

Before the  
Pennsylvania Public Utility Commission

**INDEPENDENCE ENERGY  
CONNECTION PROJECT - WEST**

ATTACHMENTS IN SUPPORT OF THE  
**Certification Application**

Application Docket No. \_\_\_\_\_

Submitted by: Transource PA, LLC



December 2017

**TRANSOURCE PA, LLC  
INDEPENDENCE ENERGY CONNECTION PROJECT - WEST**

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**COMMISSION REGULATION CROSS-REFERENCE MATRIX**

**ATTACHMENT 1  
PUC REGULATION CROSS-REFERENCE MATRIX**

Administrative Code Section or Statute*	PUC Regulation Requirement	Location
57.72	Form and content of application	
57.72(a)	Applications shall be in conformity with Section 1.31 (relating to form of documentary filings generally). Supporting exhibits such as maps, photographs and other engineering materials may be on paper not exceeding 28 inches by 40 inches.	Siting Application
57.72(b)	The application shall be signed by a person having authority with respect thereto and having knowledge of the matters herein set forth and shall be verified under oath.	Siting Application
57.72(c)	An application shall contain:	
57.72(c)(1)	The name of the applicant and the address of its principal business office	Siting Application
57.72(c)(2)	The name, title and business address of the attorney of the applicant and the person authorized to receive notice and communications with respect to the application if other than the attorney of the applicant.	Siting Application
57.72(c)(3)	A general description – not a legal or metes and bounds description – of the proposed route of the HV line, to include the number of route miles, the right-of-way width and the location of the proposed HV line within each city, borough, town and township traversed.	Attachment 3
57.72(c)(4)	The names and addresses of known persons, corporations and other entities of record owning property within the proposed right-of-way, together with an indication of HV line rights-of-way acquired by the applicant.	Attachment 5
57.72(c)(5)	A general statement of the need for the proposed HV line in meeting identified present and future demands for service, of how the proposed HV line will meet that need and of the engineering justifications for the proposed HV line.	Attachment 2
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Administrative Code Section or Statute*	PUC Regulation Requirement	Location
57.72(c)(7)	A description of studies which had been made as to the projected environmental impact of the HV line as proposed and of the efforts which have been and which will be made to minimize the impact of the HV line upon the environmental and upon scenic and historic areas, including but not limited to impacts, where applicable, upon land use, soil and sedimentation, plant and wildlife habitats, terrain, hydrology and landscape.	Attachment 3
52.72(c)(8)	A description of the efforts of the applicant to locate and identify archaeologic, geologic, historic, scenic or wilderness areas of significance within 2 miles of the proposed right-of-way and the location and identity of the areas discovered by the applicant.	Attachment 3
57.72(c)(9)	The location and identity of airports within 2 miles of the nearest limit of the right-of-way of the proposed HV line.	Attachment 3
57.72(c)(10)	A general description of reasonable alternative routes to the proposed HV line, including a description of the corridor planning methodology, a comparison of the merit and detriments of each route, and a statement of the reasons for selecting the proposed HV line route.	Attachment 3
57.72(c)(11)	A list of the local, State and Federal governmental agencies which have requirements which shall be met in connection with the construction or maintenance of the proposed HV line and a list of documents which have been or are required to be filed with those agencies in connection with the siting and construction of the proposed HV line.	Attachment 6
57.72(c)(12)	The estimated cost of construction of the proposed HV line, and the projected date for completion.	Attachment 2
57.72(c)(13)	The following exhibits:	
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Administrative Code Section or Statute*	PUC Regulation Requirement	Location
57.72(c)(13)(ii)	A description of the proposed HV line, including the length of the line, the design voltage, the size, number and materials of conductors, the design of the supporting structures and their height, configuration and materials of construction, the average distance between supporting structures, the number of supporting structures, the line to structure clearances and the minimum conductor to ground clearances at mid-span under normal load and average weather conditions and under predicted extreme load and weather conditions.	Attachment 4
57.72(c)(13)(iii)	A simple drawing of a cross section of the proposed right-of-way of the HV line and any adjoining rights-of-way showing the placement of the supporting structures at typical locations, with the height and width of the structures, the width of the right-of-way and the lateral distance between the conductors and the edge of the right-of-way indicated.	Attachment 4
57.72(c)(13)(iv)	A system map which shows in suitable detail the location and voltage of existing transmission lines and substations of the applicant and the location and voltage of the proposed HV line and associated substations.	Attachment 2
57.72(c)(14)	A statement identifying litigation concluded or in progress which concerns property or matter relating to the proposed HV line, right-of-way route or environmental matters.	Siting Application
57.72(c)(15)	Additional information as the Commission may require.	---
57.74(a)	(a) <i>Filing.</i> The applicant shall file with the Commission the original and six copies of the application. An affidavit of service showing the identity of those served under subsections (b) and (c) shall accompany the original and the copies of the application filed with the Commission.	Siting Application



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Administrative Code Section or Statute*	PUC Regulation Requirement	Location
57.74(b)	<p>(b) <i>Copies.</i> At the time of filing, the applicant shall serve a copy of the application by registered or certified mail, return receipt requested, upon the following:</p> <ul style="list-style-type: none"> <li>(1) The chief executive officer, the governing body and the body charged with the duty of planning land use in each city, borough, town, township and county in which any portion of the HV line is proposed to be located.</li> <li>(2) The president of the public utility, other than the applicant, in whose service territory any portion of the HV line is proposed to be located.</li> </ul> <p>The Department of Environmental Resources, Attention: Bureau of Environmental Planning; Post Office Box 2357, 101 S. Second Street, Harrisburg, Pennsylvania, 17120. (NOTE: now Department of Environmental Protection at different Harrisburg office).</p>	Certification of Service
57.74(c)	<p>(c) <i>Notice.</i></p> <p>(1) At the time of filing, the applicant shall serve a notice of filing and a map of suitable detail showing the proposed route of the proposed facility by registered or certified mail, return receipt requested, upon the following:</p> <ul style="list-style-type: none"> <li>(i) The Secretary of the Department of Transportation, Room 1200 Transportation and Safety Building, Harrisburg, Pennsylvania 17120.</li> <li>(ii) The Chairman of the Historical and Museum Commission, Post Office Box 1026, Harrisburg, Pennsylvania 17120.</li> <li>(iii) Other local, State or Federal agencies designated in § 57.72 (c)(11)(relating to form and content of application).</li> <li>(iv) The persons, corporations, and other entities designated in § 57.72(c)(4), unless they are served with a copy of the application under § 57.75(i) (relating to hearing and notice).</li> </ul>	Notice of Filing

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Administrative Code Section or Statute*	PUC Regulation Requirement	Location
57.74(c)	(2) The notice of filing shall contain a statement identifying the filing, the date on which the filing was or is to be made, a description of the proposed line, the design voltage, the number of route miles, the right-of-way width and the location of the proposed HV line within each township traversed and a statement that a copy of the application is available for public examination as provided in subsection (d).	Notice of Filing
57.74(d)	(d) <i>Examination.</i> On the day of filing of the application, the applicant shall make a copy of the application available for public examination during ordinary business hours at a convenient location within a county in which any part of the proposed HV will be located.	Attachment 9
57.74(e)	(e) <i>Additional notice.</i> The applicant shall provide an additional notice and shall serve such additional copies of the application without cost as the Commission may require.	---
Chapter 69	Interim guidelines require	
69.3102(a)	<p>(a) Applications for electric transmission siting authority should provide the following information with the initial application for siting approval demonstrating its efforts to fully notify landowners who are either owners of land that will be purchased for the transmission project or will be subject to right of way/easement requirements:</p> <p>(1) A Code of Conduct/Internal Practices governing the manner in which public utility employees or their agents interact with landowners along proposed rights of way.</p> <p>(2) Copies of information provided to landowners by the public utility of any publicly disseminated notices advising landowners to contact the Commission or the Office of Consumer Advocate (OCA) in the event of improper land agent practices.</p> <p>(3) Copies of all notices sent under § 57.91 (relating to disclosure of eminent domain power of electric utilities).</p>	Attachment 13

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Administrative Code Section or Statute*	PUC Regulation Requirement	Location
69.3102(b)	(b) Applicants for transmission siting authority should serve a copy of the Code of Conduct on all landowners along the proposed route whose property is to be purchased, subject to easement rights or borders the transmission corridor. The Code of Conduct should also be available on the applicant's website.	Attachment 13
69.3102(c)	(c) Applicants for transmission siting authority should provide prior notice to the Commission's Office of Communications of informational presentations to community groups by the public utility scheduled after the filing of the transmission siting application so that the Commission, OCA and other interested parties can attend meetings or obtain copies of information being disseminated at the presentations.	At this time, no informal presentations are scheduled for after the Siting Application is filed.
69.3105(1)	<p>Applications for the siting of electric transmission lines should provide the following information as part of the § 57.72(c) (relating to form and content of application) requirements:</p> <p>(1) Transmission applicants should utilize a combination of transmission route evaluation procedures including high-level GIS data, traditional mapping (including United States Geological Survey data and compilation), aerial maps and analysis of physical site specific constraints raised by affected landowners.</p>	Attachment 3
69.3105(2)	<p>Applications for the siting of electric transmission lines should provide the following information as part of the § 57.72(c) (relating to form and content of application) requirements:</p> <p>(2) Transmission applicants should summarize the status of property acquisitions (including fee simple acquisitions and rights of way/easements) as part of the application. The applicant should provide the current status and continuing updates on property acquisition litigation or settlements during the course of the siting proceeding.</p>	Attachment 5 and Statement Nos. 1 and 6

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Administrative Code Section or Statute*	PUC Regulation Requirement	Location
69.3105(3)	<p>Applications for the siting of electric transmission lines should provide the following information as part of the § 57.72(c) (relating to form and content of application) requirements:</p> <p>(3) In providing information regarding the reasonable alternative routes, the utility actively considered in its final phase of the route selection process, and the relative merits of each, in accordance with § 57.72(c)(10), the applicant should include the following information:</p> <ul style="list-style-type: none"> <li>(i) The environmental, historical, cultural and aesthetic considerations of each route.</li> <li>(ii) The proximity of these alternative routes to residential and nonresidential structures.</li> <li>(iii) The applicant’s consideration of relevant existing rights of way.</li> <li>(iv) The comparative construction costs associated with each route.</li> </ul>	Attachment 3
69.3106	<p>Applications for siting of electric transmission lines should include as part of the filing requirement under § 57.72(e)(7) the following information: A matrix or list showing all expected Federal, state and local government regulatory permitting or licensing approvals that may be required for the project at the time the application is filed, the issuing agency, approximate timeline for approval and current status. The applicant should provide an update on the status of the regulatory permitting/licensing approvals as the case progresses.</p>	Attachment 6



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Administrative Code Section or Statute*	PUC Regulation Requirement	Location
69.3107(a)	<p>(a) <i>Interim guidelines for the use of herbicides and pesticides.</i> Applicants for transmission line siting authority should provide a detailed vegetation management plan that includes the following components:</p> <p>(1) A general description of the utility’s vegetation management plan.</p> <p>(2) Factors that dictate when each method, including aerial spraying, is utilized.</p> <p>(3) Vegetation management practices near aquatic and other sensitive locations.</p> <p>(4) Notice procedures to affected landowners regarding vegetation management practices.</p> <p>(5) Provision of a copy of a landowner maintenance agreement that describes the duties and responsibilities of landowners and the utility for vegetation management to the extent utilized.</p>	Attachment 11
69.3107(b)	<p>(b) <i>Interim guidelines for Electromagnetic Field (EMF) impacts.</i> Transmission siting applications should include the following: A description of the EMF mitigation procedures that the utility proposes to utilize along the transmission line route. This description should include a statement of policy approach for evaluating design and siting alternatives and a description of the proposed measures for mitigating EMF impacts.</p>	Attachment 10

\*Pennsylvania Code 57.71 – 57.75 relates to “Commission Review of Siting and Construction of Electric Transmission Lines”. Pennsylvania Code 69.3101 – 69.3107 relates to “General Orders, Policy Statements, and Guidelines on Fixed Utilities”. Sections described within ATTACHMENT 1 pertain specifically to those items required to be included for an application filing.

**ATTACHMENT 2**

**NECESSITY STATEMENT**



**ATTACHMENT 2**  
**NECESSITY STATEMENT**

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**1.0 INTRODUCTION**

Transource Pennsylvania, LLC (“Transource PA”) seeks approval from the Pennsylvania Public Utility Commission (“Commission” or “PUC”) for the siting and construction of the Pennsylvania portion of the Rice-Ringgold 230 kV Transmission Line in Franklin County, Pennsylvania. The proposed Rice-Ringgold 230 kV Transmission Line is part of the Independence Energy Connection Project (“IEC Project”) approved by PJM Interconnection, L.L.C. (“PJM”) to alleviate transmission congestion constraints in Pennsylvania, Maryland, West Virginia, and Virginia.

The IEC Project approved by PJM involves: (i) construction of two new substations in Pennsylvania, the Rice Substation and the Furnace Run Substation; and (ii) construction of two new overhead double-circuit 230 kV interstate transmission lines, the Rice-Ringgold 230 kV Transmission Line and the Furnace Run-Conastone 230 kV Transmission Line. The new Rice-Ringgold 230 kV Transmission Line will be sited to extend approximately 28.8 miles, connecting the existing Ringgold Substation located near Smithsburg, Washington County, Maryland, and the new Rice Substation to be located in Franklin County, Pennsylvania. This transmission line project is referred to as the Independence Energy Connection-West Project (“IEC-West Project”) and is the subject of this Siting Application.<sup>1</sup>

Transource PA is obligated and responsible for the construction, ownership, maintenance, and operation of the Pennsylvania portion of IEC-West Project. Transource PA’s affiliate, Transource Maryland, LLC (“Transource MD”) is obligated and responsible for the construction, ownership, maintenance, and operation of the Maryland portion of the IEC-West Project.

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<sup>1</sup> The new Furnace Run-Conastone 230 kV Transmission Line will be sited to extend approximately 16 miles, connecting the existing Conastone Substation located near Norrisville, Harford County, Maryland, and the new Furnace Run Substation to be located in York County, Pennsylvania. This transmission line project is referred to as the Independence Energy Connection-East Project (“IEC-East Project”) and is the subject of a separately filed Siting Application.

The current estimated cost for the total IEC Project is approximately \$230 million. The estimated cost for the IEC-West Project is approximately \$132 million, which includes approximately \$47 million for substation work and approximately \$85 million for the new Rice-Ringgold 230 kV Transmission Line. Subject to the Commission’s approval, construction of the IEC-West Project is scheduled to begin as soon as practicable following Commission approval to meet the required in-service date of June 1, 2020.

## **2.0 PROJECT NEED**

PJM is a FERC-approved Regional Transmission Organization charged with ensuring the reliable and efficient operation of the electric transmission system under its functional control, and coordinating the transmission of electricity in all or parts of thirteen states, including Pennsylvania, and the District of Columbia. In order to ensure reliable transmission service, PJM prepares an annual Regional Transmission Expansion Plan (“RTEP”). PJM’s RTEP process is currently set forth in Schedule 6 of PJM’s Amended and Restated Operating Agreement (“Schedule 6”).<sup>2</sup> The RTEP is an annual planning process that encompasses a comprehensive series of detailed analyses to ensure electric power continues to flow reliably to customers under stringent reliability planning criteria. PJM Manual 14B outlines the RTEP process and reliability criteria used for this process.<sup>3</sup>

In addition to the reliability analysis, PJM’s RTEP includes a Market Efficiency Analysis to identify congestion on electric transmission facilities that has economic or wholesale market effects, as well as potential improvements to electric transmission economic efficiencies. The

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<sup>2</sup> Schedule 6 governs the process by which PJM’s members rely on PJM to prepare an annual regional plan for the enhancement and expansion of the transmission facilities to ensure long-term, reliable electric service consistent with established reliability criteria. In addition, Schedule 6 addresses the procedures used to develop the RTEP, the review and approval process for the RTEP, the obligation of transmission owners to build transmission upgrades included in the RTEP, and the process by which interregional transmission upgrades will be developed.

<sup>3</sup> PJM Manual 14B is voluminous and publicly available at: <http://www.pjm.com/~media/documents/manuals/ml14b.ashx>.

electric transmission needs identified in this analysis stem from the fact that the PJM transmission grid provides the means for generators to participate in a competitive wholesale market to supply electricity, both capacity and energy, to customers in PJM's geographic footprint no matter where in this area the electrical load is located.

The electric transmission infrastructure needs identified by the PJM Market Efficiency Analysis are addressed by market efficiency transmission projects, which are aimed specifically at improving electric transmission economic efficiencies and alleviating electric transmission constraints that have an economic impact on PJM's wholesale energy or capacity markets. When PJM's Market Efficiency Analysis identifies a need to relieve congestion on electric transmission facilities, PJM opens a Long Term Proposal Window, to solicit the submittal of potential solutions (*i.e.*, market efficiency projects) to address those needs.

PJM's solicitation of market efficiency project submittals through its Long Term Proposal Window is a competitive process consistent with FERC Order No. 1000.<sup>4</sup> Potential solutions are evaluated using two criteria: first, the project must address the congestion identified in the Market Efficiency Analysis; and, second, the project benefits must exceed the costs by at least 25 percent. In addition, the project must meet PJM's congestion criteria and not create additional unacceptable congestion elsewhere on the system. Project benefits are measured by comparing the defined benefit metric with and without the proposed project for a 15-year study period. In this case, the benefit metric used was Net Load Payments for Benefitting Zones.<sup>5</sup>

The market efficiency projects that are selected through PJM's Long Term Proposal Window are presented to stakeholders and recommended to the PJM Board of Managers ("PJM Board") for approval. If approved, such market efficiency projects are included in the RTEP as Baseline Projects.

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<sup>4</sup> A summary of FERC Order No. 1000 is available at: <http://www.ferc.gov/industries/electric/industryact/trans-plan.asp>.

<sup>5</sup> The economic benefit/cost ratio threshold test is set forth in PJM Manual 14B, Attachment E, available at: <http://www.pjm.com/~media/documents/manuals/m14b.ashx>.

Importantly, pursuant to Schedule 6 of PJM's Amended and Restated Operating Agreement, after the PJM Board approves a proposed market efficiency project, the successful project proponent is obligated to complete the project once PJM and the successful entity execute a Designated Entity Agreement, which specifically designates the entity or entities having construction responsibility for the project.

In October 2014, PJM opened a Long Term Proposal Window ("2014/15 RTEP Long Term Proposal Window") to solicit proposals to address, among other things, transmission congestion in Pennsylvania, Maryland, West Virginia, and Virginia.<sup>6</sup>

In response to the 2014/15 RTEP Long Term Proposal Window, a total of 41 proposals were submitted and 11 projects were deemed competitive and underwent further scenario testing. Transource Energy, the parent of Transource PA, submitted "Project 9A." The IEC-Project is a major component of Project 9A. Additional sensitivity analysis, which included variations in load forecast, fuel prices and important generator assumptions, further reduced the number of competitive projects to four proposals. Many of the scenarios were performed based on PJM stakeholder feedback. PJM's analysis consisted of approximately 23,000 hours of computation time.

After extensive evaluation and review with stakeholders, PJM selected Project 9A to address the needs identified in PJM's 2014/15 RTEP Long Term Proposal Window because it provided the highest benefit-to-cost ratio, the most total congestion savings, and the most production cost

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<sup>6</sup> See PJM, LLC, "PJM RTEP - 2014/15 RTEP Long Term Proposal Window Problem Statement & Requirements Document," Version 2 (Oct. 30, 2014), available at <https://www.pjm.com/~media/planning/rtep-dev/expand-plan-process/ferc-order-1000/rtep-proposal-windows/2014-15-rtep-long-term-proposal-window-problem-statement-and-requirements-document.ashx>.

savings.<sup>7</sup> On August 2, 2016, the PJM Board approved the Project 9A as Baseline Upgrade Numbers b2743 and b2752, which includes the IEC Project.<sup>8</sup>

On September 14, 2017, PJM reported the results of an update to its analysis. This report confirmed that Project 9A, which includes the IEC Project, continues to meet the criteria for inclusion in the RTEP as a baseline upgrade project.<sup>9</sup>

Although the primary benefits from the IEC Project relate to market efficiency and the reduction of congestion costs, the new transmission facilities associated with the IEC Project will also enhance the electrical strength and reliability of the transmission system by virtue of the new transmission facilities in the area that will be part of the interconnected transmission grid. The IEC Project will provide additional and alternative paths for electricity in the event of outages on other Pennsylvania transmission facilities. The IEC Project will also allow the interconnection of future reliability, generation, and load projects in the area.

### **3.0 PROPOSED SOLUTION**

The IEC Project approved by PJM involves: (i) construction of two new substations in Pennsylvania, the Rice Substation and the Furnace Run Substation; and (ii) construction of two new overhead double-circuit 230 kV interstate transmission lines, the Rice-Ringgold 230 kV

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<sup>7</sup> The recommendation of PJM staff to approve the IEC Project is available at: <http://www.pjm.com/~media/committees-groups/committees/teac/20160811/20160811-board-whitepaper-august-2016.ashx>.

<sup>8</sup> PJM's 2014/2015 RTEP Baseline Upgrade Numbers b2743 and b2752 also includes upgrades to the existing Conastone and Ringgold Substations in Maryland and reconductoring of the Conastone-Northwest double-circuit 230 kV line and the Ringgold-Catoctin 138 kV line in Maryland. The upgrades to these existing facilities will be the responsibility of the incumbent Maryland utilities. The upgrades to existing facilities, while not part of the IEC Project, are inter-dependent components of the solution approved by PJM.

<sup>9</sup> The September 14, 2017 PJM TEAC Market Efficiency Update is available at: <http://www.pjm.com/~media/committees-groups/committees/teac/20170914/20170914-market-efficiency-update.ashx>.

Transmission Line (IEC-West Project) and the Furnace Run-Conastone 230 kV Transmission Line (IEC-East Project).

Upon receipt of all necessary approvals, the new Rice-Ringgold 230 kV Transmission Line will extend approximately 28.8 miles (approximately 24.4 miles in Pennsylvania), connecting the existing Ringgold Substation located near Smithsburg, Washington County, Maryland, and the new Rice Substation to be located in Franklin County, Pennsylvania. This transmission line project is referred to as the IEC-West Project and is the subject of this Siting Application.

The new Furnace Run-Conastone 230 kV Transmission Line will be sited to extend approximately 16 miles (approximately 12.7 miles in Pennsylvania), connecting the existing Conastone Substation located near Norrisville, Harford County, Maryland, and the new Furnace Run Substation to be located in York County, Pennsylvania. This transmission line project is referred to as the IEC-East Project and is the subject of a separate Siting Application.

A map of the existing and proposed systems in the Project area is provided as **Appendix 2.1**. A one-line diagram of the proposed IEC-West Project is provided as **Appendix 2.2**.

The IEC-West Project, together with the IEC-East Project, will alleviate the transmission congestion constraints identified by PJM in Pennsylvania, Maryland, West Virginia, and Virginia. Both the IEC-West Project and the IEC-East Project are required to resolve the congestion problem identified in the 2014/15 RTEP Long Term Proposal Window.

On November 2, 2016, PJM and Transource Energy executed a Designated Entity Agreement. Pursuant to Schedule E of the Designated Entity Agreement, Transource PA is responsible for the construction, ownership, maintenance, and operation of the two new substations in Pennsylvania; and the Pennsylvania portion of the two new interstate transmission lines between Maryland and Pennsylvania contemplated in the IEC Project approved as PJM Baseline Upgrade Numbers b2743 and b2752. Under the same agreement, Transource PA's Maryland affiliate, Transource MD, is responsible for the construction, ownership, maintenance, and operation of the Maryland portion of the two new interstate transmission lines between Maryland and



Pennsylvania contemplated in the IEC Project approved as PJM Baseline Upgrade Numbers b2743 and b2752.

On November 14, 2016, the Designated Entity Agreement was filed with the FERC Commission in Docket No. ER17-349-000. FERC approved the Designated Entity Agreement on January 12, 2017.<sup>10</sup> A true copy of the Designated Entity Agreement is provided as **Appendix 2.3**.

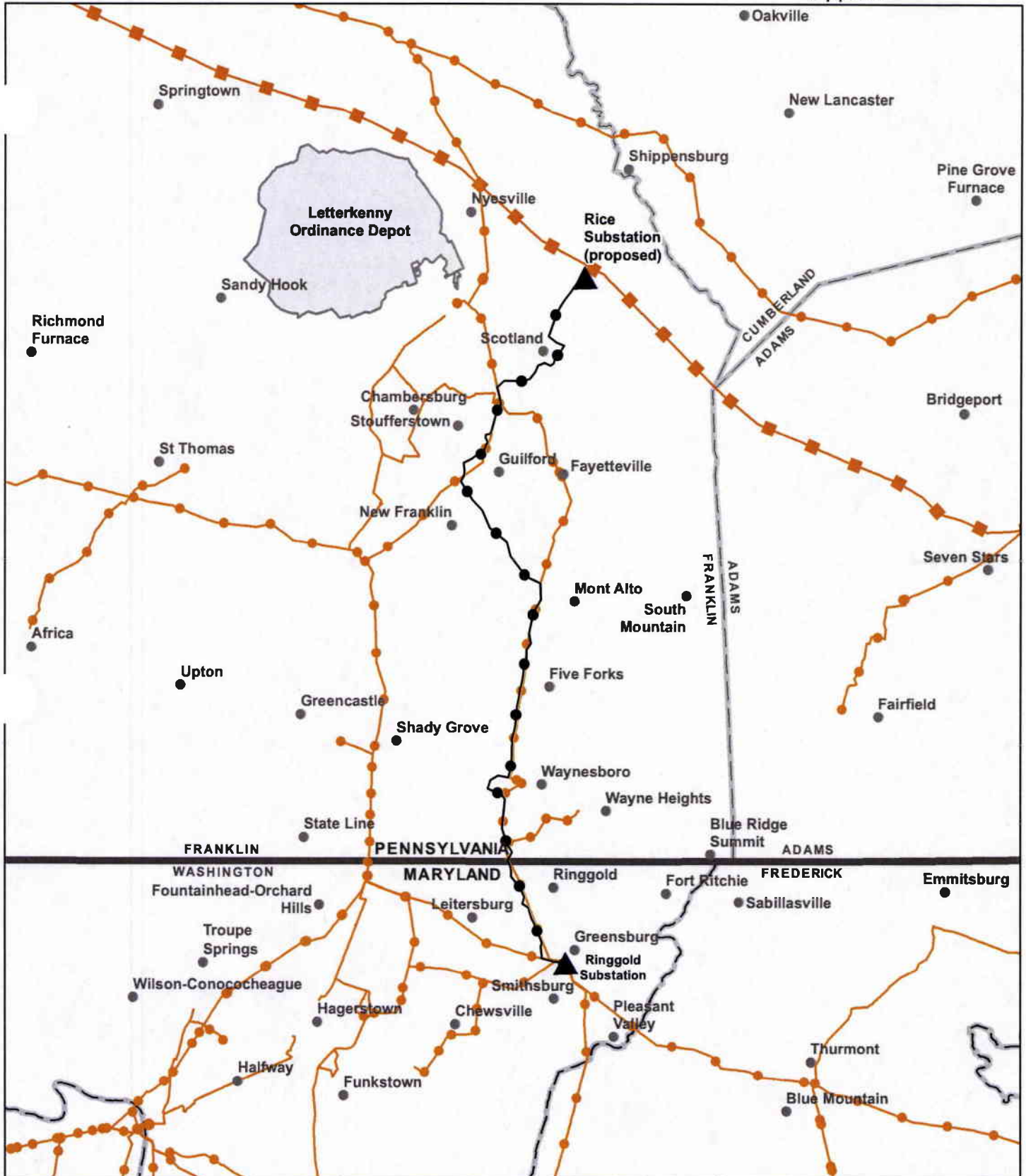
Pursuant to Schedule 6 of PJM's Amended and Restated Operating Agreement, and as stated in the Designated Entity Agreement, Transource PA and Transource MD are required to complete the IEC Project by June 1, 2020.

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<sup>10</sup> FERC's order approving the Designated Entity Agreement is available at: [https://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20170112-3047](https://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20170112-3047)

**APPENDIX 2.1**

**Map of the Existing and Proposed  
Systems in the IEC-West Project Area**



▲ Substation

● Proposed Rice - Ringgold 230 kV Line

**Existing Transmission Line**

- Below 100kV
- 115kV - 230kV
- Greater than 345kV

Data Sources: AEP (2017), POWERmap (2012), ESRI (2011), DCNR (2017) NLCD Forest Cover (2011)

Coordinate System: UTM Zone 18N NAD 83

December 01, 2017



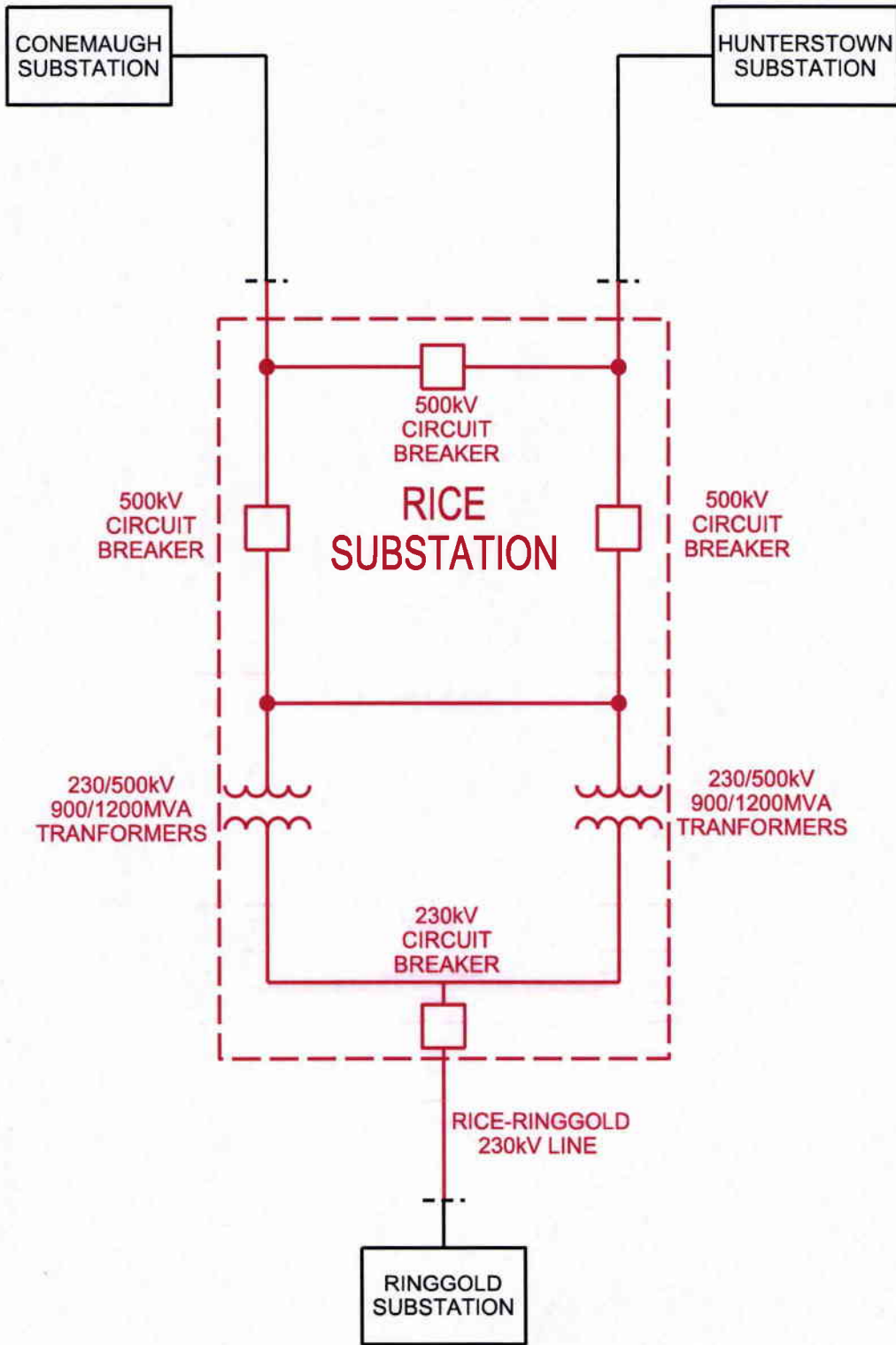
**Project System Map**

Independence Energy Connection  
Rice - Ringgold  
**TRANSSOURCE** 230kV Transmission Line

0 2 4 6 8  
Miles

**APPENDIX 2.2**

**One-Line Diagram of the Proposed IEC-West Project**



**LEGEND**  
 ■ Transource Proposed Facilities



project  
 92468  
 contract  
 TRANSOURCE  
 dwg. no. RICE SLD rev. A

date 12/5/17  
 designed J. CLOUSE

**RICE SINGLE LINE DIAGRAM**

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**APPENDIX 2.3**

**FERC-Approved Designated Entity Agreement**



Service Agreement No. [ ]

**DESIGNATED ENTITY AGREEMENT**

**Between**

**PJM Interconnection, L.L.C.**

**And**

**Transource Energy, LLC, for itself and on behalf of  
Transource Maryland, LLC and Transource Pennsylvania, LLC**

**(PJM Upgrade Project b2743, b2752 Rice - Ringgold and Furnace Run - Conastone)**

Service Agreement No. [ ]

**DESIGNATED ENTITY AGREEMENT****Between****PJM Interconnection, L.L.C.****And****Transource Energy, LLC, for itself and on behalf of  
Transource Maryland, LLC and Transource Pennsylvania, LLC****(PJM Upgrade Project b2743, b2752 Rice - Ringgold and Furnace Run - Conastone)**

This Designated Entity Agreement, including the Schedules attached hereto and incorporated herein (collectively, "Agreement") is made and entered into as of the Effective Date between PJM Interconnection, L.L.C. ("Transmission Provider" or "PJM"), and Transource Energy, LLC ("Designated Entity" or "Transource"), referred to herein individually as "Party" and collectively as "the Parties."

**WITNESSETH**

WHEREAS, in accordance with FERC Order No. 1000 and Schedule 6 of the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. ("Operating Agreement"), Transmission Provider is required to designate among candidates, pursuant to a FERC-approved process, an entity to develop and construct a specified project to expand, replace and/or reinforce the Transmission System operated by Transmission Provider;

WHEREAS, pursuant to Section 1.5.8(i) of Schedule 6 of the Operating Agreement, the Transmission Provider notified Designated Entity that it was designated as the Designated Entity for the Project (described in Schedule A to this Agreement) to be included in the Regional Transmission Expansion Plan;

WHEREAS, pursuant to Section 1.5.8(j) of Schedule 6 of the Operating Agreement, Designated Entity accepted the designation as the Designated Entity for the Project and therefore has the obligation to construct the Project; and

NOW, THEREFORE, in consideration of the mutual covenants herein contained, together with other good and valuable consideration, the receipt and sufficiency is hereby mutually acknowledged by each Party, the Parties mutually covenant and agree as follows:

**Article 1 – Definitions****1.0 Defined Terms.**

All capitalized terms used in this Agreement shall have the meanings ascribed to them in Part I of the Tariff or in definitions either in the body of this Agreement or its attached Schedules. In

the event of any conflict between defined terms set forth in the Tariff or defined terms in this Agreement, including the Schedules, such conflict will be resolved in favor of the terms as defined in this Agreement.

### **1.1 Confidential Information.**

Any confidential, proprietary, or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy, or compilation relating to the Project or Transmission Owner facilities to which the Project will interconnect, which is designated as confidential by the party supplying the information, whether conveyed verbally, electronically, in writing, through inspection, or otherwise, and shall include, but may not be limited to, information relating to the producing party's technology, research and development, business affairs and pricing, land acquisition and vendor contracts relating to the Project.

### **1.2 Designated Entity Letter of Credit.**

Designated Entity Letter of Credit shall mean the letter of credit provided by the Designated Entity pursuant to Section 1.5.8(j) of Schedule 6 of the Operating Agreement and Section 3.0 of this Agreement as security associated with the Project.

### **1.3 Development Schedule.**

Development Schedule shall mean the schedule of milestones set forth in Schedule C of this Agreement.

### **1.4 Effective Date.**

Effective Date shall mean the date this Agreement becomes effective pursuant to Section 2.0 of this Agreement.

### **1.5 Initial Operation.**

Initial Operation shall mean the date the Project is (i) energized and (ii) under Transmission Provider operational dispatch.

### **1.6 Project.**

Project shall mean the enhancement or expansion included in the PJM Regional Transmission Expansion Plan described in Schedule A of this Agreement.

### **1.7 Project Finance Entity.**

Project Finance Entity shall mean holder, trustee or agent for holders, of any component of Project Financing.

### **1.8 Project Financing.**

Project Financing shall mean: (a) one or more loans, leases, equity and/or debt financings, together with all modifications, renewals, supplements, substitutions and replacements thereof, the proceeds of which are used to finance or refinance the costs of the Project, any alteration, expansion or improvement to the Project, or the operation of the Project; or (b) loans and/or debt issues secured by the Project.

### **1.9 Reasonable Efforts.**

Reasonable Efforts shall mean such efforts as are consistent with ensuring the timely and effective design and construction of the Project in a manner, which ensures that the Project, once placed in service, meets the requirements of the Project as described in Schedule B and are consistent with Good Utility Practice.

### **1.10 Required Project In-Service Date.**

Required Project In-Service Date shall mean the date the Project is required to: (i) be completed in accordance with the Scope of Work in Schedules B this Agreement, (ii) meet the criteria outlined in Schedule D of this Agreement and (iii) be under Transmission Provider operational dispatch.

## **Article 2 – Effective Date and Term**

### **2.0 Effective Date.**

Subject to regulatory acceptance, this Agreement shall become effective on the date the Agreement has been executed by all Parties, or if this Agreement is filed with FERC for acceptance, rather than reported only in PJM's Electric Quarterly Report, upon the date specified by FERC.

### **2.1 Term.**

This Agreement shall continue in full force and effect from the Effective Date until: (i) the Designated Entity executes the Consolidated Transmission Owners Agreement; and (ii) the Project (a) has been completed in accordance with the terms and conditions of this Agreement, (b) meets all relevant required planning criteria, and (c) is under Transmission Provider's operational dispatch; or (iii) the Agreement is terminated pursuant to Article 8 of this Agreement.

## **Article 3 – Security**

### **3.0 Obligation to Provide Security.**

In accordance with Section 1.5.8(j) of Schedule 6 of the Operating Agreement, Designated Entity shall provide Transmission Provider a letter of credit as acceptable to Transmission Provider (Designated Entity Letter of Credit) or cash security in the amount of \$5,550,000, which is three percent of the estimated cost of the Project. Designated Entity is required provide and maintain the Designated Entity Letter of Credit, as required by Section 1.5.8(j) of Schedule 6 of the Operating Agreement and Section 3.0 of this Agreement. The Designated Entity Letter of Credit shall remain in full force and effect for the term of this Agreement and for the duration of the obligations arising therefrom in accordance with Article 17.0.

### **3.1 Distribution of Designated Entity Letter of Credit or Cash Security.**

In the event that Transmission Provider draws upon the Designated Entity Letter of Credit or retains the cash security in accordance with Sections 7.5, 8.0, or 8.1, Transmission Provider shall distribute such funds as determined by FERC.

## **Article 4 – Project Construction**

### **4.0 Construction of Project by Designated Entity.**

Designated Entity shall design, engineer, procure, install and construct the Project, including any modifications thereto, in accordance with: (i) the terms of this Agreement, including but not limited to the Scope of Work in Schedule B and the Development Schedule in Schedule C; (ii) applicable reliability principles, guidelines, and standards of the Applicable Regional Reliability Council and NERC; (iii) the Operating Agreement; (iv) the PJM Manuals; and (v) Good Utility Practice.

