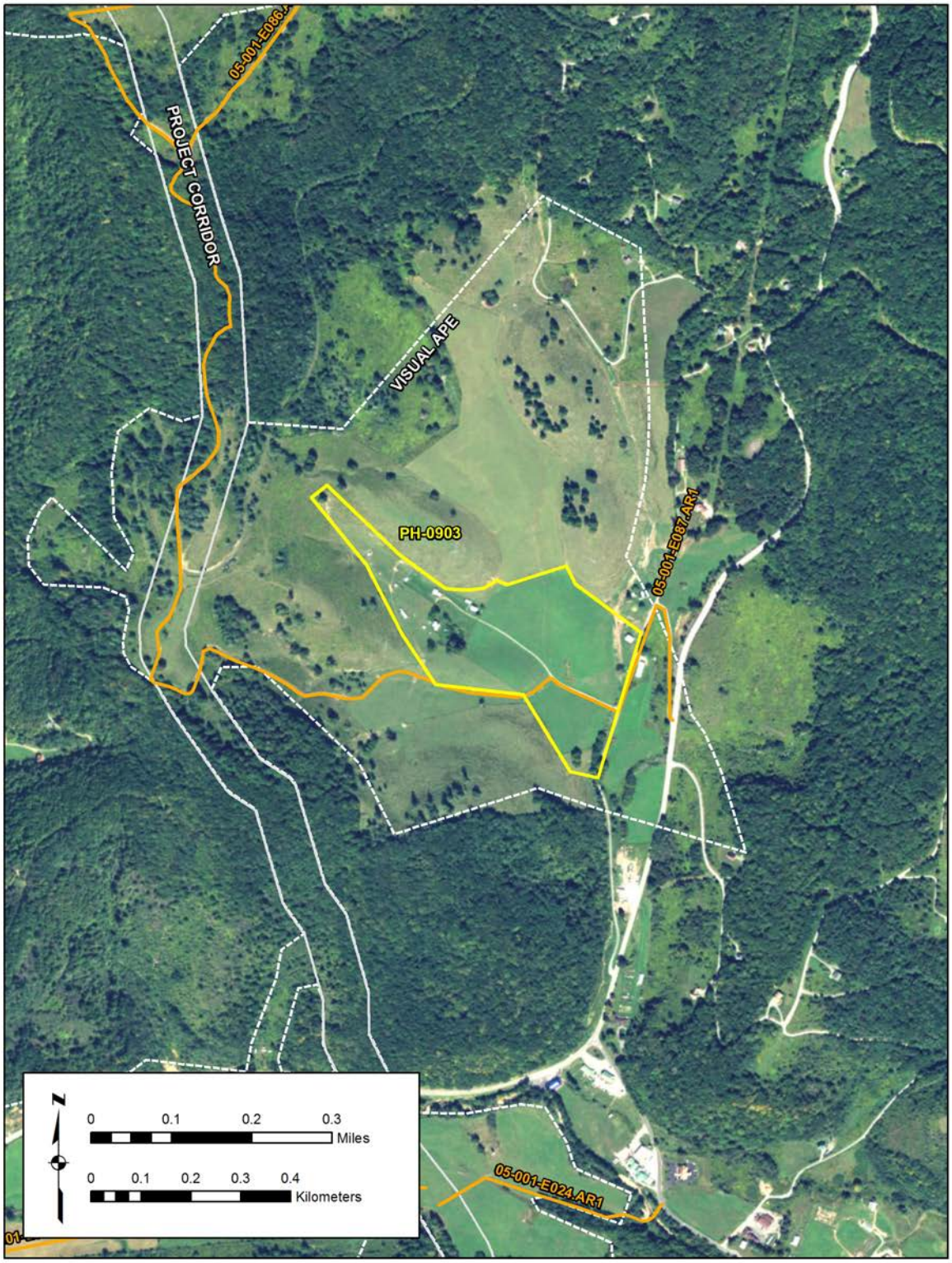

Figure 61. PH-0903, proposed NRHP boundary in relation to the Project corridor.

Figure 62. PH-0903, ca. 1890 house, facing west.

Figure 63. PH-0903, ca. 1890 house, facing north.

Figure 64. PH-0903, ca. 1940s house, facing west.

Figure 65. PH-0903, ca. 1940s house, facing east.

Figure 66. PH-0903, Outbuilding 1,facing north.

Figure 67. PH-0903, Barn 1 and Shed 5, facing northwest.

Figure 68. PH-0903, Barn 2, facing west.

Figure 69. PH-0903, Barn 3, facing southwest.

Figure 70. PH-0903, Outbuilding 2 and Shed 4, facing northwest.

Figure 71. PH-0903, Shed 1 and 2, facing northwest.

Figure 72. PH-0903, Shed 3; Outhouse; Chicken coop, facing south.

Figure 73. PH-0903, Root cellar, facing south.

Figure 74. PH-0903, Well house, facing southeast.

Figure 75. PH-0903, 3-D terrain model.

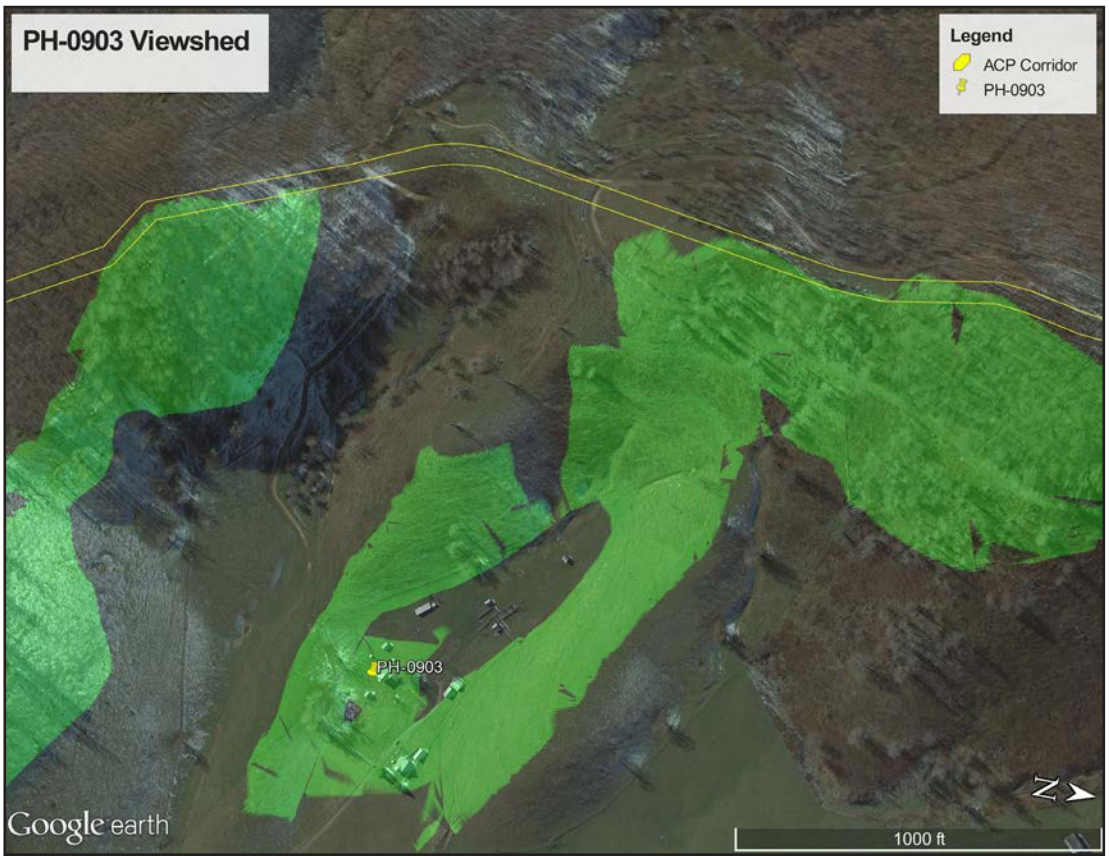

Figure 76. PH-0903, viewshed.

Figure 77. PH-0903, photo simulation.

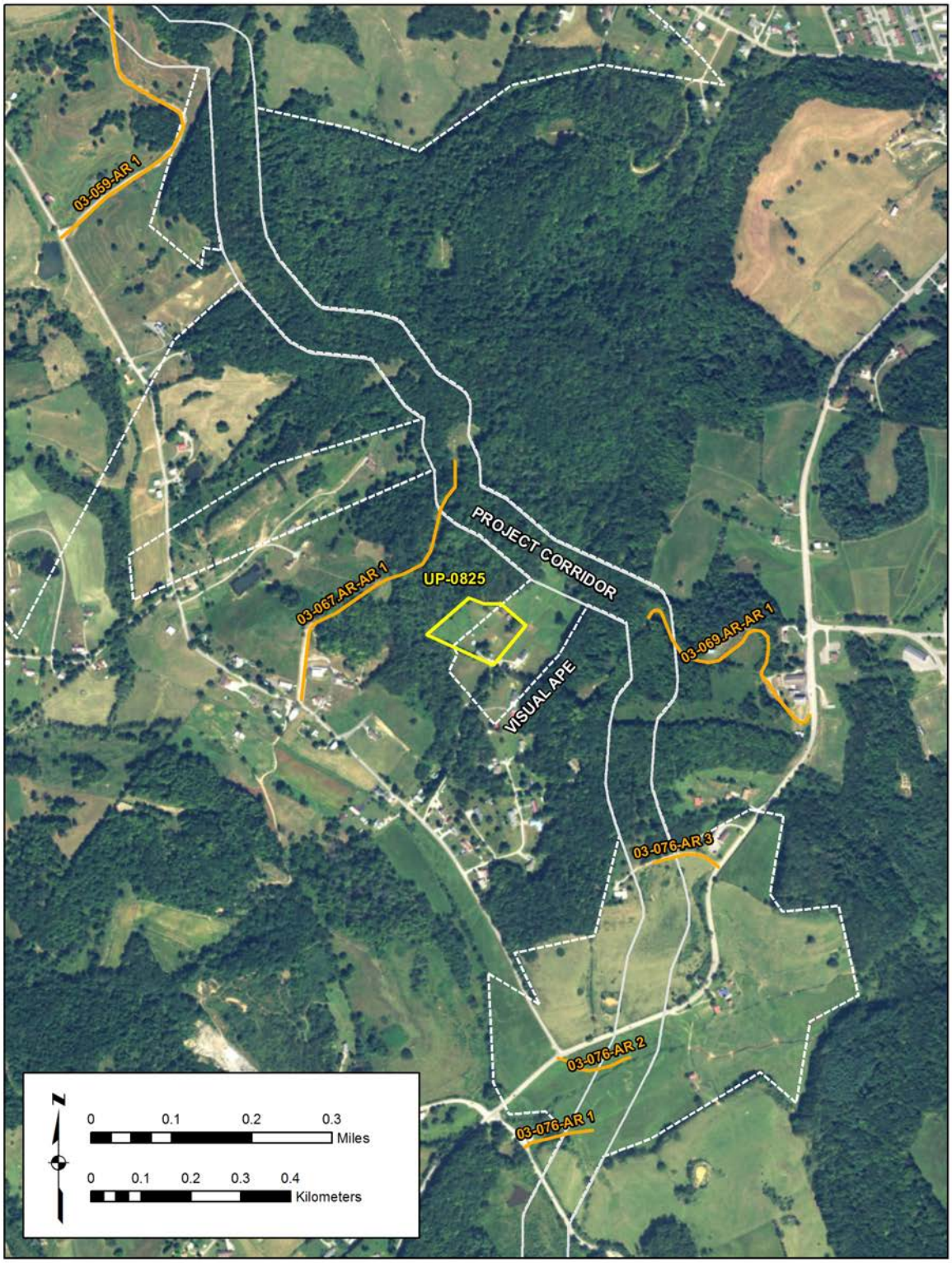

Figure 78. UP-0825, proposed NRHP boundary in relation to the Project corridor.

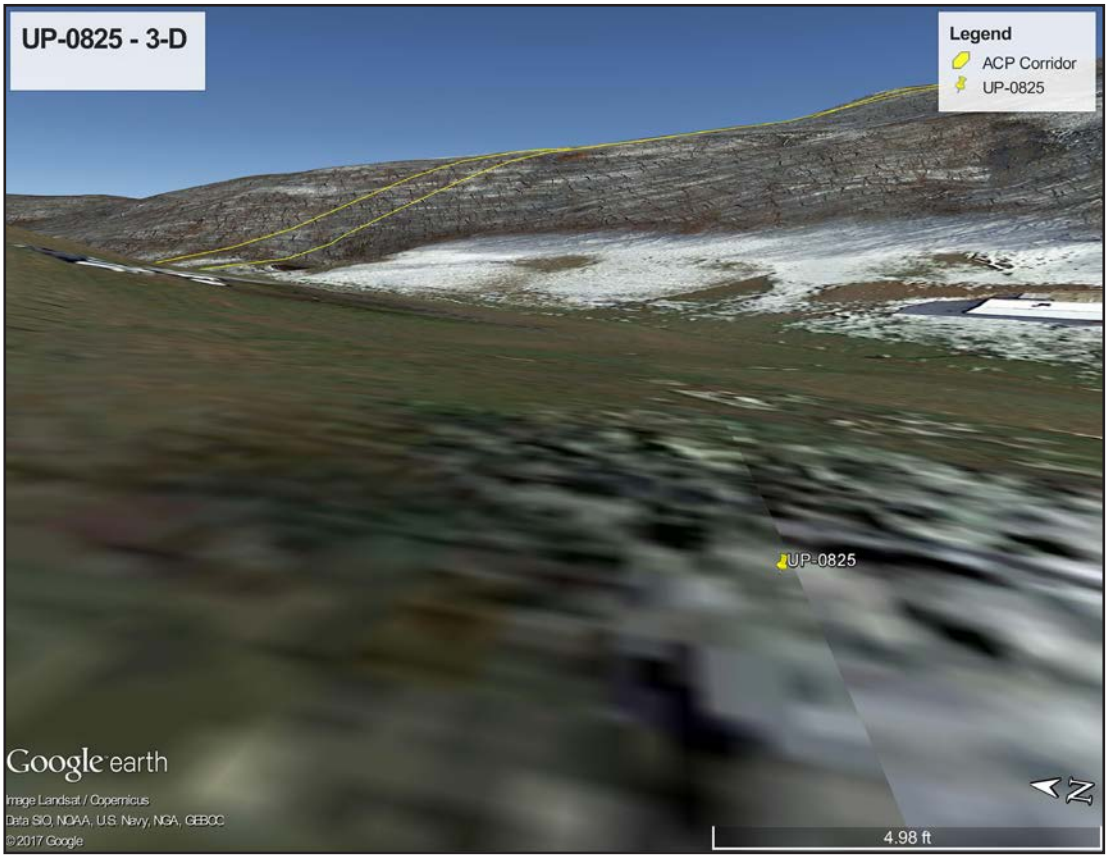

Figure 79. UP-0825, 3-D terrain model.