### **4.1 Milestones.**

#### **4.1.0 Milestone Dates.**

Designated Entity shall meet the milestone dates set forth in the Development Schedule in Schedule C of this Agreement. Milestone dates set forth in Schedule C only may be extended by Transmission Provider in writing. Failure to meet any of the milestone dates specified in Schedule C, or as extended as described in this Section 4.1.0 or Section 4.3.0 of this Agreement, shall constitute a Breach of this Agreement. Transmission Provider reasonably may extend any such milestone date, in the event of delays not caused by the Designated Entity that could not be remedied by the Designated Entity through the exercise of due diligence, or if an extension will not delay the Required Project In-Service Date specified in Schedule C of this Agreement; provided that a corporate officer of the Designated Entity submits a revised Development Schedule containing revised milestones and showing the Project in full operation no later than the Required Project In-Service Date specified in Schedule C of this Agreement.

#### **4.1.1 Right to Inspect.**

Upon reasonable notice, Transmission Provider shall have the right to inspect the Project for the purposes of assessing the progress of the Project and satisfaction of milestones. Such inspection shall not be deemed as review or approval by Transmission Provider of any design or construction practices or standards used by the Designated Entity.

#### **4.2 Applicable Technical Requirements and Standards.**

For the purposes of this Agreement, applicable technical requirements and standards of the Transmission Owner(s) to whose facilities the Project will interconnect shall apply to the design, engineering, procurement, construction and installation of the Project to the extent that the provisions thereof relate to the interconnection of the Project to the Transmission Owner(s) facilities.

#### **4.3 Project Modification.**

##### **4.3.0 Project Modification Process.**

The Scope of Work and Development Schedule, including the milestones therein, may be revised, as required, in accordance with Transmission Provider's project modification process set forth in the PJM Manuals, or otherwise by Transmission Provider in writing. Such modifications may include alterations as necessary and directed by Transmission Provider to meet the system condition for which the Project was included in the Regional Transmission Expansion Plan.

##### **4.3.1 Consent of Transmission Provider to Project Modifications.**

Designated Entity may not modify the Project without prior written consent of Transmission Provider, including but not limited to, modifications necessary to obtain siting approval or necessary permits, which consent shall not be unreasonably withheld, conditioned, or delayed.

##### **4.3.2 Customer Facility Interconnections And Transmission Service Requests.**

Designated Entity shall perform or permit the engineering and construction necessary to accommodate the interconnection of Customer Facilities to the Project and transmission service requests that are determined necessary for such interconnections and transmission service requests in accordance with Parts IV and VI, and Parts II and III, respectively, of the Tariff.

#### **4.4 Project Tracking.**

The Designated Entity shall provide regular, quarterly construction status reports in writing to Transmission Provider. The reports shall contain, but not be limited to, updates and information specified in the PJM Manuals regarding: (i) current engineering and construction status of the Project; (ii) Project completion percentage, including milestone completion; (iii) current target Project or phase completion date(s); (iv) applicable outage information; and (v) cost expenditures

to date and revised projected cost estimates for completion of the Project. Transmission Provider shall use such status reports to post updates regarding the progress of the Project.

#### **4.5 Exclusive Responsibility of Designated Entity.**

Designated Entity shall be solely responsible for all planning, design, engineering, procurement, construction, installation, management, operations, safety, and compliance with applicable laws and regulations associated with the Project, including but not limited to obtaining all necessary permits, siting, and other regulatory approvals. Transmission Provider shall have no responsibility to manage, supervise, or ensure compliance or adequacy of same.

### **Article 5 – Coordination with Third-Parties**

#### **5.0 Interconnection Coordination Agreement with Transmission Owner(s).**

By the dates specified in the Development Schedule in Schedule C of this Agreement, Designated Entity shall execute or request to file unexecuted with the Commission: (a) an Interconnection Coordination Agreement; and (b) an interconnection agreement among and between Designated Entity, Transmission Provider, and the Transmission Owner(s) to whose facilities the Project will interconnect.

#### **5.1 Connection with Entities Not a Party to the Consolidated Transmission Owners Agreement.**

Designated Entity shall not permit any part of the Project facilities to be connected with the facilities of any entity which is not: (i) a party to Consolidated Transmission Owners Agreement without an interconnection agreement that contains provisions for the safe and reliable interconnection and operation of such interconnection in accordance with Good Utility Practice, and principles, guidelines and standards of the Applicable Regional Reliability Council and NERC or comparable requirements of an applicable retail tariff or agreement approved by appropriate regulatory authority; or (ii) a party to a separate Designated Entity Agreement.

### **Article 6 – Insurance**

#### **6.0 Designated Entity Insurance Requirements.**

Designated Entity shall obtain and maintain in full force and effect such insurance as is consistent with Good Utility Practice. The Transmission Provider shall be included as an Additional Insured in the Designated Entity's applicable liability insurance policies. The Designated Entity shall provide evidence of compliance with this requirement upon request by the Transmission Provider.

## **6.1 Subcontractor Insurance.**

In accord with Good Utility Practice, Designated Entity shall require each of its subcontractors to maintain and, upon request, provide Designated Entity evidence of insurance coverage of types, and in amounts, commensurate with the risks associated with the services provided by the subcontractor. Bonding and hiring of contractors or subcontractors shall be the Designated Entity's discretion, but regardless of bonding or the existence or non-existence of insurance, the Designated Entity shall be responsible for the performance or non-performance of any contractor or subcontractor it hires.

## **Article 7 – Breach and Default**

### **7.0 Breach.**

Except as otherwise provided in Article 10, a Breach of this Agreement shall include:

(a) The failure to comply with any term or condition of this Agreement, including but not limited to, any Breach of a representation, warranty, or covenant made in this Agreement, and failure to provide and maintain security in accordance with Section 3.0 of this Agreement;

(b) The failure to meet a milestone or milestone date set forth in the Development Schedule in Schedule C of this Agreement, or as extended in writing as described in Sections 4.1.0 and 4.3.0 of this Agreement;

(c) Assignment of this Agreement in a manner inconsistent with the terms of this Agreement; or

(d) Failure of any Party to provide information or data required to be provided to another Party under this Agreement for such other Party to satisfy its obligations under this Agreement.

### **7.1 Notice of Breach.**

In the event of a Breach, a Party not in Breach of this Agreement shall give written notice of such Breach to the breaching Party, and to any other persons, including a Project Finance Entity, if applicable, that the breaching Party identifies in writing prior to the Breach. Such notice shall set forth, in reasonable detail, the nature of the Breach, and where known and applicable, the steps necessary to cure such Breach.

### **7.2 Cure and Default.**

A Party that commits a Breach and does not take steps to cure the Breach pursuant to Section 7.3 shall be in Default of this Agreement.



### **7.3 Cure of Breach.**

The breaching Party may: (i) cure the Breach within thirty days from the receipt of the notice of Breach or other such date as determined by Transmission Provider to ensure that the Project meets its Required Project In-Service Date set forth in Schedule C; or, (ii) if the Breach cannot be cured within thirty days but may be cured in a manner that ensures that the Project meets the Required Project In-Service Date for the Project, within such thirty day time period, commences in good faith steps that are reasonable and appropriate to cure the Breach and thereafter diligently pursue such action to completion.

### **7.4 Re-evaluation if Breach Not Cured.**

In the event that a breaching Party does not cure a Breach in accordance with Section 7.3 of this Agreement, Transmission Provider shall conduct a re-evaluation pursuant to Section 1.5.8(k) of Schedule 6 of the Operating Agreement. If based on such re-evaluation, the Project is retained in the Regional Transmission Expansion Plan and the Designated Entity's designation for the Project also is retained, the Parties shall modify this Agreement, including Schedules, as necessary. In all other events, Designated Entity shall be considered in Default of this Agreement, and this Agreement shall terminate in accordance with Section 8.1 of this Agreement.

### **7.5 Remedies.**

Upon the occurrence of an event of Default, the non-Defaulting Party shall be entitled to: (i) commence an action to require the Defaulting Party to remedy such Default and specifically perform its duties and obligations hereunder in accordance with the terms and conditions hereof; (ii) suspend performance hereunder; and (iii) exercise such other rights and remedies as it may have in equity or at law. Upon Default by Designated Entity, Transmission Provider may draw upon the Designated Entity Letter of Credit. Nothing in this Section 7.5 is intended in any way to affect the rights of a third-party to seek any remedy it may have in equity or at law from the Designated Entity resulting from Designated Entity's Default of this Agreement.

### **7.6 Remedies Cumulative.**

No remedy conferred by any provision of this Agreement is intended to be exclusive of any other remedy and each and every remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law or in equity or by statute or otherwise. The election of any one or more remedies shall not constitute a waiver of the right to pursue other available remedies.

### **7.7 Waiver.**

Any waiver at any time by any Party of its rights with respect to a Breach or Default under this Agreement, or with respect to any other matters arising in connection with this Agreement, shall not be deemed a waiver or continuing waiver with respect to any other Breach or Default or other matter.

## **Article 8 – Early Termination**

### **8.0 Termination by Transmission Provider.**

In the event that: (i) pursuant to Section 1.5.8(k) of Schedule 6 of the Operating Agreement, Transmission Provider determines to remove the Project from the Regional Transmission Expansion Plan and/or not to retain Designated Entity's status for the Project; (ii) Transmission Provider otherwise determines pursuant to Regional Transmission Expansion Planning Protocol in Schedule 6 of the Operating Agreement that the Project is no longer required to address the specific need for which the Project was included in the Regional Transmission Expansion Plan; or (iii) an event of force majeure, as defined in section 10.0 of this Attachment KK, or other event outside of the Designated Entity's control that, with the exercise of Reasonable Efforts, Designated Entity cannot alleviate and which prevents the Designated Entity from satisfying its obligations under this Agreement, Transmission Provider may terminate this Agreement by providing written notice of termination to Designated Entity, which shall become effective the later of sixty calendar days after the Designated Entity receives such notice or other such date the FERC establishes for the termination. In the event termination pursuant to this Section 8.0 is based on (ii) or (iii) above, Transmission Provider shall not have the right to draw upon the Designated Entity Letter of Credit or retain the cash security and shall cancel the Designated Entity Letter of Credit or return the cash security within thirty days of the termination of this Agreement.

### **8.1 Termination by Default.**

This Agreement shall terminate in the event a Party is in Default of this Agreement in accordance with Sections 7.2 or 7.4 of this Agreement. Upon Default by Designated Entity, Transmission Provider may draw upon the Designated Entity Letter of Credit or retain the cash security.

### **8.2 Filing at FERC.**

Transmission Provider shall make the appropriate filing with FERC as required to effectuate the termination of this Agreement pursuant to this Article 8.

## **Article 9 – Liability and Indemnity**

### **9.0 Liability.**

For the purposes of this Agreement, Transmission Provider's liability to the Designated Entity, any third-party, or any other person arising or resulting from any acts or omissions associated in any way with performance under this Agreement shall be limited in the same manner and to the same extent that Transmission Provider's liability is limited to any Transmission Customer, third-party or other person under Section 10.2 of the Tariff arising or resulting from any act or

omission in any way associated with service provided under the Tariff or any Service Agreement thereunder.

### **9.1 Indemnity.**

For the purposes of this Agreement, Designated Entity shall at all times indemnify, defend, and save Transmission Provider and its directors, managers, members, shareholders, officers and employees harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third-parties, arising out of or resulting from the Transmission Provider's acts or omissions associated with the performance of its obligations under this Agreement to the same extent and in the same manner that a Transmission Customer is required to indemnify, defend and save Transmission Provider and its directors, managers, members, shareholders, officers and employees harmless under Section 10.3 of the Tariff.

## **Article 10 – Force Majeure**

### **10.0 Force Majeure.**

For the purpose of this section, an event of force majeure shall mean any cause beyond the control of the affected Party, including but not restricted to, acts of God, flood, drought, earthquake, storm, fire, lightening, epidemic, war, riot, civil disturbance or disobedience, labor dispute, labor or material shortage, sabotage, acts of public enemy, explosions, orders, regulations or restrictions imposed by governmental, military, or lawfully established civilian authorities, which in any foregoing cases, by exercise of due diligence, it has been unable to overcome. An event of force majeure does not include: (i) a failure of performance that is due to an affected Party's own negligence or intentional wrongdoing; (ii) any removable or remedial causes (other than settlement of a strike or labor dispute) which an affected Party fails to remove or remedy within a reasonable time; or (iii) economic hardship of an affected Party.

### **10.1 Notice.**

A Party that is unable to carry out an obligation imposed on it by this Agreement due to Force Majeure shall notify the other Party in writing within a reasonable time after the occurrence of the cause relied on.

### **10.2 Duration of Force Majeure.**

A Party shall not be responsible for any non-performance or considered in Breach or Default under this Agreement, for any deficiency or failure to perform any obligation under this Agreement to the extent that such failure or deficiency is due to Force Majeure. A Party shall be excused from whatever performance is affected only for the duration of the Force Majeure and while the Party exercises Reasonable Efforts to alleviate such situation. As soon as the non-performing Party is able to resume performance of its obligations excused because of the

occurrence of Force Majeure, such Party shall resume performance and give prompt notice thereof to the other Party. In the event that Designated Entity is unable to perform any of its obligations under this Agreement because of an occurrence of Force Majeure, Transmission Provider may terminate this Agreement in accordance with Section 8.0 of this Agreement.

### **10.3 Breach or Default of or Force Majeure under Interconnection Coordination Agreement**

If either of the following events prevents Designated Entity from performing any of its obligations under this Agreement, such event shall be considered a Force Majeure event under this Agreement and the provisions of this Article 10 shall apply: (i) a breach or default of the Interconnection Coordination Agreement associated with the Project by a party to the Interconnection Coordination Agreement other than the Designated Entity; or (ii) an event of Force Majeure under the Interconnection Coordination Agreement associated with the Project.

## **Article 11 – Assignment**

### **11.0 Assignment.**

A Party may assign all of its rights, duties, and obligations under this Agreement in accordance with this Section 11.0. Except for assignments described in Section 11.1 of this Agreement that may not result in the assignment of all rights, duties, and obligations under this Agreement to a Project Finance Entity, no partial assignments will be permitted. No Party may assign any of its rights or delegate any of its duties or obligations under this Agreement without prior written consent of the other Party, which consent shall not be unreasonably withheld, conditioned, or delayed. Any such assignment or delegation made without such written consent shall be null and void. Assignment by the Designated Entity shall be contingent upon, prior to the effective date of the assignment: (i) the Designated Entity or assignee demonstrating to the satisfaction of Transmission Provider that the assignee has the technical competence and financial ability to comply with the requirements of this Agreement and to construct the Project consistent with the assignor's cost estimates for the Project; and (ii) the assignee is eligible to be a Designated Entity for the Project pursuant to Sections 1.5.8(a) and (f) of Schedule 6 of the Operating Agreement. Except as provided in an assignment to a Finance Project Entity to the contrary, for all assignments by any Party, the assignee must assume in a writing, to be provided to the other Party, all rights, duties, and obligations of the assignor arising under this Agreement. Any assignment described herein shall not relieve or discharge the assignor from any of its obligations hereunder absent the written consent of the other Party. In no circumstance, shall an assignment of this Agreement or any of the rights, duties, and obligations under this Agreement diminish the rights of the Transmission Provider under this Agreement, the Tariff, or the Operating Agreement. Any assignees that will construct, maintain, or operate the Project shall be subject to, and comply with the terms of this Agreement, the Tariff and the Operating Agreement.

## **11.1 Project Finance Entity Assignments**

### **11.1.1 Assignment to Project Finance Entity**

If an arrangement between the Designated Entity and a Project Finance Entity provides that the Project Finance Entity may assume any of the rights, duties and obligations of the Designated Entity under this Agreement or otherwise provides that the Project Finance Entity may cure a Breach of this Agreement by the Designated Entity, the Project Finance Entity may be assigned this Agreement or any of the rights, duties, or obligations hereunder only upon written consent of the Transmission Provider, which consent shall not be unreasonably withheld, conditioned, or delayed. In no circumstance, shall an assignment of this Agreement or any of the rights, duties, and obligations under this Agreement diminish the rights of the Transmission Provider under this Agreement, the Tariff, or the Operating Agreement.

### **11.1.2 Assignment By Project Finance Entity**

A Project Finance Entity that has been assigned this Agreement or any of the rights, duties or obligations under this Agreement or otherwise is permitted to cure a Breach of this Agreement, as described pursuant to Section 11.1.1 above, may assign this Agreement or any of the rights, duties or obligations under this Agreement to another entity not a Party to this Agreement only: (i) upon the Breach of this Agreement by the Designated Entity; and (ii) with the written consent of the Transmission Provider, which consent shall not be unreasonably withheld, conditioned, or delayed. In no circumstance, shall an assignment of this Agreement or any of the rights, duties, and obligations under this Agreement alter or diminish the rights of the Transmission Provider under this Agreement, the Tariff, or the Operating Agreement. Any assignees that will construct, maintain, or operate the Project shall be subject to, and comply with the Tariff and Operating Agreement.

## **Article 12 – Information Exchange**

### **12.0 Information Access.**

Subject to Applicable Laws and Regulations, each Party shall make available to the other Party information necessary to carry out each Party's obligations and responsibilities under this Agreement, the Operating Agreement, and the Tariff. Such information shall include but not be limited to, information reasonably requested by Transmission Provider to prepare the Regional Transmission Expansion Plan. The Parties shall not use such information for purposes other than to carry out their obligations or enforce their rights under this Agreement, the Operating Agreement, and the Tariff.

### **12.1 Reporting of Non-Force Majeure Events.**

Each Party shall notify the other Party when it becomes aware of its inability to comply with the provisions of this Agreement for a reason other than Force Majeure. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply,

including, but not limited to, the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this Section 12.1 shall not entitle the receiving Party to allege a cause of action for anticipatory Breach of this Agreement.

### **Article 13 – Confidentiality**

#### **13.0 Confidentiality.**

For the purposes of this Agreement, information will be considered and treated as Confidential Information only if it meets the definition of Confidential Information set forth in Section 1.1 of this Agreement and is clearly designated or marked in writing as “confidential” on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Party receiving the information that the information is “confidential.” Confidential Information shall be treated consistent with Section 18.17 of the Operating Agreement. A Party shall be responsible for the costs associated with affording confidential treatment to its information.

### **Article 14 – Regulatory Requirements**

#### **14.0 Regulatory Approvals.**

Designated Entity shall seek and obtain all required government authority authorizations or approvals as soon as reasonably practicable, and by the milestone dates set forth in the Development Schedule of Schedule C of this Agreement, as applicable.

### **Article 15 – Representations and Warranties**

#### **15.0 General.**

Designated Entity hereby represents, warrants and covenants as follows, with these representations, warranties, and covenants effective as to the Designated Entity during the full time this Agreement is effective:

##### **15.0.1 Good Standing**

Designated Entity is duly organized or formed, as applicable, validly existing and in good standing under the laws of its State of organization or formation, and is in good standing under the laws of the respective State(s) in which it is incorporated.

### **15.0.2 Authority**

Designated Entity has the right, power and authority to enter into this Agreement, to become a Party thereto and to perform its obligations hereunder. This Agreement is a legal, valid and binding obligation of Designated Entity, enforceable against Designated Entity in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

### **15.0.3 No Conflict.**

The execution, delivery and performance of this Agreement does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of Designated Entity, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon Designated Entity or any of its assets.

## **Article 16 – Operation of Project**

### **16.0 Initial Operation.**

The following requirements shall be satisfied prior to Initial Operation of the Project:

#### **16.0.1 Execution of the Consolidated Transmission Owners Agreement**

Designated Entity has executed the Consolidated Transmission Owners Agreement and is able to meet all requirements therein.

#### **16.0.2 Execution of an Interconnection Agreement**

Designated Entity has executed an Interconnection Agreement with the Transmission Owner(s) to whose facilities the Project will interconnect, or such agreement has been filed unexecuted with the Commission.

#### **16.0.3 Operational Requirements**

The Project must meet all applicable operational requirements described in the PJM Manuals.

#### **16.0.4 Parallel Operation**

Designated Entity shall have all necessary systems and personnel in place to allow for parallel operation of its facilities with the facilities of the Transmission Owner(s) to which the Project is interconnected consistent with the Interconnection Coordination Agreement associated with the Project.



### **16.0.5 Synchronization**

Designated Entity shall have received any necessary authorization from Transmission Provider and the Transmission Owner(s) to whose facilities the Project will interconnect to synchronize with the Transmission System or to energize, as applicable, per the determination of Transmission Provider, the Project.

### **16.1 Partial Operation.**

If the Project is to be completed in phases, the completed part of the Project may operate prior to completion and Required Project In-Service Date set forth in Schedule C of this Agreement, provided that: (i) Designated Entity has notified Transmission Provider of the successful completion of the Project phase; (ii) Transmission Provider has determined that partial operation of the Project will not negatively impact the reliability of the Transmission System; (iii) Designated Entity has demonstrated that the requirements for Initial Operation set forth in Section 16.0 of this Agreement have been met for the Project phase; and (iv) partial operation of the Project is consistent with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice.

## **Article 17 – Survival**

### **17.0 Survival of Rights.**

The rights and obligations of the Parties in this Agreement shall survive the termination, expiration, or cancellation of this Agreement to the extent necessary to provide for the determination and enforcement of said obligations arising from acts or events that occurred while this Agreement was in effect. The Liability and Indemnity provisions in Article 9 also shall survive termination, expiration, or cancellation of this Agreement.

## **Article 18 – Non-Standard Terms and Conditions**

### **18.0 Schedule E – Addendum of Non-Standard Terms and Conditions.**

Subject to FERC acceptance or approval, the Parties agree that the terms and conditions set forth in the attached Schedule E are hereby incorporated by reference, and made a part of, this Agreement. In the event of any conflict between a provision of Schedule E that FERC has accepted and any provision of the standard terms and conditions set forth in this Agreement that relates to the same subject matter, the pertinent provision of Schedule E shall control.

## Article 19 – Miscellaneous

### 19.0 Notices.

Any notice or request made to or by any Party regarding this Agreement shall be made by U.S. mail or reputable overnight courier to the addresses set forth below:

Transmission Provider:  
PJM Interconnection, L.L.C.  
2750 Monroe Blvd.  
Audubon, PA 19403  
Attention: Manager, Infrastructure Coordination

Designated Entity:  
Transource Energy, LLC  
1 Riverside Plaza,  
Columbus, Ohio 43215-2372  
Attention: Antonio Smyth

### 19.1 No Transmission Service.

This Agreement does not entitle the Designated Entity to take Transmission Service under the Tariff.

### 19.2 No Rights.

Neither this Agreement nor the construction or the financing of the Project entitles Designated Entity to any rights related to Customer-Funded Upgrades set forth in Subpart C of Part VI of the Tariff.

### 19.3 Standard of Review.

Future modifications to this Agreement by the Parties or the FERC shall be subject to the just and reasonable standard and the Parties shall not be required to demonstrate that such modifications are required to meet the “public interest” standard of review as described in *United Gas Pipe Line Co. v. Mobile Gas Service Corp.*, 350 U.S. 332 (1956), and *Federal Power Commission v. Sierra Pacific Power Co.*, 350 U.S. 348 (1956).

### 19.4 No Partnership.

Notwithstanding any provision of this Agreement, the Parties do not intend to create hereby any joint venture, partnership, association taxable as a corporation, or other entity for the conduct of any business for profit.

**19.5 Headings.**

The Article and Section headings used in this Agreement are for convenience only and shall not affect the construction or interpretation of any of the provisions of this Agreement.

**19.6 Interpretation.**

Wherever the context may require, any noun or pronoun used herein shall include the corresponding masculine, feminine or neuter forms. The singular form of nouns, pronouns and verbs shall include the plural and vice versa.

**19.7 Severability.**

Each provision of this Agreement shall be considered severable and if for any reason any provision is determined by a court or regulatory authority of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions of this Agreement shall continue in full force and effect and shall in no way be affected, impaired or invalidated, and such invalid, void or unenforceable provision shall be replaced with valid and enforceable provision or provisions which otherwise give effect to the original intent of the invalid, void or unenforceable provision.

**19.8 Further Assurances.**

Each Party hereby agrees that it shall hereafter execute and deliver such further instruments, provide all information and take or forbear such further acts and things as may be reasonably required or useful to carry out the intent and purpose of this Agreement and as are not inconsistent with the terms hereof.

**19.9 Counterparts.**

This Agreement may be executed in multiple counterparts to be construed as one effective as of the Effective Date.

**19.10 Governing Law**

This Agreement shall be governed under the Federal Power Act and Delaware law, as applicable.

**19.11 Incorporation of Other Documents.**

The Tariff, the Operating Agreement, and the Reliability Assurance Agreement, as they may be amended from time to time, are hereby incorporated herein and made a part hereof.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective authorized officials.

**Transmission Provider: PJM Interconnection, L.L.C.**

By: Suzanne Glatz Manager, Infrastructure Coordination 11/2/2016  
Name Title Date

Printed name of signer: \_\_\_\_\_

**Designated Entity: Transource Energy, LLC for itself and on behalf of  
Transource Maryland, LLC and Transource Pennsylvania, LLC**

By: [Signature] PRESIDENT 10-26-16  
Name Title Date

Printed name of signer: ANDREW P. SMYTH

## SCHEDULE A

### Description of Project

#### Rice – Ringgold Line (b2743.5):

- Build new 230 kV double circuit overhead transmission line between the existing Ringgold Substation and the new Rice Substation; operated as a single circuit.

#### Rice Substation (b2743.1):

- Tap the existing Conemaugh - Hunterstown 500 kV line to tie in the new 500/230kV Rice Substation connecting to the new Rice - Ringgold 230 kV line.
- Install two 500/230 kV transformers, operated in parallel.

#### Furnace Run – Conastone Line (b2752.5):

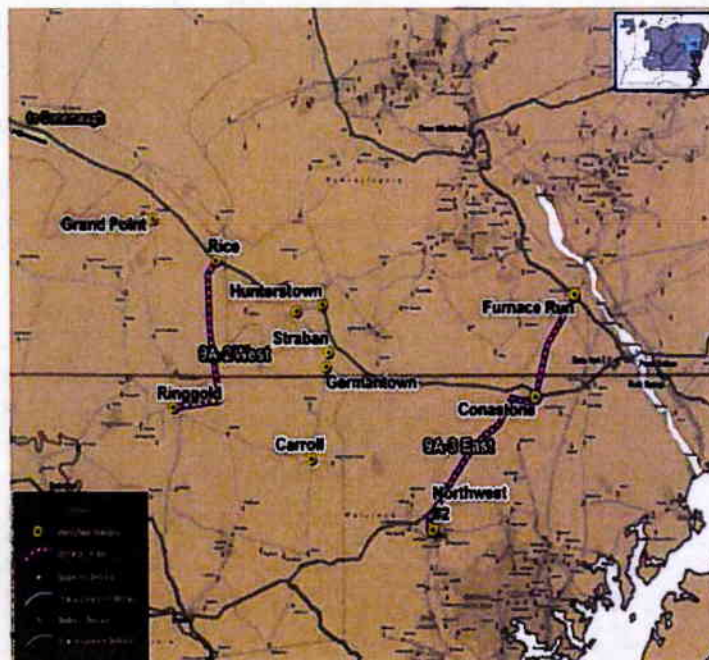
- Build new 230 kV double circuit overhead transmission line between the existing Conastone Substation and the new Furnace Run Substation; operated as a single circuit.

#### Furnace Run Substation (b2752.1):

- Tap the existing Peach Bottom - Three Mile Island 500 kV line to tie in the new 500/230kV Furnace Run Substation connecting to the new Furnace Run - Conastone 230 kV line.
- Install two 500/230 kV transformers, operated in parallel.

*Note:* Work required to rebuild the Conastone - Northwest 230 kV line will be covered under a separate RTEP project. The work required to replace the Ringgold #3 and #4 230/138 kV transformers, to reconfigure the Ringgold bus, and to rebuild & reconductor the Ringgold - Catocin 138 kV & replace terminal equipment at both ends of the circuit will also be covered under a separate RTEP project.

#### *Project Area Map:*



## **SCHEDULE B**

### **Scope of Work**

The new Rice – Ringgold Line will include approximately 27 miles of double-circuit 230 kV alternating current overhead transmission line configured in a six-wired arrangement (operated as a single circuit), rated at least 1660 MVA summer normal and summer emergency, between the existing Ringgold Substation and the new Rice Substation.

The new Rice Substation will tie into the existing Hunterstown – Conemaugh 500 kV line. The transmission line and substation remote-end work required to tie the existing Hunterstown – Conemaugh 500 kV line into the new Rice Substation will be performed by others, and not by Transource. The new Rice Substation will include:

- Two at least 900 MVA 500/230 kV transformers, operated in parallel.
- One 245 kV breaker in a single bus single breaker configuration.
- Three 500 kV breakers in a ring bus configuration.

The new Furnace Run – Conastone Line will include approximately 15 miles of new double-circuit 230 kV alternating current overhead transmission line configured in a six-wired arrangement (operated as a single circuit), rated at least 1800 MVA summer normal and 2400 MVA summer emergency, between the existing Conastone Substation and the new Furnace Run Substation.

The new Furnace Run Substation will tie into the existing Three Mile Island – Peach Bottom 500 kV line. The transmission line and substation remote-end work required to tie the existing Three Mile Island – Peach Bottom 500 kV line into the new Furnace Run Substation will be performed by others, and not by Transource. The new Furnace Run Substation will include:

- Two at least 900 MVA 500/230 kV transformers, operated in parallel.
- Two 245 kV breakers in a double breaker single bus configuration.
- Four 500 kV breakers in a ring bus configuration.



## SCHEDULE C

### Development Schedule

Designated Entity shall ensure and demonstrate to the Transmission Provider that it timely has met the following milestones and milestone dates and that the milestones remain in good standing:

<b>Milestones and Milestone Dates</b>
<b>Execute Interconnection Coordination Agreement.</b> On or before <u>May 31, 2017</u> , Designated Entity must execute the Interconnection Coordination Agreement with PECO or request the agreement be filed unexecuted.
<b>Execute Interconnection Coordination Agreement.</b> On or before <u>May 31, 2017</u> , Designated Entity must execute the Interconnection Coordination Agreement with Metropolitan Edison Company or request the agreement be filed unexecuted.
<b>Execute Interconnection Coordination Agreement.</b> On or before <u>May 31, 2017</u> , Designated Entity must execute the Interconnection Coordination Agreement with Baltimore Gas and Electric Company or request the agreement be filed unexecuted.
<b>Execute Interconnection Coordination Agreement.</b> On or before <u>May 31, 2017</u> , Designated Entity must execute the Interconnection Coordination Agreement with Pennsylvania Electric Company or request the agreement be filed unexecuted.
<b>Demonstrate adequate Project financing.</b> On or before <u>December 31, 2016</u> , Designated Entity must demonstrate that adequate project financing has been secured. Project financing must be maintained for the term of this Agreement.
<b>Submit application for any required certificate of convenience and necessity.</b> On or before <u>June 1, 2018</u> , Designated Entity must demonstrate that any applications for any required state or local certificate(s) of convenience and necessity have been submitted or such certificates have been ruled as not required by the applicable states or local governmental authorities.
<b>Acquisition of all necessary federal, state, county, and local site permits.</b> On or before <u>December 1, 2019</u> , Designated Entity must demonstrate that all required federal, state, county and local site permits have been acquired.
<b>Delivery of major electrical equipment.</b> On or before <u>December 1, 2019</u> , Designated Entity must demonstrate that all major electrical equipment has been delivered to the project site.

**Substantial Site Work Completed:** On or before January 31, 2020, Designated Entity must demonstrate that at least 20% of Project site construction is completed. Additionally the Designated Entity must submit updated ratings and the final project drawings to the Transmission Provider.

**Demonstrate required ratings.** On or before May 1, 2020, Designated Entity must demonstrate that the project meets all required electrical ratings.

**Required Project In-Service Date.** On or before June 1, 2020, Designated Entity must: (i) demonstrate that the Project is completed in accordance with the Scope of Work in Schedules B of this Agreement; (ii) meets the criteria outlined in Schedule D of this Agreement; and (iii) is under Transmission Provider operational dispatch.

**SCHEDULE D****PJM Planning Requirements and Criteria and Required Ratings****Required Ratings\*****Rice – Ringgold Line (b2743.5):**

- 1660 / 1660 MVA summer normal / emergency
  - Two 230kV circuits each with the following parameters:
    - $R = 0.0025299$  pu
    - $X = 0.0275589$  pu
    - $B = 0.114035$  pu

**Rice Substation (b2743.1):**

- Two 900 MVA 500/230 kV transformers

**Furnace Run – Conastone Line (b2752.5):**

- 1800 / 2400 MVA summer normal / emergency
  - Two 230kV circuits each with the following parameters:
    - $R = 0.00134928$  pu
    - $X = 0.0146981$  pu
    - $B = 0.0608184$  pu

**Furnace Run Substation (b2752.1):**

- Two 900 MVA 500/230 kV transformers

\* These parameters may be updated and are subject to evaluation by PJM.

## SCHEDULE E

### Non-Standard Terms and Conditions

#### Project Development

The Parties acknowledge and agree that Transource Energy, LLC may utilize its wholly owned subsidiaries, Transource Pennsylvania, LLC and Transource Maryland, LLC (the “Transource Subsidiaries”), to perform its obligations to design, engineer, procure, install, and construct the Project.

Transource Pennsylvania, LLC shall design, engineer, procure, install, construct, own, operate and maintain the portion of the Project to be located in the Commonwealth of Pennsylvania, and Transource Maryland, LLC shall design, engineer, procure, install, construct, own, operate, and maintain the portion of the Project to be located in the State of Maryland. Transource Energy, LLC shall provide the overall coordination for the Project work.

The Transource Subsidiaries shall obtain all necessary permits, siting, and other regulatory approvals to undertake their respective portions of the Project and shall perform their work in accordance with the terms of this Designated Entity Agreement.

In accordance with Sections 5.0, 16.0.1, and 16.0.2, of this Designated Entity Agreement:

- (a) Transource Energy, LLC, Transource Pennsylvania, LLC and Transource Maryland, LLC shall each execute the Consolidated Transmission Owners Agreement;
- (b) Transource Energy, LLC, Transource Pennsylvania, LLC and Transource Maryland, LLC shall each execute the Interconnection Coordination Agreement for the Project; and
- (c) The Transource Subsidiaries each shall execute interconnection agreements with Transmission Owners with whom their respective facilities will interconnect.

#### Project Cost

The Estimated Project Cost is \$197.1 million plus an escalation compounded adjustment of 3 percent per year to account for inflation as measured from the bid submission date of February 27, 2015 and the Project In-Service Date.

Consistent with the proposal submitted by Transource on February 27, 2015, Transource commits to the following terms and conditions relevant to the Project:

- (a) The Transource Subsidiaries shall be entitled to recover the FERC approved return on equity plus incentives on the costs incurred for the Project up to the Estimated Project Cost;

Service Agreement No. [ ]

- (b) The Transource Subsidiaries shall be entitled to recover the FERC approved return on equity on the costs incurred for the Project above the Estimated Project Cost, but shall forego any return on equity incentives approved by FERC (including the RTO participation adder) for the project cost portion that exceeds the Estimated Project Cost; and
- (c) The Transource Subsidiaries commit to an actual equity content of no greater than 50 percent for the Project, once permanent financing is in place. Transource shall be granted relief from this commitment if the capital market conditions do not remain normal and the Transource Subsidiaries do not have the ability to finance these transmission projects with the proposed capital structure.

**ATTACHMENT 3**

**SITING STUDY**



# Siting Study

## INDEPENDENCE ENERGY CONNECTION (WEST):

### Rice-Ringgold 230 kV Transmission Line Project

*Prepared for:*

Transource PA, LLC and Transource MD, LLC

1 Riverside Plaza

Columbus, Ohio 43215



*Prepared by:*

AECOM

625 West Ridge Pike, Suite E-100

Conshohocken, Pennsylvania 19428



December 2017

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**Appendix A: GIS Data Sources**

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**Appendix C: Aerial Mapbook**

**Appendix D: Proposed Route 2-Mile Overview Drawing (Figure 15)**

**Key Terminology**

Alternative Routes	A combination of Study Segments that form routes that connect the Project Endpoints and will be used for analysis and comparison
Conceptual Routes	Initial routes for the project that adhere to a series of general siting and technical guidelines
Constraints	Specific areas that should be avoided, to the extent reasonably practicable, during the route development and site selection process, recognizing that it is not possible to completely avoid all constraints
Distribution Line	An electric line that delivers power from a substation to households and businesses
Opportunity Feature	Areas where the transmission line may have less potential impacts to area land uses and the natural and human environment
Project Endpoint	The project starting and ending point(s), which may include substations, switch stations, tap points, or other locations defined by the Company's planners and engineers
Proposed Route	The alignment on which the applicant/Siting Team proposes to construct a transmission line.
Project Study Area	The territory in which line route alternatives can be sited to feasibly meet the Project's functional requirements
Siting Team	A multidisciplinary team of experts that includes engineers, siting specialists, natural resource specialists, construction managers, and right-of-way agents
Study Segments	Study Segments are partial alignments that when combined form a complete route
Substation	Substations are facilities that transform electric power from high to low, or the reverse, and is composed of an enclosed assemblage of equipment, e.g., switches, circuit breakers, buses, and transformers, through which electric energy is passed for the purpose of switching or modifying its characteristics
Transmission Line	Electric line that moves bulk electric power from a generating plant to a substation or between substations

**ACRONYMS**

ACEP	Agricultural Conservation Easement Program
amsl	Above Mean sea level
APE	Area of Potential Effect
ASA	Agricultural Security Areas
BG&E	Baltimore Gas and Electric
BLM	Bureau of Land Management
CFR	Code of Federal Regulation
COMAR	Code of Maryland Regulation
CRGIS	Cultural Resources Geographic Information System
CWF	Coldwater Fisheries
ESRI	Environmental Systems Research Institute
EU	Existing Use
EV	Exceptional Value
FAA	Federal Aviation Administration
FCALPB	Franklin County Agricultural Land Preservation
FCC	Franklin County Commissioners
FE	First Energy
FEMA	Federal Emergency Management Agency
FRPP	Farm and Ranch Lands Protection Program
GIS	Geographic information system
GPS	Global positioning system
HQ	High Quality
HQ-CWF	High Quality-Cold Water Fishery
IBA	Important Bird Area
IEC Project	Independence Energy Connection Project
kV	Kilovolt
MALPF	Maryland Agricultural Land Preservation Foundation
MALPP	Maryland Agricultural Land Preservation Program
MF	Migratory Fishes
MDA	Maryland Department of Agriculture
MDE	Maryland Department of Environment



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MDNR	Maryland Department of Natural Resources
MDPSC	Maryland Public Service Commission
MERLIN	Maryland Environmental Resource and Land Inform
MET	Maryland Environmental Trust
MHT	Maryland Historical Trust
MRLC	Multi-resolution land characteristics
MRLP	Maryland Rural Legacy Program
NAI	Natural Area Inventories
NAIP	National Agricultural Imagery Project
NCED	National Conservation Easement Database
NERC	North American Electric Reliability Corporation
NESC	National Electric Safety Code
NHD	National Hydrography Dataset
NLCD	National Land Cover Database
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWPS	National Wilderness Preservation System
PADCNR	Pennsylvania Department of Conservation and Natural Resources
PADEP	Pennsylvania Department of Environmental Protection
PAPUC	Pennsylvania Public Utility Commission
PDA	Pennsylvania Department of Agriculture
PEM	Palustrine Emergent
PFBC	Pennsylvania Fish and Boat Commission
PFO	Palustrine Forested
PGC	Pennsylvania Game Commission
PHMC	Pennsylvania Historic and Museum Commission
PJM	PJM Interconnection, LLC
POTC	Pennsylvania Ornithological Technical Committee
PSS	Palustrine Scrub Shrub
ROW	Right-of-way

SHPO	State Historic Preservation Office
SR	State Route
SSPRA	Sensitive Species Project Review Area
SSURGO	Soil Survey Geographic Database
TEAs	Targeted Ecological Areas
TNC	The Nature Conservancy
T&E	Threatened and endangered (species)
Transource	Transource Energy
TSF	Trout Stocked Fishery
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WMA	Wildlife Management Areas
WWF	Warm Water Fisheries

## 1.0 PROJECT OVERVIEW

PJM Interconnection, LLC (PJM), the regional transmission operator, solicited proposals in 2014 to solve an electrical congestion issue on the grid. Numerous transmission providers proposed solutions to solve the problem, and PJM evaluated each proposal to determine the best solution. In March 2016, PJM selected Transource Energy’s (Transource) proposal as the best solution to solve the problem. Transource’s proposal, the Independence Energy Connection Project (IEC Project), consists of two 230 kilovolt (kV) transmission lines, two new 500/230 kV substations, and several incumbent upgrades. The Rice-Ringgold 230 kV transmission line (IEC West Project) begins in Franklin County, Pennsylvania at Transource’s proposed new Rice Substation and terminates at the existing Ringgold Substation in Washington County, Maryland (Figure 1). The Furnace Run–Conastone 230 kV transmission line (IEC East Project) begins at Transource’s proposed new Furnace Run Substation in York County, Pennsylvania and terminates at the existing Conastone Substation in Harford County, Maryland. The focus of this siting study is on the IEC West Project. A similar report for the IEC East Project was also developed.