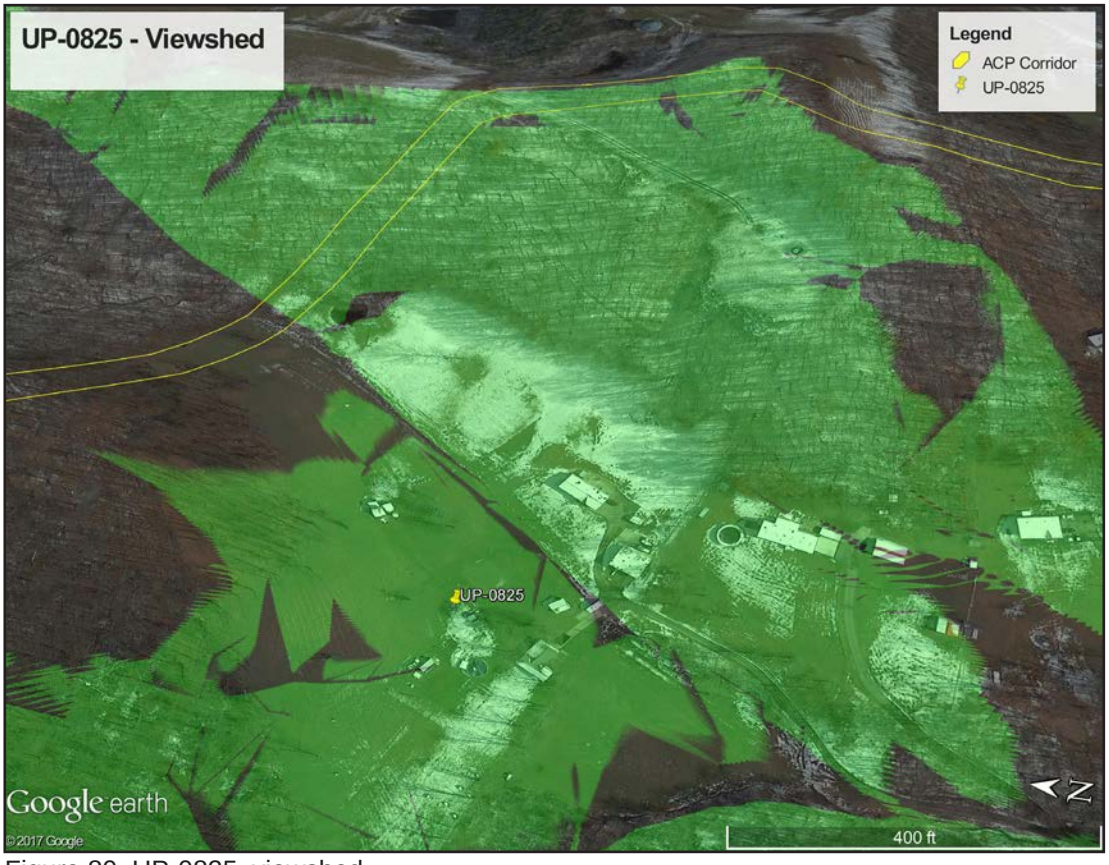

Figure 80. UP-0825, viewshed.

Figure 81. UP-0830, masonry hangar, facing north.

Figure 82. UP-0830, masonry hangar, facing southeast.

Figure 83. UP-0830, machine shop, facing northeast.

Figure 84. UP-0830, machine shop, facing northwest.

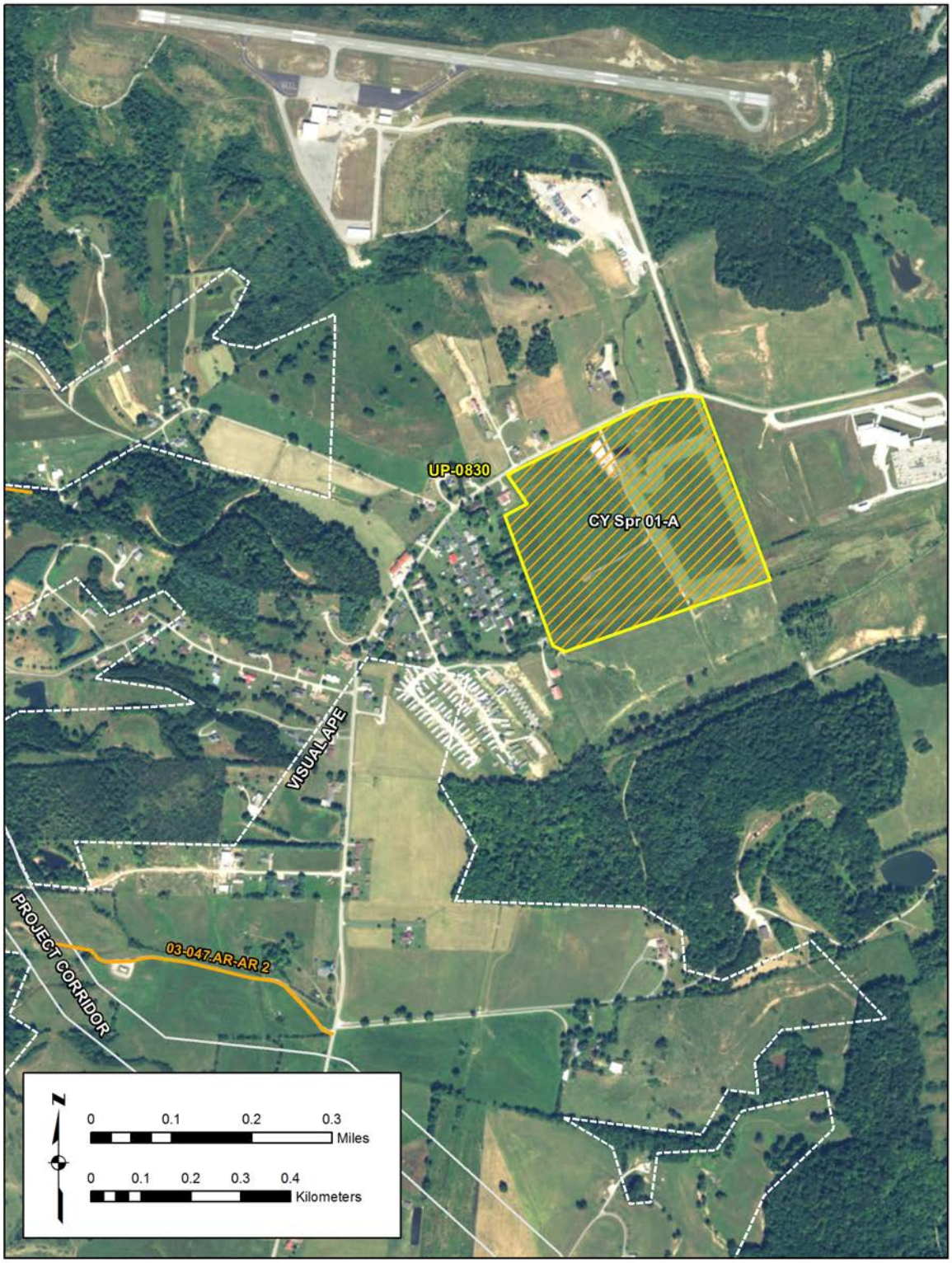

Figure 85. UP-0830, proposed NRHP boundary in relation to the Project corridor.

Figure 86. UP-0830, 3-D terrain model facing west.

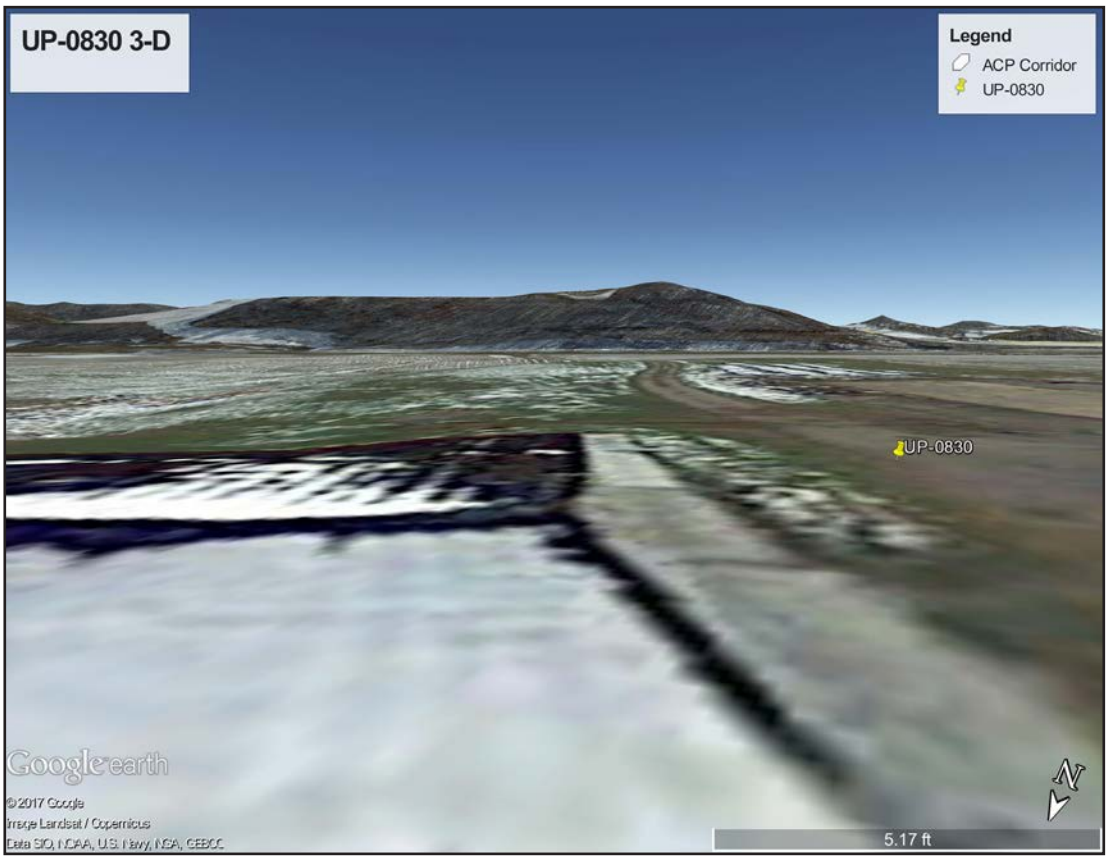

Figure 87. UP-0830, 3-D terrain model facing south.