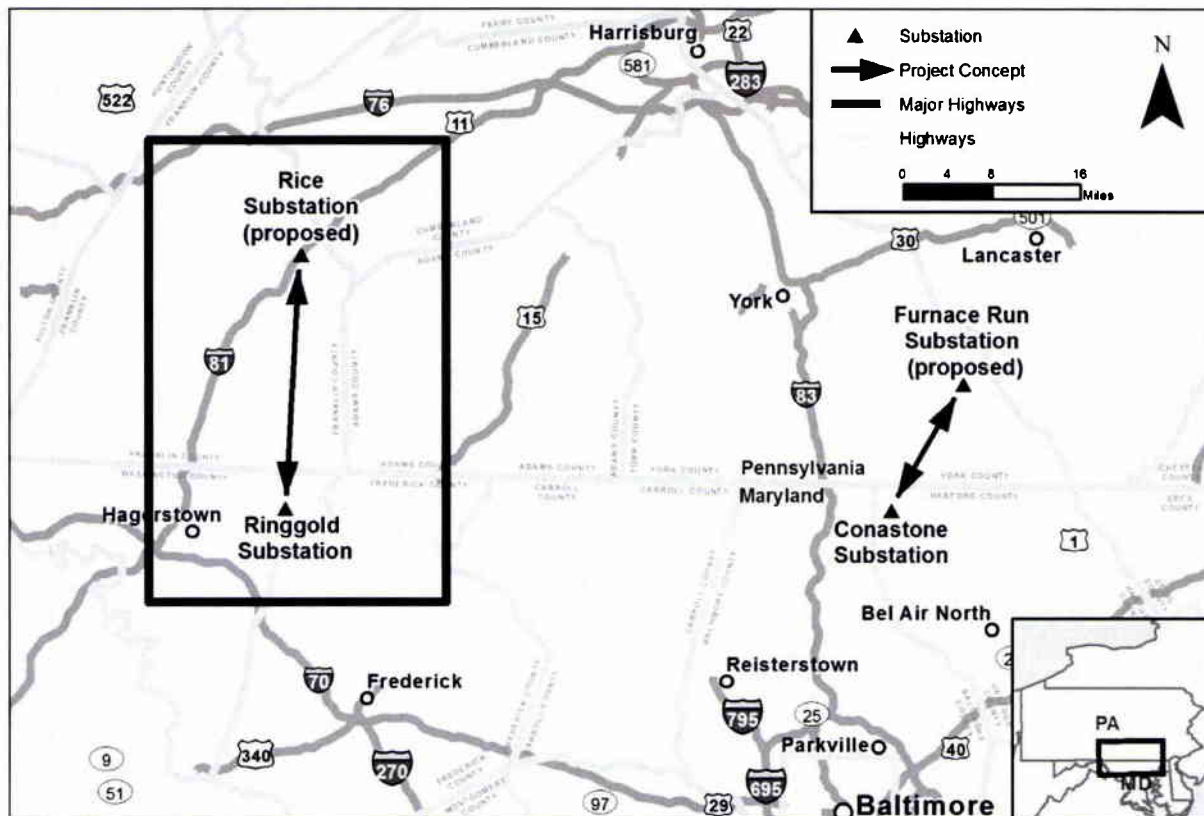


Figure 1: Project Location Map

## 1.1 Project Characteristics

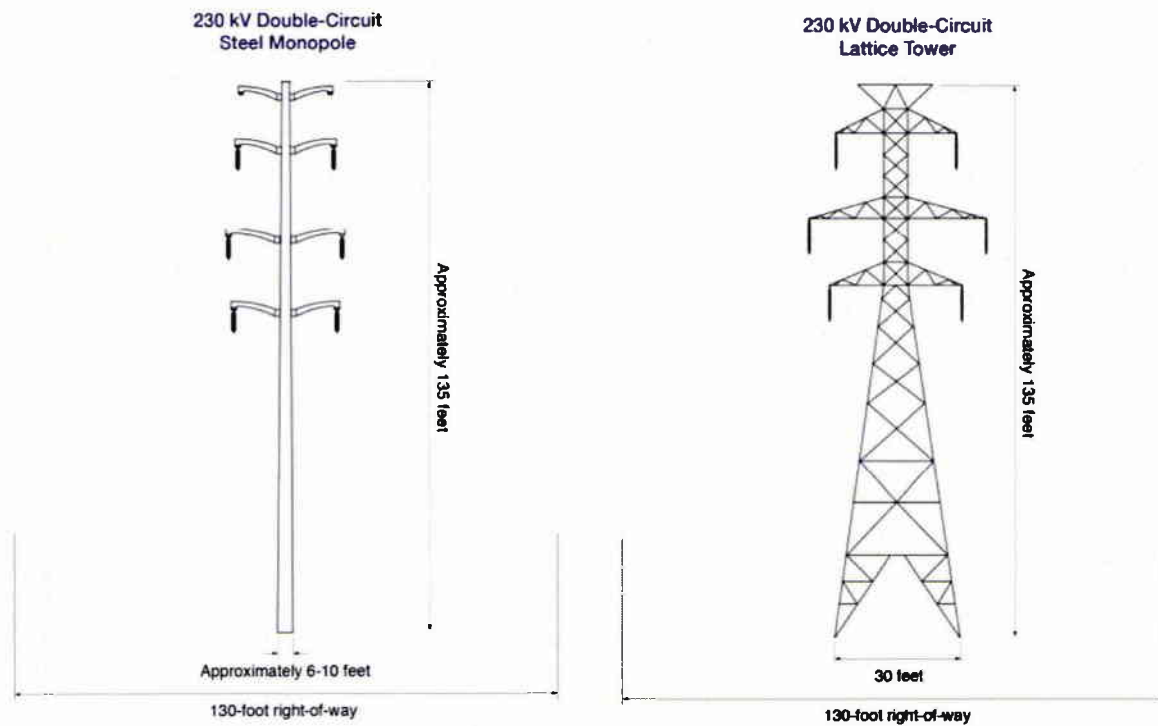
### 1.1.1 Project Endpoints

The IEC West Project involves the development of an approximately 28 mile long 230 kV double-circuit overhead electric transmission line. The northern extent of the IEC West Project will tap into First Energy's (FE) Hunterstown-Conemaugh 500 kV transmission line via two new 500 kV transmission lines, approximately 0.5 mile in length, to be constructed by FE. These two new 500 kV transmission lines will supply power to the proposed Rice Substation to be owned and operated by Transource. The Rice 500/230 kV Substation will be located off State Route (SR) 696 in Southampton Township, Franklin County, Pennsylvania. The southern extent of the Project will terminate into the existing FE Ringgold 230/138 kV Substation located near Smithsburg in Washington County, Maryland. The identification of the location of the proposed Rice 500/230 kV Substation is further detailed in Section 3.0.

### 1.1.2 Transmission Line, Substation Design, and ROW Requirements

The IEC West Project requires new right-of-way with a typical width of 130 feet (**Figure 2**). Proposed structures vary in height, footprint, and type depending on location. However, the IEC West Project will generally be constructed using galvanized steel double-circuit monopoles. Galvanized steel double-circuit lattice towers may also be used as dictated by site and engineering constraints. The average height for the galvanized steel double-circuit structures is approximately 135 feet (**Figure 2**). Typical span lengths can range from approximately 800 feet; however, actual span lengths will vary depending on the location.

The Rice 500/230 kV Substation will require approximately 33 acres to accommodate the substation facility, fencing, grading, and stormwater features. The IEC West Project will also require upgrades to the Ringgold 230/138 kV Substation. The Ringgold Substation will be expanded by FE to accommodate the construction of additional bays.



**Figure 2: Typical 230 kV Double-Circuit Monopole and Lattice Transmission Structures**

## 1.2 Project Timeline and Overview of Regulatory Approvals

PJM identified the need for the project in 2014, and selected Transource’s proposed solution in March of 2016. Transource contracted AECOM to assist with siting the IEC Project in August of 2016. The Siting Team initiated the transmission line siting process in the fall of 2016 with the identification and collection of relevant publicly available data. Federal and State agencies were contacted in January of 2017 to introduce the Project and obtain feedback and data. In addition, initial meetings were held with agencies, townships, counties, and elected officials to introduce the project and discuss potential constraints in the area.

Initial Study Segments were developed in early 2017 followed by field reviews of the Project Study Area to verify land use and modify Study Segments accordingly. The Study Segments were continually revised during this time as new data were collected from public sources, engineering input, agency coordination efforts, and field reviews.

The resultant network of Study Segments was presented at a series of public open houses in June 2017. The Study Segments were then re-evaluated based on public input, additional engineering review, and existing constraints and either further refined or eliminated from further consideration. The Revised Study Segments were then presented to the public during a second round of open houses conducted in August 2017 to obtain further feedback. Following

the second round of public open houses, the Revised Study Segments were again modified as necessary and compiled into complete Alternative Routes for analysis and comparison. The Proposed Route was identified through the analysis and comparison of these Alternative Routes.

This Siting Study was prepared during the fall of 2017 to support Transource's application to the Maryland Public Service Commission (MDPSC) and the Pennsylvania Public Utility Commission (PAPUC) for approval to construct the Proposed Route. The Siting Study describes the process used, information gathered, and analysis conducted to identify the Proposed Routes for the IEC Project. Concurrent with the MDPSC and PAPUC review process, other relevant state and federal permit applications will be prepared and submitted in 2018 to those regulatory agencies that will oversee the construction and permitting of the Project. Pending approval from the MDPSC, PAPUC, and other relevant regulatory agencies, construction of the Project is expected to begin in 2019 with an in-service date of June 2020.

### **1.3 Goal of the Siting Study**

The goal of the Siting Study is to identify and evaluate opportunities and constraints in the Project Study Area to facilitate the development of several Alternative Routes, evaluate potential impacts associated with these Alternative Routes, and identify a Proposed Route to be constructed to meet the Project need. The Proposed Route is the route that (1) reasonably minimizes adverse impacts on area land uses and the natural and cultural environment; (2) minimizes special engineering design requirements and unreasonable costs; and (3) can be constructed and operated in a timely, safe, and reliable manner.

## 2.0 ROUTE AND SITE DEVELOPMENT PROCESS

### 2.1 Route Development Process Summary/Methodology

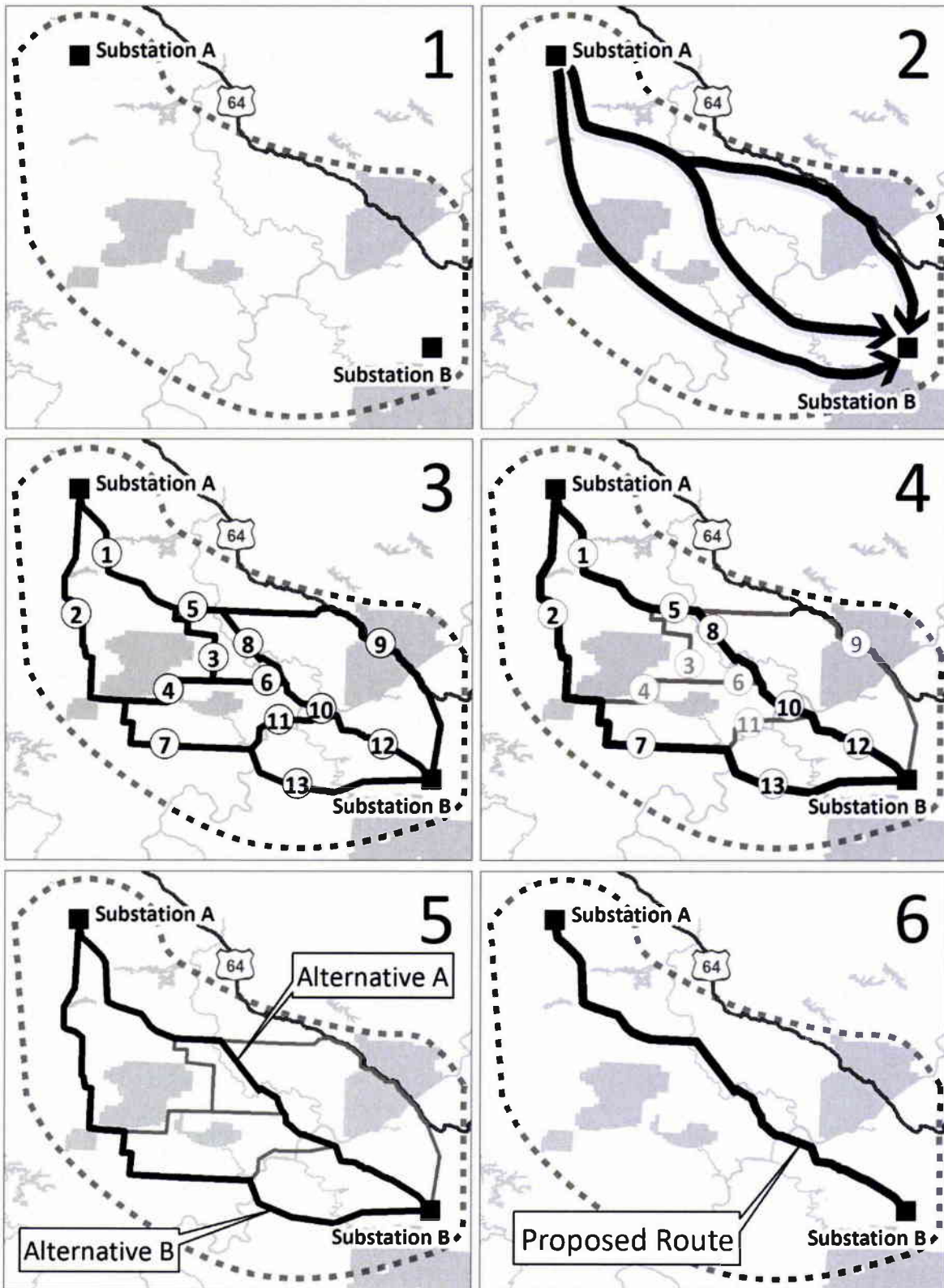
The route development process is inherently iterative with modifications made throughout the siting analysis as a result of the identification of new constraints, input from agencies, landowners, and other stakeholders, periodic re-assessment of routes with respect to the siting criteria, and adjustments to the overall route network. As a result of the evolving nature of the route development process, the Siting Team (see **Section 2.2**) uses specific vocabulary to describe the routes at different stages of development.

Initial route development efforts start with the identification of large area constraints and opportunity features within the **Study Area**, which encompasses the endpoints of the Project and areas in between (**Figure 3, Step 1**). These areas are typically identified using a combination of readily available public data sources.

The Siting Team uses this information to first develop an array of **Conceptual Routes** for the Project adhering to a series of general siting and technical guidelines (**Step 2**). Where two or more of these Conceptual Routes intersect, **Study Segments** are formed between two common nodes or points of intersection. Together, the assemblage of Study Segments is referred to as the **Study Segment Network (Step 3)**.

As the route development process progresses, the Siting Team continues to evaluate new data and modifies, if necessary, the Study Segments included in the network to develop a **Refined Study Segment Network (Step 4)**. Eventually, complete **Alternative Routes** are developed by assembling the Study Segments that best meet the siting guidelines into individual routes for analysis (**Step 5**). Alternative Routes are assessed and compared with land uses, natural and cultural resources, and engineering and construction concerns. Ultimately, through a quantitative and qualitative analysis and comparison of the Alternate Routes, the Siting Team identifies a **Proposed Route (Step 6)** for submission to the MDPSC and PAPUC.





**Figure 3: Route Development Process Steps**

The above figure is for illustrative purposes and does not reflect the actual study segments or alternative routes developed for the IEC Project.



## 2.2 Siting Team Members

A multi-disciplinary Siting Team was engaged throughout the siting process for the IEC Project. Team members were selected to bring a wide variety of experience to achieve a thorough review of all aspects of developing the Proposed Route. Members of the Siting Team have experience in transmission line siting, impact assessment for a wide variety of natural resources, cultural resources, and area land use types, as well as impact mitigation, transmission engineering and design, right-of-way acquisition, and construction.

The team worked together during the Siting Study to define the Project Study Area, develop siting criteria, identify siting constraints and opportunities, collect and analyze environmental and design data, solicit public input, consult with natural resource and permitting agencies, develop and revise the study segments, and analyze and report on the selection of a Proposed Route.

## 2.3 Data Collection

The following sources of information were used to develop data for the Siting Study. A detailed table of data sources is provided in **Appendix A**.

### 2.3.1 Geographic Information System (GIS) Data Collection

Aerial photography is an important tool in the siting process. The primary sources of aerial imagery used in the route identification, analysis, and selection effort for the Project include Maryland National Agricultural Imagery Program (NAIP) (2015) and Pennsylvania NAIP (2015), but also included review of on-line imagery provided by Google Earth, Bing Maps, United States Fish and Wildlife Service (USFWS) Wetland Mapper, Pennsylvania Department of Environmental Protection's (PADEP) EMapPA, and Maryland's Environmental Resource and Land Inform (MERLIN).

Updated information, such as the location of new residences and other constraints, was annotated to the photography by either paper maps (at the public meetings) that were transferred into the GIS, or digitized directly into the GIS as identified during field inspections. Existing paper and electronic maps were also examined as part of the siting process. These include U.S. Geological Survey (USGS) Geological Survey 7 ½ minute topographic quadrangle maps and state and county road maps in digital form.

The siting process made extensive use of information in existing GIS data sets that were obtained from many sources, including federal, state, and local governments. This information was obtained through official agency GIS data access websites, provided directly by government agencies, and created by the Siting Team by digitizing information from paper-

based maps, aerial photo interpretation, interviews with stakeholders, public input, and field inspections.

**Appendix A** presents a list of the GIS data sources used for this study. Field reconnaissance was conducted to verify certain features (e.g., locations of residential, commercial and industrial buildings).

### 2.3.2 Field Reviews

Siting Team members conducted multiple field reviews across the Project Study Area. Prior to these reviews, field maps were generated that consisted of key siting features such as residences, parcel lines, places of worship, cemeteries, and natural resources (e.g., wetlands, streams, and floodplains). During these field reviews, team members confirmed the general land uses and evaluated the specific Study Segments by automobile from public roads and other points of public access. Field-verified features were added to the GIS database using laptops/tablets running GIS software supported by real-time Global Positioning System (GPS). This information, in conjunction with the public input, was used in the siting process to assist in the comparison of Study Segments and to create mapping to depict the opportunities and constraints.

### 2.3.3 Federal, State and Local Government Coordination

The Siting Team initiated agency consultation in early 2017 by mailing letters to various federal, state, and local agencies and/or officials to inform them of the IEC Project and request data for the Siting Study. In addition, the Siting Team held numerous meetings with agencies, counties, townships, and officials during the siting process. A summary of the agencies contacted and a listing of meetings held, as well as copies of agency correspondence, are included as **Appendix B**. Transource will work with all applicable agencies and obtain all required jurisdictional permits and approvals, and comply with any conditions tied to these approvals.

## 2.4 Siting Guidelines

### 2.4.1 General Guidelines

The primary goal for this siting effort was to identify a Proposed Route for the Project that (1) reasonably minimizes adverse impacts on area land uses and the natural and cultural environment; (2) minimizes special engineering design requirements and unreasonable costs; and (3) can be constructed and operated in a timely, safe and reliable manner.

The following guidelines were considered for this effort, where reasonable and practicable:

- Consider parallel alignments along existing utility ROWs or other infrastructure, such as roadways and railroads.

- Maximize the distance from residential dwellings, schools, daycare facilities, hospitals, and other community facilities.
- Consider stakeholder input.
- Minimize visibility from federal and state listed scenic roadways and designated scenic resources.
- Minimize conflict with designated public resource lands, recreation lands, nature preserves, or other conservation areas.
- Minimize conflict with existing and approved future development and land uses.
- Minimize potential environmental and land use impacts by avoiding circuitous routes.
- Minimize new crossings of large wetland complexes, critical habitat, and other unique or distinct natural resources.
- Minimize habitat fragmentation and impacts on designated areas of biodiversity concern.
- Avoid crossing hazardous waste sites or sites with active mineral extraction activities.

#### **2.4.2 Technical Guidelines**

Technical guidelines are driven by the physical characteristics and engineering limitations of the structures and lines themselves, and the design criteria necessary to meet Transource design standards, North American Electric Reliability Corporation (NERC) reliability standards, National Electric Safety Code (NESC), and industry best practices for construction. The technical guidelines were informed by (1) the technical expertise of engineers and other industry professionals responsible for the reliable, safe and economical construction, operation, and maintenance of electric system facilities, (2) NERC reliability standards as implemented by PJM, and (3) industry best practices.

The Siting Team considered the following technical guidelines during the siting process:

- Maintain a minimum of 115 feet of centerline to centerline separation when paralleling 138 kV or lower voltage transmission lines.
- Minimize crossings of existing transmission lines.
- Minimize crossing existing interstate and multi-lane highways and cross perpendicular, where feasible.
- Limit transmission line angles greater than 30 degrees.
- Limit areas across steep slopes (more than 20 percent slopes for angle structures and more than 30 percent slopes for tangent structures).

## 2.5 Public Involvement Process

### 2.5.1 Public Open House

Transource conducted two rounds of public open houses during different phases of the siting process to inform the public about the IEC Project and obtain information from landowners about their properties. The first round of open houses focused on a wide network of Study Segments with the goal to obtain information from the public to help modify, eliminate or add Study Segments. Following the first round of open houses and subsequent qualitative and quantitative analysis, the second round of open houses focused on a refined set of Study Segments. The dates of all the open houses are listed below.

#### First Round of Open Houses:

1. June 12, 2017 from 6pm-9pm at the Smithsburg High School in Smithsburg, Washington County, Maryland;
2. June 13, 2017 from 6pm-9pm at the Eugene C. Clarke Jr. Community Center in Chambersburg, Franklin County, Pennsylvania;
3. June 14, 2017 from 6pm-9pm at the Waynesboro Area Senior High School in Waynesboro, Franklin County, Pennsylvania; and
4. June 15, 2017 from 6pm-9pm at the Kauffman Ruritan Club and Community Center in Chambersburg, Franklin County, Pennsylvania.

#### Second Round of Open Houses:

1. August 7, 2017 from 6pm-9pm at the Smithsburg Middle School in Smithsburg, Washington County, Maryland; and
2. August 8, 2017 from 6pm-9pm at the Kauffman Ruritan Club and Community Center in Chambersburg, Franklin County, Pennsylvania.

The public and property owners were notified about the time and location of the open house meetings through the following means:

1. Letters to property owners within 500 feet of the Study Segments,
2. Automated phone calls to residences within 500 feet of the Study Segments,
3. Reminder postcards sent to these residences,
4. Newspaper notification placed in the Chambersburg Public Opinion, Waynesboro Record and Herald Mail Media, and

5. A Project specific web site <http://beta.power-viz.com/transourceenergyprojects/IndependenceEnergyConnection/>, which was included in media venues and in letters to residents.

The open houses were set up with an open format where the public could attend at any time during the hours listed above. Each attendee was greeted by a Transource representative and given a guided tour through various boards that described Transource, the purpose and need of the IEC Project, engineering considerations, the right-of-way process, and the siting process. After the guided tour, members of the Siting Team were available with large format maps, printed at a scale of 1 inch = 500 feet, to review individual properties and take comments. All attendees were given comment cards with unique identifying numbers. These numbers were noted on maps for the parcel(s) of each landowner. Attendees were encouraged to identify the location of their residences, places of business, property of concern, or other sensitive resources on the printed maps. After the public open house, handwritten comments from the maps were digitized and entered into a GIS database. In addition, all comment cards were entered into a database with the unique identifier so the comment and the parcel could easily be correlated.

A total of 238 people signed in at the first round of open houses and 343 people signed in at the second round of open houses for the Rice-Ringgold portion of the Project.

### **2.5.2 Project Website and Virtual Open House**

Transource also established an IEC Project website which was updated throughout the various phases of the siting process. The website provided access to a google-earth style aerial map where interested parties could zoom to a particular area of the IEC Project and review Study Segments (after the first round of open houses) or refined Study Segments (after the second round of open houses). In addition to reviewing the potential alignments of the Study Segments, landowners and members of the general public could submit comments or add points to the map to provide specific information about resources or structures on their property. These points were integrated into the GIS database and were reviewed as part of the siting process.

The IEC Project website also offered the public the ability to virtually review the printed materials presented at the open houses such as the explanatory boards and the large format maps. Transource monitored the comments provided through the website and provided answers to questions from the public. Over the course of the Project, over 428 comments were received through this venue, XX were specific to the IEC West portion of the IEC Project.

For individuals without access to the internet, paper maps were mailed, upon request.

### **2.5.3 Consideration of Public Input**

In addition to the 211 comment cards submitted regarding the Project at the two sets of public open houses and the 428 comments received via the website, Transource also received an additional 442 comments on the Project through phone calls, emails, and letters and postcards received via U.S. mail. All of the comments were entered into the IEC Project database and categorized based on the topics addressed such as aesthetics, vegetation clearing, structure type, or land use. Data from all of these input sources (e.g., open houses, comment cards, website) were used to evaluate the Study Segments after each open house and assisted in the decision-making process toward identifying a Proposed Route.

### 3.0 ALTERNATIVE ROUTE IDENTIFICATION

#### 3.1 Substation Siting

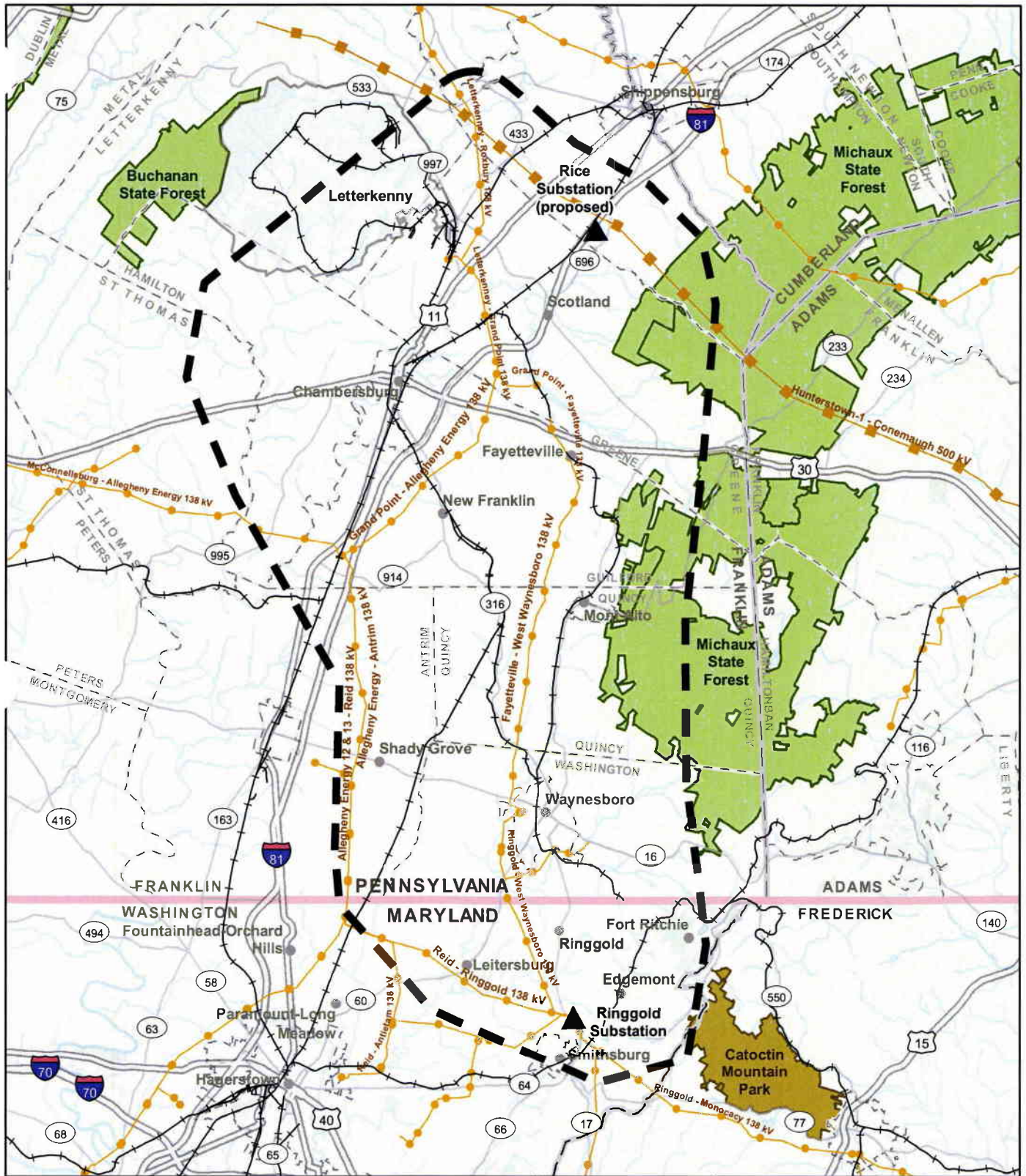
In conjunction with the transmission line siting process, multiple locations for the proposed Rice 500/230 kV Substation were also evaluated in Franklin County, Pennsylvania. The Rice Substation will be connected to FE's Hunterstown-Conemaugh 500 kV transmission line and will be the northern-most endpoint of the IEC West Project. Locations in close proximity to the FE Hunterstown-Conemaugh 500 kV transmission line were considered more favorable than sites further from this existing transmission line. Being in close proximity to the existing 500 kV system will reduce the length of 500 kV tap lines that will need to be constructed to the Rice Substation. Other key considerations for siting the new substation included accessibility from adjacent established roadways, a large enough parcel to accommodate the substation and ancillary design features, generally level grade, a lack of environmental or agricultural conservation land, favorable soil conditions for foundations, and ability to acquire the property. Due to relative close proximity of the two substation sites that were ultimately identified, evaluation of the substation options had limited effect on defining the Project Study Area or developing Study Segments. Ultimately, the proposed Rice Substation site was determined based on the design requirements of the substation as well as assessment of the Study Segments to that particular location.

#### 3.2 Project Study Area Description

The Project Study Area is the territory in which Study Segments can be reasonably developed to meet the Project's functional requirements and, at the same time, minimize environmental impacts and Project costs. The boundaries of the Project Study Area were determined by the geographic area encompassing the proposed Rice Substation and existing Ringgold Substation and was intended to incorporate all reasonable Conceptual Routes between these connection points. Given these considerations, the Siting Team identified a Project Study Area encompassing approximately 170 square miles that included portions of central and southern Franklin County in Pennsylvania and the northeast portion of Washington County in Maryland (**Figure 4**). The Project Study Area is generally bounded by:

- The FE's Hunterstown-Conemaugh 500 kV transmission line to the north,
- Michaux State Forest and the towns of Mont Alto and Waynesboro, Pennsylvania to the east,
- The town of Smithsburg, Maryland to the south,
- The Hagerstown Regional Airport, the town of Greencastle, Pennsylvania, and the Letterkenny Army Depot to the west.





▲ Substation	▭ Study Area
—+— Railroad	▭ National Park
▭ Highway	▭ State Forest
— Road	▭ Forest Cover
— Stream	
<b>Existing Transmission Line</b>	
— 115kV - 230kV	
— Greater than 345kV	

Data Sources: AEP (2017), POWERmap (2012), ESRI (2011), DCNR (2017) NLCD Forest Cover (2011)

Coordinate System: UTM Zone 18N NAD 83

November 14, 2017

Pennsylvania

Maryland

**Figure 4**  
**Project Study Area**

Independence Energy Connection  
Rice - Ringgold  
**TRANSOURCE** 230kV Transmission Line

0 1 2 3 4  
Miles



### 3.3 Constraints and Opportunities

One of the first steps in the process is for the Siting Team to define the major siting opportunities and constraints in the Project Study Area. *Constraints* are specific areas that should be considered, and where possible avoided, to the extent practicable during the route development and selection process. Siting *opportunities*, or ‘opportunity features’, include other existing linear infrastructure and utility corridors, such as existing electric transmission networks, railroad corridors, and roads, that may reduce the overall impact of the line on area land uses (**Figure 4**). Opportunity features may also include non-linear features such as reclaimed mine lands or unused portions of industrial or commercial areas.

Alignments developed along opportunity features may lessen the overall impact of the new line. For example, siting a new transmission line next to an existing one typically can reduce the overall visual impact of the new line when compared to a non-parallel or ‘greenfield’ alignment. Paralleling a road right-of-way may reduce the fragmentation impacts of a new right-of-way cut through a heavily forested area. However, the benefits of these opportunity features have to be considered with respect to area land use and other associated effects. For example, if a parallel alignment requires frequent crossing of the existing line to avoid adjacent constraints, then additional aesthetic impacts from many tall crossing structures would need to be considered, as well as the potential for operational and construction impacts associated with outage planning, construction, and maintenance activities. Similarly, while paralleling roads may reduce fragmentation impacts in a heavily forested area, it may also place the line in closer proximity to houses along the road.

During the conceptual siting process, the Siting Team initially identifies a range of both large area and smaller site specific constraints. Large area constraints may include densely populated residential areas, federal and state parks, airports, and mining operations. As the Siting Team develops specific siting alignments, smaller scale constraints are identified and avoided, where feasible. Examples of these more local constraints include individual homes, schools, recreational trails, and radio towers. The effect of these large and small scale constraints on routing options will vary based on the potential opportunities identified across the Project Study Area.

### 3.4 Conceptual Route Development

Working with the opportunities and constraints identified, and within the general and technical siting guidelines, the next step is developing potential Conceptual Routes, which are routes developed at a high level to avoid large area constraints or incorporate notable opportunity features in the Project Study Area.

Specific Conceptual Routes identified in the Project Study Area included paralleling Interstate-81 (I-81), regional railroad alignments (e.g., CSX Lurgan Subdivision), local utility corridors such as the Fayetteville-West Waynesboro 138 kV line, as well as traversing the forested slopes of South Mountain. Constraints primarily consisted of Michaux State Forest, Caledonia State Park, the Letterkenny Army Depot (located northwest of Chambersburg), and densely developed areas such as Waynesboro. In addition, identifying a suitable crossing location of U.S. Route 30 was a key constraint in the Project Study Area as a result of the dense commercial/retail and residential development along and fringing this corridor.

### **3.5 Study Segments**

#### **3.5.1 Description of Study Segments**

The Siting Team developed a series of Study Segments based on the conceptual routes guidelines presented in **Section 2.0**. Study Segments are partial alignments developed based on the routing concepts (see **Figure 3**). As the siting effort evolved through the field review and open house phases, Study Segments were modified, removed, or added. These eliminations or adjustments were based on the likelihood of impacts on residential or commercial areas, agricultural operations, planned and future development, and sensitive environmental areas. **Figure 5** shows the resulting network of Study Segments evaluated by the Siting Team.

#### **3.5.2 Study Segment Evaluation Process**

To evaluate and compare Study Segments, a table of factors was developed which focused on the potential impacts of the Project to the human/built environment, the natural environment, and engineering considerations. Examples of the human/built environment include factors such as proximity to residences schools, or historic and cultural resources. The natural environment includes factors such as number of stream crossings or acres of forest clearing. Comparative factors for engineering include the number of transmission line crossings or sharp transmission line turns (greater than 30 degrees). The quantitative routing factors assessed are listed and defined in **Table 1** in **Section 4.0** where these factors are further discussed.

To compare Study Segments, the Siting Team initiated an iterative side-by-side comparison of specific segments or group of segments that could connect particular points across the landscape. Relevant assessment factors for each of these comparative reviews varied across the Project Study Area as a result of the changing land use and topography. Throughout the Study Segment evaluation process, the entire collection of human/built, environmental, and engineering factors were considered together. The evaluation included both a quantitative and qualitative assessment recognizing that minimizing impacts to one constraint factor may increase impacts to others. The analysis sought to identify Study Segments that represent a best balance in reducing potential impacts across all of these factors.

The comparative analysis and public input allowed the Siting Team to identify Study Segments that minimized potential impacts as compared to other Study Segments that serve the same purpose and function. In scenarios where the impacts would be significantly different, the Study Segment(s) with the greatest potential impacts were eliminated. In scenarios where the difference was less pronounced, all Study Segments were retained until they could be reviewed in the larger context, which was accomplished through combining several Study Segments that connect similar points.

### **3.5.3 Study Segment Development**

At the onset of the Study Segment development phase, the specific location of the Rice Substation was unknown. The Siting Team identified and optioned two potential substation locations approximately one mile apart along the FE Hunterstown-Conemaugh 500 kV transmission line. Given the close proximity of the sites, Study Segment options were very similar and only varied close to the potential substations. Identifying opportunity corridors and developing Study Segments heading south to the Ringgold Substation were minimally affected by the substation review process.

A key factor to the Study Segment development process was the limited opportunities to cross U.S. Route 30, which is a highly developed-east-west corridor that bisects the Project Study Area. From the eastern boundary of the Project Study Area, this highway extends west from the forested slopes of South Mountain, most of which is protected as part of Michaux State Forest, through the dense development around Fayetteville, Guilford, and Chambersburg, and then out to the less developed western boundary. Four potential crossing locations were identified to cross the highway, with one being close to South Mountain, two being located in commercial areas between Fayetteville and Chambersburg, and the fourth being west of Chambersburg. Crossing U.S. Route 30 at these four areas resulted in Study Segment development that funneled to these specific locations, and in many cases, resulted in Study Segment development close to several constraints areas. Specifically, the eastern crossing of U.S. Route 30 resulted in Study Segments across the edge of South Mountain and across one section of Michaux State Forest; the central options resulted in Study Segments in developed areas along I-81 that included a private airport, local schools, dense residential neighborhoods, and commercially evolving properties; and the western option resulted in Study Segments toward the Franklin County Regional Airport and the extensive Letterkenny Army Depot and the surrounding commercial development.

Opportunity corridors identified in the Project Study Area included roads (i.e., I-81 and U.S. Route 11), railroads, (such as the Norfolk Southern railroad line that parallels I-81 and several other local rail lines), as well as a number of transmission line corridors (most of which have a generally north-south alignment). Opportunities to use the undeveloped lands along South

Mountain were also evaluated. Development of the Study Segments initially focused on any potential conceptual alignments that could parallel these existing infrastructure features or use areas of undeveloped land.

Study Segments were developed parallel to I-81 north of Chambersburg where agricultural lands were located adjacent to the highway, however, concentrated development near Scotland and Chambersburg resulted in several alignment shifts away from the highway edge. Opportunities to parallel I-81 south of Chambersburg were also limited due to adjacent development and because the highway continues to travel further to the southwest and away from the Ringgold Substation area. Assessment of U.S. Route 11 noted no paralleling opportunity due to the variable residential and commercial development along this roadway.

Similar to I-81, the Norfolk Southern railroad offered a few opportunities north of Chambersburg where short Study Segments could be developed, however, the dense development adjacent to the rail corridor limited the length of these alignments. A few local railroad lines south of Chambersburg, specifically the CSX Lurgan Subdivision line, provided more opportunities for parallel alignments. However, many of these railroad alignments were also bordered in certain areas by concentrated residential and commercial structures, especially at road crossings. This resulted in several diversions from parallel alignments to avoid these areas.

The existing transmission line network within the Project Study Area provided several opportunities for paralleling, but most opportunities were limited in length due to the general orientation of the transmission line and the extent of development in the area. North of Chambersburg and west of I-81, residential and commercial development has been built up to the edge of the existing transmission lines and approved planned development in the surrounding open fields limited options to divert from paralleling the existing transmission line alignment in many of these areas. As with the railroads, opportunities were identified south of Chambersburg to parallel longer sections of the transmission line system, specifically the FE Ringgold-West Waynesboro and FE Fayetteville-West Waynesboro transmission lines. Similarly, alignment shifts to bypass developed areas were necessary in several locations.

Study Segments were also developed along the edge of South Mountain. However, the number of Study Segments that could be developed in this area was limited by general constructability issues associated with construction on steep terrain, in addition to the extensive forest clearing that would be required for these Study Segments and the access needed for construction. Study Segments were also required to cross Michaux State Forest, which was unavoidable south of U.S. Route 30 due to the dense development along the western slopes of South Mountain. According to PADCNR, Michaux State Forest is a last vestige of undeveloped forested habitat in this section of Pennsylvania. Michaux State Forest also provides habitat for federally listed species and several state-listed species of concern, some of which are

associated with the Mt. Cydonia Ponds Natural Area that is located adjacent to the Study Segment crossing through the state forest. This natural area was established to protect the numerous vernal ponds scattered throughout the area that provide critical breeding habitats for certain reptiles and amphibians. Although not directly crossing the ponds in the natural area, the alignment would span adjacent vernal ponds that are part of the same hydrologic system and potentially contain the same sensitive species.

In addition to these various opportunity corridors, several Study Segments developed for the Project extended across other sections of undeveloped agricultural or forested lands. These segments were developed to maintain a direct alignment, where feasible, while maximizing distance from residential and farm structures; minimizing forest clearing and limiting alignments through topographically challenging areas.

#### **3.5.4 Study Segment Analysis**

As noted in **Figure 5**, there were numerous Study Segments presented during the first public open house that encompassed a large area around Chambersburg, but narrowed further south as they extended toward the Ringgold Substation. Due to the funneling aspect of the four identified crossings over U.S. Route 30, three major corridors were noted extending east, south, and west from the Rice Substation review area. Eastern Study Segments extended along portions of South Mountain and across a section of Michaux State Forest before intersecting with an existing transmission line corridor that extends south and close to Waynesboro. Central Study Segments paralleled existing transmission line corridors and I-81 toward the two U.S. Route 30 crossing areas and then used existing railroad corridors or undeveloped lands to head south toward the Ringgold Substation. Western Study Segments extended around the western edge of Chambersburg, across sections of Letterkenny Army Depot, and then back to the east crossing I-81 south of Chambersburg. These Study Segments then parallel a series of existing transmission line corridors into Ringgold Substation.

After the first open house, the Siting Team reviewed the public comments and the information received at the open house and incorporated it into the GIS database. In addition, the Siting Team reviewed and compared Study Segments for impacts to land use, environmentally sensitive areas, and engineering considerations. The assessment of this information resulted in modifications or eliminations to Study Segments as described below.

Overall, the Study Segments along the western perimeter of the Project Study Area noted more potential human/built and environmental impacts, as well as engineering challenges, relative to the central and eastern options. Study Segments near the Letterkenny Army Depot identified several considerable engineering challenges. These challenges included numerous railroads in and around Letterkenny Army Depot that would have to be crossed by the Project. In addition, the Franklin County Regional Airport, located to the east of Letterkenny, may limit the height of



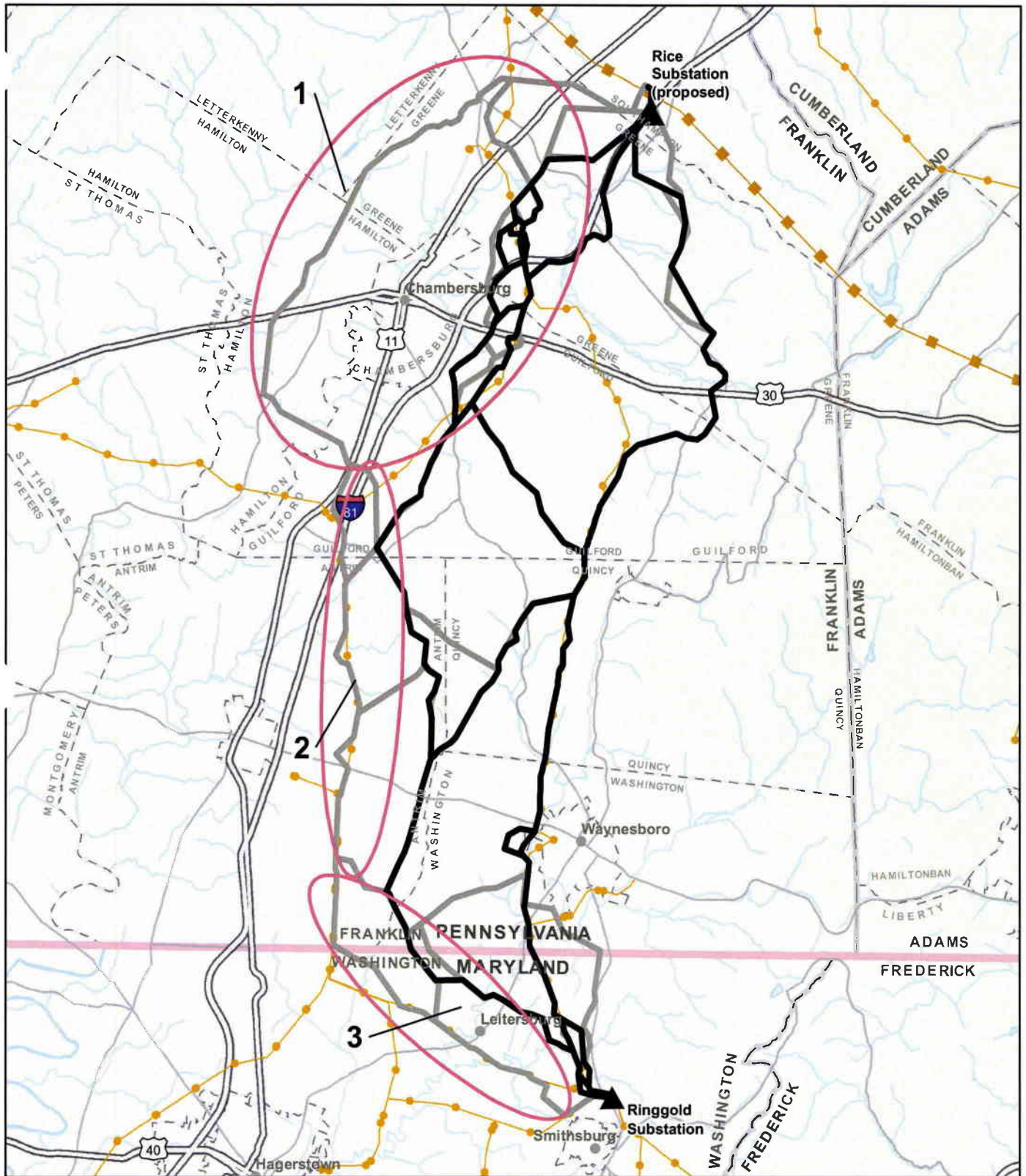
the transmission line structures, further complicating the ability to cross the numerous railroads. Finally, the dense commercial development on the boundaries of the Letterkenny Army Depot would not feasibly accommodate the 130 foot wide ROW required for the Project. Therefore, Study Segments to the west of Chambersburg were eliminated from further review.

Study Segments further to the south that paralleled the FE Allegheny Energy-Reid Transmission Line near Marion, Pennsylvania (area 2 in **Figure 5**) were noted to bypass around areas of dense residential or industrial structures, limiting the length of parallel opportunities. In addition, numerous transmission line crossings would be required to avoid the developed areas resulting in engineering challenges and potential visual impacts due to a series of taller structures. Assessment of the southernmost Study Segments that parallel the FE Reid-Ringgold Transmission Line (circled area 3 in **Figure 5**) noted these same human/built and engineering concerns, but also identified complex environmental issues along sections near the Ringgold Substation. These included historic resources and numerous crossings of tributaries to Little Antietam Creek. For these reasons, the Study Segments along these areas were eliminated from further review.

Study Segments presented at the second open house (black lines in **Figure 5**) were concentrated between South Mountain to the east and Chambersburg and I-81 to the west. After the second open house, the Siting Team reviewed the public comments and revised the remaining Study Segments where reasonable and practicable.

During this time, Transource was also in the process of finalizing their substation siting analysis, which was focused on two potential sites adjacent to the FE Hunterstown-Conemaugh 500 kV Transmission Line. Specific factors evaluated for the substation site included adjacent land use, soil and geological conditions, grading requirements, required area for stormwater controls and transmission line orientation entering and exiting the substation, distance from the 500 kV line, and road accessibility for delivery of the transformers, which can be limited by the grade of a road. The substation siting process initially assessed a section of the existing 500 kV corridor and identified over ten possible sites. Many of these sites were eliminated due to a variety of reasons including proximity to residential development, environmental issues, proximity to the 500 kV transmission line, and land development constraints. The site for the new Rice 500/230 kV Substation was selected along SR 696 to avoid geotechnical issues that would make the design and construction of the substation more challenging from an engineering perspective.

Upon identification of the substation site and completion of the Study Segment refinement process, these Study Segments were then used to develop the Alternative Routes.



<ul style="list-style-type: none"> <li> Substation</li> <li> 2nd Open House Segments</li> <li> 1st Open House Segments (Eliminated)</li> <li> Study Area Eliminated</li> <li> Existing Transmission Line</li> <li> 115kV - 230kV</li> <li> Greater than 345kV</li> </ul>	<ul style="list-style-type: none"> <li> Highway</li> <li> Road</li> <li> Stream</li> <li> Forest Cover</li> </ul>	<p>Data Sources: AEP (2017), POWERmap (2012), ESRI (2011), NLCD Forest Cover (2011)</p> <p>Coordinate System: UTM Zone 18N NAD 83</p> <p>November 14, 2017</p>	<p>Pennsylvania</p> <p>Maryland</p>	<p><b>Figure 5</b> <b>Study Segments</b></p> <p>Independence Energy Connection Rice - Ringgold <b>TRANSOURCE</b> 230kV Transmission Line</p> <p>0 1 2 3 4 Miles</p>
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### 3.6 Alternative Routes

The Siting Team evaluated the resulting Study Segments to identify combinations that provided complete connection between the Rice and Ringgold Substations. These combinations were the basis for development of the Alternative Routes for the Project. Ultimately, three (3) Alternative Routes were identified for a detailed comparative analysis to determine a Proposed Route. These Alternative Routes are described in the following sections and are shown in more detail in **Figure 6**.

#### 3.6.1 Alternative Route A (30.4 miles)

- Alternative Route A exits the Rice Substation and immediately extends 0.1 mile across Interstate 81 (I-81), and an active Norfolk Southern rail line. After crossing these linear features, the route parallels the western side of the railroad for approximately 0.4 mile, and then turns slightly west for another 1.2 miles. The route travels across agricultural fields and crosses Pine Stump Road.
- After crossing Pine Stump Road, the route travels for approximately 0.1 mile through a wooded area and then makes a sharp turn and extends 0.7 mile to the west, crossing agricultural fields and Byers Road. At this point, Alternative Route A turns southwest for approximately 0.6 mile across agricultural fields to the Cumberland Highway (State Route (SR) 997).
- The route extends west for 0.2 mile past SR 997 and then turns south for 0.4 mile, spanning Mickey Inn Road and Conococheague Creek, which is designated by PADEP as a Cold Water Fisheries (CWF) stream.
- Turning to the southwest for 0.6 mile, Alternative Route A crosses a wooded area with state-mapped wetlands before travelling across agricultural fields. This section avoids a residential neighborhood that is located to the west.
- From here, Alternative Route A turns southeast and parallels the existing FE Letterkenny-Grand Point 138 kV line for 0.4 mile, spanning Scotland Road and an unnamed CWF tributary.
- Alternative Route A then turns southwest to span the existing electric lines and extends for 0.4 mile across agricultural fields paralleling the existing Norfolk Southern railroad line.
- Turning south, the route crosses the rail line, and travels approximately 0.9 mile across an agricultural field, crossing Grand Point Road, and extending to the east side of I-81.
- Alternative Route A parallels I-81 for 0.2 mile and then turns south for 1.2 miles, crossing Walker Road and Franklin Farms Lane, paralleling agricultural field edges, and traversing through forested lands toward the commercial lined U.S. Route 30 crossing. The Lost Acres Airport is located approximately 0.3 mile east of the route.



- After spanning the commercial areas around U.S. Route 30, the route travels 0.7 mile to Falling Spring Road, crossing through forest, an agricultural field, and then spanning the Falling Spring Branch Stream, designated as a high quality-cold water fisheries (HQ-CWF) stream. This stream also has state-mapped wetlands within the wooded area that surrounds the stream.
- After spanning Falling Spring Road, the route extends in a southwestern direction for approximately 0.7 mile, crossing agricultural fields that contain two unnamed HQ-CWF streams and associated mapped wetlands. Stanley Avenue is also crossed in this section.
- Alternative Route A then takes a sharp turn to the southeast and then south for approximately 0.5 mile through an agricultural fields before crossing Garber Road.
- After crossing Garber Road, the route travels for 0.8 mile through the edge of the Martin's industrial facility, across agricultural fields, over the existing FE Grand Point-Allegheny Energy 138 kV transmission line, and over a warm water fishery stream (WWF), before turning southwest toward Wayne Road (SR 316).
- After crossing SR 316, the route extends for 2.0 miles crossing open fields, spanning the CSX Lurgan Division railroad line, paralleling and crossing Stone Quarry Road, crossing New Franklin Road, and spanning the FE Fayetteville-Allegheny Energy 69 kV transmission line, before turning sharply west to intersect with Helman Road.
- From Helman Road, Alternative Route A crosses open farm lands for 1.7 miles to the southwest before turning sharply to the southeast to cross Swamp Fox Road (SR 914).
- After crossing SR 914, the route traverses approximately 5.3 miles to the southeast through existing agricultural fields, making turns to avoid structures and spanning several local roads, until it reaches the west side of the active CSX Lurgan Division railroad line.
- Alternative Route A parallels the west side of the CSX railroad tracks for approximately 0.9 mile to the Buchanan Trail East (SR 16) crossing, where the route crosses the commercial-lined road and the railroad tracks to continue paralleling the east side of the tracks for approximately 2.4 miles. The route crosses one unnamed WWF stream in this section as well as crossing Barr Road and McDowell Road.
- The route turns sharply to the southeast for approximately 1.4 miles across predominantly agricultural fields toward Leitersburg Road (SR 2002), crossing Marsh Run (a WWF) and the FE Reid-West Waynesboro 69 kV transmission line along the alignment.
- After crossing SR 2002, the route spans the Pennsylvania/Maryland state line and turns for 1.0 mile to the southeast to parallel Leiters Mill Road (was Leitersburg Road in Pennsylvania) until it reaches Millers Church Road, where the route turns sharply east, crossing both roads.

- The route continues east and southeast for 1.8 miles through agricultural fields, crossing an unnamed tributary to Antietam Creek, Antietam Creek, and then paralleling Battletown Road before intersecting with Leitersburg Pike (Maryland (MD) 60).
- After spanning MD 60, Alternative Route A extends 1.5 miles across agricultural lands to Poplar Grove Road, spanning Ringgold Pike (MD 418) and three unnamed tributaries to Little Antietam Creek.
- Turning east, the route extends for 0.6 mile over agricultural lands to intersect with the Ringgold-West Waynesboro 138 kV transmission line, which it parallels to the southwest for 0.4 mile. This section spans Newcomer Road and Gardenhour Road, crosses Little Antietam Creek and two tributaries, and extends through an orchard.
- Extending out for 0.5 mile to the southwest from the transmission line, Alternative Route A bypasses around residential structures along Rowe Road and traverses agricultural lands before spanning over to the south side of the FE Reid-Ringgold 138 kV transmission line.
- The route turns east for 0.8 mile and extends into the southeastern corner of the Ringgold Substation, spanning the FE Ringgold-East Hagerstown 138 kV transmission line and Smithsburg Pike (MD 64) along the alignment.

### **3.6.2 Alternative Route B (31.9 miles)**

- Alternative Route B exits the Rice Substation from the southwest corner and heads south, paralleling the east side of I-81 and spanning along the edge of agricultural fields for approximately 2.2 miles; along this stretch Alternative Route B crosses Mountain Run, designated a CWF.
- The route turns sharply east to cross SR 696 perpendicularly and travels approximately 0.6 mile to the east-southeast through an agricultural field before turning sharply to the southwest.
- Travelling southwest for 0.7 mile, the route crosses Phillaman Run (CWF) and then crosses Black Gap Road (SR 997) in a perpendicular fashion. Alternative Route B meanders for 0.6 mile around the Chambersburg Mall, generally following the outer edge of the parking lot on the eastern and northern sides of the mall, and then heading west to intersect with I-81 again.
- After reaching the eastern side of I-81, Alternative Route B turns sharply south, and parallels the interstate for approximately 1.4 miles; at this location I-81 and the route generally travel in a western direction. Along this section, Alternative Route B traverses the edge of agricultural fields and crosses an unnamed stream (CWF) and the Conococheague Creek (CWF).
- Alternative Route B turns sharply to the southwest and travels 0.4 until it reaches the existing FE Letterkenny-Grand Point 138 kV transmission line. The route stays to the

east of this system and parallels it south for approximately 1.6 miles toward U.S. Route 30, spanning along agricultural fields, around the Grand Point Substation, and over Walker Road. The Lost Acres Airport is located approximately 0.6 mile west of the route.

- Prior to crossing commercial lined U.S. Route 30, the route first crosses over to the west side of the transmission line, which is now the FE Grand Point-Allegheny Energy 138 kV line, and then spans the highway. The route turns sharply west and then south for 0.5 miles to bypass around the commercial building. After going around the building, the route again parallels the FE Grand Point-Allegheny Energy 138 kV line for 0.5 mile.
- Alternative Route B deviates from the transmission line corridor for 1.1 mile to bypass around homes along the line. Along this section, the route extends to the southwest and spans Falling Spring Branch (HQ-CWF), crosses Falling Spring Road, and traverses through a forested area that contains several home. Within the forest, the route turns south, travels across an agricultural field and spans the FE Grand Point-Allegheny Energy 138 kV line near Henry Lane.
- After crossing this road, Alternative Route B extends to the southeast for approximately 4.6 miles over agricultural fields to Yohe Road, where it intersects with the FE Fayetteville-West Waynesboro 138 kV transmission line. This section involves crossing of two unnamed WWF streams, one CWF stream, several local roadways, and the FE Fayetteville-Allegheny 69 kV line.
- As the route crosses Yohe Road, it also spans to the east side of the FE Fayetteville-West Waynesboro 138 kV transmission line and then turns sharply to the south to parallel this existing line for approximately 1.0 mile; an unnamed CWF stream is crossed in this section, as is Stamey Hill Road.
- At this point, Alternative Route B turns sharply to the west and spans to the west side of the FE Fayetteville-West Waynesboro 138 kV transmission line and travels for approximately 1.0 mile across agricultural fields, Buttermilk Road, and one CWF stream and intersects with the CSX Lurgan Division railroad corridor.
- The route turns to the southwest and parallels the CSX railroad for approximately 4.5 miles, with some deviations to bypass around residential and agricultural facilities adjacent to the railroad line. This stretch crosses Wayne Highway (SR 316), several local roads, and three unnamed CWF streams.
- At this point, Alternative Route B crosses to the west side of the CSX rail line and parallels the west side of the CSX railroad tracks for approximately 0.9 mile to the Buchanan Trail East (SR 16) crossing, where the route crosses the commercial-lined road and the railroad tracks to continue paralleling the east side of the tracks for approximately 2.4 miles. The route crosses one unnamed WWF stream in this section as well as crossing Barr Road and McDowell Road.

- The route turns sharply to the southeast for approximately 1.3 miles across predominantly agricultural fields toward Leitersburg Road (SR 2002), crossing Marsh Run (a WWF) and the FE Reid-West Waynesboro 69 kV transmission line along the alignment.
- After crossing SR 2002, Alternative Route B spans the Pennsylvania/Maryland state line and turns for 1.0 mile to the southeast to parallel Leiters Mill Road (was Leitersburg Road in Pennsylvania) until it reaches Millers Church Road, where the route turns sharply east, crossing both roads.
- The route continues east and southeast for 1.8 miles through agricultural fields, crossing an unnamed tributary to Antietam Creek and Antietam Creek, and paralleling Battletown Road before intersecting with Leitersburg Pike (Maryland (MD) 60).
- After spanning MD 60, Alternative Route B extends 1.5 miles across agricultural lands to Poplar Grove Road, spanning Ringgold Pike (MD 418) and three unnamed tributaries to Little Antietam Creek.
- Turning east, the route extends for 0.6 mile over agricultural lands to intersect with the Ringgold-West Waynesboro 138 kV transmission line, which it parallels to the southwest for 0.4 mile. This section spans Newcomer Road and Gardenhour Road, crosses Little Antietam Creek and two tributaries, and extends through an orchard.
- Extending out for 0.5 mile to the southwest from the transmission line, Alternative Route B bypasses around residential structures along Rowe Road and traverses agricultural lands before spanning over to the south side of the FE Reid-Ringgold 138 kV transmission line.
- The route turns east for 0.8 mile and extends into the southeastern corner of the Ringgold Substation, spanning the FE Ringgold-East Hagerstown 138 kV transmission line and Smithsburg Pike (MD 64) along the alignment.

### **3.6.3 Alternative Route C (28.8 miles) (the Proposed Route)**

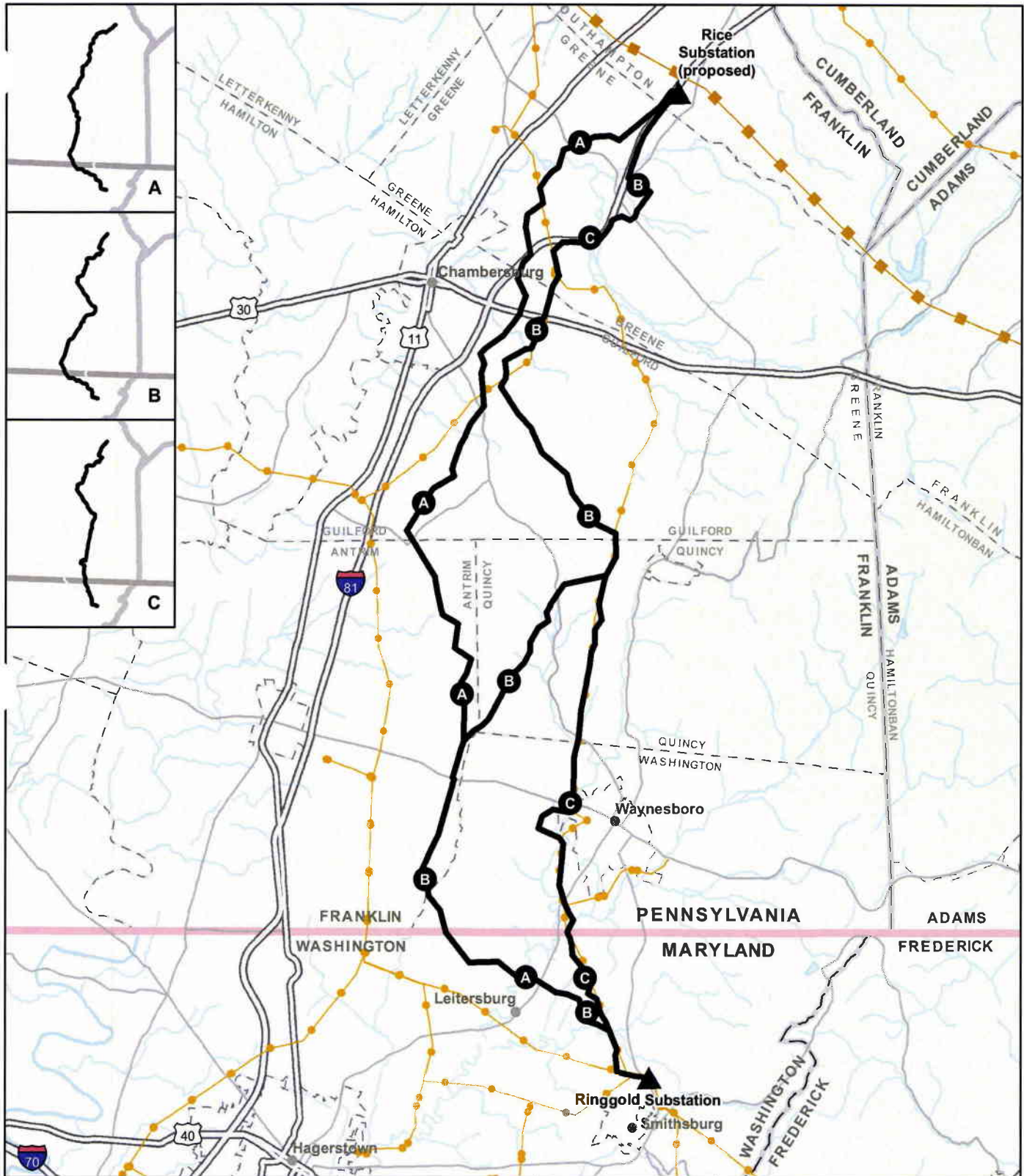
- Alternative Route C exits the Rice Substation from the southwest corner and heads south, paralleling the east side of I-81 and spanning along the edge of agricultural fields for approximately 2.2 miles; along this stretch Alternative Route C crosses Mountain Run, designated a CWF.
- Alternative Route C turns sharply east to cross SR 696 perpendicularly and travels approximately 0.6 mile to the east-southeast through an agricultural field before turning sharply to the southwest.
- Travelling southwest for 0.7 mile, Alternative Route C crosses Phillaman Run (CWF) and then crosses Black Gap Road (SR 997) in a perpendicular fashion. Alternative Route C traverses for 0.6 mile around the perimeter of the Chambersburg Mall, generally

following the outer edge of the parking lot on the northern and eastern sides of the mall, and then heading west to parallel with I-81 again.

- After reaching the eastern side of I-81, Alternative Route C turns sharply south, and parallels the interstate for approximately 1.4 miles and at this location I-81 and the route generally travel in a western direction. Along this section, Alternative Route C traverses the edge of agricultural fields and crosses an unnamed stream (CWF) and the Conococheague Creek (CWF).
- Alternative Route C turns sharply to the southwest and travels 0.4 until it reaches the the existing FE Letterkenny-Grand Point 138 kV transmission line. The route stays to the east of this system and parallels it south for approximately 1.6 miles toward U.S. Route 30, spanning along agricultural fields, around the Grand Point Substation, and over Walker Road. The Lost Acres Airport is located approximately 0.6 mile west of the route.
- Prior to crossing commercial lined U.S. Route 30, Alternative Route C first crosses over to the west side of the transmission line, which is now the FE Grand Point-Allegheny Energy 138 kV line, and then spans the highway. The route turns sharply west and then south for 0.5 miles spanning across a parking lot and bypassing around a commercial building. After going around the building, the route again parallels the FE Grand Point-Allegheny Energy 138 kV line for 0.5 mile.
- Alternative Route C deviates from the transmission line corridor for 1.1 mile to bypass around homes along the line. Along this section, the route extends to the southwest and spans Falling Spring Branch (HQ-CWF), crosses Falling Spring Road, and traverses through a forested area where homes are present to the east. Within the forest, the route turns south, travels across an agricultural field and spans the FE Grand Point-Allegheny Energy 138 kV line near Henry Lane.
- After crossing this road, Alternative Route C extends to the southeast for approximately 4.6 miles over agricultural fields to Yohe Road, where it intersects with the FE Fayetteville-West Waynesboro 138 kV transmission line. This section involves crossing of two unnamed WWF streams, one CWF stream, several local roadways, and the FE Fayetteville-Allegheny 69 kV line.
- As Alternative Route C crosses Yohe Road, it also spans to the east side of the FE Fayetteville-West Waynesboro 138 kV transmission line and then turns sharply to the south to parallel this existing line for approximately 1.7 mile; an unnamed CWF stream is crossed in this section, as is Stamey Hill Road.
- A 0.6 mile deviation from the colocation is required in the vicinity of the Manheim Road crossing due residential development that has built up adjacent to the transmission line and the route then parallels the existing line for 0.5 miles on the eastern side.

- At Hess Benedict Road, Alternative Route C crosses over to the west side of the FE Fayetteville-West Waynesboro 138 kV transmission line to avoid agricultural and residential structures. The route parallels the line for another 3.7 miles, traversing agricultural fields, crossing Orphanage Road, Wayne Highway (SR 316), and Buchanan Trail East (SR 16), as well as an unnamed CWF stream.
- After crossing SR 16 and spanning the FE Antrim-West Waynesboro 69 kV lines, Alternative Route C turns sharply to the west and parallels this line for approximately 0.4 mile. This stretch includes a crossing of Cold Springs Road and an unnamed CWF stream.
- Turning to the south and then east, Alternative Route C extends for 1.2 miles to Marsh Road. The route traverses an agricultural field to avoid agricultural and residential structures, and crosses an unnamed CWF stream, the FE Reid-West Waynesboro 69 kV line, and the FE Ringgold-West Waynesboro 138 kV line.
- After crossing Marsh Road and an unnamed CWF stream, Alternative Route C turns sharply south to parallel the east side of the FE Ringgold-West Waynesboro 138 kV line for 2.1 miles. Alternative Route C crosses agricultural fields, Hagerstown Road (SR 316), the FE West Waynesboro-East Waynesboro 138 kV line, and the West Branch Antietam Creek (CWF) along this stretch. The route extends away from the transmission line corridor to avoid residential structures near the southern end of this section prior to crossing Lyons Road.
- Spanning to the west side of the FE Ringgold-West Waynesboro 138 kV line, Alternative Route C turns south and crosses the Pennsylvania/Maryland state line. The route generally parallels the transmission line for approximately 2.6 miles until it intersects with Gardenhour Road. Some deviations are required along this stretch to avoid agricultural operations and structures. The route in this section crosses Rocky Forge Road, Ringgold Pike (SR 418), Poplar Grove Road, and Newcomer Road, as well as numerous crossings of various tributaries to Little Antietam Creek.
- Alternative Route C crosses Gardenhour Road paralleling the existing transmission line for 0.4 miles and traverses through an orchard.
- Alternative Route C extends out for 0.6 mile to the southwest from the transmission line to bypasses around residential structures along Rowe Road and traverses agricultural lands before spanning over to the south side of the FE Reid-Ringgold 138 kV transmission line.
- Alternative Route C turns east for 0.8 mile and extends into the southeastern corner of the Ringgold Substation, spanning the FE Ringgold-East Hagerstown 138 kV transmission line and Smithsburg Pike (MD 64) along the alignment.





Substation	Highway
Alternative Routes	Road
<b>Existing Transmission Line</b>	Stream
115kV - 230kV	Forest Cover
Greater than 345kV	

Data Sources: AEP (2017), POWERmap (2012), ESRI (2011), NLCD Forest Cover (2011)

Coordinate System:  
UTM Zone 18N  
NAD 83

November 13, 2017

Pennsylvania

Maryland

**Figure 6**  
**Alternative Routes**

Independence Energy Connection  
Rice - Ringgold  
**TRANSOURCE** 230kV Transmission Line

0 1 2 3 4  
Miles

## 4.0 ALTERNATIVE ROUTE COMPARISON

This section further discusses the Alternative Routes and provides a quantitative and qualitative analysis of potential impacts to the social landscape, the environment and cultural resources, and potential engineering considerations. The Alternative Routes were reviewed in detail and compared using a combination of information collected from GIS data sources, public and regulatory input, supporting documents, field review, and the collective knowledge and experience of the Siting Team.

The results of the comparative analysis completed for each of the factors listed in **Table 1** are documented within the respective section of the siting study.

Table 1: Quantitative Siting Factors	
<b>Human/Built Factors</b>	
<b>Number of parcels crossed by the ROW:</b>	Count of the number of parcels crossed by the ROW.
<b>Number of residences within 500 feet of the route centerline:</b>	Count of the number of residences within the ROW and within 100 feet, 250 feet and 500 feet of potential routes.
<b>Number of commercial buildings within 500 feet of the route centerline:</b>	Count of the number of commercial buildings within the ROW and within 100 feet, 250 feet and 500 feet of potential routes.
<b>Acres of pasture/rangeland crossed by the ROW:</b>	Area of pasture or range land crossed by the routes.
<b>Acres of cropland crossed by the ROW:</b>	Area of cropland crossed by the routes.
<b>Acres of conservation easements crossed:</b>	Private conservation easements crossed by the routes.
<b>Acres of county agricultural easement land crossed:</b>	Protected land crossed by the Project that is devoted to agricultural production.
<b>Number of archeological resources within the ROW and within 250 feet of centerline:</b>	Previously identified archeological resources.
<b>Number of historic architectural resources within the ROW, within 0.25 mile:</b>	Previously identified historic architectural resource sites and districts listed or eligible on the NRHP.
<b>Institutional uses (schools, places of worship and cemeteries) within 1000 feet (schools and places of worship) or 250 feet (cemeteries and hospitals) of the route centerline:</b>	Locations of cemeteries, churches, hospitals, parks, and schools.
<b>Environmental Factors</b>	
<b>Forest clearing within the ROW:</b>	Acres of forest within the ROW - digitized from aerial photography.



Table 1: Quantitative Siting Factors	
<b>Number of National Hydrography Dataset (NHD) stream and waterbody crossings within the ROW:</b>	a count of the number of surface water features crossed, such as lakes, ponds, streams, rivers, springs and wells.
<b>Acres of National Wetland Inventory (NWI) wetland crossings within the ROW:</b>	The type and acreage of wetlands crossed by the routes.
<b>Acres of 100-year floodplain within the ROW:</b>	Acres of 100-year floodplain within the ROW.
<b>Miles of public lands crossed by the route:</b>	Miles of federal, state and local lands crossed by the ROW.
<b>Threatened, endangered, rare or sensitive species occurrence within the Project vicinity:</b>	Known occurrences; locations of potential habitat based on land use.
<b>Karst topography within the ROW:</b>	Represents areas of Dolomite or Limestone (karst-derived geology) crossed by the ROW.
<b>Acres of prime farmland soils within the ROW:</b>	Percent of soil associations crossed by the ROW characterized as prime farmland.
Engineering Factors	
<b>Route length:</b>	Length of route in miles.
<b>Number of angled structures:</b>	Anticipated number of angled structures over 30 degrees based on preliminary design.
<b>Number of road crossings:</b>	Count of federal, state and local roadway crossings.
<b>Number of pipeline crossings:</b>	Number of known pipelines crossed by the transmission ROW.
<b>Number of railroads crossings:</b>	Number of railroads crossed by the transmission ROW.
<b>Number of transmission line crossings:</b>	Number of high voltage (100 kV or greater) transmission lines crossed by the ROW.
<b>Distance of steep slopes crossed:</b>	Miles of slope greater than 20 percent crossed by the routes.
<b>Length of transmission line parallel:</b>	Miles of the route parallel to existing high voltage transmission lines.
<b>Length of pipeline parallel:</b>	Miles of the route parallel to existing pipelines.
<b>Length of railroad or road parallel:</b>	Miles of the route parallel to existing roadways.
<b>Airfield and heliports within 1 mile of the route centerline:</b>	Distance from airfields and heliports.

## 4.1 Natural Resources

Natural resources are an important consideration in the siting process. The Siting Team attempts to minimize impacts to the natural environment by minimizing the crossing of certain features such as wetlands, streams, forested areas and floodplains, which are often habitats for sensitive species. Natural resource impacts are assessed for potential effects to vegetation and habitat, surface waters, threatened and endangered species, and conservation and recreation lands. Potential impacts discussed in this section are based on publically available maps and data, as well as consultation with federal and state agencies. A quantitative comparison of the natural resource considerations for the Alternative Routes is presented at the end of this section in **Table 6**, providing both a project total and state specific breakdown.

### 4.1.1 Soil and Water Resources

#### Resource Characteristics

#### Physiographic Setting and Geology

The Project Study Area is located within the Great Valley and South Mountain Physiographic Sections of the Ridge and Valley Physiographic Province (Sevon 2000). The Great Valley Physiographic Section is characterized as a very broad valley with low to moderate relief. Elevations in this region range from 140 to 1,100 feet above mean sea level (amsl). The South Mountain Physiographic Section is characterized by linear ridges partly dissected by deep valleys, and has moderate to high relief. Underlying rock consists of metavolcanic rocks, quartzite, and some dolomite. Elevations in this region range from 450 to 2,080 feet amsl (PADCNr 2017a, Maryland 1967).

The regional geology of the Project Study Area is composed primarily of sedimentary rock units ranging from the older Cambrian to the more recent Ordovician Age. The Ordovician aged formations are located along the lower elevations of the Great Valley Physiographic Section, and make up the greater part of the Project Study Area. The older Cambrian aged bedrock units are located in the higher elevations of the South Mountain Physiographic Section, and make up the smaller portion of the Project Study Area. Karst features are prevalent throughout the area and are illustrated in **Figure 7a** (PADCNr 2017b, Reger 2008).

#### Soils

Within the Project Study Area, almost three-quarters of the soils are listed as Prime Farmland soils. In an effort to identify the extent and location of important farmland soils, the National Resources Conservation Service (NRCS) of the U.S. Department of Agriculture (USDA), has inventoried land that can be used for the production of the Nation's food supply. Important farmland soils vary in degree of productivity from prime farmland to unique farmland to

farmland of statewide or local importance. Prime farmland is defined by the NRCS as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. These soils could be cultivated land, pastureland, forestland, or other land, that is not urban or built-up land or water areas (USDA/NRCS 2007, USDA/SCS 1975). Prime farmland soils are identified in **Figure 7b**.