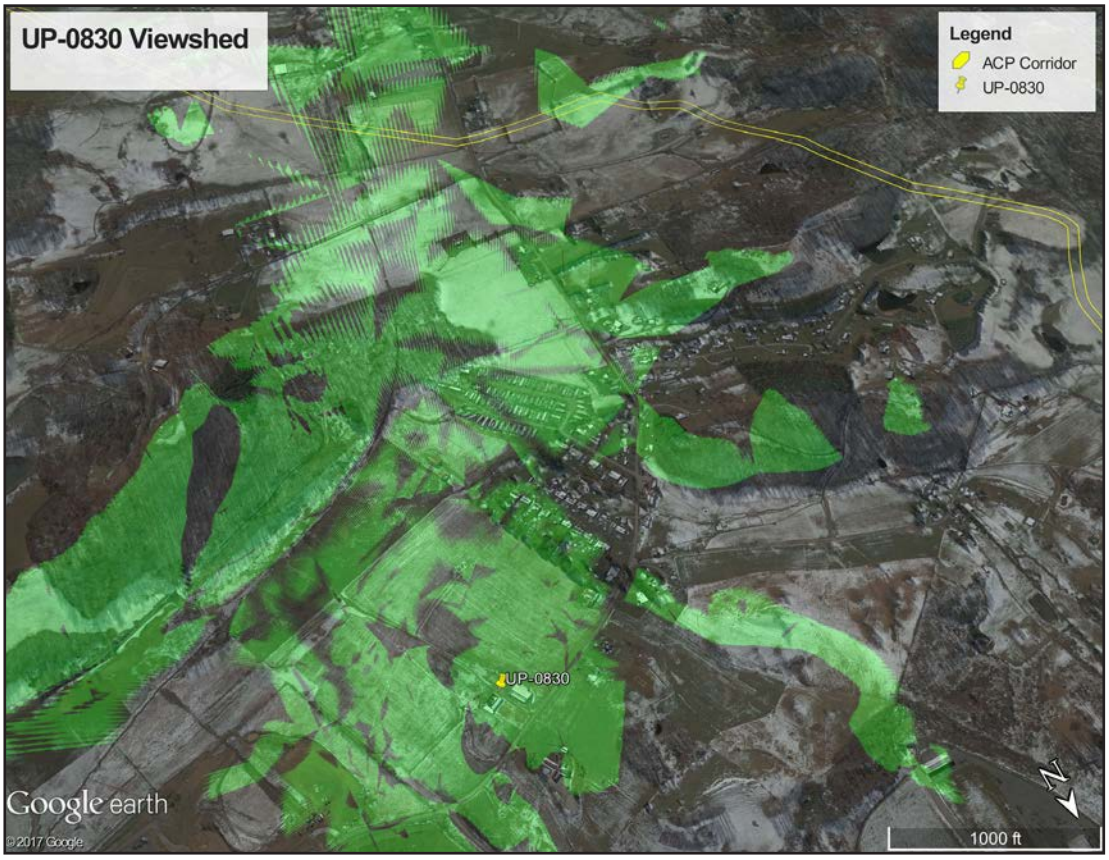

Figure 88. UP-0830, viewshed.

Figure 89. UP-0830, photo simulation facing west.

Figure 90. UP-0830, photo simulation facing south.

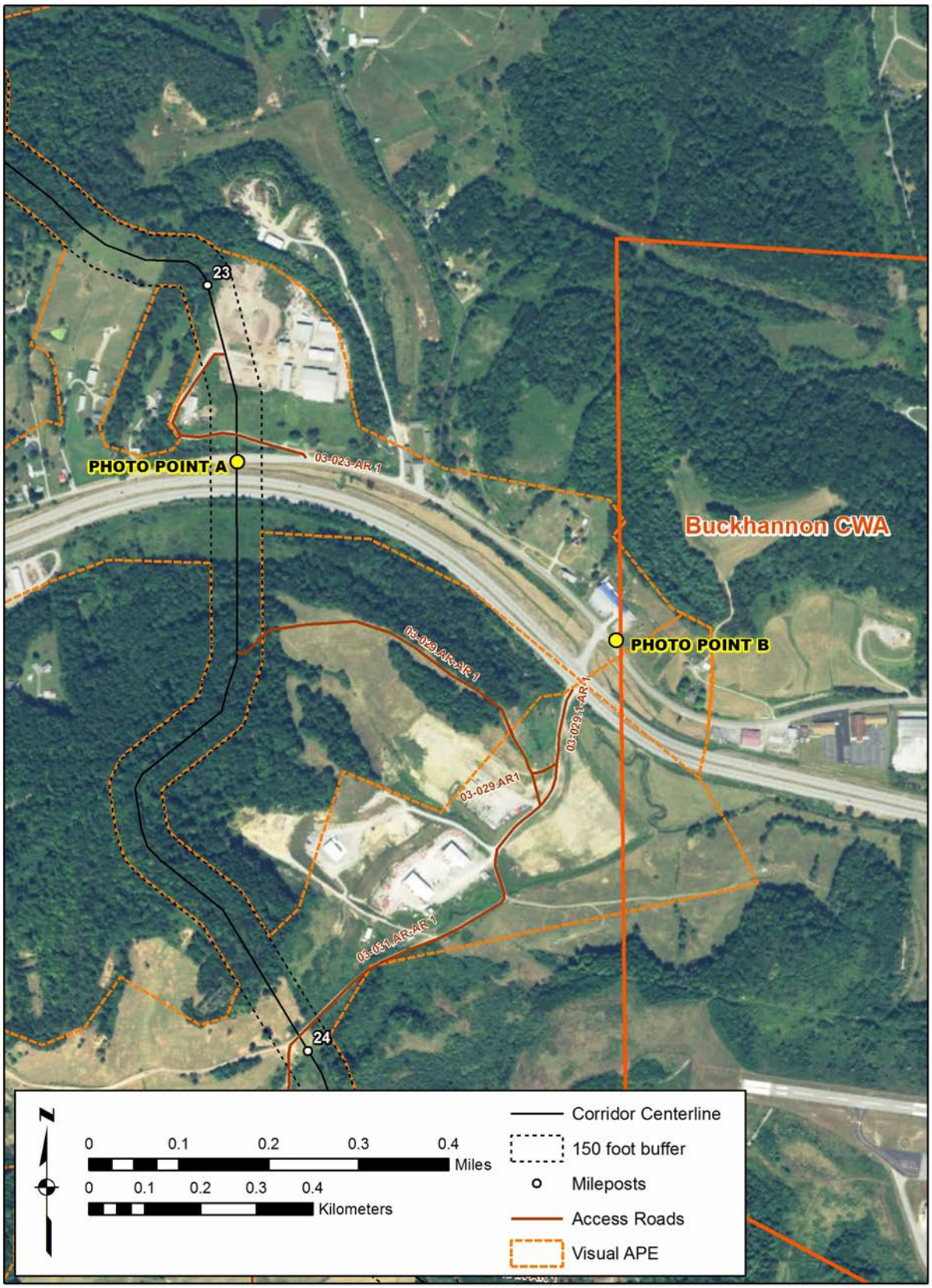

Figure 91. Buckhannon Civil War Study Area on contemporary aerial photograph depicting relationship to Project and photo areas.