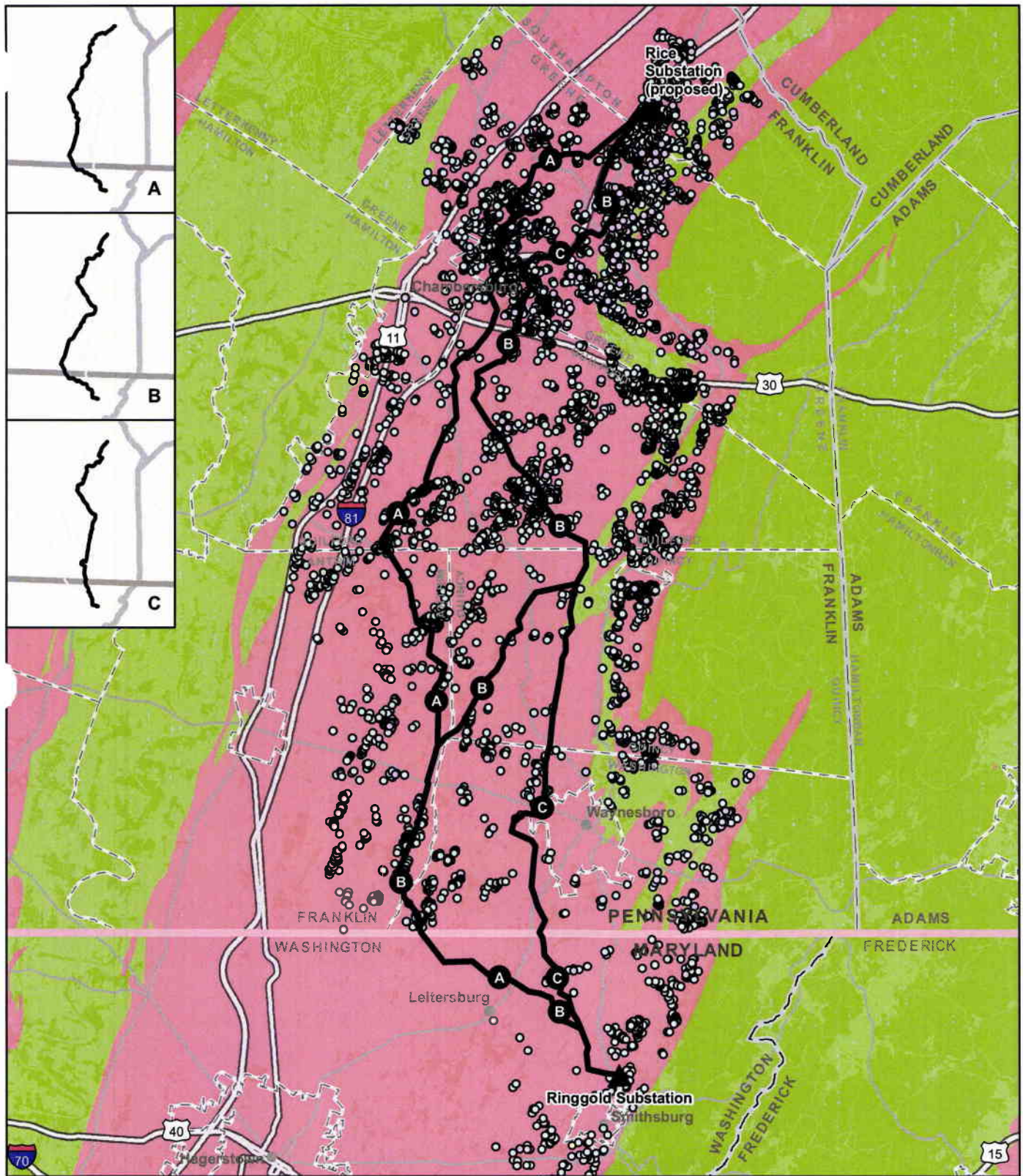
### **Alternative Route Comparison**

Karst topography is a unique condition formed from the dissolution of soluble rocks including limestone and dolomite. The topography is characterized by underground drainage systems that undermine the consistency of the rock and can result in sinkholes and caves. These conditions are difficult for transmission structure engineering, which prefer stable bedrock conditions. Landscape features such as sinkholes may also affect structure placement and access road development. Alternative Route B crosses the most area of karst topography and would involve the most known karst features. Alternative Route C would cross the least area of karst topography, but would also involve the second most karst features. Through detailed engineering, the karst features may be avoided through strategic structure placement, therefore, the length through the karst topography is the key metric in this comparison.

All of the Alternative Routes cross agricultural lands comprised of prime farmland soils. In general, long term impacts to agricultural operations will be localized to the structure locations with general farming operations continuing within the ROW. The Project will be designed to allow typical farming vehicles to operate within the ROW. Although, the impact to prime farmland soils would be localized, overall Alternative Route C does cross the fewest acres of these soils as the route alignment is shorter than the other options. Due to their longer lengths, Alternative Routes A and B would cross the most prime farmland soils. Overall, the Siting Team attempted to minimize impacts to agricultural lands, where feasible, by routing along the edge of fields, along farm roads, or in pasture lands.

All temporary ground disturbances will be permitted through the appropriate state agency to ensure soils impacts are adequately addressed through the installation and maintenance of best management practices and restoration of disturbed areas. Aside from structure placement and the few instances of permanent access roads, all other soil impacts will be temporary in nature and returned to preconstruction state.





	Substation		Limestone
	Alternative Routes		Other
	Sinkhole		Highway
	Surface Depression		Road
			Forest Cover

Data Sources: AEP (2017), ESRI (2011), NRCS (2017), NLCD Forest Cover (2011)

Coordinate System:  
UTM Zone 18N  
NAD 83

November 14, 2017

Pennsylvania

Maryland

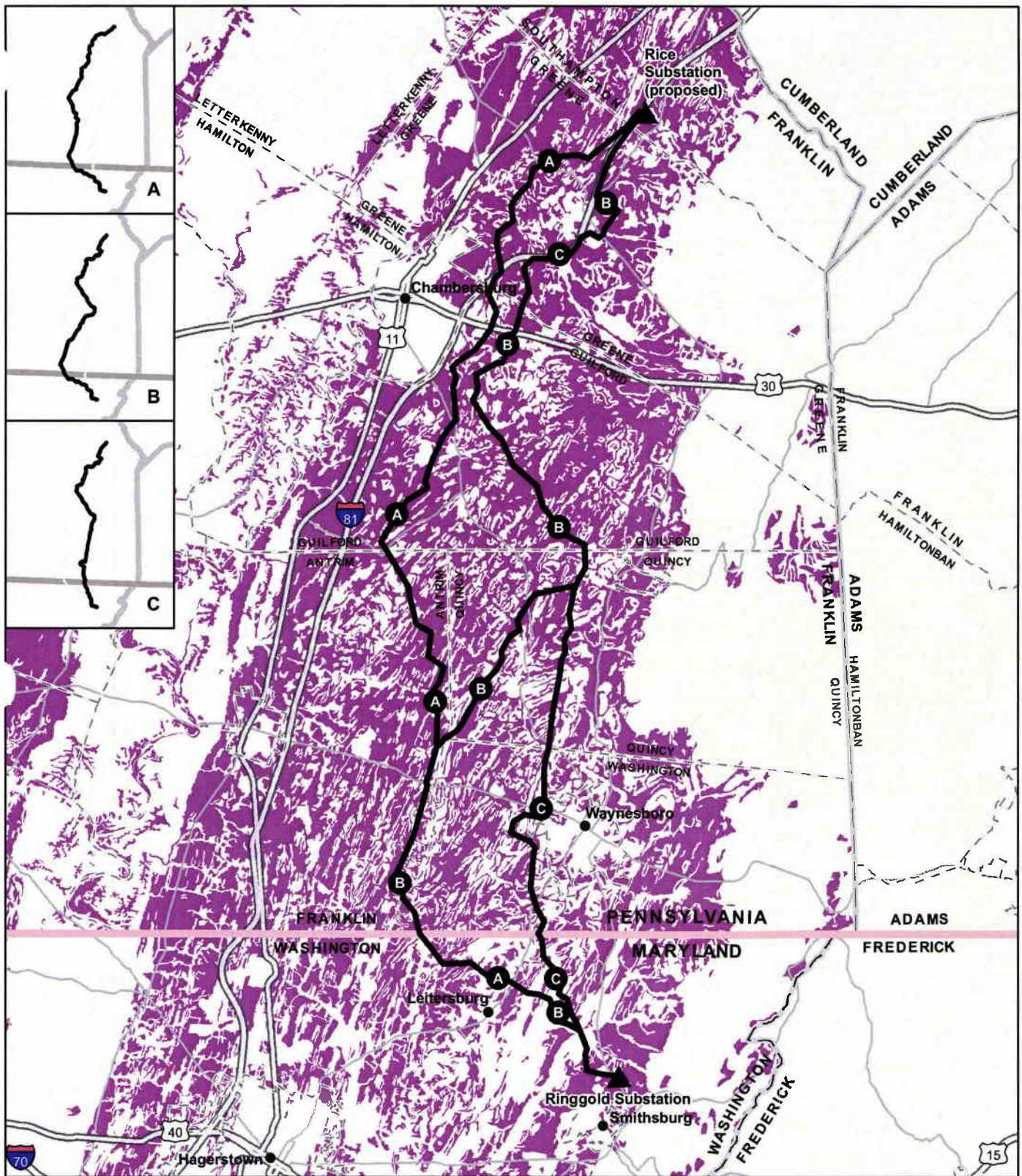
Virginia

**Figure 7**  
**Karst**

Independence Energy Connection  
Rice - Ringgold  
**TRANSOURCE** 230kV Transmission Line

0 1 2 3 4  
Miles





▲ Substation  
 — Highway  
 — Road  
 — Alternative Routes  
 ■ Forest Cover  
 ■ Prime Farmland

Data Sources: AEP (2017),  
 ESRI (2011), NRCS (2017),  
 NLCD Forest Cover (2011)

Coordinate System:  
 UTM Zone 18N  
 NAD 83

November 14, 2017



**Figure 7b**  
**Prime Farmland**

Independence Energy Connection  
 Rice - Ringgold  
**TRANSOURCE** 230kV Transmission Line

0 1 2 3 4  
 Miles

**Water Resources**

***Streams***

The Project Study Area is located primarily within the Conococheague Creek (USGS Hydrologic Unit 0207000408) and Antietam Creek watersheds (USGS Hydrologic Unit 0207000410) of the Potomac River Basin, with a portion of the northern extent located in the Conodoguinet Creek watershed (USGS Hydrologic Unit 0205030502) of the Lower Susquehanna-Swatara River in Pennsylvania and the Conococheague-Opequan basin within both Pennsylvania and Maryland. Water Resources are identified in **Figures 8a and 8b**.

***Pennsylvania***

According to Pennsylvania Code, Title 25, *Water Quality Standards* (Chapter 93), PADEP has established narrative and numeric water quality criteria necessary to support a variety of protected water uses, which include protection uses for aquatic life (e.g., Cold Water Fishes [CWF], Warm Water Fishes [WWF], Trout Stocked Fishery [TSF], and Migratory Fishes [MF]) and special protection waters (e.g., High Quality [HQ] and Exceptional Value [EV]). PADEP assigns all streams in the Commonwealth a Designated Use, which is the water use goal for a particular stream segment, whether or not it is currently being attained. In contrast, a stream’s Existing Use is the use actually attained by existing water quality. PADEP’s antidegradation policy requires existing uses, and the level of water quality necessary to protect existing uses, shall be maintained and protected. As such, the water quality of a stream segment with an existing use that exceeds its designated use may not be degraded below the water quality levels protective of that existing use (PADEP 2017).

Further, the PFBC provides additional protection (i.e., seasonal restrictions) to streams that support trout populations. Streams listed as Approved Trout Stream (stocked) (PFBC 2017a), Class A Wild Trout Waters (PFBC 2017b), Wilderness Trout Waters (PFBC 2017c), or Wild Trout Waters (Natural Reproduction) (PFBC 2017d) are also noted on **Table 2**.

<b>Table 2: Pennsylvania Water Quality Designations</b>			
<b>Stream Name</b>	<b>Chapter 93 Designated Use</b>	<b>Chapter 93 Existing Use</b>	<b>Special PFBC Designations</b>
Muddy Run	WWF, MF	N/A	N/A
Rowe Run	CWF, MF	N/A	Approved Trout Waters Portions – PFBC Stocked Trout Water
Furnace Run	CWF, MF	N/A	N/A



**Table 2: Pennsylvania Water Quality Designations**

Stream Name	Chapter 93 Designated Use	Chapter 93 Existing Use	Special PFBC Designations
UNT to Middle Spring Creek	CWF, MF	HQ-CWF, MF	Class A Wild Trout
Antietam Creek	WWF, MF	N/A	Portions – Natural Trout Reproduction
East Branch Antietam Creek	WWF, CWF, HQ, MF	N/A	Approved Trout Waters Portions – Natural Trout Reproduction
West Branch Antietam Creek	CWF, HQ-CWF, MF	N/A	Approved Trout Waters Portions – PFBC Stocked Trout Water
Back Creek	WWF, TSF, CWF, MF	N/A	N/A
Conococheague Creek and Tributaries	WWF, CWF, HQ-CWF, EV, MF	N/A	Portions – Approved Trout Waters Portions – PFBC Stocked Trout Water Portions – Natural Trout Reproduction
Falling Spring Branch of the Conococheague Creek	TSF, HQ-CWF, MF	N/A	Approved Trout Waters Portions – PFBC Stocked Trout Water Class A Wild Trout

### ***Maryland***

According to Code of Maryland Regulations (COMAR) Sections 26.08.02.02 and 26.08.02.02-1, Maryland Department of Environment (MDE) has established narrative and numeric water quality criteria necessary to support a variety of protected water uses, which include protection uses for aquatic life. These include:

- **Use Class I:** Water Contact Recreation, and Protection of Nontidal Warmwater Aquatic Life
- **Use Class I-P:** Water Contact Recreation, Protection of Aquatic Life, and Public Water Supply
- **Use Class II:** Support of Estuarine and Marine Aquatic Life and Shellfish Harvesting
- **Use Class II-P:** Tidal Fresh Water Estuary – includes applicable Use II and Public Water Supply
- **Use Class III:** Nontidal Cold Water
- **Use Class III-P:** Nontidal Cold Water and Public Water Supply
- **Use Class IV:** Recreational Trout Waters
- **Use Class IV-P:** Recreational Trout Waters and Public Water Supply

MDE assigns all streams in the State a Use Class, which is the water use goal for a particular stream segment, whether or not it is currently being attained. A component of the designated use is the stream’s Existing Use (EU). The EU is the use actually attained by existing water quality. Both Federal and MDE’s State water quality standards requires existing uses, and the level of water quality necessary to protect existing uses, shall be maintained and protected

(Code of Federal Regulations [CFR] Title 40 § 131.3 and § 131.12(a)). Use classes include consideration of existing conditions and potential uses which may be made possible by anticipated improvements in water quality (COMAR 2017a, COMAR 2017b, Legal 2015a, Legal 2015b).

Maryland also assesses streams based on the Antidegradation Regulations provided in COMAR Sections 26.08.02.04, 26.08.02.04-1, and 26.08.02.04-2 (COMAR 2017c). These regulations classify streams based on two tiers:

- **Tier 1** specifies the minimum standard that must be met—support of balanced indigenous populations and support of contact recreation—this is often referred to as "fishable-swimmable."
- **Tier 2** protects water that is better than the minimum specified for that designated use.

In Maryland, the Project Study Area is primarily located within the Antietam Creek, Little Antietam Creek, and East Branch Antietam Creek Watersheds. The majority of these stream segments include sections containing Use Classes III-P, IV-P, as well as some unnamed tributaries that have not yet been determined as noted on **Table 3**. All of these streams are classified as Tier 1 features.

Table 3: Maryland Water Quality Designations			
Stream Name	Use Class	Antidegradation Tier	Antidegradation Catchment
Antietam	Use Class IV-P	Tier I	Tier I
Little Antietam	Use Class III-P	Tier I	Tier I
Unnamed Tributaries to East Branch Antietam	Use Class IV-P	Tier I	Tier I
Grove Creek	Use Class III-P	Tier I	Tier I
Marsh Run	Use Class III-P	Tier I	Tier I

**Wetlands**

Review of the USFWS National Wetlands Inventory (NWI) mapping indicates numerous small wetlands exist throughout the Project Study Area. These wetlands primarily exist next to streams and within floodplain areas as palustrine wetlands. Palustrine systems include all non-tidal vegetated wetlands and are further classified based on the dominant plant type. These classifications include palustrine emergent (PEM) herbaceous systems, palustrine scrub-shrub (PSS) systems, and palustrine forested (PFO) systems (USFWS 2017).

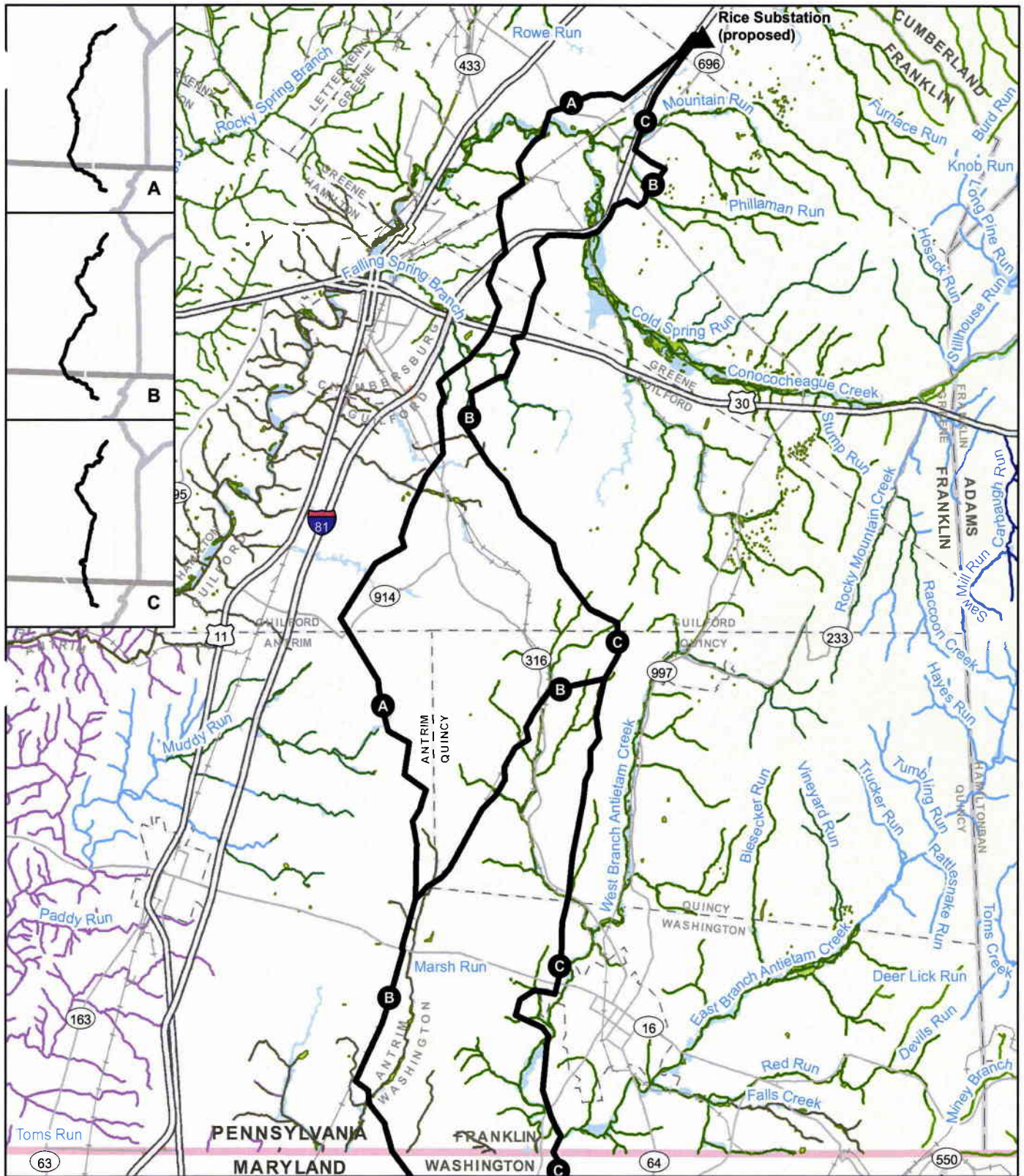


Maryland has also identified specific nontidal wetlands within the state that exhibit exceptional ecological and educational value. These Wetlands of Special State Concern are the best examples of Maryland's nontidal wetland habitats and are designated for special protection under the State's nontidal wetlands regulations. Many of these special wetlands contain the last remaining populations of native plants and animals that are now considered rare and threatened (MDNR 2017d). Several Wetlands of Special State Concern are located within the Project Study Area, however, only one is located in the overall area of the Alternative Routes and none of the routes cross this Wetland of Special State Concern.

### ***Floodplains***

One hundred year floodplains are areas adjacent to streams which would be inundated by a flood elevation that has a 1-percent chance of being equaled or exceeded each year. The Federal Emergency Management Agency (FEMA) delineates the extent of most 100-year floodplains. Floodplains are located primarily along main branch named streams within the Project Study Area (FEMA 2017).

Streams, wetlands, and floodplains within the Project Study Area are identified in **Figures 8a (Pennsylvania) and 8b (Maryland) – Water Resources**.



- ▲ Substation
- Alternative Routes
- Ch. 93 Designated Use
- Exceptional Value
- High Quality-CWF
- Trout Stocking
- Warm Water Fishes
- Cold Water Fishes
- 100-Year Floodplain
- NWI Wetland
- Highway
- Road
- Forest Cover

Data Sources: AEP (2017), ESRI (2011), PADEP (2017), USFWS (2009), FEMA (2012), NLCD Forest Cover (2011)

Coordinate System:  
UTM Zone 18N  
NAD 83

November 14, 2017

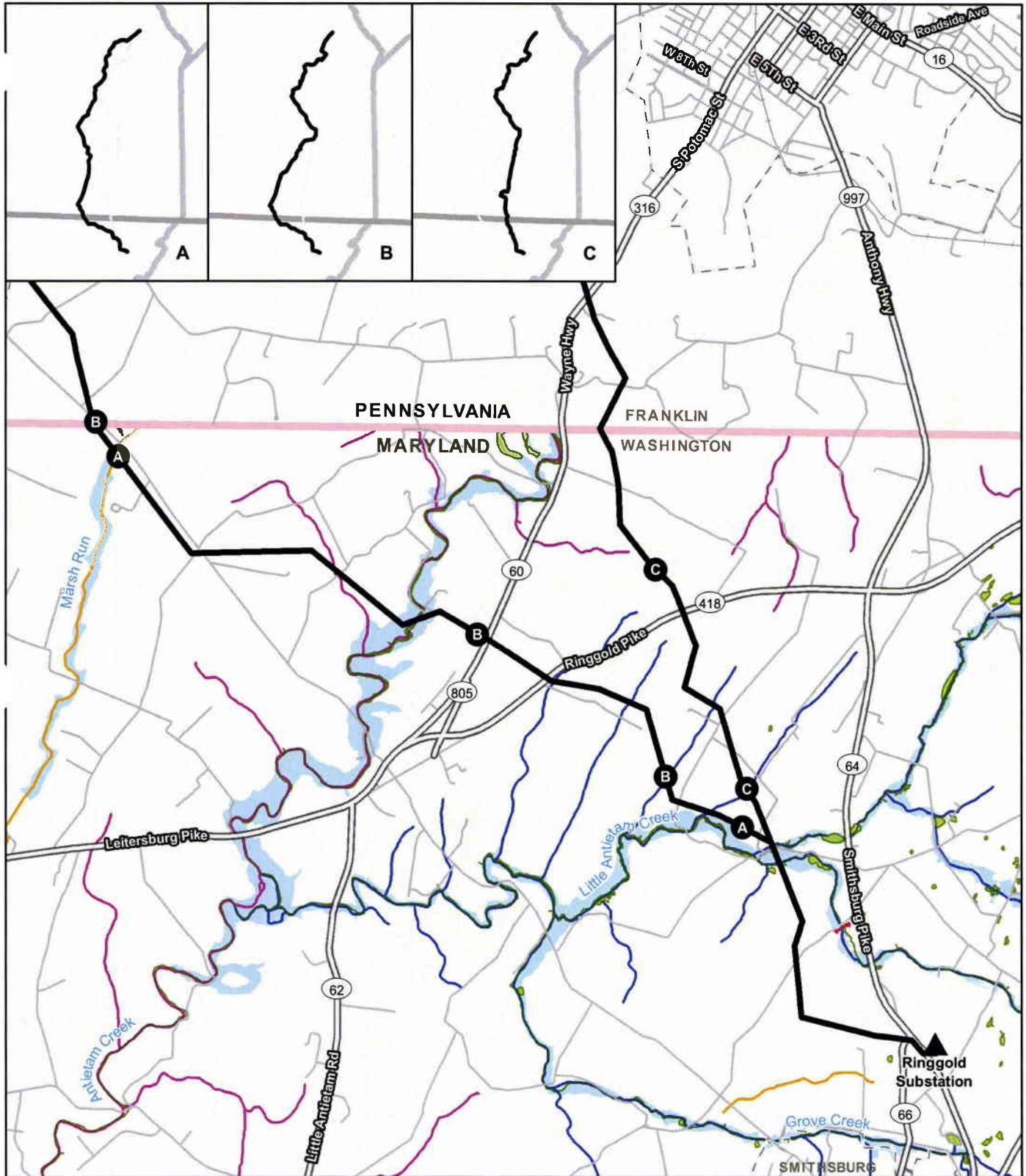


**Figure 8a**  
**Water Resources (PA)**

Independence Energy Connection  
**TRANSOURCE** Rice - Ringgold  
230kV Transmission Line

0 1 2 3 4  
Miles





▲ Substation	— Not yet determined
— Alternative Routes	■ Wetland of Special Concern
— Class III-P: Nontidal Cold Water and Public Water Supply	■ NWI Wetlands
— Class IV-P: Recreational Trout Waters and Public Water Supply	■ 100-Year Floodplain
	— Major Road
	— Local Road
	■ Forest Cover

Data Sources: AEP (2017), ESRI (2011), MDE (2016), DNR (2002), USFWS (2009), FEMA (2016), NLCD Forest Cover (2011)

Coordinate System: UTM Zone 18N NAD 83

November 14, 2017

Pennsylvania

Maryland

**Figure 8b**  
**Water Resources (MD)**

Independence Energy Connection  
Rice - Ringgold  
**TRANSOURCE** 230kV Transmission Line

0 0.25 0.5 0.75 1  
Miles

## Alternative Route Comparison

Most of the streams crossed in the northern portion of the Project Study Area in Pennsylvania are classified by PADEP as Cold Water Fishery (CWF) and Warm Water Fishery (WWF) tributaries to Conococheague Creek, which flows through Chambersburg and then south into Maryland. Both of these stream classifications involve relatively limited agency protection due to their average water and habitat quality. A few tributaries in this area are classified as High Quality (HQ) due to their above average water quality and are thereby eligible for special protection. These streams are usually associated with natural springs that are flowing from the karst limestone bedrock (e.g., Cold Spring Run, Falling Spring). Both of these HQ streams are also considered Wild Trout Waters by the PFBC, which provides additional protective measures.

In central portions of the Project Study Area, the routes extend into the Antietam Creek watershed, which also flows south into Maryland. Most of these streams are also classified as CWF and WWF, but there are no HQ streams in this part of the watershed.

At its southern extent, the Project continues along within the Antietam Creek watershed as it extends into Maryland, where it is listed as a Tier I (minimum standard) stream by MDNR. While many of these streams are not considered special protection, most of these watersheds are classified by MDNR as Use Class III-P (Nontidal Cold Water and Public Water Supply) or Use Class IV (Recreational Trout Waters), which provides them with additional protection due to their social services and ecological values.

Alternative Route A crosses the least number of streams as this option extends through lower sections of the Conococheague Creek and Antietam Creek valleys, where there are fewer, but wider stream features. Although Alternative Route A crosses the fewest streams, it also crosses the most special protection streams (3). All of these crossings are associated with the HQ-classified Falling Spring watershed, which is located near Chambersburg. Alternative Routes A and B will cross one (1) special protection stream along their alignments. Alternative Route C would cross the second fewest streams and span the HQ-classified Falling Spring stream only once.

Impacts to wetlands by the Alternative Routes are limited due to the few wetland resources in the Project Study Area. In most cases, the transmission line alignment can be engineered to span over the wetland areas thus having limited effect on PEM or PSS wetlands. PFO wetlands however would be affected by the removal of the trees within the 130-foot wide ROW. No permanent structures or other sources of fill are anticipated in any wetland but the use of timber matting for temporary access road crossings may be required in certain situations. All three Alternative Routes would cross the same amount of forested wetland. Overall,

Alternative Route A would cross the most wetland area in total and Alternative Route C would cross the least total wetland area.

Floodplains in the Project Study Area are fairly common due to the level terrain of the Conococheague and Antietam Creek valleys, which allows for floodwaters to more easily overflow their banks. These floodplains primarily consist of narrow buffers along streams and are not wide resources. Placement of a transmission line structure within a floodplain area would need to be approved by the state regulatory agencies as changes to the hydrology of floodwaters may affect properties downstream. As with wetlands, the alignment of the transmission line can usually be engineered to span floodplain areas, with the potential impact being constrained to tree clearing. Alternative Route A would cross the least floodplain area (along with the fewest streams) while Alternative Route B would cross the most floodplain area. Alternative Route C would encounter the most floodway areas, which defines the area of concentrated floodwater flow and is strongly protected by the regulatory agencies to avoid potential modifications in flooding behaviors. No structures will be built within the floodway areas of any stream.

In Maryland, the area adjacent to a stream corridor is also considered by the state regulatory agencies as a riparian buffer to the stream that provides water quality protection and habitat area. Although trees within the riparian area may be cleared, lower growing vegetation would be allowed to grow. Alternative Routes A and B would result in the most riparian impacts as these alignments extend from west to east toward the Ringgold Substation and across a longer section of the state, whereas Alternative Route C would have limited riparian buffer impact as it would have a shorter north to south alignment across the state of Maryland, and follows an existing utility corridor which already crosses these riparian areas.

Wetland and floodplain impacts will be minimized to the best extent practicable by spanning these resources where feasible. Streams will always be spanned by the transmission line but some minor crossings may be required for permanent or temporary access roads. These stream access road crossings will be avoided where possible, but where deemed required will be designed and permitted under the direction of the federal and state agencies.

#### 4.1.2 Wildlife Habitat and Sensitive Species

##### Resource Characteristics

Typical wildlife species found within the Project Study Area include those found in wetlands, forested habitats, and open/agricultural lands. These habitats contain a diverse population of amphibians, fish, reptiles, birds and mammals. Common mammals within these habitats include raccoon (*Procyon lotor*), opossum (*Didelphia virginiana*), fox (*Vulpes vulpes*), skunk (*Mephitis mephitis*), porcupine (*Erethizon dorsatum*), and white-tailed deer (*Odocoileus virginianus*). More isolated regions such as Michaux State Forest may also contain black bears (*Ursus americanus*), beaver (*Castor canadensis*), and bobcat (*Lynx rufus*).

Important Bird Areas (IBA) are “designated by the Pennsylvania Ornithological Technical Committee (POTC), as the most critical regions in the Commonwealth for conserving bird diversity and abundance, and are the primary focus of Audubon Pennsylvania’s conservation efforts” (Audubon Pennsylvania Birds Conservation 2017). The Project Study Area does extend into the South Mountain – Caledonia State Park and Michaux State Forest and Maryland Blue Ridge IBAs that run north to south along the eastern portion of the Project Study Area. These areas are the northernmost section of the Blue Ridge Mountains in Pennsylvania and Maryland and contain interior forest that attracts several species of migratory species, as well as waterfowl and wading birds. Many foot trails exist within the state forest area and several rock outcroppings provide views of raptors during the fall migration season (Audubon 2017).

The Project Study Area contains a diverse range of habitat, and therefore, has the potential to host a number of different types of threatened and endangered (T&E) species. These may include species of plants, birds, fish, mammals, bats, insects and spiders, reptiles and amphibians, or mussels.

A review of the PADCNr and MDNR Natural Heritage Program Databases will be conducted during the permitting process to determine the potential presence of T&E species along the Proposed Route. Specifically, the Pennsylvania review of the Natural Heritage Program Databases would evaluate for federal (USFWS) and state (PADCNr, PFBC and PGC) listed species. In Maryland, an initiation letter would be submitted to MDNR and USFWS to commence Project specific consultation. Within both states, further coordination with these federal and state agencies will be required to obtain specific T&E species data.

Based on review of the *Natural Areas Inventory of Franklin County, Pennsylvania* (The Nature Conservancy 2004) and the MDNR *List of Rare, Threatened, and Endangered Species of Washington County* (MDNR 2016), the protected species listed in **Table 4** may be located in the Project Study Area.



**Table 4: Threatened and Endangered Species**

Species Name	Scientific Name	Status	Habitat Type
<b>AMPHIBIANS</b>			
Bog turtle	<i>Glyptemys muhlenbergii</i>	Federally Endangered	Spring fed emergent wetlands
<b>BIRDS</b>			
Loggerhead shrike	<i>Lanius ludovicianus</i>	Endangered (MD); Endangered (PA)	Grassy pastures
<b>MAMMAL</b>			
Northern long-eared bat	<i>Myotis septentrionalis</i>	Federally Threatened	Mature forests and stream corridors
Indiana bat	<i>Myotis sodalis</i>	Federally Threatened	Mature forests and stream corridors
<b>PLANTS</b>			
Baltic rush	<i>Juncus balticus</i>	Endangered (MD); Threatened (PA)	Emergent wetlands
Blue lupine	<i>Lupinus perennis</i>	Threatened (MD); Rare (PA)	Open fields and woodlands
Broad-leaved willow	<i>Salix myricoides</i>	Endangered (PA)	Stream banks
Kidney-leaved twayblade	<i>Listera smallii</i>	Endangered (MD); Endangered (PA)	Woodlands
Lance-leaved buckthorn	<i>Rhamnus lanceolata</i>	Endangered (PA)	Dry to moist, brushy thickets
Lance-leaved loosestrife	<i>Lysimachia lanceolata</i>	Threatened (MD); Endangered (PA)	Open woodlands and wetlands
Limestone petunia	<i>Ruellia strepens</i>	Threatened (PA)	Mesic forests, bluffs
Northeastern bulrush	<i>Scirpus ancistrochaetus</i>	Federally Endangered	Pooled wetlands
Oakes' pondweed	<i>Potamogeton oakesianus</i>	Endangered (PA)	Shallow waters
Prairie sedge	<i>Carex prairea</i>	Threatened (PA)	Emergent wetlands
Short's sedge	<i>Carex shortiana</i>	Endangered (MD); Rare (PA)	Moist meadows
Short-leaf pine	<i>Pinus echinata</i>	Threatened (PA)	Dry mountain woods
White milkweed	<i>Asclepias variegata</i>	Endangered (PA)	Woodland margins

**Natural Areas - Pennsylvania**

Natural Areas in Franklin County were surveyed by the Pennsylvania Science Office of The Nature Conservancy (TNC) and are outlined in the Natural Area Inventories (NAI) of Franklin County (Nature Conservancy 2004). The NAI provides maps and detailed information concerning locations of known outstanding natural features, flora, fauna, and geology in Franklin County, Pennsylvania. These sites represent good examples of rare habitat that support an uncommon diversity of plant and wildlife habitat. In addition, the PADCNR also identifies specific wild and natural areas within their state park or state forest systems that are also based on special ecological conditions or the presence of uncommon plants or animals. PADCNR has indicated that South Mountain and Michaux State Forest contain some unique areas that provide habitat for several listed species.

Table 5 below provides a list of the TNC and PADCNR identified natural areas within the Project Study Area in Franklin County, Pennsylvania. These areas are illustrated in Figure 9.

Table 5: Natural Areas within the Project Study Area - Pennsylvania		
TNC-Identified		
Name	Description	Proximity to Alternative Routes
<i>Antietam West Branch</i>	Contains a State endangered bird species of concern, with past breeding observed at the site.	Crossed by Alternative Route C
<i>Conococheague Creek Floodplain at Caledonia Park</i>	Contains an animal and a plant species of concern.	5.2 miles east of Alternative Routes B and C
<i>Conococheague Creek Near Marion</i>	Contains a population of State threatened plant species of concern.	2.5 miles west of Alternative Route A
<i>Falling Springs</i>	Site contains a species of concern.	Crossed by Alternative Routes A, B, and C
<i>Hoover Spring</i>	Contains a State animal species of concern.	2.6 miles east of Alternative Route C
<i>Mont Alto Mountain</i>	A mixed hardwood-pine forest containing an abundance of native pine species in a unique pine forest habitat.	2.0 miles east of Alternative Routes B and C
<i>Mountain Run Ponds</i>	Contains a number of excellent quality vernal pools, as well as several plant species of concern.	1.0 mile east of Alternative Routes B and C



**Table 5: Natural Areas within the Project Study Area - Pennsylvania**

<b>TNC-Identified</b>		
<b>Name</b>	<b>Description</b>	<b>Proximity to Alternative Routes</b>
<i>Muddy Run Spring</i>	Contains a population of an animal species of concern.	0.7 mile southwest of Alternative Route A
<i>Muskrat Fen</i>	Located along the Conococheague Creek, and contains a relatively uncommon fen habitat. Contains four plant species of concern.	0.9 mile east of Alternative Routes B and C
<i>Needy Cave</i>	Contains three animal species of concern within a cave system.	2.2 miles east of Alternative Route C
<i>Nunnery Spring</i>	Contains a population of State animal species of concern in a spring fed stream in an agricultural and residential setting.	0.9 mile east of Alternative Route C
<i>Siberia</i>	Contains a PA threatened plant species, as well as several natural communities supporting a diverse, interesting flora.	2.1 miles west of Alternative Route A
<i>Waynecastle Old Field Habitat</i>	Contains a good population of a number of State listed plant species of concern.	Crossed by Alternative Routes A and B
<i>Zullinger Spring</i>	Contains a State animal species of concern in a tributary to the West Branch Antietam Creek.	Crossed by Alternative Route C
<b>PADCNR-Identified</b>		
<i>Mount Cydonia Ponds Natural Area</i>	Part of the Michaux State Forest, the site contains numerous vernal pools which provide critical breeding habitat for reptiles and amphibians, several plant species of concern, as well as an unspecified animal species of concern.	3.2 miles northeast of Alternative Routes B and C

**Natural Areas - Maryland**

Natural Areas in Maryland were surveyed by MDNR. MDNR lists one natural area in Washington County, which exists outside of the Project Study Area (MDE 2017e), therefore, no

Natural Areas are within the Project Study Area in Washington County, Maryland.

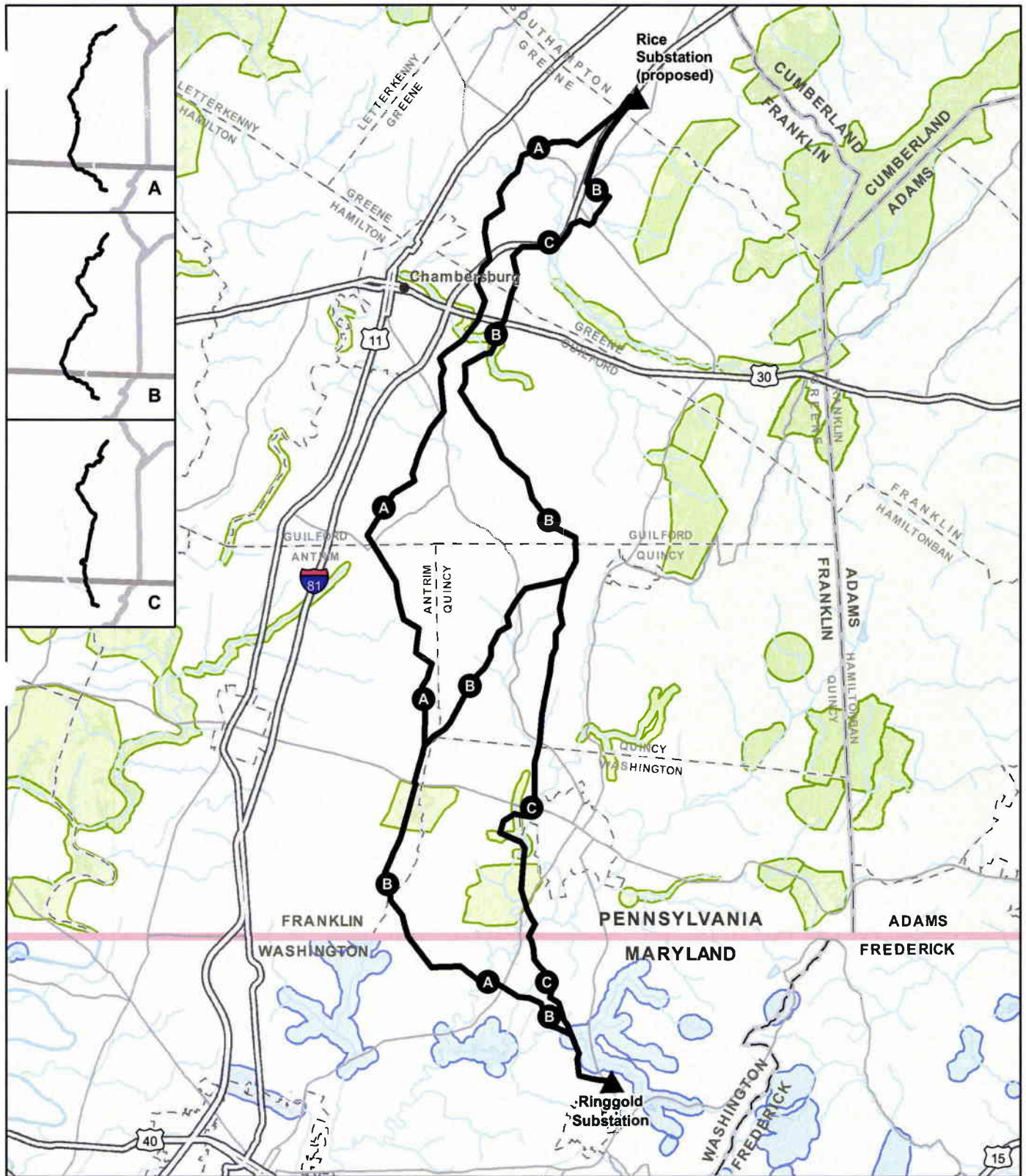
MDNR does provide potential T&E habitat information through its Sensitive Species Project Review Areas (SSPRA), which is a GIS based search website that illustrates polygons of potential habitat areas (MDNR 2016). These polygons are categorized by groups, with Group 1 habitat areas being focused on federally listed species, Group 2 being focused on state listed species, Group 3 being composed of species of concern to MDNR, and Group 4 being related to bald eagle nests. Review of the SSPRA data indicates that the stream network north of Ringgold Substation contains habitat that supports a MDNR species of concern (Group 3). These habitat areas are illustrated in **Figure 9**.

### **Alternative Route Comparison**

While the potential for T&E species is known, whether the specific habitat will be impacted will not be known until after the Proposed Route alignment is field reviewed and habitat assessments are completed. The data used in the Siting Study provides information on identified natural areas that contain habitat to support some of these species and were used as guides for routing the Study Segments. As illustrated in **Figure 9**, potential T&E habitat is focused along several of the main water courses extending across the Project Study Area and in scattered points throughout the area, making avoidance of these sensitive areas difficult.

Crossing through TNC-identified natural areas in Pennsylvania or the sensitive species polygons in Maryland does not dictate that an impact will occur, however, the potential of encountering T&E species or their habitat may be higher in these areas. Based on the analysis, although Alternative Route A would cross the least acreage of natural areas, all Alternative Routes parallel existing infrastructure through these prominently non-forested natural areas, and can therefore span potential T&E habitat. Comparatively, none of the Alternative Routes are anticipated to cause significant impacts to these natural areas.

All required federal and state agency consultations would be completed for the Proposed Route to determine final species habitat locations and requirement for species specific surveys. Coordination will ensure whether areas can be avoided, or where appropriate, timing restrictions applied to construction activities to avoid impact during breeding or roosting seasons.



Substation	Highway
Alternative Routes	Road
MD Sensitive T&E Area	Stream
PA Core Habitat of Biological Diversity Area	Forest Cover

Data Sources: Western PA Conservancy (2014), PASDA (2015), MD DNR (2002, 2008, 2013), NLCD Forest Cover (2011)

Coordinate System: UTM Zone 18N NAD 83

November 14, 2017



**Figure 9 - Threatened and Endangered Habitat**

Independence Energy Connection  
**TRANSOURCE** Rice - Ringgold  
 230kV Transmission Line

Table 6: Natural Resource Evaluation Criteria				
Alternative Route	Unit	A	B	C
<b>General</b>				
Length	miles	<b>30.4</b> PA: 23.8 MD: 6.6	<b>31.9</b> PA: 25.3 MD: 6.6	<b>28.8</b> PA: 24.4 MD: 4.4
<b>Water Resources</b>				
Total streams crossed	count	<b>18</b> PA: 9 MD: 9	<b>26</b> PA: 17 MD: 9	<b>23</b> PA: 19 MD: 4
High/Exceptional/Special Protection streams crossed	count	<b>3</b> PA: 3 MD: 0	<b>1</b> PA: 1 MD: 0	<b>1</b> PA: 1 MD: 0
Riparian buffers crossed - Applicable to MD (25 foot buffer) - Not applicable to PA	acres	<b>1.7</b> PA: 0.0 MD: 1.7	<b>1.7</b> PA: 0.0 MD: 1.7	<b>0.6</b> PA: 0.0 MD: 0.6
Forested wetlands in the ROW (NWI)	acres	<b>0.8</b> PA: 0.8 MD: 0.0	<b>0.8</b> PA: 0.8 MD: 0.0	<b>0.8</b> PA: 0.8 MD: 0.0
PEM/PSS wetlands in the ROW (NWI)	acres	<b>1.8</b> PA: 1.8 MD: 0.0	<b>0.4</b> PA: 0.4 MD: 0.0	<b>&lt;0.1</b> PA: <0.1 MD: 0.0
FEMA-designated floodplain crossed by ROW	acres	<b>21.8</b> PA: 14.3 MD: 7.5	<b>28.3</b> PA: 20.8 MD: 7.5	<b>25.7</b> PA: 23.7 MD: 2.0



**Table 6: Natural Resource Evaluation Criteria**

Alternative Route	Unit	A	B	C
FEMA-designated floodway crossed by ROW	acres	0.0	0.0	1.0 PA: 1.0 MD: 0.0
<b>Geological, Topographical, and Soil Resources</b>				
Prime and unique farmland soil in the ROW [1]	acres	303.9 PA: 262.1 MD: 41.8	323.7 PA: 281.9 MD: 41.8	260.4 PA: 228.0 MD: 32.4
Karst topography in the ROW (represents acres of Dolomite or Limestone within a segment ROW (karst-derived geology)	acres	479.5 PA: 374.9 MD: 104.6	493.3 PA: 388.7 MD: 104.6	430.1 PA: 360.8 MD: 69.3
Other karst features (i.e., sinkholes, surface depressions, underground springs) in the ROW	count	30 PA: 29 MD: 1	36 PA: 35 MD: 1	34 PA: 33 MD: 1
<b>Wildlife and Habitat</b>				
Special natural areas crossed by the ROW	acres	30.7 PA: 19.9 MD: 10.8	36.1 PA: 25.3 MD: 10.8	50.1 PA: 39.6 MD: 10.5

PA: and MD: = State specific impact breakdown.

[1] Prime farmland is land that has the best combination of physical and chemical characteristics for producing crops

## 4.2 Land Use

Potential land use impacts considered in the siting process included proximity of Alternative Routes to residential, commercial and industrial development, institutional uses (e.g., schools, places of worship, cemeteries, and hospitals), cultural resources, and overall land use of the area. A comparison of the land use considerations for the Alternative Routes is presented at the end of this section in **Table 9**. Land use within the Project Study Area is shown in **Figure 10**.

### 4.2.1 Agricultural and Forestry Resources

#### Resource Characteristics

##### Forestry

Upland forest communities once dominated the natural landscape within the Project Study Area. However, over time the natural land cover has become highly modified by agricultural uses. Land use within the Project Study Area consists of agricultural, woodlands, residential, commercial and industrial uses. Agricultural lands make up approximately half of the land use with pasture accounting for 30% and crop land accounting for 20%. Residential, commercial and industrial land uses account for approximately 25% of the area while woodlands make up the remaining 25%.

Forests throughout the Project Study Area are fragmented and scattered, with the exception of concentrated forested area along the steep slopes of South Mountain to the east, portions of which are part of Michaux State Forest. Forests in the region are comprised of two main types, Appalachian Oak forests, which are dominated by oaks and other hardwood species, such as black birch red maple, black gum, and hickories, and a smaller percentage of Oak/Hickory/Pines forests, which are dominated by broadleaf deciduous and needle-leaf evergreen trees, such as hickory, Virginia pine, pitch pine, chestnut oak, and black oak (Nature Conservancy 2004).

In both Pennsylvania and Maryland, some of the forests are preserved within State and county agricultural preservation programs. In Maryland, additional protection to forests is given through the Maryland Forest Conservation Act in order to reduce the loss of forest cover due to development and improve water quality (MDNR 1997). In addition, Washington County, Maryland has instituted a Forest Conservation Ordinance in order to further protect forests by requiring mitigation for forest disturbance (Washington County, MD 2014).

## **Alternative Route Comparison**

Forest clearing concerns from an environmental perspective focus on fragmentation, which reduces the viability of a forest ecosystem through the possible introduction of invasive plant species and changes in the wildlife community dynamics. Trees are also specifically tied to the habitat requirements of several T&E bat species, which use trees for roosting at night during the summer. Clearing trees may have a direct impact on potential bat habitat, thus the less tree clearing required, the less possibility of creating a T&E impact. Tree clearing impacts were assessed by digitizing forested areas from recent aerial photography. Alternative Route A would require the most tree clearing overall. Alternative Route C has the least amount of tree clearing for both Pennsylvania and Maryland and would likely have less overall potential impact to the T&E bat species. Fragmentation of forest habitat was minimized through paralleling existing infrastructure, where feasible.

## **Agricultural Preservation**

Agricultural land is a predominant characteristic of the land use in the Project Study Area, with greater concentration on the flatter topography between the Appalachian Mountains to the west and South Mountain to the east. Agricultural lands are predominantly used for row crops, with other areas used for dairy cattle. A number of orchards also exist across the Project Study Area. The majority of these agricultural lands are associated with single farm complexes that may consist of several hundred acres.

Within the Project Study Area, prime agricultural soils accounts for approximately 33% of the soils in Franklin County, Pennsylvania (Franklin County 2012), and approximately 43% of the soils in Washington County, Maryland (USDA, NRCS 2003). Both States and counties institute agricultural preservation programs in order to preserve agricultural uses of high quality farmland. Both Maryland and Pennsylvania offer agricultural preservation easement initiatives in order to preserve the integrity of the local farmland by precluding the development or improvement of a parcel for a purpose other than agricultural uses. **Figure 11** depicts those parcels that have agricultural easements traversed by the Alternative Routes.

### ***Pennsylvania***

In Pennsylvania, the State easements are typically managed by the county. In Franklin County, agricultural easements are purchased at the county level and approved by the State. Farms within Agricultural Security Areas (ASA) may apply for easement purchase. ASAs are a State program whereby a number of adjacent participating farms join together to form an area consisting of a minimum of 250 acres in which participants receive special protection regarding local ordinances affecting farming activities, nuisance complaints, and review of farmland



condemnation by state and local government agencies. A farm must be part of an ASA to qualify for consideration in the Easement Purchase Program (PDA 2017, Ch. 183e). In Franklin County, easements are purchased through the Franklin County Agricultural Land Preservation Board (FCALPB). The FCALPB oversees the terms and conditions of the permitted agricultural activities, as well as restrictions that are established by an easement. Such restrictions include development of buildings and other structures, subdivision, mining, rural enterprises, and soil and water conservation (Franklin County 2017). Utilities are a permitted use within the FCALPB easements.

Within Franklin County, and the limits of the Study Area, the USDA/NRCS does not hold any agricultural easements through their Agricultural Conservation Easement Program (amsl), formerly referred to as the Farm and Ranch Lands Protection Program (FRPP).

### ***Maryland***

In Maryland, there are two ways to preserve farmland: easement donation and easement sale. Easements may be purchased by both state and county governments. Easements may be donated through the Maryland Environmental Trust (MET), which is a component of the MDNR. MET easements are highly customizable to the type of preservation applicable to the individual tract of land, and regulate the type of development permitted. This type of easement is considered a charitable donation that may be deducted from Federal income taxes (MDNR 2017b).

Easements in Maryland may be sold through a number of means. Washington County has instituted the Washington County Agricultural Land Preservation District, by which the county purchases the development rights to an agricultural property for a period of ten years. Once a part of this program, a farm is eligible to sell development rights through the Maryland Agricultural Land Preservation Program (MALPP), receive tax credits, and be protected from nuisance complaints (Washington County 2009). An easement may also be sold through the Maryland Agricultural Land Preservation Foundation's (MALPF) MALPP, the Maryland Rural Legacy Program, or the GreenPrint Program. The MALPF is a part of the Maryland Department of Agriculture (MDA) and places restrictions on development on Prime Farmland and woodland, permanently preserving the property for agricultural use. MALPF will purchase an easement that will remain in perpetuity on the property deed (MDA 2017). The Maryland Rural Legacy Program (MRLP) is a part of the MDNR and provides funding to preserve large tracts of land through public-private partnerships in order to allow local land trusts and governments to enhance natural resources, agriculture, forests and the environment. These easements protect the most ecologically valuable resources that impact the Chesapeake Bay and local waterways (MDNR 2017c). Easements may also be sold through the GreenPrint Program, which is an

initiative of the MDNR that designates Targeted Ecological Areas (TEAs) that have high ecological value, and targets adjacent lands for acquisition and easements (MDNR 2017d).

In the limits of the Project Study Area in Washington County, there is one USDA/NRCS agricultural FFRP easement, which is not crossed by any of the Alternative Routes.

### **Alternative Route Comparison**

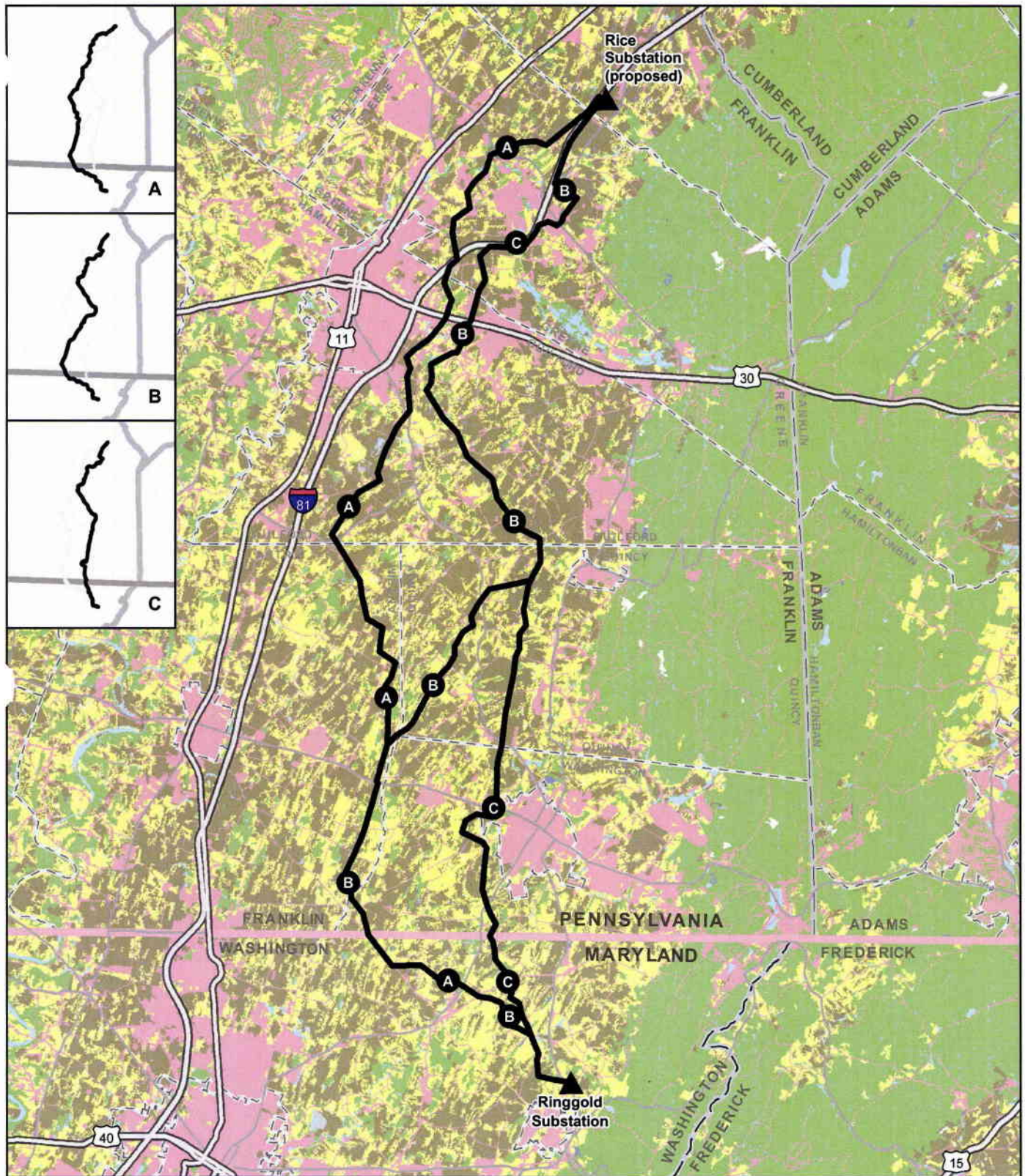
Agricultural lands are a dominant component of the landscape in the Project Study Area and many of these lands are protected from development through agricultural easements. Removal of the development rights of these lands was encouraged to maintain the viability of the farms by eliminating outside pressures to sell land for residential or commercial development. In Pennsylvania, the state easements used by Franklin County for the agricultural preservation allow for transmission line crossings. In most cases, the agricultural easement language does not restrict the ability of an electric transmission line to cross these lands; placement of the structures on a preserved property is not considered development as it does not remove the ability of the landowner to use the land under the transmission lines for agricultural purposes. In general, Alternative Routes were sited to minimize impacts to farming operations by paralleling the edge of fields or through placement of structures at access road locations, where possible.

Information provided by the farm landowners crossed by the various Study Segments highlighted that using pasture or rangeland would be considered less intrusive on farm operations than crossing over croplands. Pasture and rangeland often consist of landscape elements, such as rock outcrops or steeper slopes, that restrict the land use to cattle or horse grazing and that structure placement in these fields has limited effect on the agricultural use. Croplands involve more comprehensive attention through plowing, planting, and harvesting processes that require direct access to most of the area throughout the growing season. Through the siting process, alignment shifts were made to maximize the use of pasture lands and minimize crossing croplands, where feasible. Routing the transmission line along parcel boundaries and fields were feasible, also helped to reduce overall potential impacts. Overall Alternative Route A would use the most pasture land and Alternative Route C would use the least. Review of the cropland data notes that all of the routes would cross a considerable number of acres with just under a 10 acre difference between the extremes. Alternative Route C would cross the least acres of cropland and Alternatives Route A and B would cross a greater amount of cropland.

Numerous orchards are located throughout the Project Area. Typically, orchards can still grow within the transmission line ROW and the structures can be engineered to meet appropriate clearances. Orchard tree species are typically restricted to around 15 feet. As with croplands,

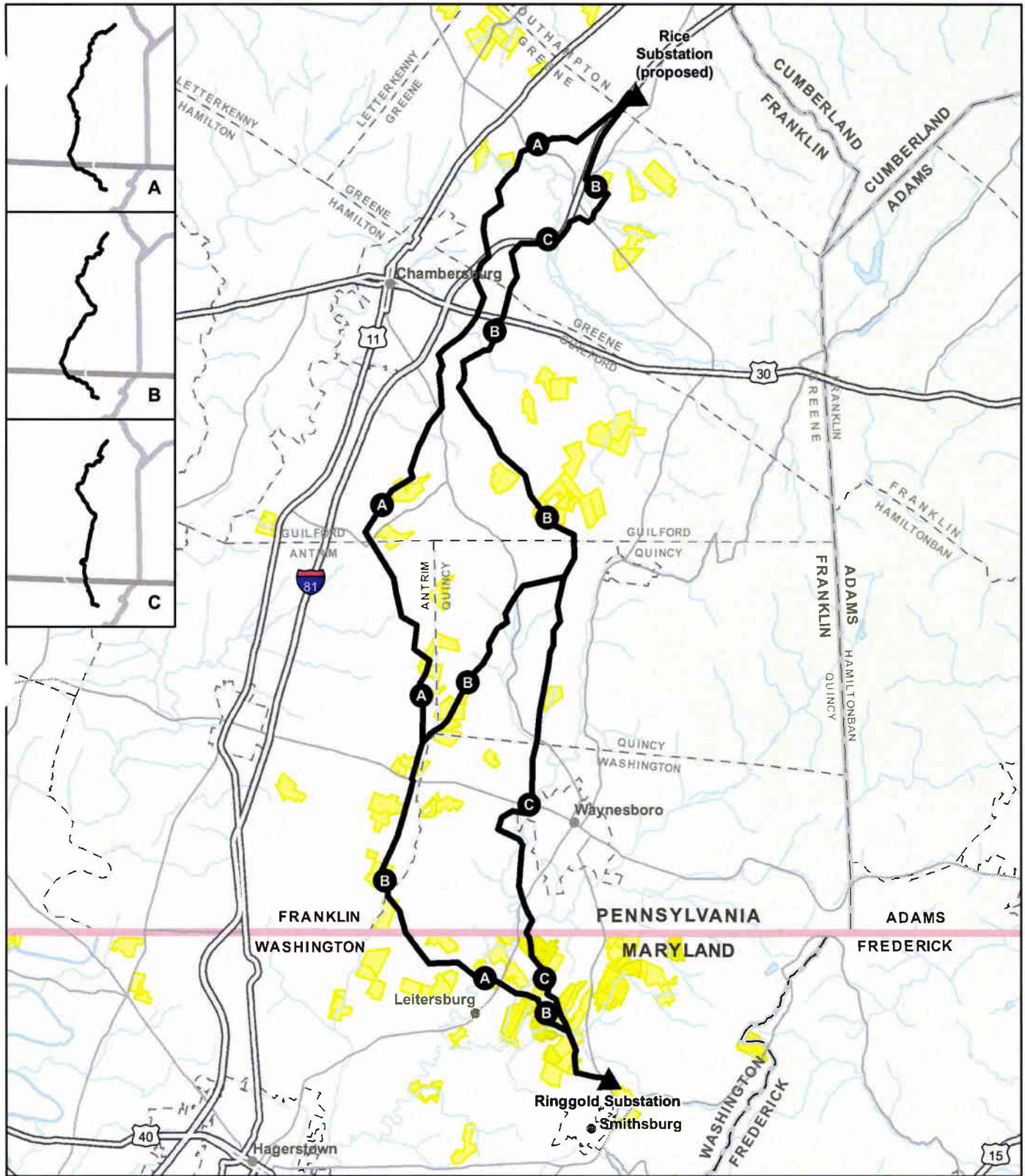
the siting process worked to place alignments in areas across an orchard where structures may be located near access roads or along the edge of a section, thereby reducing the potential loss of trees and minimizing the effect of the structures on the orchard operations. Alternative Route A crosses the most orchard area. Alternative Route B crosses the fewest acres of orchards.





<ul style="list-style-type: none"> <li> Substation</li> <li> Alternative Routes</li> <li> Water/Wetlands</li> <li> Developed</li> <li> Barren Land</li> <li> Forest</li> <li> Shrub/Scrub</li> <li> Grasslands/ Herbaceous</li> <li> Pasture/Hay</li> <li> Cultivated Crops</li> <li> Highway</li> <li> Road</li> </ul>	<p>Data Sources: AEP (2017), ESRI (2011), NLCD Land Use Land Cover (2011)</p> <p>Coordinate System: UTM Zone 18N NAD 83</p> <p>November 14, 2017</p>	<p>Pennsylvania</p> <p>Maryland</p>	<p><b>Figure 10</b> <b>Land Use</b></p> <p>Independence Energy Connection Rice - Ringgold <b>TRANSOURCE</b> 230kV Transmission Line</p> <p>0 1 2 3 4 Miles</p>
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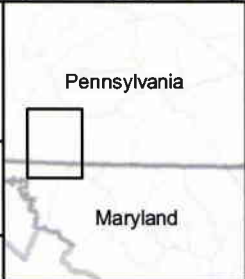




Data Sources: AEP (2017), POWERmap (2012), ESRI (2011), NLCD Forest Cover (2011)

Coordinate System: UTM Zone 18N NAD 83

November 14, 2017



**Figure 11**  
**Agricultural Easements**

Independence Energy Connection  
Rice - Ringgold  
**TRANSOURCE** 230kV Transmission Line

0 1 2 3 4  
Miles

## 4.2.2 Recreation and Conservation Lands

### Resource Characteristics

Recreation and Conservation Lands are typically defined as governmental owned or controlled lands that are publically accessible and provide special conservations value and social service. Scenic vistas, wilderness areas, state game lands, and public parks are several examples of these lands. Recreational areas are depicted in **Figure 12**.

### Wilderness Areas

The National Wilderness Preservation System (NWPS) preserves wild lands with the highest level of government protection, and includes National Forests, National Parks, National Wildlife Refuges, and Bureau of Land Management (BLM) lands. The Project Study Area does not contain lands managed by the National Wilderness Preservation System (NWPS 2016).

#### *Pennsylvania*

### State Lands

Portions of Michaux State Forest are within the Pennsylvania section of the Project Study Area. Michaux State Forest consists of more than 85,500 acres in the area of South Mountain and includes public use facilities and trails (PADCNR 2017c).

There are no Pennsylvania State Game Lands within the Project Study Area (PGC 2017). Two Pennsylvania state parks, Caledonia and Mont Alto, are located along the eastern perimeter of the Project Study Area (PADCNR 2017d).

There are a number of small local community parks throughout the Project Study Area. These parks are primarily located in more densely developed areas and serve local communities. Specific examples include Norlo Park in Guilford Township and Green Township Park.

#### *Maryland*

### Wildlife Management Areas

In Maryland, Wildlife Management Areas (WMA) are managed by the Wildlife and Heritage Service. WMAs are established in order to maintain, enhance, create, and preserve, and protect diverse wildlife populations and their habitat (MDNR 2017c). The Project Study Area is not located within a WMA in Washington County, Maryland (MDNR 2017a).

### State Parks

In Washington County, Maryland, there are no State parks within the Project Study Area (Maryland 2017).



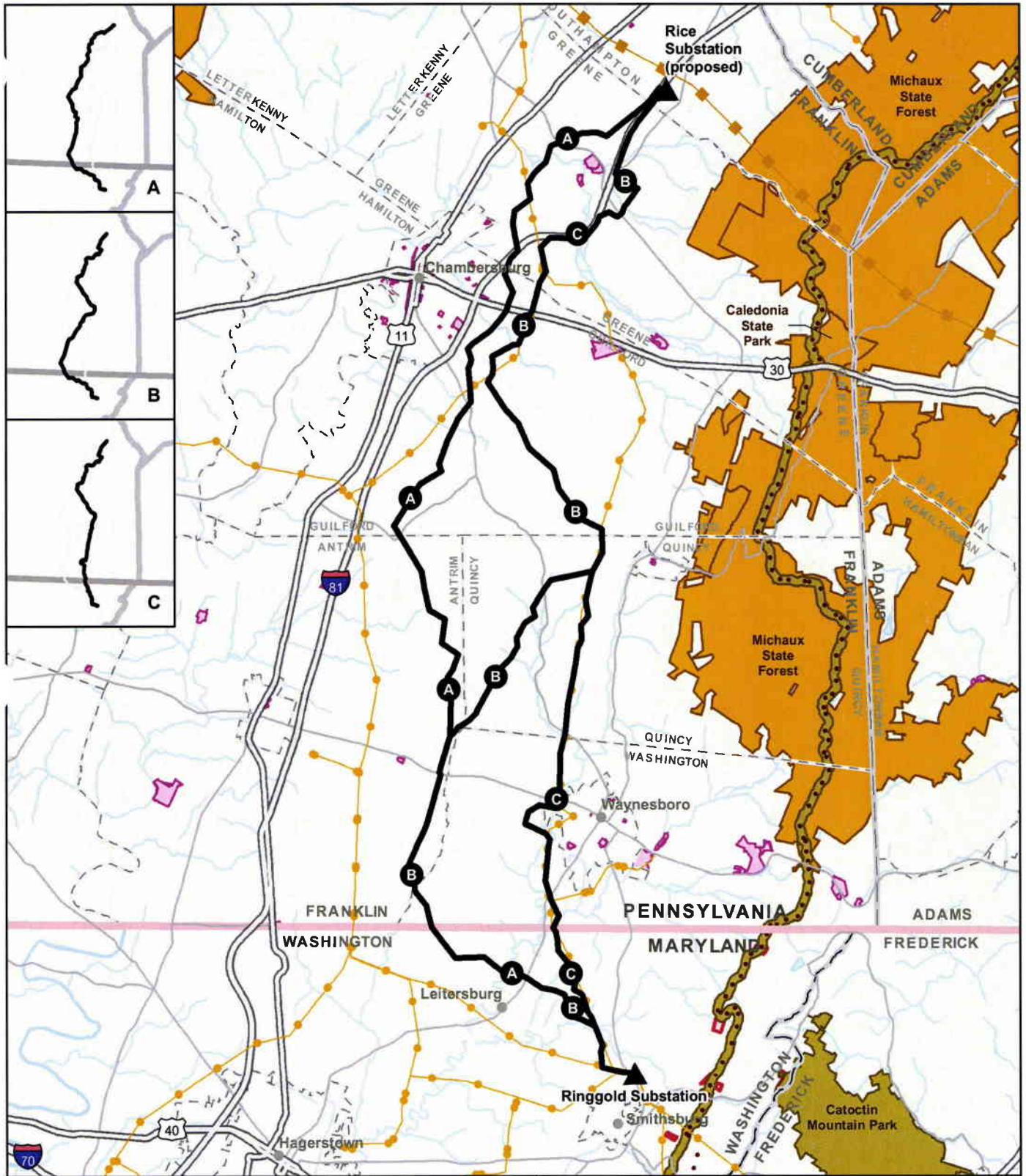
### **Public Trails**

The Appalachian Trail is a 2,190 mile hiking trail extending from Maine to Georgia (Appalachian 2017). This trail is a federally protected recreational area that borders the eastern side of the Project Study Area along South Mountain, mostly within Michaux State Forest in Pennsylvania and preserved corridors in Maryland.

In addition, small community trail networks exist throughout the Project Study Area and serve the local community's recreation needs.

### **Alternative Route Comparison**

None of the Alternative Routes will cross any local parks, state lands, recreational areas, or trail systems.



- Substation
- Appalachian Trail
- National Park
- Federal Land
- State Park
- Local Park

- Existing Transmission Line**
- 115kV - 230kV
  - Greater than 345kV
  - Highway
  - Road
  - Stream
  - Forest Cover

Data Sources: AEP (2017), POWERmap (2012), ESRI (2011), PASDA (2015, 2016), MD GIS Office (2016), Franklin Co GIS Office (2015), NLCD Forest Cover (2011)

Coordinate System:  
UTM Zone 18N  
NAD 83

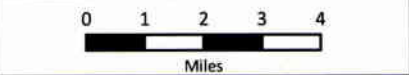


November 14, 2017



**Figure 12**  
**Recreation and Aesthetics**

Independence Energy Connection  
**TRANSSOURCE** Rice - Ringgold  
230kV Transmission Line



### 4.2.3 Developed Land Use

#### Resource Characteristics

Characteristics of the developed land were identified, such as urban and developed land, institutions, mineral and subsurface resources, and airports. As detailed in **Section 2.3.3** meetings were held with the counties, and in Pennsylvania, the municipalities within the Project Study Area to discuss any potential future development plans. Within the Project Study Area there were numerous potential future development plans based on county/municipal meetings and landowner input. The data gathered from these meetings and discussions were considered during the siting process.

#### Urban and Developed Land

Developed areas within the Project Study Area are fairly concentrated, surrounded by land dominated by agricultural development. Urban land is focused around the town centers of Scotland, Chambersburg, Guilford, Fayetteville, Marion, Mont Alto, Greencastle, Waynesboro, Ringgold, Leitersburg, and Smithsburg. Concentrations of urban land also exist along the corridors of I-81, U.S. Route 30, SR 11, and SR. 16, which are the major transportation routes through the area. Throughout the agricultural portions of the Project Study Area, small residential developments create communities that are not centered around a town. There are several industrial centers located within the Project Study Area, primarily near Chambersburg and along the I-81 corridor.

#### Institutions

Within the Project Study Area numerous schools, churches, religious facilities, cemeteries, and hospitals exist including:

- Cemeteries
  - St. Paul's Lutheran Church Graveyard (MD)
  - Brownsville Church of God Cemetery (PA)
- Churches
  - St Paul United Methodist Church (PA)
  - Wayside Baptist Church (MD)
- Schools
  - Fayetteville Elementary School (PA)
  - Greencastle-Antrim High School (PA)

- Falling Spring Elementary School (PA)
- Hospitals
  - Waynesboro Hospital (PA)

### **Mineral and Subsurface Resources**

There are several quarries within the Project Study Area in Pennsylvania, but none in the Maryland portion. New Enterprise Stone and Lime Company own the two limestone quarries in Southampton Township; the Mount Cydonia Sand Plant Number 2 quarry is located in Greene Township; and the Mount Cydonia Number 1 and Chambersburg Quarry quarries are in Guilford Township. David H. Martin Excavating owns the Martin Shale Pit Number 2 located in Greene Township and the Martin Shale Pit Number 8 located in Chambersburg Township. The Commerce Street Shale Pit is in Hamilton Township and the Borough of Chambersburg and the Letterkenny Road Shale Pit is located in Greene and Hamilton Townships (DCNR 2017c).

### **Airports**

Within the Project Study Area, there are two public use airports, the Hagerstown Regional Airport – Richard A. Henson Field and the Franklin County Regional Airport. Five private use airports also exist within the Project Study Area including the Lost Acres Airport, Rocktop Airport, Five Lakes Airport, Letterkenny Army Depot Helipad, and Greencastle U.S. Army Reserve Center Helipad. Two helipads were noted on mapping east of Waynesboro, but neither was confirmed during field reviews.

### **Alternative Route Comparison**

Developed commercial land within the Project Study Area is focused along specific highways including I-81, U.S. Route 30, and SR 16, and occasionally in the scattered villages in between. Residential development is very dense along U.S. Route 30 between Fayetteville and Chambersburg, west of I-81 north of Chambersburg, and in several towns located along the base of South Mountain, such as Waynesboro, Mont Alto, and Leitersburg. Moderate to low density residential development is sporadic across the rest of the landscape, with large areas dominated by agricultural fields with pockets of residential development along local roads.

The number of parcels crossed and the number of unique landowners are relatively similar for all of the Alternative Routes despite the variability in lengths. Overall Alternative Route B, which is the longest route option, would involve the most parcels and the most landowners. Conversely, Alternative Route C, which is the shortest option, would cross the fewest parcels and also have the fewest landowners thereby making it the best route from a landowner



coordination perspective. In addition, Alternative Route C has a significant amount of the overall length parallel to existing transmission lines and a number of residences are already adjacent to existing infrastructure.

Review of the distance the Alternative Routes would be from residential structures notes that Alternative Route A would have one home within the ROW, which would need to be acquired for the route to be developed. Alternative Route B would have the most homes within 100 feet of the transmission centerline whereas Alternative Route A would have the most within 500 feet of centerline. Alternative Route C would have the least homes within 500 feet of centerline and would be in close proximity to the fewest residential structures.

Since all of the Alternative Routes need to cross U.S. Route 30, there will be sections of each that will extend through commercial areas along this highway. Other route sections will also parallel I-81, which also contains areas of dense commercial development. In most cases, siting a transmission line through a commercial area is an acceptable practice, but one that may have some engineering challenges due the height or spacing between the buildings, and the activities involved in the businesses (i.e., semi-truck storage, hydraulic lift operations). Review of the data indicates that Alternative Route A would involve several commercial buildings within the ROW and the most buildings within 250 feet of centerline. None of the other route options have any structures in the ROW, but all would have several buildings within 250 feet of the centerline.

Another land use item evaluated were mines and quarries, which are typically incompatible with transmission lines due to the instability of the lands and the extensive operations involved in their processes. No mines were noted in the Project Study Area, but several active quarries are present, two of which are crossed by the route options. One of these is a limestone quarry that owns surrounding parcels and has plans for expansion. Another is a sand quarry that shows limited signs of activity and no known plans for expansion. Review of the options notes that Alternative Route A would cross the limestone quarry area. Alternative Routes B and C would not cross any quarries.

There are also several private airports in the Project Study Area that are located close to the developed areas around I-81 and U.S. Route 30. Efforts were made during the siting process to provide sufficient buffer around these facilities to reduce the potential need to coordinate with the Federal Aviation Administration (FAA), who would evaluate structure locations and elevations to provide determination on possible conflicts to landing and takeoff pathways. Alignments found to be in conflict may require additional engineering to reduce structure heights, which may result in an increase in the number of structures involved across these



pathways. The data in Table 9 note that Alternative Route A is within one mile of an airport, which may make this option potentially more difficult to engineer.

In regards to other social institutions in the Project Study Area, each of the Alternative Routes would be within at least 1,000 feet of a school except Alternative Route A. Alternative Routes B and C would be located in a forest area southeast of Falling Spring Elementary School with approximately 590 feet of woods between the school and these alignments. Alternative Route A would be within 1,000 feet of a church or place of worship consisting of Cedar Valley Mennonite Church. The route would be situated to the west within an agricultural field and would not cross this feature. None of the Alternative Routes would be located near a hospital, cemetery, or local park.

#### **4.2.4 Historic and Archeological Resources**

##### **Resource Characteristics**

As part of the Siting Study, a desktop survey of existing historic structures and archaeological resources within the Project Study Area was conducted by accessing the Pennsylvania Historical and Museum Commission's (PHMC) Bureau of Historic Preservation's Cultural Resources Geographic Information System (CRGIS) and the Maryland Historic Trust's (MHT) "Medusa" GIS system and database to review available information on previously recorded historic structures, historic districts, and archaeological sites (PHMC CRGIS 2016, MHT Medusa 2016). The Project Study Area included a one-mile buffer of all of the proposed alignments for above ground resources (historic properties), and a 130-foot wide ROW for archaeological resources. Cultural resources are depicted in **Figure 13** and only include the location of non-sensitive data tied to aboveground resources.

##### ***Pennsylvania***

##### **Historic Architecture**

Forty-four NRHP-listed or eligible properties have been identified in the Project Study Area in Pennsylvania, and are listed in **Table 7a**.