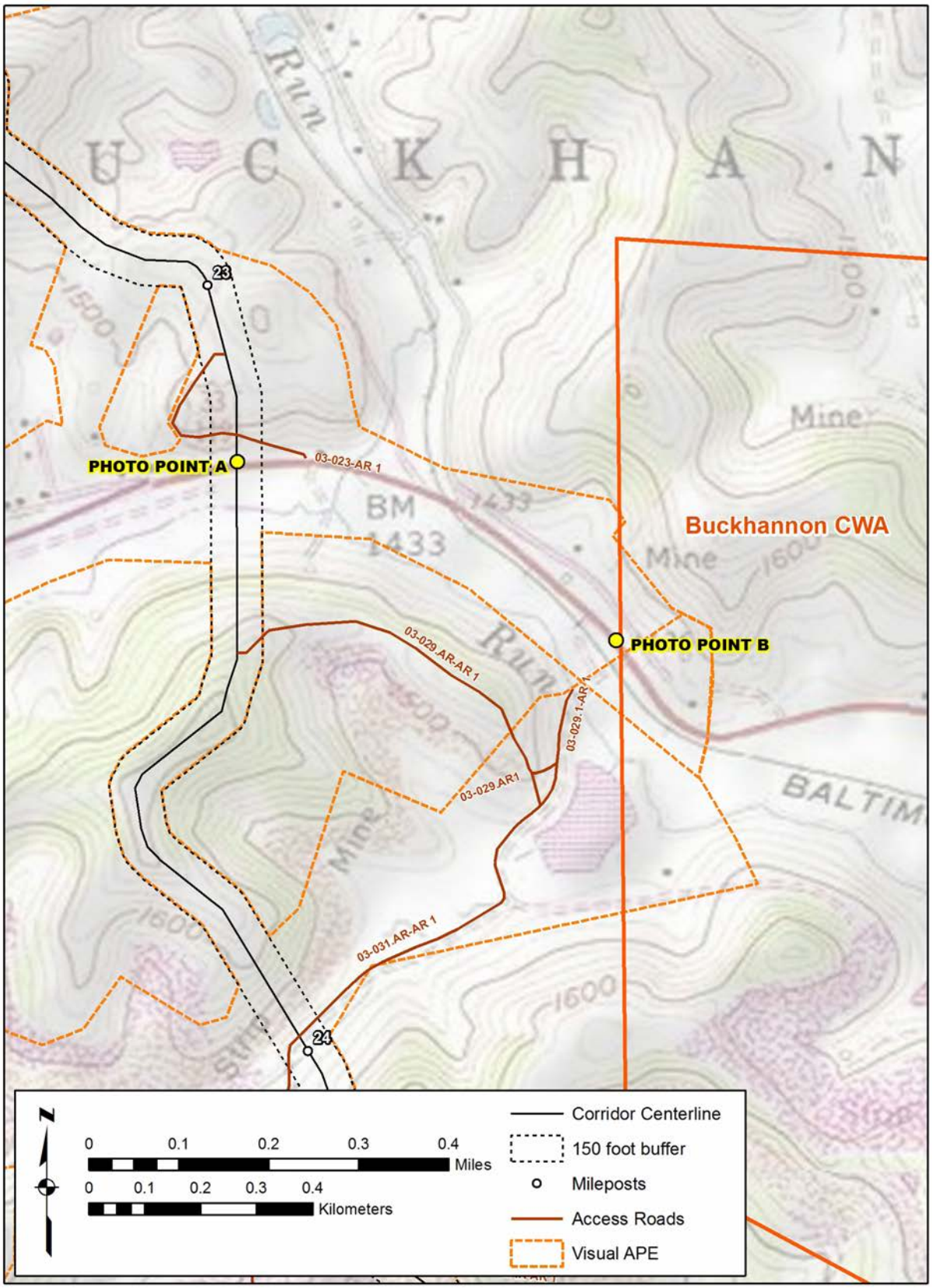

Figure 92. Buckhannon Civil War Study Area on the Berlin and Adrian USGS 7.5-minute quadrangles depicting relationship to Project and photo areas.

Figure 93. Buckhannon Civil War Study Area Photo Point A, facing north.

Figure 94. Buckhannon Civil War Study Area Photo Point A, facing east.

Figure 95. Buckhannon Civil War Study Area Photo Point A, facing south.

Figure 96. Buckhannon Civil War Study Area Photo Point A, facing west.

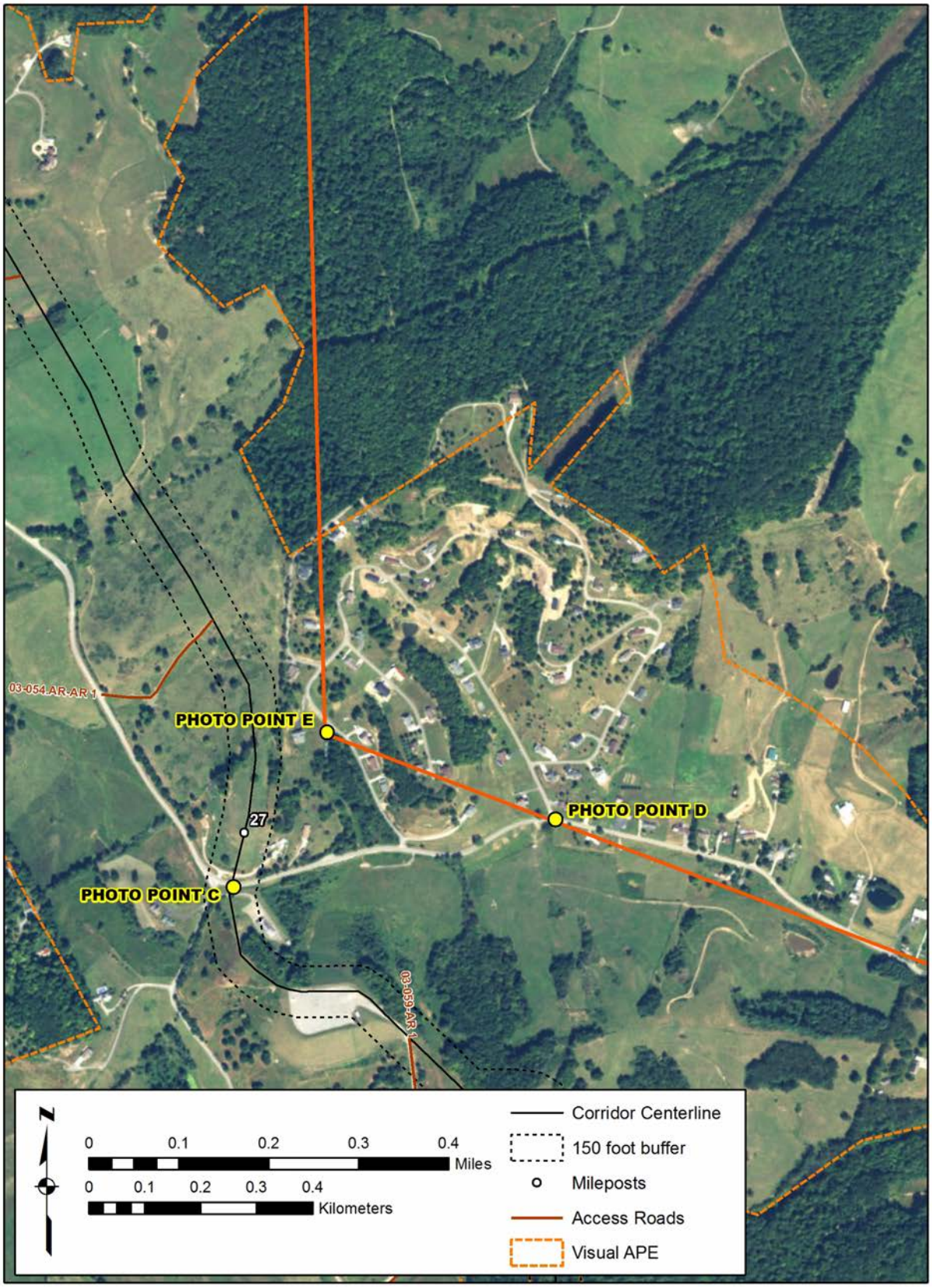

Figure 97. Buckhannon Civil War Study Area on contemporary aerial photograph depicting relationship to Project and photo areas.