**TABLE 7a: NRHP-listed or eligible Historic Properties in the Project Study Area (PA)**

PHMC KEY#	Resource Name	Resource Address/ Location	NR Status/ SHPO Opinion Date	Township	County
<b>LISTED</b>					
877	Brotherton Farm	Falling Springs Rd.	Listed: 03/30/1979	Guilford	Franklin
883	Culbertson-Harison Farm	Nyesville Rd.	Listed: 06/27/1980	Greene	Franklin
887	James Finley House	Coffrey Ave (Rocky Spring Golf Course)	Listed: 11/19/1974	Greene	Franklin
898	Old Brown's Mill School	Browns Mill Rd. and Angle Rd.	Listed: 03/07/1973	Antrim	Franklin
906	Gass House (Union Plantation)	Franklin Farms Ln	Listed: 04/11/1977	Guilford	Franklin
79841	Rocky Spring Presbyterian Church	Rocky Spring Rd.	Listed: 05/13/1994	Letterkenny	Franklin
79869	Coldbrook Farm	955 Spring Ln.	Listed: 03/28/1996	Chambersburg	Franklin
79886	Corker Hill	1237 Garver Ln.	Listed: 03/13/2003	Greene	Franklin
96472	Waynesboro Armory	N Grant St.	Listed: 12/22/1989	Washington	Franklin
<b>ELIGIBLE</b>					
83691	Kreiner Rd. Bridge	Kreiner Rd., T-489	Eligible: 03/05/2007	Guilford	Franklin
87191	Patrick Vance House	297 Quarry Road	Eligible: 06/02/1986	Chambersburg	Franklin
91947	Brian Sprecher Property	14853 Honodel Rd.	Eligible: 03/04/1987	Washington	Franklin
96323	John Stam Farm	2330 Scotland Rd.	Eligible: 06/23/1989	Chambersburg	Franklin
97574	Marks Property	Off of Coquina Sands Drive	Eligible: 11/21/1991	Washington	Franklin
97861	Martin Farm	6150 Angle Rd.	Eligible: 03/25/1992	Guilford	Franklin
101782	Franklin County Poor House	Franklin Farms Ln	Eligible: 11/03/1993	Guilford	Franklin

**TABLE 7a: NRHP-listed or eligible Historic Properties in the Project Study Area (PA)**

PHMC KEY#	Resource Name	Resource Address/ Location	NR Status/ SHPO Opinion Date	Township	County
101835	Christian Fry, Jr. House	1438 Nolts Rd.	Eligible: 01/15/1997	Greene	Franklin
101839	Samuel Disert House (listed as Historic District)	Walker Road	Eligible: 10/13/1993	Chambersburg	Franklin
101841	C. Fry Farmstead	Kohler Rd.	Eligible: 10/13/1993	Greene	Franklin
102137	Eastern Greene Township Rural Historic District		Eligible: 04/05/1994 (Not eligible: 04/28/2005)	Greene	Franklin
102235	Waynesboro Historic District		Eligible: 08/13/2000	Waynesboro	Franklin
103456	Henry Greenawalt House	1085 Lincoln Way	Eligible: 06/16/1995	Hamilton	Franklin
105342	Residence, Barn, Outbuildings at Golf Complex	Penn National Golf Club and Inn	Eligible: 09/26/1994	Guilford	Franklin
105585	Letterkenny Army Depot Chapel: Italian P.O.W. Chapel	New Franklin Rd.	Eligible: 10/04/1996	Letterkenny	Franklin
106025	Cumberland Valley Railroad (Shippensburg to MD line) Historic District	From Shippensburg, PA to Hagerstown, MD	Eligible: 03/04/1997	Multiple	Franklin, Cumberland

**TABLE 7a: NRHP-listed or eligible Historic Properties in the Project Study Area (PA)**

PHMC KEY#	Resource Name	Resource Address/ Location	NR Status/ SHPO Opinion Date	Township	County
106860	Letterkenny Army Depot	S of Rt. 0533, W of Rt. 0997, E of Kittatinny Mts., and N of Rt. 0340	Eligible: 08/26/2011	Letterkenny, Hamilton, & Greene	Franklin
107396	Sunny Side Farm (Sunny Side Antiques)	2027 Lincoln Way	Eligible: 12/02/1997	Guilford	Franklin
108701	Hambright Farmstead	1873 Ragged Edge Rd.	Eligible: 01/15/1997	Greene	Franklin
108705	Shivley Farmstead	528 Ragged Edge Rd.	Eligible: 01/15/1997	Greene	Franklin
108707	Sollenberger Farmstead	896 Ragged Edge Rd.	Eligible: 01/15/1997	Greene	Franklin
108717	S. Grove Farmstead	2585 Woodstock Rd.	Eligible: 01/15/1997	Greene	Franklin
108721	Morehead Kennedy House	1090 Ragged Edge Rd.	Eligible: 01/15/1997	Greene	Franklin
108723	Shivley's Schoolhouse	976 Ragged Edge Rd.	Eligible 01/15/1997	Greene	Franklin
108725	Brindle Farmstead	1883 Ragged Edge Rd.	Eligible 01/15/1997	Greene	Franklin
110410	Chambersburg Armory	1010 Lincoln Way	Eligible: 08/28/1998	Hamilton	Franklin
115232	Col. Samuel Culbertson House	7450 Nyesville Rd.	Eligible: 08/25/2000	Greene	Franklin
117257	McKee Historic District (Woodstock)	Woodstock Rd.	Eligible: 01/07/1997	Greene	Franklin

**TABLE 7a: NRHP-listed or eligible Historic Properties in the Project Study Area (PA)**

PHMC KEY#	Resource Name	Resource Address/ Location	NR Status/ SHPO Opinion Date	Township	County
117364	Kuhns Farmstead (Jacob-Frey Farmstead)	1205 Mower Rd.	Eligible: 01/15/2001	Greene & Guilford	Franklin
117367	John Lehman Farmstead: Kuhns Farm	1316 Mower Rd.	Eligible: 01/15/1997	Greene	Franklin
117370	Mower Farmstead	1068 Mower Rd.	Eligible 01/15/1997	Greene & Guilford	Franklin
117373	Lantz Farmstead	1071 Mower Rd.	Eligible 01/15/1997	Greene	Franklin
117376	Peter Brindle Farmstead	2390 Woodstock Rd.	Eligible: 01/15/1997	Greene	Franklin
128900	Scotland School for Veterans' Children: Soldiers' Orphans School	3583 Scotland Rd.	Eligible: 10/29/2001	Chambersburg	Franklin
140905	Miller's House	7748 Brown Mill Rd.	Eligible: 06/22/2004	Antrim	Franklin

The majority of the NRHP-eligible and listed properties within the Pennsylvania portion of the Study Area are either houses or farmsteads which date to the eighteenth and nineteenth centuries. Additionally there are three schools, a church, a poor house, two armories, an army chapel, and one bridge included in the Study Area. Many of these resources are either the oldest or a well-preserved example of its kind of architecture or building tradition within Franklin County. Several of these resources are also significant for their relation to certain people of historical significance. Many of these resources, particularly the farmsteads within Greene Township, have little to no information about the resource listed on CRGIS. Additionally, many of these resources include a comment from the PHMC that eligibility may need to be re-assessed.



All of the NRHP-eligible and listed houses (not farmsteads) within Franklin County date to the eighteenth and nineteenth centuries. They are typically NRHP-eligible under Criterion C for architecture, though some have additional historical significance. The NRHP-listed houses include the James Finley House (PHMC Key# 000887; NRHP# 74001783) and the Gass House (PHMC Key# 000906; NRHP# 77001168) which are some of the oldest dwellings remaining in Franklin County. The Gass House was built by William Gass in 1760. It is significant as a well-preserved eighteenth-century stone farmhouse, but it is also significant as a former residence of Patrick Gass who took part in the Lewis and Clark expeditions and fought under General Jackson in the War of 1812. The James Finley House is also an eighteenth-century stone farmhouse typical of those found in south central Pennsylvania. It was built by James Finley who served as a private in the Cumberland County militia during the Revolutionary War and was appointed a Justice of the Peace for the county in 1783. It was eventually turned into a Commanding Officer's Residence, Building No. 505 of the Letterkenny Army Depot.

The NRHP-eligible houses within the Study Area include the Col. Samuel Culbertson House (PHMC Key# 115232), the Patrick Vance House (PHMC Key# 087191), The Henry Greenawalt House (PHMC# 103456), the Samuel Disert House (listed as Historic District) (PHMC Key# 101839), and The Miller's House (PHMC Key# 140905). Both the Col. Samuel Culbertson House and the Patrick Vance house were built in the late eighteenth century and are examples of stone, Georgian-style dwellings. The PHMC notes in their records for both of these resources that re-evaluation of National Register eligibility may be necessary due to the date of the initial evaluation, and to contact them for guidance. The same note was found attached to both the nineteenth-century Henry Greenawalt House and Samuel Disert House. The Samuel Disert House is currently listed in CRGIS as a Historic District; however, this is likely incorrect as the property includes only three contributing resources. The Miller's House was built circa 1875-1885, with alterations dating to 1950. Its particular use is listed as a Miller's residence.

The vast majority of the resources within the Study Area within Pennsylvania are farmsteads. The NRHP-listed farms include Corker Hill (PHMC Key# 079886; NRHP# 03000131), Coldbrook Farm (PHMC Key# 079869; NRHP# 96000321), Culbertson-Harbison Farm (PHMC Key# 000883; NRHP# 80003499), Brotherton Farm (PHMC Key# 000877; NRHP# 79002227). Both Corker Hill and Coldbrook Farm are early eighteenth-century examples of a gentleman's farm/country estate. Corker Hill reflects both Federal and Colonial Revival influences, while Coldbrook is an example of the transition between the Georgian and Federal styles. The Brotherton Farm is also known as the Brotherton-McKenzie Farm. This nineteenth-century farm is primarily significant for its Georgian style architecture and secondarily for its association with the history of agriculture, commerce and industry in Franklin County. The Culbertson-Harbison Farm which was built around the turn of the century is significant for its Federal style architecture and for

its association with a prominent local family who were active in both the French and Indian War and the American Revolution.

A large majority of the NRHP-eligible farmsteads within the Study Area are located in Greene Township, mostly identified during a late 1990's architectural survey. Approximately half of these NRHP-eligible resources include no information on CRGIS. These include the Shively Farmstead (PHMC Key# 108705), the Hambright Farmstead (PHMC Key# 108701), the Brindle Farmstead (PHMC Key# 108725), the S. Grove Farmstead (PHMC Key# 108717), Sollenberger Farmstead (PHMC Key# 108707), and Morehead Kennedy House (PHMC Key# 108721). Seven additional farmsteads have a small amount of information available on CRGIS, dating them to the late eighteenth-early twentieth centuries and identifying various construction materials of stone, brick, and timber. These resources include The C. Fry Farmstead (PHMC Key# 101841) built in 1780 and 1830, The Mower Farmstead (PHMC Key# 117370) built circa 1830, the Peter Brindle Farmstead (PHMC Key# 117376) built circa 1840-1850, The Christian Fry, Jr. House (PHMC Key # 101835) built circa 1840-1860, The Lantz Farmstead (PHMC Key# 117373) built circa 1870, the John Lehman Farmstead: Juhns Farm (PHMC Key# 117367) built in 1908, and the Kuhns Farmstead (Jacob-Frey Farmstead) (PHMC Key # 117364) with no construction date documented.

Six additional NRHP-eligible farm properties are located in the Study Area within Chambersburg, Washington, and Guilford. All of these resources include notation that re-evaluation of National Register eligibility may be necessary due to the date of the initial evaluation, and to contact them for guidance. These resources include The John Stam Farm (PHMC Key # 096323), The Brian Sprecher Property (PHMC KEY# 091947), the Marks Property (PHMC Key# 097574), The Martin Farm (PHMC Key# 097861), Sunny Side Farm (Sunny Side Antiques) (PHMC Key# 107396), and Residence, Barn, Outbuildings at Golf Complex (PHMC Key# 105342). The John Stam Farm includes a Pennsylvania German Bank Barn the was reported in the 2007 *Inventory of Pennsylvania Historic Barns, Franklin County* report by the Center for Rural Pennsylvania. The date listed for the barn is 1814, with alterations in 1960. It is registered with the PA Department of Agriculture as a Century or Bicentennial Farm. The Brian Sprecher Property, the Marks property, and the Martin Farm all include buildings of domestic and agriculture/subsistence functions, but no age or specific significance is noted in CRGIS. Sunny Side Farm in Guilford dates to the early twentieth century and represents the Colonial Revival and Bungalow/Craftsman style. Also in Guilford, the Residence, Barn, Outbuildings at Golf Complex (PHMC Key# 105342) CRGIS entry contains no additional information.

Three historical schools are located within the study area: Old Brown's Mill School (PHMC Key# 000898; NRHP# 73001632), the Scotland School for Veterans' Children (Soldiers' Orphans School) (PHMC Key# 128900), and Shively's Schoolhouse (PHMC Key# 108723). The NRHP-listed

Old Brown's Mill School was built in 1836. It is a well-preserved example of a stone, mid-nineteenth-century one room schoolhouse which served the community until 1921 when a new school was opened. It is now owned by the Franklin County Historical Society and is operated as a museum. The NRHP-eligible Scotland School for Veterans' Children (Soldiers' Orphans School) was built in 1932 with alterations made between 1951 and 1952. The resource includes ten buildings: a school and 9 dormitories. It continues to function as a school today. The PHMC notes in their records that re-evaluation of National Register eligibility may be necessary due to the date of the initial evaluation, and to contact them for guidance. The third school, Shivley's Schoolhouse (PHMC Key# 108723), is documented as NRHP-eligible; however, no information about the resource is listed on CRGIS.

Rocky Spring Presbyterian Church (PHMC Key# 079841; NRHP# 94000430) is NRHP-listed as significant under Criterion A for its association with exploration/settlement and under Criterion C for architecture. The cemetery adjacent to the church is considered significant along with the church building. The church building is particularly significant as the only known remaining eighteenth-century brick church building in Franklin County, and it survives with a remarkable degree of integrity.

The NRHP-eligible Franklin County Poor House (PHMC Key# 101782) was built in 1808. It is a well-preserved example of a stone Federal-style Institutional Housing building. The PHMC notes in their records that re-evaluation of National Register eligibility may be necessary due to the date of the initial evaluation, and to contact them for guidance.

Military-related resources include the Waynesboro Armory (PHMC Key# 096472; NRHP# 89002080), the Chambersburg Armory (PHMC Key# 110410), and the Letterkenny Army Depot Chapel/ Italian P.O. W. Chapel (PHMC Key# 105585). The NRHP-listed Waynesboro Armory was built in 1938 by Silverman & Levy, and is significant under Criteria A and C for Military Architecture; it is one of seventeen armories built in 1938 in Pennsylvania. The NRHP-eligible Chambersburg Armory was built several years earlier, in 1931, out of limestone and in the Colonial Revival Style. This armory is currently vacant/not in use. The NRHP-eligible Letterkenny Army Depot Chapel/ Italian P.O. W. Chapel (PHMC Key# 105585) was built in 1945. The PHMC notes that this resource is federally owned and under Covenant. The PHMC also notes in their records that re-evaluation of National Register eligibility may be necessary for both the Chambersburg Armory and the Letterkenny Chapel due to the date of the initial evaluation, and to contact them for guidance.

The only NRHP-eligible bridge within the Study area is the Kreiner Rd. Bridge (PHMC Key# 083691) which was a steel bridge that was built circa 1900 along the Western Maryland Railroad. It was listed as eligible in 2007; however, the comments within CRGIS indicate that the

1900 steel bridge may have been demolished around 2000 and replaced by a new box beam bridge in 2001. The eligibility status is therefore unclear and additional consultation with the PHMC would be necessary.

### ***Pennsylvania Historic Districts***

There are five Historic Districts within the Pennsylvania portion of the Study Area (not including PHMC Key# 101839 which is labeled as a historic district, but appears to be an individual resource). All five districts are NRHP-eligible; these include the Letterkenny Army Depot (PHMC Key# 106860), the McKee Historic District (Woodstock) (PHMC Key# 117257), the Cumberland Valley Railroad Historic District (Shippensburg to MD line) (PHMC Key# 106025), Eastern Greene Township Rural Historic District (PHMC Key# 102137), and the Waynesboro Historic District (PHMC Key# 102235). Additional consultation with the PHMC will be necessary to determine if the Cumberland Valley Railroad, Eastern Greene Township Rural, and Waynesboro Districts are still considered to be eligible.

The Letterkenny Army Depot is a 19,511 acre military base that includes approximately 1,800 resources. It is listed as a Historic District in the paperwork, but not in CRGIS. It was originally built as a military ordnance base. Construction of the depot began in 1942 by William Lozier, Inc. of NY and was completed in 1957. The period of significance for the depot is 1941-1957, though the depot is still in use today.

The McKee Historic District (Woodstock) is documented as significant in the areas of mid-nineteenth-century agriculture and subsistence. No additional information about the district is available on CRGIS.

The Cumberland Valley Railroad Historic District (Shippensburg to MD line) is considered eligible for NRHP listing under Criterion A, for its contribution to the long-term development of the Cumberland Valley and to the railroad industry. The rail line crosses from Shippensburg, PA to Hagerstown, MD and passes approximately 34 miles through multiple towns. The district consists of the rail bed, with approximately 25 bridges, crossings, and tracks. It was built circa 1837- 1841 with additions circa 1908- 1913. Few of the original associated buildings remain, as most of the stations have been demolished. As of 1997, the railroad was still in use as part of Conrail's Hagerstown Secondary Line. The PHMC notes in their records that re-evaluation of National Register eligibility may be necessary due to the date of the initial evaluation, and to contact them for guidance.

The Eastern Greene Township Rural Historic District is a 12.5 acre Historic District that is unclear in its eligibility. According to CRGIS records, the district is officially listed as eligible. However, according to the Administrative Actions, the PHMC and National Park Service originally

determined the district to be eligible in 1995, and the National Park Service determined it to be eligible in 1995. All NR Nominations have been returned, and as of 2005, PHMC determined the district to be not eligible following a site visit. Additional PHMC guidance will be required.

The Waynesboro Historic District has no information documented about in on CRGIS. The PHMC, however, notes in their records that re-evaluation of National Register eligibility may be necessary due to the date of the initial evaluation, and to contact them for guidance.

**Archaeology**

Seven PHMC-identified archaeological sites are located within the 130-ft ROW Archaeological Study Area assigned to each alternative route, and are listed in **Table 7b**. These sites are illustrated in **Figure 13** but due to the sensitivity of these resources, **their location is considered proprietary and is only being made available to the PUC for review per their regulatory requirement**. Identification and avoidance of specific sites will be coordinated with the PHMC as part of the permitting process that will be required after the Proposed Route has been approved.

TABLE 7b: Identified Archaeological Sites within the Archaeological Study Area (PA)			
Site#	Resource Name	Resource Type	NR Status/ SHPO Opinion Date
36FR0406	Skelly Pasture Site	Open Habitation prehistoric	Eligible: 12/21/2001
36FR0294	Unknown Site	Open Habitation prehistoric	Insufficient Information to Evaluate
36FR0244	94A Site	Open Habitation prehistoric	Insufficient Information to Evaluate
36FR0070	Turkey Site	Open Habitation prehistoric	Insufficient Information to Evaluate
36FR0001	Unknown Site	Open Habitation prehistoric	Insufficient Information to Evaluate
36FR0337	2390 Woodstock Road Site	Open Prehistoric Site, Unknown Function	Insufficient Information to Evaluate
36FR0078	Woodstock I-81 Site	Open Habitation prehistoric	Insufficient Information to Evaluate

All but one of the sites with the Archaeological Study Area are prehistoric sites. All but one of the prehistoric sites within the Project Study Area have been identified, but have not been assessed for NRHP listing eligibility. The exception is the Skelly Pasture Site (36FR0406) in



Guilford. This is an Open Habitation prehistoric site that is NRHP-eligible. Rhyolite/Metarhyolite Genessee Points were recovered from the site along with other jasper, quartz, and rhyolite lithics. A radiocarbon date of 270 ( $\pm 60$ ) was documented at the site. Identified archaeological sites may require additional Phase II archaeological survey to determine eligibility if site avoidance is not possible once the preferred alternatives are chosen.

### ***Maryland***

#### **Historic Architecture**

Twelve National Register of Historic Places (NRHP)-listed or eligible properties have been identified in the Project Study Area in Maryland, and are listed in **Table 8a**. Historic properties are defined as buildings, structures, districts, objects, sites, and linear historic sites aged 50 years or more. Additional identified historic properties which have not been assessed for NRHP eligibility are not included in this report. Once an alignment is chosen, additional research will be done to identify other historic architectural resources within the ROW or which may be affected visually.

<b>TABLE 8a: NRHP-listed or eligible Historic Properties in the Project Study Area (MD)</b>						
<b>MHT ID#</b>	<b>NRHP REF#</b>	<b>Resource Name</b>	<b>Resource Address/ Location</b>	<b>NR Status/ SHPO Opinion Date</b>	<b>Township</b>	<b>County</b>
<b>LISTED</b>						
WA-I-142	3001292	Rockledge	13535 Foxfire Ln.	Listed: 12/18/2003	Hagerstown	Washington
WA-I-149	79003271	Bell-Varner House	Unger Road	Listed: 9/24/1979	Smithsburg	Washington
WA-I-154	90001994	Huckleberry Hall (Charles Mill)	Charles Mill Rd.	Listed: 12/28/1990	Hagerstown	Washington
WA-I-159	98001231	Lantz-Ziegler House	21000 Leitersburg Pike (MD 60)	Listed: 10/08/1998	Hagerstown	Washington
WA-I-174	3001295	Leitersburg Historic District		Listed: 12/19/2003	Leitersburg	Washington
WA-I-175	99001543	Good-Hartle Farm	13357 Little Antietam Road	Listed: 12/09/1999	Hagerstown	Washington

**TABLE 8a: NRHP-listed or eligible Historic Properties in the Project Study Area (MD)**

MHT ID#	NRHP REF#	Resource Name	Resource Address/ Location	NR Status/ SHPO Opinion Date	Township	County
WA-I-216	74000973	Brightwood (Yeager House)	Marsh Pike	Listed: 07/30/1974	Hagerstown	Washington
WA-I-523	90001945	Lehman's Mill Historic District	Lehman's Mill Rd.	Listed: 01/04/1991	Hagerstown	Washington
ELIGIBLE						
WA-I-156		Brick House, Near Leitersburg	22527 Ringold Pike	Eligible: 08/09/2002	Hagerstown	Washington
WA-I-735		Bridge 21026	Little Antietam Rd over Little Antietam Creek	Eligible: 04/03/2001	Hagerstown	Washington
WA-IV-049		Kretsinger Farm	13654 Kretsinger Rd.	Eligible: 08/09/2002	Smithsburg	Washington
WA-IV-259		Smithsburg Historic District		Eligible: 05/07/2004	Smithsburg	Washington

All but one of the NRHP eligible and listed properties within the Maryland portion of the study area are either houses or farmsteads which date to the eighteenth and nineteenth centuries. Many of these are either the oldest or a well-preserved example of its kind of architecture or building tradition within Washington County. Several of these resources are also significant for their relation to certain ethnic groups (German) or the agricultural history of the area. One resource does not fall into this broader category: Bridge 21026. No information about this resource is available online, other than that it has been found to be NRHP-eligible by the MHT.

Rockledge (MHT Inventory# WA-I-142; NRHP# 03001292) is an NRHP-listed building which is significant for exemplifying the limestone architecture typical of rural Washington County in the eighteenth and early nineteenth centuries. Rockledge retains sufficient integrity to stand as a representative example of this regional building tradition. Unlike the majority of surviving limestone houses of the period, which are relatively large buildings constructed in a single building campaign, Rockledge was built in three sections during the early nineteenth century. This process of enlargement reflects the economic status of the owner.

Dated to 1851, the NRHP-listed Bell-Varner House (MHT Inventory# WA-I-149; NRHP# 79003271) is a documented and well-maintained example of mid-nineteenth century domestic

architecture in Washington County. The house is also important for the eighteenth-century woodwork and structural elements found in the basement. These suggest that parts of an earlier house were used in construction of the present dwelling, or that the present house rests on foundations of a possible eighteenth century structure.

Huckleberry Hall (MHT Inventory# WA-I-154; NRHP# 90001994) is NRHP-listed and is significant for its architectural character. Built about 1784, the house embodies the distinctive characteristics of eighteenth century rural Germanic domestic architecture in the middle to western sections of Maryland. While the house includes many typical Germanic characteristics, it does include unique features such as a four-room plan rather than the typical three-room plan, original interior finishes including stenciling and marbleizing, and the placement of the stair rising across a front window.

Brick House, near Leitersburg (MHT Inventory# WA-I-156) is a farmstead property eligible for NRHP-listing as a significant surviving example of early Washington County vernacular architecture. Both houses on the property are characteristic of late eighteenth and early nineteenth-century German farmsteads in the region and the farm maintains its historical continuity. This property is eligible for listing under Criterion A for its association with regional agricultural practices and its ties to important ethnic groups (Germans) significant in the region's development. The property is also eligible under Criterion C for its architecture.

The Lantz-Zeigler House (MHT Inventory# WA-I-159; NRHP# 98001231) is a NRHP-listed resource in Hagerstown; it is significant under Criterion C as an exceptionally well-crafted and well-preserved example of a vernacular architectural form which characterized rural Washington County in the early nineteenth century. It displays outstanding coursed stone masonry, exemplifying a regional building tradition, and retains the majority of its interior decorative detailing.

The NRHP-listed Good-Hartle Farm (MHT Inventory# WA-I-175; NRHP# 99001543) is primarily significant for its architecture. The house comprises a log section built after 1765 by Jacob Good, a Swiss Mennonite from Lancaster County, Pennsylvania, and a stone section built in 1833 by George Hartle, the grandson of a German immigrant also from Lancaster County. The house thus presents a significant example of a rare early structure which was adapted for nineteenth century use by the 1833 addition. The springhouse, wagon shed, and barn reflect the continued agricultural function of the farm complex.

Brightwood (MHT Inventory# WA-I-216; NRHP# 74000973) is NRHP-listed and an unusually large log and stone building with elaborately carved Adamesque embellishments, built during the eighteenth and early nineteenth century. The stone wing of the house is believed to be one

of the oldest surviving houses in Washington County. Also located on the property are a stone springhouse and a stone smokehouse. A fourth building, a log "quarter," has been demolished.

Kretsinger Farm (MHT Inventory# WA-IV-049) is an NRHP-eligible resource that includes five buildings: a brick house, barn, agricultural storage building, spring house, and an abandoned frame dwelling. The property is recommended eligible under Criteria A and C. The combined elements of this historic property are consistent with regional German-influenced farmsteads composed of multiple dwellings, agricultural outbuildings, and fields. Additional research may reveal that it's a component in a larger rural historic landscape district.

Bridge 21026 (MHT Inventory# WA-I-735) is an NRHP-eligible resource; however no information is available regarding the bridge through Medusa.

### ***Maryland Historic Districts***

There are three Historic Districts within the Maryland portion of the Study Area. Two of the districts are NRHP-listed; these include the Lehman's Mill Historic District (MHT Inventory# WA-I-523; NRHP# 90001945) and the Leitersburg Historic District (MHT Inventory# WA-I-174; NRHP# 03001295). The Smithsburg Historic District (MHT Inventory# WA-IV-259) is an NRHP-eligible historic district.

The Lehman's Mill Historic District is located near Marsh Run, north of Hagerstown. This NRHP-listed district is significant for its association with the county's agricultural and economic history. Built in 1869, it is the oldest continuously operating mill in Washington County, and is the most intact mill complex remaining in the county as well. Included in the resource are the mill, mill farm, miller's house, assorted domestic agricultural and mill-related outbuildings, and vestiges of the mill race and dam.

The Leitersburg Historic District is significant for its association with the development of commerce and transportation in Washington County and the surrounding region in the nineteenth and early twentieth centuries. The NRHP-listed Leitersburg Historic District derives additional significance as a well-preserved example of crossroads community which characterized the region in the nineteenth century, and for its variety of historic architecture. The village comprises a cohesive collection of architectural resources reflecting a wide variety of vernacular types and popular expressions dating from the early nineteenth century through the early twentieth century.

The Smithsburg Historic District is an NRHP-eligible historic district. The district is eligible under Criteria A and C, maintaining its integrity of design, materials, setting and feeling of a mid-size rural community. The district is primarily residential in character with commercial structures

clustered at the intersection of Water and Main streets. The period of significance dates to nineteenth and twentieth century.

**Archaeology**

Nine MHT-identified archaeological sites are located within the 130-ft ROW Archaeological Study Area, and are listed in **Table 8b**. These sites are illustrated in **Figure 13** but due to the sensitivity of these resources, **their location is considered proprietary and is only being made available to the PUC for review per their regulatory requirement**. Identification and avoidance of specific sites will be coordinated with the MHT as part of the permitting process that will be required after the Proposed Route has been approved.

TABLE 8b: Identified Archaeological Sites within the Archaeological Study Area (MD)			
Site#	Resource Name	Resource Type	NR Status/ SHPO Opinion Date
18WA248	Pine Tree Site	Mid Archaic-Mid Woodland possible short-term camp	Insufficient Information to Evaluate
18WA228	Tomato Field Site	Early Archaic-Mid Woodland base camps	Insufficient Information to Evaluate
18WA108	N1, N2 Site	Early Archaic-Late Woodland short term resource procurement	Insufficient Information to Evaluate
18WA149	1898 Site	Late Archaic-Early Woodland Possible short-term camp	Insufficient Information to Evaluate
18WA105	LNG 13 Site	Lithic Scatter	Insufficient Information to Evaluate
18WA229	R-1 Site	Late Archaic possible short-term camp	Insufficient Information to Evaluate
18WA99	BJ-1 Site	Unknown prehistoric	Insufficient Information to Evaluate
18WA324	Clopper Mill	Historic grist and saw mill	Insufficient Information to Evaluate
18WA82	Dead Tree Site	Archaic possible short-term camp	Insufficient Information to Evaluate

All but one of the sites with the Archaeological Study Area are prehistoric sites. The one historic site is the Clopper Mill (18WA324) which is a grist mill dating to the nineteenth century. All but one of the prehistoric sites within the Project Study Area have been identified, but have not been assessed for NRHP listing eligibility. The assessed NHRP site is located in Pennsylvania.



### **General Impacts**

Potential impacts on NRHP-listed and eligible architectural historic properties may be visual, created by the construction of transmission structure and clearcutting of vegetation within the ROW. Visual impacts will vary based on local relief, height of existing vegetation, and any intervening recent development. Additional effort will be needed to map these resources within the Project Study Area and ROW once a proposed alternative is chosen. Any physical impacts on architectural historic properties will be minimized, where practicable, by strategically locating access roads, staging areas, and structure away from the historic resource. Impacts on archaeological sites typically occur during the ground-disturbing activities associated with construction of a structure, e.g., construction of new access roads, clearing of the ROW, establishing equipment staging areas, driving of tired or tracked vehicles, and structure construction. Whenever possible, these impacts on identified sites will be minimized by strategically locating access roads, staging areas, and structure away from any archaeological sites. If any historic architectural resource or archaeological site cannot be physically avoided, then additional consultation will be carried out with either the PHMC or MHT. A Phase I cultural resources study will likely be required by the PHMC and/or the MHT.

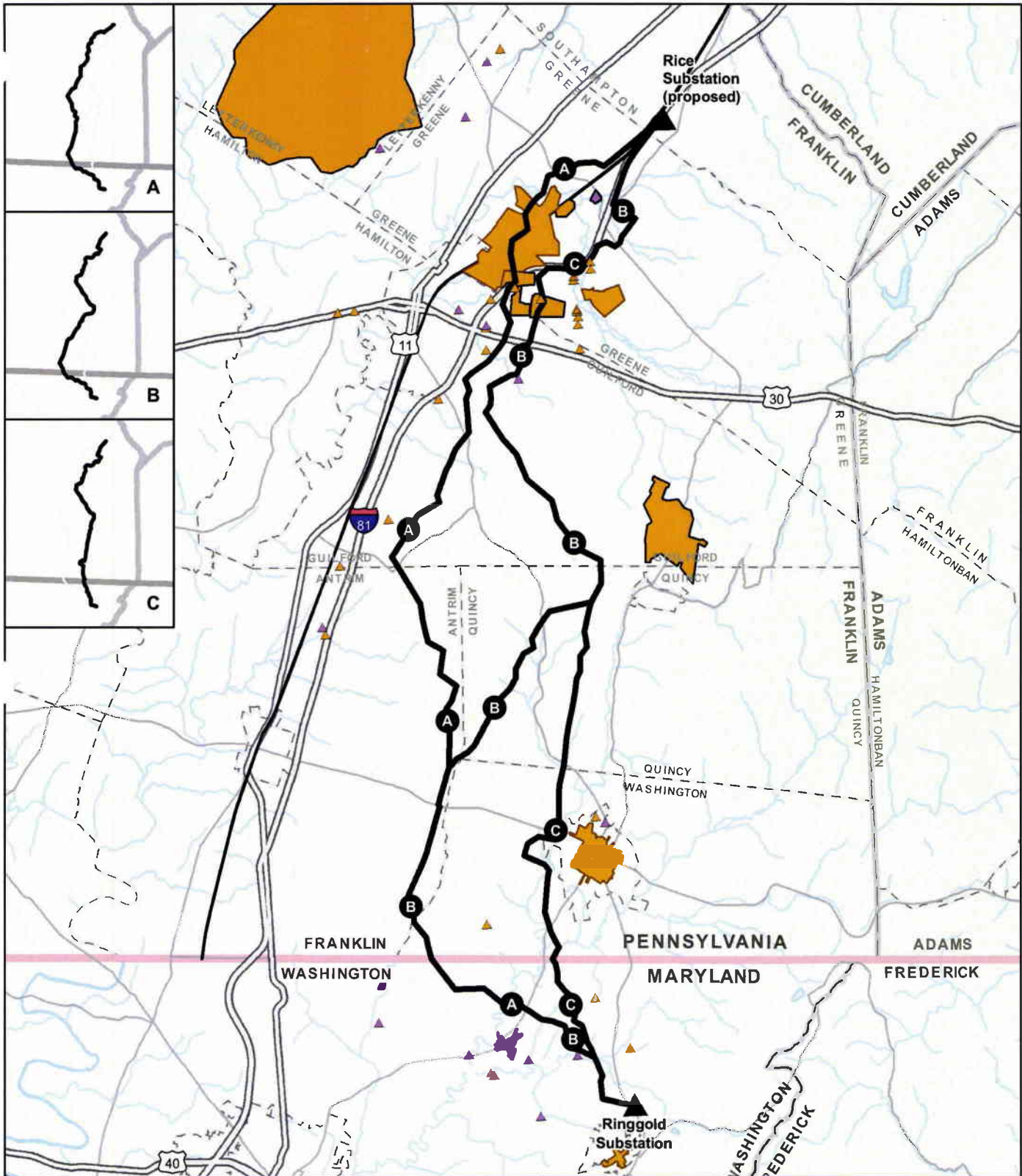
### **Alternative Route Comparison**

A considerable number of NRHP-listed and -eligible historic properties and districts are located near Chambersburg, along I-81, and north of U.S. Route 30, as well as near Waynesboro. These resources range from single structures on a small private parcel to large farmsteads that extend over 1,000 acres. Due to the size, density, and location of these features, some of which bordered both sides of I-81, options to totally avoid crossing some of them were not feasible. Similarly, numerous archaeological sites were noted parallel to Conococheague Creek, which also extends north of U.S. Route 30, along portions of I-81, and near Chambersburg. These areas also vary in size with most being one acre or less, but others extending over 20 acres. As these features are located along some of the linear corridors that the Alternative Routes parallel (e.g., transmission lines, I-81), avoidance of all these areas was not feasible.

It should be noted that those alternatives that parallel existing transmission lines have a higher potential for identified aboveground and archeological resources, versus undeveloped areas, since they have undergone studies tied to their development. Review of Table 9 indicates that all of the Alternative Routes would be within 0.25 mile of NRHP-listed property, but that Alternative Route B would be near the most. Alternative Route B would also cross the most archaeological sites and have the most archaeological sites within 250 feet of the alignment. Conversely, Alternative Route A would have the least NRHP-eligible properties within 0.25

miles, cross the fewest archaeological site, and be within 250 feet of the fewest archaeological sites. Alternative Route A is therefore the best option from a historic resource impact avoidance perspective.

The route selected will ultimately be reviewed by both the PHMC and MHT within the requisite area of potential effect (APE) determined for the Project to ascertain the potential impacts on historic aboveground and archeological resources.



**Data Sources:** AEP (2017), ESRI (2011), Transource (2017), NLCD Forest Cover (2011)

**Coordinate System:** UTM Zone 18N NAD 83

November 29, 2017

**Figure 13**  
**Cultural Resources**

Independence Energy Connection  
**TRANSOURCE** Rice - Ringgold  
230kV Transmission Line

0 1 2 3 4  
Miles

#### 4.2.5 Scenic Resources

##### Resource Characteristics

Aesthetics are defined as a mix of landscape visual character, the context in which the landscape is viewed (view/user groups), and the scenic integrity of the landscape. This study reviewed the potential visibility and visual impact of the Alternative Routes through landscape character assessment, field evaluation, and environmental factor tabulations.

Visual character encompasses the patterns of landform (topography), vegetation, land use, and aquatic resources (e.g., lakes, streams, and wetlands). Multiple elements influence visual character, such as natural systems, human interactions, and land use. In natural settings, the visual character attributes are natural elements such as forested mountains or scenic rivers and lakes, whereas rural or pastoral/agricultural settings may include manmade elements such as fences, walls, barns and outbuildings, and occasional residences. In a more developed setting, the visual character may include commercial or industrial buildings, manicured lawns, pavement, and other infrastructure.

The Siting Team observed four distinctive landscapes within the Study Area: 1) forested and mountain view, 2) pastoral and farming communities, 3) small residential communities, and 4) urban towns.

Forested areas and mountain views are mainly observed along the eastern portion of the Project Study Area. A number of state forests and parklands exist in this region, including Michaux State Forest, Caledonia State Park, and Norlo Park. No designated scenic overlooks, vistas, or byways are documented in the Project Study Area.

##### Alternative Route Comparison

All of the Alternative Routes would span the main roads that crisscross the Project Study Area and traverse across relatively similar agricultural viewsheds. Alternative Route A would parallel the least length of existing linear infrastructure and extend through a more densely populated section north of Chambersburg thereby creating the most potential visual impact. Alternative Route B would parallel relatively more existing infrastructure, but would be the longest option and have more potential to impact surrounding communities. Alternative Route C parallels the longest length of existing transmission lines and Interstate 81 and is the overall shortest option, therefore, minimizing new visual impacts to the area.