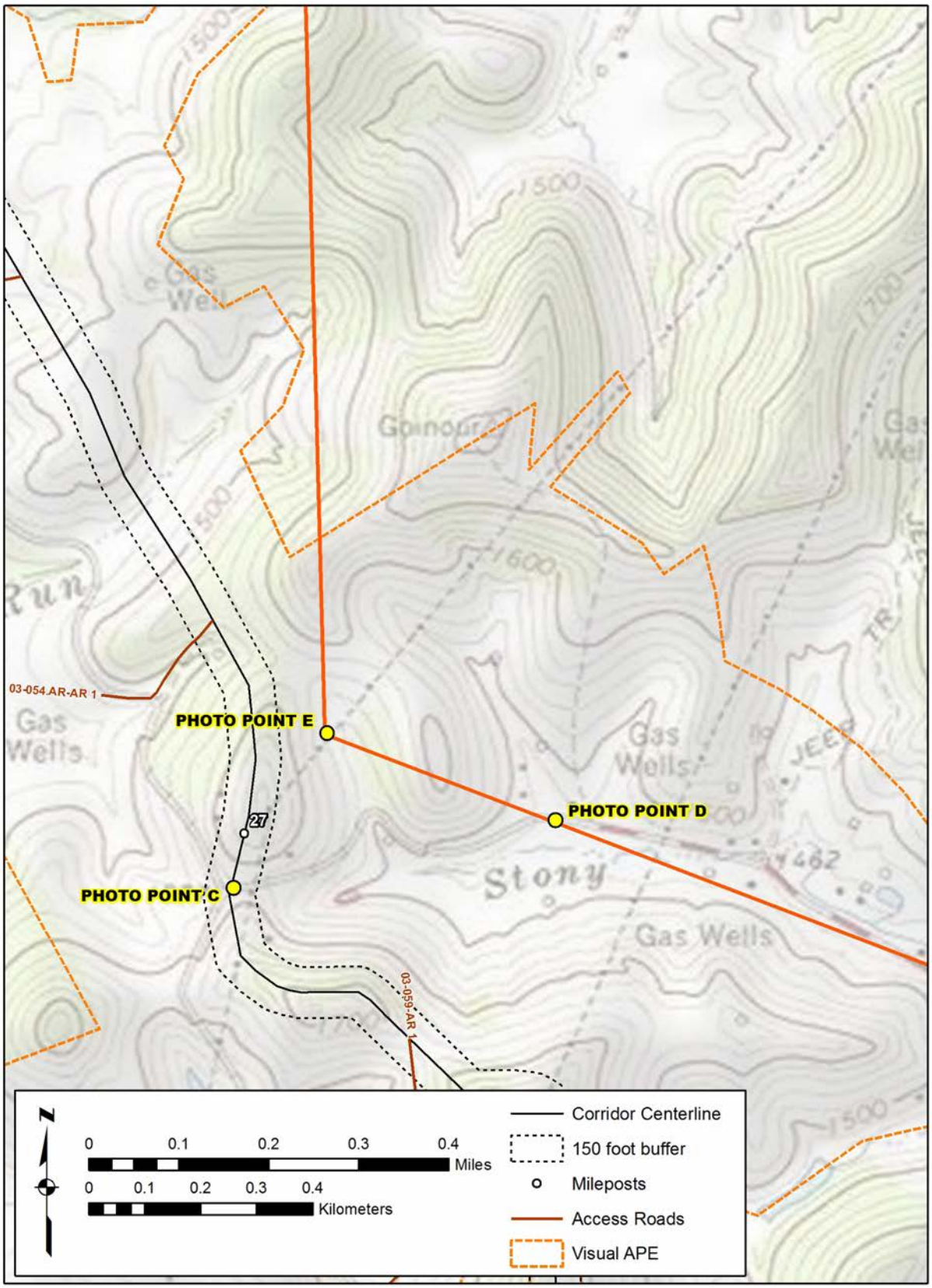

Figure 98. Buckhannon Civil War Study Area on the Adrian USGS 7.5-minute quadrangle depicting relationship to Project and photo areas.

Figure 99. Buckhannon Civil War Study Area Photo Point C, facing north.

Figure 100. Buckhannon Civil War Study Area Photo Point C, facing northeast.

Figure 101. Buckhannon Civil War Study Area Photo Point C, facing east.

Figure 102. Buckhannon Civil War Study Area Photo Point B, facing north.

Figure 103. Buckhannon Civil War Study Area Photo Point B, facing east.

Figure 104. Buckhannon Civil War Study Area Photo Point B, facing south.

Figure 105. Buckhannon Civil War Study Area Photo Point B, facing west.

Figure 106. Buckhannon Civil War Study Area Photo Point D, facing west.

Figure 107. Buckhannon Civil War Study Area Photo Point E, facing north.

Figure 108. Buckhannon Civil War Study Area Photo Point E, facing northwest.

Figure 109. Buckhannon Civil War Study Area Photo Point E, facing west.

Figure 110. Buckhannon Civil War Study Area Photo Point E, facing southwest.

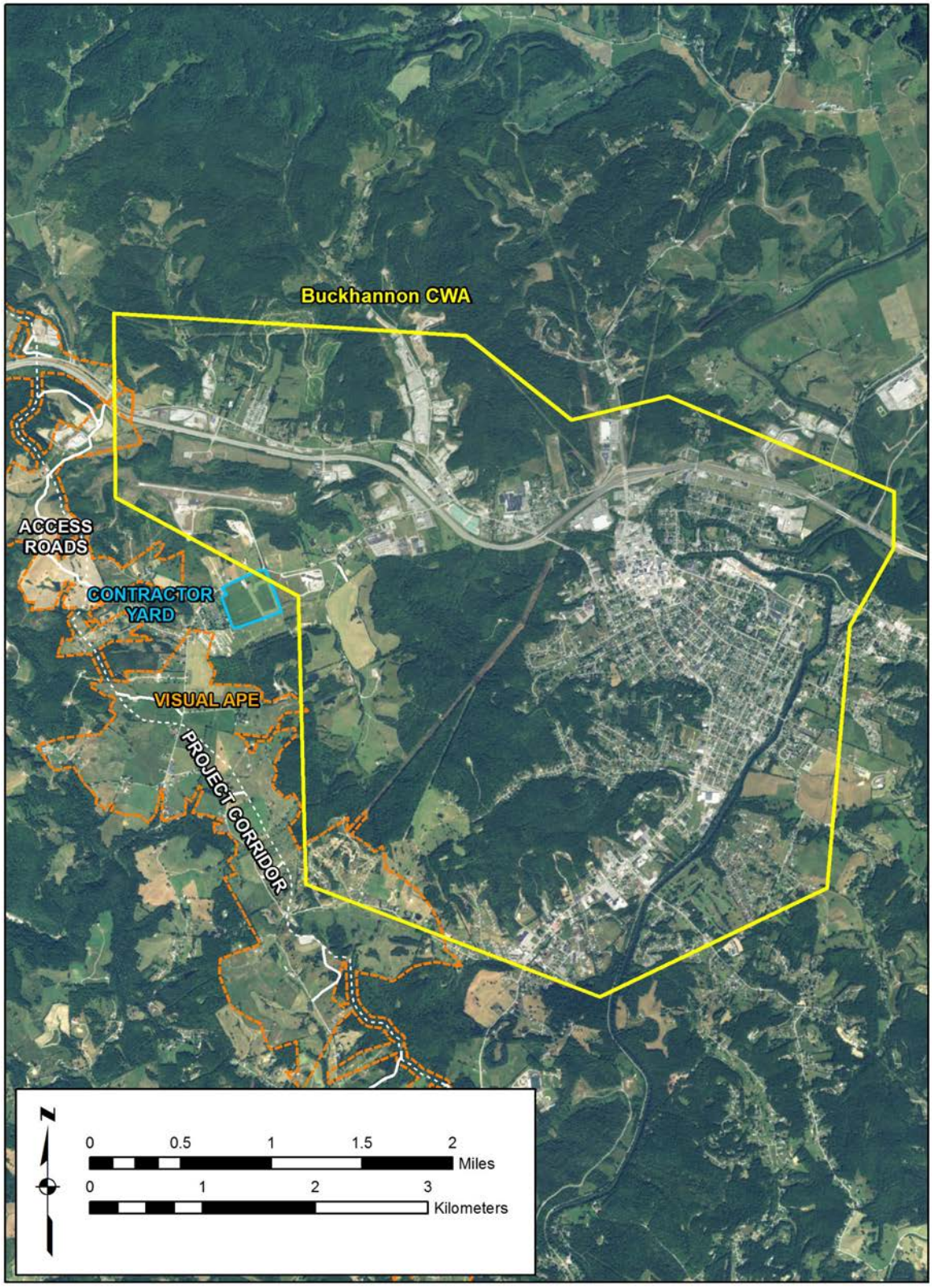

Figure 111. Buckhannon Civil War Study Area, proposed NRHP boundary and relationship to Project.

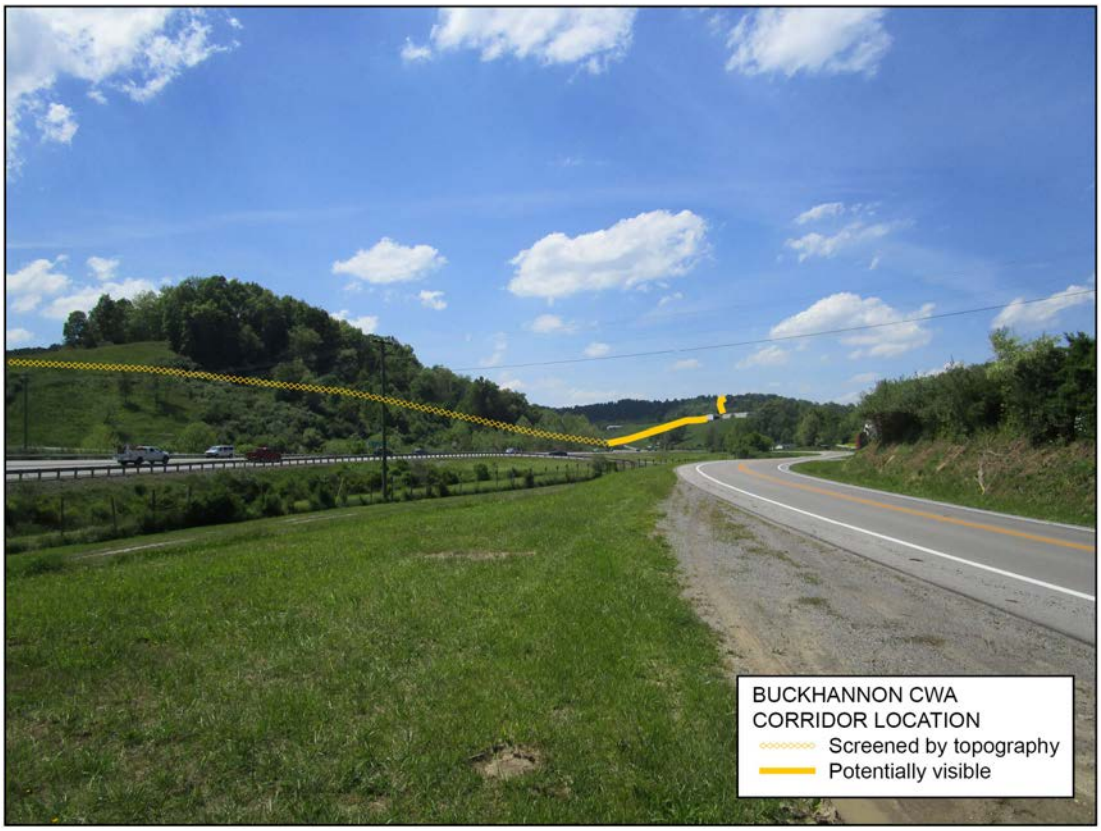

Figure 112. Buckhannon, photo simulation.

Figure 113. Buckhannon, 3-D terrain model.

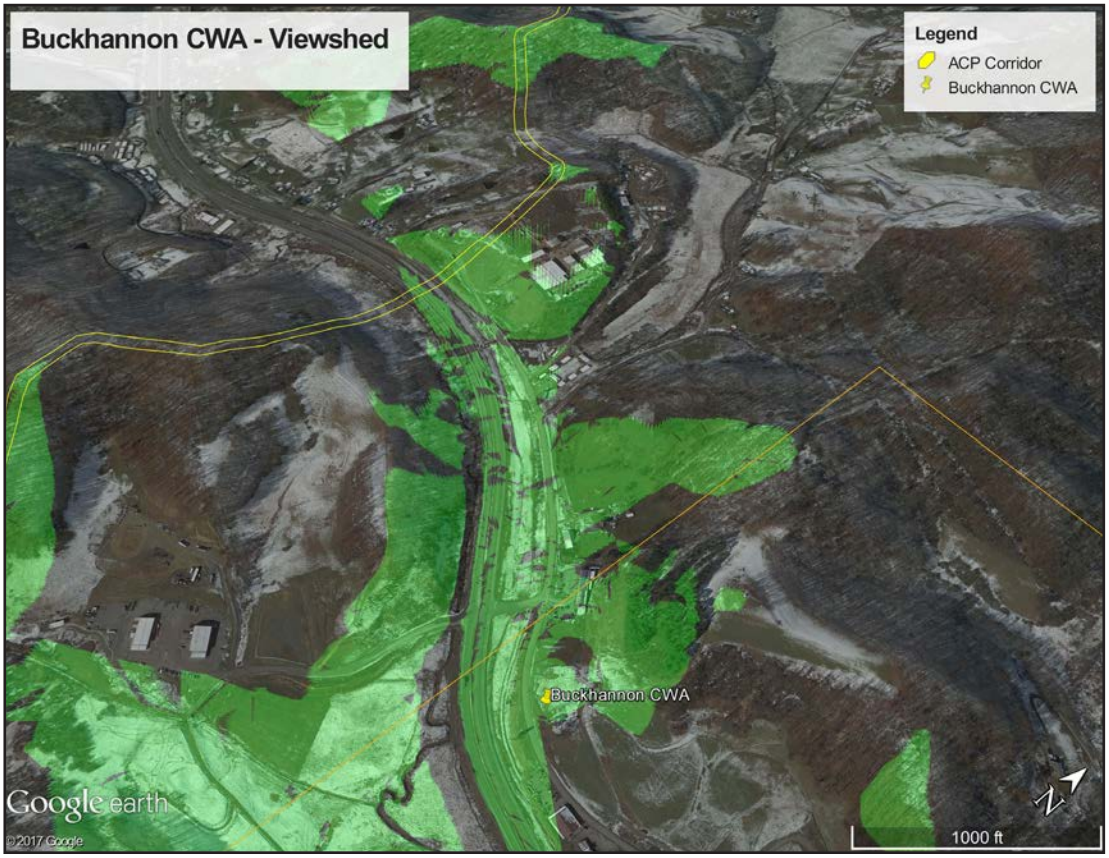

Figure 114. Buckhannon, viewshed.

Figure 115. Buckhannon, photo simulation at Point D.

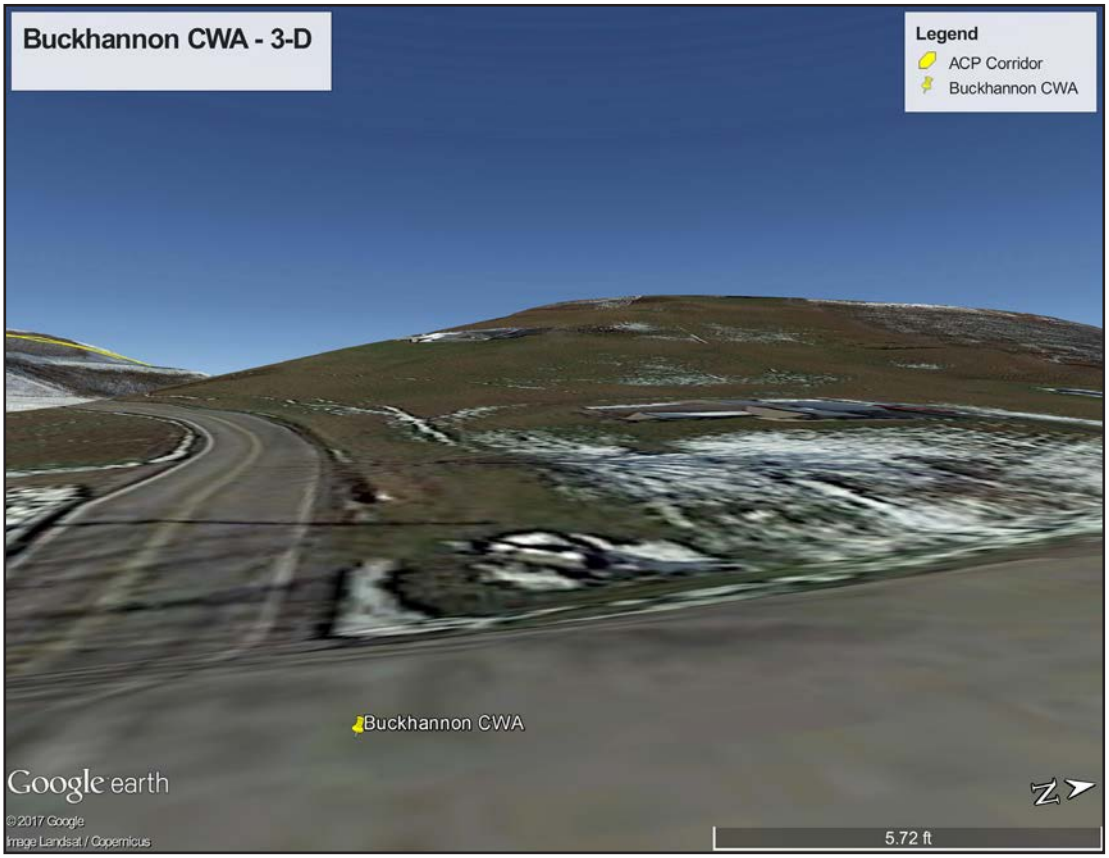

Figure 116. Buckhannon, 3-D terrain model at Point D.

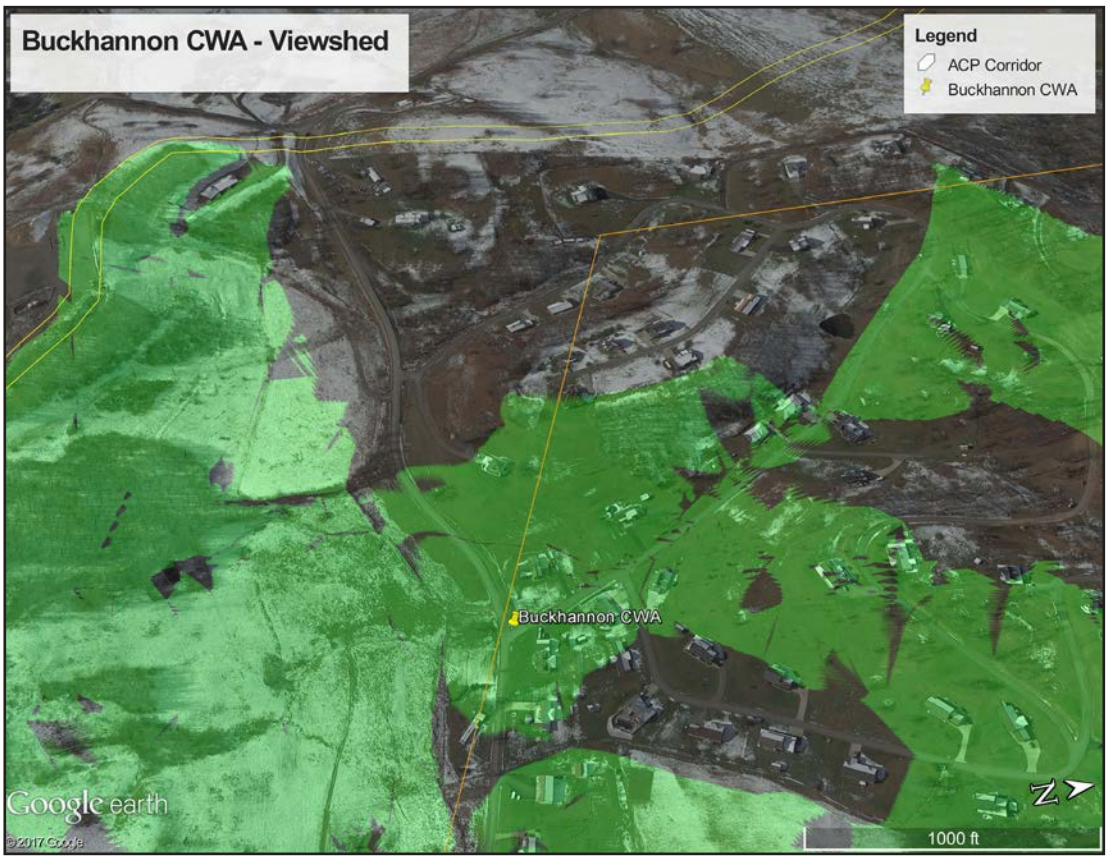

Figure 117. Buckhannon, viewshed at Point D.

APPENDIX C – RESUME OF PRINCIPAL INVESTIGATOR

Laura Voisin George

Architectural Historian, Cultural Resources

Laura Voisin George is a Consultant within ERM based in Atlanta.

Ms. Voisin George's background combines in-the-field experience of surveying historic structures, both to determine their eligibility for listing in the National Register of Historic Places and also to assess their physical condition and appropriate treatment options, with the academic experience of teaching university undergraduate history and urban planning courses. She holds a Master of Architectural History and Certificate in Historic Preservation from the University of Virginia. She has conducted baseline survey for historic structures, cultural landscapes and viewsheds, determinations of historic significance, re-evaluations of existing resources, and impact assessment. Ms. Voisin George also has expertise in archival research, and developing historic contexts for historic resources.

Her publications and conference presentations have specialized in cultural succession and reinterpretations of a place's history by subsequent occupants, and the use of archaeological evidence with archival documentation and oral history to challenge conventional assumptions about historical patterns.

Ms. Voisin George has 4 years of experience in the field of historic structures survey and assessment. She has evaluated a wide range of buildings, including regional design influences in the Mid-Atlantic and Southeastern United States and in Southern California, for high-style structures listed in the National Register of Historic Places (NRHP) as well as utilitarian and vernacular buildings, and landscapes.

Professional Affiliations & Registrations

- Society of Architectural Historians
- Vernacular Architecture Forum

Fields of Competence

- Impact Assessment for Cultural Heritage
- Historic Structures Survey
- Preparation of Historic Contexts for the Built Environment

Education

- Master of Architectural History. University of Virginia, Charlottesville, Virginia, USA. 2010
- Certificate in Historic Preservation, University of Virginia , Charlottesville, Virginia, USA. 2010
- Bachelor of Science, Planning and Development. University of Southern California, Los Angeles, California, USA. 2006.

Training

- Virginia Forum (panel moderator), Salem, Virginia, USA. 2012; Lexington, Virginia, USA. 2011
- Southeast Society of Architectural Historian Annual Conference, Jackson, Mississippi, USA. 2009
- Victorian Society Summer School, Studies in Architecture, Decorative and Fine Arts, Design and Landscape, Newport, Rhode Island, USA. 2009
- Society of Architectural Historians Annual Conference, Pasadena, California, USA. 2009

Publications

"A Good Life: Turn of the 19th-Century Strategies in Albemarle County and Beyond" (co-written with Dr. Alison Bell), *Papers from Upland Archaeology in the East Symposium XI*, compiled by Clarence R. Geier, James Madison University, Harrisonburg, Virginia, 2014.

"Surveying the Past: Virginia archaeological team uncovers layers of meaning in a Jeffersonian map from The Huntington," Huntington Library *Frontiers*, Spring/Summer 2010

Key Projects

Gulf Xpress Project, Union and Grenada Counties, Mississippi, and Gulf Xpress Project, Davidson and Wayne Counties, Tennessee, Phase I Cultural Resources Reports, Columbia Gulf Transmission, 2015
Architectural Historian
Ms. Voisin George planned and conducted field survey, identifying previously-undocumented historic structures in the APE of proposed compressor stations, performed determinations of eligibility for the National Register of Historic Places (NRHP) for the newly-identifed resources, and assessed potential project impacts.

Remington Pratts Gordonsville Transmission Line, U.S.A., Dominion Virginia Power, 2015
Architectural Historian
Ms. Voisin George conducted field assessments of previously-listed historic structures and sites within the project's area of potential effect (APE), with consultation with the Virginia Department of Historic Resources (Virginia's State Historic Preservation Office) for clarification of Civil War battlefield boundaries, documented their viewshed toward the proposed transmission line corridor and performed determinations of the proposed project's impact.

Atlantic Coast Pipeline, Phase I Report, Dominion Transmission Inc., 2015
Architectural Historian
Ms. Voisin George researched and drafted the Phase I Report's statewide historic context sections for project areas in Virginia, West Virginia, and North Carolina.

Pre-execution Cultural Resource Survey, Enbridge 2014-2015,
Architectural Historian
Ms. Voisin George conducted field survey of previously-listed historic resources and the identification of previously-undocumented historic structures within the project's potential APE, in consultation with the Wisconsin Historical Society (Wisconsin's State Historic Preservation Office), and performed an assessment of project effects.

Los Angeles Regional Interoperable Communications System, Phase I, ASM Affiliates for LA-RICS Joint Powers Authority, 2013
Architectural Historian
Ms. Voisin George conducted field assessments of previously-listed historic resources and sites within the APE of potential emergency equipment installations across Los Angeles County, and performed assessments of visual impact for the installation of a system of monopole equipment and lattice towers for a dedicated broadband emergency communications system.