Table 9: Land Use Evaluation Criteria				
Alternative Route	Unit	A	B	C
<b>General</b>				
Length	miles	<b>30.4</b> PA: 23.8 MD: 6.6	<b>31.9</b> PA: 25.3 MD: 6.6	<b>28.8</b> PA: 24.4 MD: 4.4
Number of parcels[1] crossed	count	<b>152</b> PA: 114 MD: 38	<b>159</b> PA: 121 MD: 38	<b>147</b> PA: 123 MD: 24
Landowners within ROW	count	<b>128</b> PA: 93 MD: 35	<b>129</b> PA: 94 MD: 35	<b>119</b> PA: 98 MD: 21
<b>Residential</b>				
Barns, outbuildings, sheds, garages and silos in the ROW (excludes abandoned features)	count	<b>1</b> PA: 1 MD: 0	<b>5</b> PA: 5 MD: 0	<b>2</b> PA: 2 MD: 0
Residences/single-family dwellings within ROW	count	<b>1</b> PA: 1 MD: 0	<b>0</b>	<b>0</b>
Residences/single-family dwellings within 100 feet of centerline	count	<b>1</b> PA: 1 MD: 0	<b>3</b> PA: 3 MD: 0	<b>2</b> PA: 2 MD: 0
Residences/single-family dwellings within 250 feet of centerline	count	<b>33</b> PA: 25 MD: 8	<b>31</b> PA: 23 MD: 8	<b>25</b> PA: 21 MD: 4



Table 9: Land Use Evaluation Criteria				
Alternative Route	Unit	A	B	C
Residences/single-family dwellings within 500 feet of centerline	count	<b>131</b> PA: 98 MD: 33	<b>126</b> PA: 93 MD: 33	<b>115</b> PA: 97 MD: 18
Multi-family dwellings[2] within ROW	count	<b>0</b>	<b>0</b>	<b>0</b>
Multi-family dwellings within 250 feet of centerline	count	<b>0</b>	<b>8</b> PA: 8 MD: 0	<b>8</b> PA: 8 MD: 0
Multi-family dwellings within 500 feet of centerline	count	<b>1</b> PA: 1 MD: 0	<b>25</b> PA: 25 MD: 0	<b>26</b> PA: 26 MD: 0
<b>Commercial/Industrial</b>				
Businesses/commercial buildings[3] within the ROW	count	<b>3</b> PA: 3 MD: 0	<b>0</b>	<b>0</b>
Businesses/commercial buildings within 250 feet of the centerline	count	<b>11</b> PA: 10 MD: 1	<b>9</b> PA: 8 MD: 1	<b>10</b> PA: 9 MD: 1
Businesses/commercial buildings within 500 feet of the centerline	count	<b>32</b> PA: 31 MD: 1	<b>28</b> PA: 27 MD: 1	<b>30</b> PA: 29 MD: 1
Mining areas crossed	count	<b>0</b>	<b>0</b>	<b>0</b>
Quarries crossed	count	<b>2</b> PA: 2 MD: 0	<b>0</b>	<b>0</b>

Table 9: Land Use Evaluation Criteria				
Alternative Route	Unit	A	B	C
Airports within one mile of the centerline	count	<b>1</b> PA: 1 MD: 0	<b>0</b>	<b>0</b>
<b>Undeveloped Lands</b>				
Pasture/rangeland crossed in ROW (based on NLCD data)	acres	<b>177.5</b> PA: 125.4 MD: 52.1	<b>166.3</b> PA: 114.2 MD: 52.1	<b>126.8</b> PA: 96.3 MD: 30.5
Cropland crossed in ROW (based on NLCD data)	acres	<b>246.4</b> PA: 206.2 MD: 40.2	<b>248.0</b> PA: 207.8 MD: 40.2	<b>238.2</b> PA: 209.5 MD: 28.7
Tree farms/orchards crossed in ROW	acres	<b>12.9</b> PA: 8.4 MD: 4.5	<b>4.5</b> PA: 0.0 MD: 4.5	<b>6.5</b> PA: 2.7 MD: 3.8
Agricultural easements crossed in ROW	acres	<b>49.4</b> PA: 24.1 MD: 25.3	<b>68.5</b> PA: 43.2 MD: 25.3	<b>46.5</b> PA: 12.3 MD: 34.2
Tree clearing required in the ROW (digitized based on aerial photography)	acres	<b>75.3</b> PA: 53.3 MD: 22.0	<b>60.3</b> PA: 38.3 MD: 22.0	<b>50.8</b> PA: 39.1 MD: 11.7
Length of clearing parallel to existing linear infrastructure	miles	<b>0.2</b> PA: 0.0 MD: 0.2	<b>0.2</b> PA: <0.1 MD: 0.2	<b>0.6</b> PA: 0.4 MD: 0.2

Table 9: Land Use Evaluation Criteria				
Alternative Route	Unit	A	B	C
<b>Community/Recreational Facilities</b>				
Schools within 1,000 feet of centerline	count	0	1 PA: 1 MD: 0	1 PA: 1 MD: 0
Designated places of worship within 1,000 feet of centerline	count	1 PA: 1 MD: 0	0	0
Cemeteries within 250 feet of centerline	count	0	0	0
Hospitals, and assisted living facilities within 250 feet of centerline	count	0	0	0
Parks and recreation areas crossed by the ROW	count	0	0	0
Scenic byways crossed	count	0	0	0
<b>Protected Land</b>				
Federal/state land crossed by ROW	acres	0	0	0
Local public lands crossed by ROW	acres	0	0	0
<b>Cultural Resources</b>				
NRHP-listed historic properties within 1/4 mile of the centerline	count	1 PA: 0 MD: 1	2 PA: 1 MD: 1	1 PA: 1 MD: 0

Table 9: Land Use Evaluation Criteria				
Alternative Route	Unit	A	B	C
National Landmarks within 1/4 mile of the centerline	count	0	0	0
Listed or Eligible Historic Districts within 1/4 mile of the centerline	count	1 PA: 1 MD: 0	1 PA: 1 MD: 0	1 PA: 1 MD: 0
Known NRHP-eligible historic properties within 1/4 mile of the centerline	count	5 PA: 5 MD: 0	10 PA: 10 MD: 0	10 PA: 10 MD: 0
Identified archaeological sites within ROW	count	3 PA: 0 MD: 3	6 PA: 3 MD: 3	4 PA: 3 MD: 1
Identified archaeological sites within 250 feet of centerline	count	6 PA: 1 MD: 5	8 PA: 3 MD: 5	8 PA: 4 MD: 4

[1] The number of parcels crossed refers to the number of individual plots of owned land recorded by each County. The number of landowners within the ROW represents the number of individual landowners, who each may own one or more parcels.

[2] Multi-family dwellings include townhome, condominium, and apartment complexes, and duplexes

[3] Commercial development includes retail, service, office, restaurants, and lodging establishments

### **4.3 Constructability**

This section discusses the constructability of a proposed transmission line, as it relates to engineering and construction concerns. Major factors that affect constructability include, but are not limited to, steep topography, condensed ROWs, heavy angles, proximity to existing infrastructure facilities, accessibility, safety and cost. A comparison of the engineering and construction considerations for the Alternative Routes is presented at the end of this section in **Table 10**.

#### **4.3.1 Engineering Design Considerations**

##### **Transmission Right-of-Way**

The siting process attempted to minimize route length which ultimately minimizes impacts to human/built and environmental resources. Assessment of the Alternative Routes considered paralleling existing electric lines, or paralleling other infrastructure (i.e., roadways, railways or gas lines) relative to cross-country options. Although no linear features provided a direct alignment between the two substation sites, several linear options were noted across the landscape including I-81, the Norfolk Southern railroad, and a variety of transmission line ROW corridors that extend for considerable lengths in a general north to south alignment. Evaluation of the transmission line ROWs identified residential or other commercial development adjacent to the ROW, particularly near U.S. Route 30 and in the northern portions of the Project Study Area. At these locations, the Alternative Routes deviated from a parallel alignment to avoid existing constraints.

##### **Engineering and Construction Considerations**

Potential engineering and construction challenges are important to consider when siting a transmission line. Transmission line crossings, road and railroad crossings, nearby towers or antennas, and heavy angles, dense residential or commercial development, along with narrow ROW alignments are all elements that could ultimately require extensive or non-standard engineering and lead to an increase of impacts and overall cost.

A few specific transmission line ROWs south of U.S. Route 30 were identified that provided opportunities for considerable lengths of paralleling. To maintain the paralleling capacity along these stretches, however, the Alternative Routes would occasionally need to cross over the existing alignment. Engineering of these crossovers is a common event but can involve specific structural design challenges depending on the landscape and the voltage of the lines involved.

Spanning over existing roadways is also an engineering consideration due to the density of telephone and distribution lines that often parallel these corridors. Engineering review of these



existing features is necessary to design the new alignment with required distances between these electrical systems. Part of the review focuses on the structure placement, which is often preferred close to the road edge to provide crossings at the highest point of the conductor, however, state highway expectations are that these structures are not too close to the roadway to ensure safer conditions for vehicles. Spanning major highways such as interstates can also be challenging due to the agency coordination required for the permits and potential for road closures during the wire installation process.

Another consideration is the crossing of railroads. Railroads provide opportunities for paralleling but crossing over these features can be complex. Ideally, new transmission lines would cross at 90° degree angles to the railroad, but many scenarios involve heavy angle crossings that need to take into consideration the width and height of the various rail cars that use the tracks. Other considerations are the presence of additional railroad lines in adjacent sequence and aboveground infrastructure of the railroad that may also parallel the rail line.

Numerous communication towers are also located in the Project Study Area. These tall structures are typically supported by an extensive network of guy wires that would be difficult to engineer around and were avoided where possible during the siting process.

Spanning over existing electrical transmission lines is also an engineering consideration to be assessed during the siting process. Depending on the voltage of the lines involved, new transmission lines would be required to cross under or over the existing lines. For this Project, the new 230 kV line would typically cross over any of the existing transmission line systems in the Project Study Area. Crossing over lines requires review of the clearances needed between the conductors, which will affect the height of the new structures needed to achieve these clearances. In addition, transmission line crossings require coordination during construction, operations, and maintenance for taking outages on the existing line. The scenario becomes further complicated in situations where the new alignment would be required to cross back and forth over the existing system several times to maintain a parallel alignment

A final consideration is the number of heavy angles (greater than 30°) required along the various Alternative Routes. Due to the tensions necessary on the conductor wires, sharp turns typically require stronger support which is typically achieved through larger structures, the use of multi-pole structures, or the installation of wires. These options involve additional assessment of the terrain and the transmission line alignments leading into and out of these sharp turn scenarios to determine the best engineering course of action.

### Alternative Route Comparison

As noted, paralleling existing linear features, such as transmission lines or roadway corridors, is typically viewed as a common siting practice to minimize the cumulative effect of a new right-of-way. Given the constrained environment adjacent to most of the existing linear corridors, only a few options were realized in the Project Study Area. Alternative Route A would parallel the least of these linear features. Alternative Route C would have the longest alignment paralleling these features, with more than one-third its length being parallel to an existing transmission line and additional 3.5 miles adjacent to I-81. Alternative Route B would have the second longest length paralleling these features, with one-quarter of its length paralleling a railroad or transmission line corridor. As such, Alternative Routes B (39%) and C (42%) are therefore the best options from a paralleling existing linear infrastructure perspective.

Review of **Table 10** indicates that Alternative Route A would span I-81 twice, whereas the other options would not need to cross this highway. Alternative Route B would cross the most roadways while Alternative A would involve the most railroad crossings. Alternative Route C would involve the fewest road crossings and contain no railroad crossings. As such, Alternative Route C is therefore the best option from a railroad or roadway crossing perspective.

Alternative Route A and C would be within 1,000 feet of the most communication antennas, whereas Alternative Route B would be near the fewest. The locations of the Alternative Routes relative to these structures are not considered problematic at this time as the distances to these features are still far enough away to not require any engineering modifications.

In terms of heavy angle structures, most of these turns in the alignment are required to follow specific property lines or to avoid other constraint areas such as additional stream crossings or dense forested areas. Review of the data notes that Alternative Routes B and C would involve the most heavy angle turns and that Alternative Route A would involve the least.

#### 4.3.2 Topography

In general, the Alternative Routes traverse a relatively broad valley with rolling hills between the Appalachian Mountains and South Mountain. The elevation change for the Alternative Routes is relatively minor given that all the Alternative Routes are located in the valley area and not on the slopes of South Mountain.

### Alternative Route Comparison

All of the Alternative Routes avoid the steep slopes of South Mountain and are located in the more level terrain of the Conococheague Creek valley. All of the Alternative Routes cross less than 2 miles of steep slopes with Alternative Route B crossing more steep slopes and

Alternative Route A crossing the least amount. In general, all of the Alternative Routes would have the same constructability considerations for steep slopes given the terrain.

#### **4.3.3 Access Roads**

The access road networks that will be required to construct and potentially maintain the proposed alignment are being developed as engineering completes more the transmission line design and as landowner negotiations occur. Most of the access roads will be located within the new ROW corridor to help further minimize the impact of the Project on the surrounding human/built and environmental landscape. Many of these roads will be temporary in nature as they would extend across agricultural lands or through forested areas and will need to be removed at the end of construction. Stabilized road bases may be left in places that can be used for future access but few new permanent roads will be developed.

Where possible, existing farm or forest roads will be evaluated and used instead of developing new access roads, which could involve grading to provide the desired slopes for the heavy equipment that would be involved in the construction. Landowner coordination to secure the rights to use these existing roads will be required.

#### **Alternative Route Comparison**

The overall location of each Alternatives was considered as it relates to the siting of temporary and permanent on and off-ROW access roads and what challenges may be present along each route. Review of the Maryland portion of the Project Study Area note that the terrain across this area is generally hilly but not steep; hence the same level of grading would be anticipated for each of the options. Since Alternative Routes A and B would extend diagonally from northwest to southeast for a further distance across the state, they would be anticipated to involve more access road development. Alternative Route C would extend in a shorter distance across the state and along an existing transmission line alignment, thus less access road development is anticipated.

In Pennsylvania, the majority of the area is agricultural with less terrain variations and more local roads. Therefore, access for any of the Alternative Routes is expected to be similar; however, Alternative Route C is the shortest in length and therefore likely to require less access road construction.

Overall, Transource will minimize additional impacts to streams, wetlands, and sensitive habitat areas by siting the access roads outside these features.

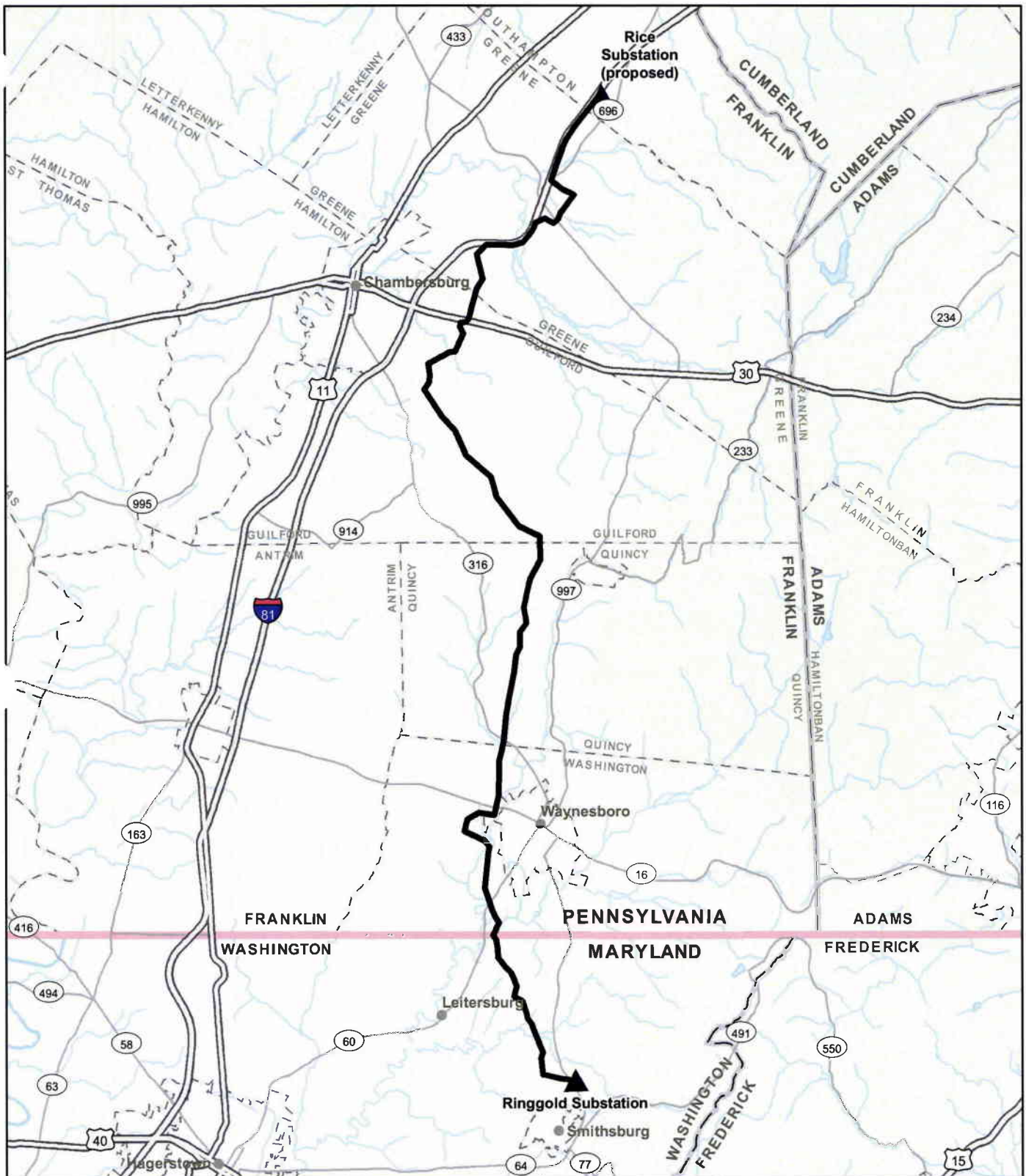
Table 10. Constructability Evaluation Criteria				
Alternative Route	Unit	A	B	C
<b>General</b>				
Length	miles	<b>30.4</b> PA: 23.8 MD: 6.6	<b>31.9</b> PA: 25.3 MD: 6.6	<b>28.8</b> PA: 24.4 MD: 4.4
<b>Transportation Resources</b>				
Interstate highways crossed	count	<b>2</b> PA: 2 MD: 0	<b>0</b>	<b>0</b>
U.S. highways crossed (combination of state and U.S.)	count	<b>1</b> PA: 1 MD: 0	<b>1</b> PA: 1 MD: 0	<b>1</b> PA: 1 MD: 0
State highways crossed	count	<b>9</b> PA: 5 MD: 4	<b>10</b> PA: 6 MD: 4	<b>9</b> PA: 6 MD: 3
Local roads and streets crossed	count	<b>36</b> PA: 26 MD: 10	<b>42</b> PA: 32 MD: 10	<b>30</b> PA: 24 MD: 6
Railroads crossed	count	<b>3</b> PA: 3 MD: 0	<b>2</b> PA: 2 MD: 0	<b>0</b>
<b>Utility Resources</b>				
Oil and gas pipelines crossed	count	<b>6</b> PA: 6 MD: 0	<b>6</b> PA: 6 MD: 0	<b>6</b> PA: 5 MD: 1







Table 10. Constructability Evaluation Criteria				
Alternative Route	Unit	A	B	C
Communication towers within 1,000 feet of the centerline	count	<b>11</b> PA: 11 MD: 0	<b>6</b> PA: 6 MD: 0	<b>11</b> PA: 11 MD: 0
Existing 69 kV Transmission Lines Crossed	count	<b>4</b> PA: 4 MD: 0	<b>2</b> PA: 2 MD: 0	<b>2</b> PA: 2 MD: 0
Existing 115 kV Transmission Lines Crossed	count	<b>0</b>	<b>0</b>	<b>0</b>
Existing 138 and 230 kV Transmission Lines Crossed	count	<b>4</b> PA: 2 MD: 2	<b>7</b> PA: 5 MD: 2	<b>10</b> PA: 8 MD: 2
Existing 500 kV Transmission Lines Crossed	count	<b>0</b>	<b>0</b>	<b>0</b>
<b>Engineering and Construction Considerations</b>				
Steep slopes crossed by ROW (>20%), percent of total length	miles	<b>1.0</b> PA: 0.7 MD: 0.3	<b>1.5</b> PA: 1.2 MD: 0.3	<b>1.3</b> PA: 1.0 MD: 0.3
Heavy angles, greater than 30%	count	<b>16</b> PA: 15 MD: 1	<b>17</b> PA: 16 MD: 1	<b>17</b> PA: 15 MD: 2
<b>Rights-of-Way Rebuild/Parallel</b>				
Existing 69 kV transmission lines paralleled	miles	<b>0</b>	<b>0</b>	<b>0</b>
Existing 115 kV transmission lines paralleled	miles	<b>0</b>	<b>0</b>	<b>0</b>



**Table 10. Constructability Evaluation Criteria**

Alternative Route	Unit	A	B	C
Existing 138 and 230 kV transmission lines paralleled	miles	<b>0.7</b> PA: 0.0 MD: 0.7	<b>2.6</b> PA: 1.9 MD: 0.7	<b>8.6</b> PA: 7.2 MD: 1.4
Existing 500 kV transmission lines paralleled	miles	<b>0</b>	<b>0</b>	<b>0</b>
Interstate highways, U.S. highways, State highways, and local roads paralleled	miles	<b>1.6</b> PA: 1.1 MD: 0.5	<b>4.0</b> PA: 3.5 MD: 0.5	<b>3.5</b> PA: 3.5 MD: 0.0
Railroad	miles	<b>3.3</b> PA: 3.3 MD: 0.0	<b>5.2</b> PA: 5.2 MD: 0.0	<b>0</b>
Total length paralleled	miles	<b>5.6</b> PA: 4.4 MD: 1.2	<b>11.8</b> PA: 10.6 MD: 1.2	<b>12.1</b> PA: 10.8 MD: 1.5
Percent of length paralleled	%	<b>18%</b> PA: 14% MD: 4%	<b>37%</b> PA: 33% MD: 4%	<b>42%</b> PA: 37% MD: 5%



-  Substation
-  Alternative Route C (Proposed Route)
-  Stream
-  Highway
-  Road
-  Forest Cover

Data Sources: AEP (2017),  
 POWERmap (2012),  
 ESRI (2011),  
 NLCD Forest Cover (2011)

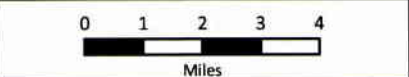
Coordinate System:  
 UTM Zone 18N  
 NAD 83

November 14, 2017



**Figure 14**  
**Proposed Route**

Independence Energy Connection  
 Rice - Ringgold  
**TRANSOURCE** 230kV Transmission Line



## 5.0 IDENTIFICATION OF THE PROPOSED ROUTE

The goal in selecting a Proposed Route for the Project is to minimize impacts on land use and natural and cultural resources while avoiding circuitous routes, extreme costs, and non-standard design requirements. However, in practice, it is not usually possible to minimize all potential impacts. There are often inherent tradeoffs in potential impacts to every siting decision. For example, in heavily forested study areas, the route that avoids the most developed areas will likely have the greatest amount of forest clearing, while the route that has the least impact on vegetation and wildlife habitats often impacts more residences or farm lands. Thus, an underlying goal of a siting study is to reach a reasonable balance between minimizing potential impacts on one resource versus increasing the potential impacts on another.

The following section summarizes the rationale for selection of the Proposed Route, and thus, the route that the Siting Team considered to best minimize the overall impacts of the Project. The rationale presented is derived from the accumulation of the siting decisions made throughout the process, the knowledge and experience of the Siting Team, comments from the public and regulatory agencies, and the comparative analysis of potential impacts presented in Section 4. Based on the data reviewed in this Siting Study, Alternative Route C was determined to be the Proposed Route.

### 5.1 Proposed Route Summary

Alternative Route C has an approximate length of 28.8 miles (approximately 23.8 miles in Pennsylvania and approximately 6.6 miles in Maryland). Being a more direct alignment between the Rice and Ringgold Substations it will cross fewer parcels (147) and impact less landowners (119) compared to the other alternatives. The alignment avoids the more populated sections of the Project Study Area by crossing agricultural lands adjacent to I-81 and paralleling an existing transmission line corridor south past Waynesboro as it extends into the Ringgold Substation. Additionally, the proposed route spans U.S. Route 30 in a commercial retail area thereby minimizing the residentially dense areas along this corridor. As a result, the Proposed Route has the fewest residences within 500 feet (115) compared to the other alternatives.

This more direct route will also help minimize impacts to agricultural lands, farming operations, and orchard areas since many of the alignments across these areas were identified during early coordination with the landowners. Key requests during this coordination were to span fields or parallel property lines or access roads where feasible, and to provide specially engineered structures near orchards to allow the orchard trees to remain in production under the ROW.

Environmentally, Alternative Route C would span a low number of streams (23) and have minimal impact on riparian areas. As noted previously, streams and floodplains will be crossed at right angles and spanned with structures typically placed outside these regulated areas. Since one of the streams crossed will be the HQ-designated Falling Spring waterway, the construction of this alignment will involve additional stormwater permitting requirements focused on the preservation of the water quality level. In terms of wetlands, this alignment would cumulatively cross the least wetland area relative to the other alternatives. Similar to streams and floodplains, wetland areas will be spanned to further minimize potential impact.

Alternative Route C has the least amount of tree clearing and reduces the forest fragmentation effects and potential impacts to T&E species that use forest habitats such as T&E bat species. In terms of other potential T&E habitat areas, Alternative Route C would cross three natural areas in Pennsylvania and one SSPRA area in Maryland, that are comprised predominantly of open meadows which can be spanned by the transmission lines therefore minimizing potential impacts on the plant or animal communities.

From an engineering perspective, Alternative Route C parallels existing linear features for 42% of the total length of the transmission line which allows for the use of existing access roads. Overall, Alternative Routes C is the preferred route from an engineering and constructability perspective. In addition, Alternative Route C will not interfere with any airport operations or quarries. Although Alternative Route C crosses more transmission lines, Transource will work with the incumbent utilities to ensure proper clearances in order to safely operate and maintain the facilities.

### **Conclusion**

Based on a qualitative and quantitative review of information obtained from GIS data, field reconnaissance, agency consultation and public outreach as well as engineering and constructability considerations for the Project, the Siting Team recommends Alternative Route C as the Proposed Route as depicted in **Figure 14**. An overview of the Proposed Route is provided in a detailed aerial map book in Appendix C. Appendix D contains **Figure 15** which is an overview of environmental, human/built, and historic resources within 2-miles of the Proposed Route.

Collectively, the Siting Team believes that the Proposed Route meets the goal of minimizing impacts on land use, and the natural and cultural resources along the route, while avoiding circuitous routes, extreme costs, and non-standard design requirements.

## 5.2 Proposed Route Impacts and Mitigation

The following is a discussion of the anticipated Project impacts and potential permit and mitigation requirements of the proposed Rice 230 kV Project.

Transource is working diligently with relevant property owners to secure the necessary ROW easements along the Proposed Route to minimize the impact on existing and future land use. Efforts were made during the transmission line siting process to minimize impacts on existing and future land uses, as well as avoid sensitive natural resources such as wetlands and streams. Where potential impacts are unavoidable, mitigating factors will be employed.

As part of the permitting process, any required waterway, wetland, or floodplain encroachment permits will be obtained from PADEP, MDE and the USACE prior to construction and Transource will comply with all special conditions placed on the permits. In addition, to address water quality standards within watersheds along the Project corridor, Transource will comply with the regulations of the NPDES permit program, obtain the required soil erosion and sedimentation control permits, and follow the specified conditions required for the permit.

### 5.2.1 Land Use

Siting analyses for the Proposed Route was conducted with acknowledgement of existing and proposed land uses. Some impact on existing and future land use may occur, including clearing of forest areas and reducing potential areas for residential or commercial development. Establishment of ROW easement areas also preclude certain uses such as constructing structures or installing swimming pools within the easement area. Transource is working with property owners to minimize the impact on existing and future land uses.

The Proposed Route will also be designed to minimize conflicts with the existing transportation network and other utilities currently located or proposed along the route. The necessary state Highway Occupancy Permits or equivalent type permits will be acquired by Transource for those respective highway crossings and all other state road access points prior to construction. The permit processes typically includes review of the plans to ensure that the transmission structure locations and development are in compliance with current safety regulations regarding height and sight clearances. This permit process will also be used to coordinate the actual crossing of U.S Route 30 with the conductor wires, which often requires the temporary closure of the highway.

### 5.2.2 Natural Features

Vegetation clearing and maintenance is required to abide by the federal guidelines mandated by NERC to ensure the safe and reliable operation of the line on the Proposed Route.



Transource's vegetation management practices will allow for the re-generation of compatible species of low growing trees, shrubs, and grasses, where practicable. Herbicides used on the ROW will be EPA-approved and will be applied selectively in accordance with all label instructions. Different herbicides will be used based on the environmental conditions with specific attention to not negatively affect streams and wetlands areas. Application of these herbicides near sensitive resources would be conducted by hand-held spraying; no aerial spraying will be used along the alignment. Determination of the mitigation requirements for forest impacts, as well as for impacts to the other natural resources, will be part of the permit review process.

Wetlands along the Proposed Route will be delineated using PADEP, MDE, and USACE approved methodologies based on the *"Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region"* (USACE 2010). Once the wetlands have been delineated, an engineering review will be conducted to minimize the potential impact to these resources through strategic structure placement that will be oriented to span the wetlands where possible. Impacts to wetlands will be further minimized by identifying access road networks that do not need to cross these features. All required permits for these unavoidable wetland impacts will be obtained from the PADEP, MDE, and the USACE prior to construction. Mitigation in the form of wetland creation, enhancement, or conservation may be required for these wetland impacts.

Streams along the Proposed Route will also be delineated using PADEP, MDE, and USACE approved methodologies. Long-term impacts to these watercourses are expected to be minimal, as they will be spanned by the proposed transmission line, with most crossings oriented to span the feature at a 90° angle to minimize impacts to the adjacent riparian area. Some mitigation efforts may be required as a result of the reduction in riparian buffer along these features. Due to the water quality level in these watersheds, an Individual NPDES permit will be required to mitigate any potential short-term impacts of erosion and sedimentation during construction. As part of the Individual NPDES process, additional and more sophisticated Best Management Practices (BMPs) may be required during construction to maintain the high water quality standards in the watersheds and obtain the NPDES permit.

FEMA and state-identified floodplains are found adjacent to watercourses and identify the areas that routinely flood during heavy rain events. Encroachment within a floodplain area is discouraged by the regulatory agencies due to the potential of the structure to increase the flooding hazard in the local area. Where practicable, transmission structures will be constructed outside the floodplain areas. Due to the wide valleys associated with many of the waterways along the Proposed Route, many of the floodplains and floodways will be relatively narrow and can be spanned by the transmission line. For those locations where the floodplains

are not avoidable, additional analysis of the proposed structures may be required by PADEP and MDE to confirm the activity will not create flooding conditions in the local area. No structures will be located in the floodway of any stream.

### **5.2.3 Threatened and Endangered Species**

During the siting process, threatened and endangered species and habitat data were collected from those federal and state agencies that handle this information to understand the location of sensitive resources. Effort has already been made at this initial step to site the proposed route knowing where such resources are located. Coordination with state and federal agencies regarding potential threatened and endangered species will be initiated prior to commencing field surveys to ensure any necessary habitat or species specific survey are completed during the appropriate time of year. Transource is committed to obtain all necessary permits and approvals from the applicable jurisdictional agencies and comply with any conditions or requirements imposed on such permits.

### **5.2.4 Cultural Resources**

During the siting process cultural resources data were collected from both PHMC and MHT to understand the location of sensitive resources. Effort has already been made at this initial step to site the proposed route knowing where such resources are located, and working to avoid NRHP listed sites, and where possible avoiding eligible resources. Cultural resource coordination with the PHMC and MHT is underway and with selection of the proposed route Transource will further coordinate with the PHMC and MHT to determine an area of potential effect (APE) and complete the necessary surveys. Transource is committed to working with the PHMC and MHT to complete any required studies and address any potential impacts and required mitigation activities.

### **5.2.5 Community Features and Conserved Lands**

Community features, which include schools, daycare centers, churches, and cemeteries, were identified and effectively avoided during the route selection process. One school parcel that is currently forested would be crossed by the Proposed Route.

Conserved lands involve areas preserved as private or public open space. No private or public open space areas are located along the Proposed Route.

### **5.2.6 Anticipated Agency Requirements and Permits**

In summation of the items reviewed above, several specific threatened and endangered species studies, wetland/stream studies, and archaeological surveys will need to be conducted that provide information on possible avoidance and impact areas along the Proposed Route.

Transource is committed to obtain all necessary permits and approvals from the applicable jurisdictional agencies and comply with any conditions or requirements imposed on such permits.

### **5.2.7 Review of County Comprehensive Plans and Municipal Level Zoning**

Public utility features, such as transmission lines and substations are generally exempt from local municipal authority. To further the Commonwealth's goal of making agency actions consistent with sound land use planning by considering the impact of its decision upon local comprehensive plans and zoning ordinances, the Pennsylvania Public Utilities Commission (PUC) adopted a policy on January 11, 2001 that requires the public utility to review comprehensive land use plans and local zoning ordinances to evaluate the impact of proposed projects on these items (See 52 Pa. Code 69.1101, 31 Pa. Bull. 951 [Feb. 17, 2001]). In adherence to PUC regulations, Transource evaluated the proposed Rice-Ringgold 230 kV Transmission Line Project's (IEC West Project) consistency with the zoning ordinances and comprehensive plans of Franklin County and associated municipalities through which the Project would pass.

#### ***Pennsylvania***

The Franklin County Commissioners (FCC) first prepared a comprehensive plan in 1999, but more recently adopted an update in July of 2012 (**Table 11**). The updated comprehensive plan, *Franklin Forward: The Comprehensive Plan for Franklin County* (Plan), dubbed "Franklin Forward" for short, is an "overall guide for development, land use, economic progress and the preservation of the quality of life" in the County (FCC 2012). Franklin County has experienced a decade of "significant change" that has resulted in population growth at one of the highest percentages in the Commonwealth over the past decade (FCC 2012).

The Plan is not intended to regulate and has no official authority, but all planning efforts at the municipal level are meant to be guided by the goals, objectives, and policies outlined within. The Plan listed the following five (5) goals:

1. Engage in outreach, education, communication and cooperation within the County.
2. Foster the continued livability and success of urban communities and of communities embedded in the rural landscape.
3. Facilitate the protection and promotion of the County's rich natural resources, recreation opportunities and history.
4. Promote economic opportunities while retaining agriculture and community character.

5. Use a balanced approach in the development of transportation, infrastructure, and energy systems (FCC 2012).

In an effort to meet these goals, Franklin County plans to develop land use controls that promote balanced growth and conservation, promote conservation of quality farmland and prime agricultural soils, support revitalization of core communities, work with landowners to ensure prompt and sufficient reforestation of woodlands that have been timbered, and encourage homeownership (FCC 2012).

“Franklin Forward” has identified characteristics of the County that are valued by its residents and are the basis of the comprehensive plan. Accessibility, economic stability, agricultural and woodland landscapes, natural features and history assets were identified and specific plans were developed to ensure they were preserved and enhanced over the next decade (FCC 2012).

“Franklin Forward” outlines a series of recommendations that will protect the aforementioned valued assets. Specifically, “Franklin Forward” is rooted in land use and housing strategies. Franklin County developed a Recreation Plan, Greenway and Open Space Plan and the Natural Areas Inventory in order to meet the goal of preserving open space and natural resources, while simultaneously supporting growth and development throughout the County. Electrical transmission is not addressed directly in “Franklin Forward,” but the County is focused on promoting balanced growth with sustainable transportation and infrastructure investments.

Since its adoption in 2012, “Franklin Forward” has been well received throughout the County at the Municipal level. The plan encourages locally implemented land use strategies, and is positioned to be the central resource for providing model ordinance language and other planning ideas to communities so that development and conservation goals can be encouraged to be upheld. As a result of this initiative, many of the townships with the County have developed or updated comprehensive plans and municipal zoning ordinances. Many of these townships have worked jointly with adjacent townships to develop multi-municipal comprehensive plans (Table 1). Specific to the Project, Waynesboro Borough and Washington Township have coordinated to develop the Washington Township and Waynesboro Borough Joint Comprehensive Plan (Washington Township Planning Commission; Waynesboro Borough Planning Commission 2009). Specific townships, including Southampton and Greene Townships have prepared individual comprehensive plans to guide their specific land use plans (Greene Township Planning Commission 1994; Southampton Township Planning Commission 2001). These municipal comprehensive plans generally reiterate the concerns raised by the county-level comprehensive plans. Gilford and Quincy Townships do not have Township specific Comprehensive Plans.

## **Township Zoning**

Local zoning ordinances have been adopted in all six (6) of the municipalities that will be crossed by the Project in Franklin County. These ordinances are used to guide future land use in the townships by encouraging development of desirable residential, commercial, agricultural, and industrial areas with appropriate groupings of compatible and related land uses. Ordinances defining the allowances and restrictions associated with the various zoning districts typically identify “Essential Services” or “Public Utility Facilities,” which include distribution, transmission, or collection systems associated with utilities such as water, gas, and electric, to be conditionally exempt from local regulations, as long as the required actions are approved by the state utility commission.

As such, the proposed Project will not have any effect on zoning within any of the townships crossed.

## ***Maryland***

In 1971 the Washington County Planning and Zoning Commission created and adopted the first Comprehensive Plan. To date, the *Washington County Comprehensive 2002*, adopted in August 2002, was prepared by the Washington County Department of Planning and Community Development Department and updates the 1981 Comprehensive Plan for Washington County.

Four major goals have been developed as a result of consideration to County and State visions, public input, analysis of past and projected growth trends, studies on the fiscal impact of growth, anticipated capital improvement program funding levels, and review of strengths and weaknesses of the former Comprehensive Plan (Washington 2002).

1. Provide opportunities for individual choice and self fulfillment.
2. Promote a balanced and diversified economy, including agriculture.
3. Encourage the stewardship of the environment and the county’s heritage.
4. Establish parameters for managing growth.

Per the State Legislation Article 66B, “Planning and Zoning” states: “The plan shall be made with the general purpose of guiding and accomplishing the coordinated, adjusted, and harmonious development of the jurisdiction, and its environs which will, in accordance with present and future needs, best promote health, safety, morals, order, convenience, prosperity, and general welfare, as well as efficiency and economy in the process of development; including among other things, adequate provisions for traffic, the promotion of public safety, adequate provision for light and air, conservation of natural resources, the prevention of environmental pollution, the promotion of the healthful and convenient distribution of population, the promotion of



good civic design and arrangement, wise and efficient expenditure of public funds, and the adequate provision of public utilities and other public requirements”. As such, the Comprehensive Plan becomes a policy document which must be flexible enough to address changing circumstances yet rigid enough to establish a reasoned and practical vision of the future which can balance the need to grow and develop with the protection of the natural, cultural and human resources which make Washington County a unique place to live, work and play (Washington 2002).

The type, location and timing of development is regulated through County laws and ordinances such as the Zoning Ordinance, as well as guidance through functional plans such as the Water and Sewerage Plan. In particular, the Zoning Ordinance is critical to the overall regulatory implementation of the Comprehensive Plan. The Proposed Route will traverse through the Agricultural (Rural) District (A(R)) and Business, General District (BG). The Zoning Ordinance states Essential Utility Equipment shall be permitted in any zoning district, as authorized and regulated by law and ordinances of Washington County, it being the intention hereof to exempt such essential services from the application of this Ordinance; except that, without in any way altering or otherwise affecting such exemption, the plans of any overhead electric transmission line of 69 kV or more, on metal or wooden poles or towers or pole structures, proposed to be erected or installed in any C, A, A(R), EC, P, RV, RR, RS, RU or RM District shall be submitted before the beginning of construction to the Planning and Zoning Commission for its review.

**Table 11: Summary of Zoning and Comprehensive Plans within the Project Study Area**

COUNTY/TOWNSHIP	ZONING	COMPREHENSIVE PLAN
Franklin County		Franklin Forward: The Comprehensive Plan for Franklin County, PA (2012)
Southampton Township	Zoning Map (2017) and Ordinances	Southampton Township Comprehensive Plan Update (2001)
Greene Township	Zoning Map (2016) and Ordinances	Greene Township Comprehensive Plan Update (1994)
Guilford Township	Zoning Map (2012) and Ordinances	No Comprehensive Plan
Quincy Township	Zoning Map (1992) and Ordinances	No Comprehensive Plan
Washington Township	Zoning Map (2007) and Ordinances	Washington Township and Waynesboro Borough Joint Comprehensive Plan (2009)
Waynesboro Borough	Zoning Map (2005) and Ordinances	Washington Township and Waynesboro Borough Joint Comprehensive Plan (2009)
Washington County	Zoning Map (2013) and Ordinances	Comprehensive Plan for the County (2002)

## 6.0 REFERENCES

- 1992 Antrim Township Planning Commission and Greencastle Borough Planning Commission. Comprehensive Plan for the Borough of Greencastle and Antrim Township. Antrim Township, Franklin County, Pennsylvania.
2017. Audubon Pennsylvania Birds Conservation. The Important Bird Area Program in Pennsylvania. <http://www.audubon.org/important-bird-areas/lower-susquehanna-river-gorge-conowingomuddy-run>. Accessed July 2017.
2017. Audubon Birds Conservation. The Important Bird Area Program in Maryland. <http://www.audubon.org/important-bird-areas/state/maryland>. Accessed July 2017.
2017. Appalachian Trail Conservancy. Interactive Map. <http://www.appalachiantrail.org/home/explore-the-trail>.
2017. Federal Emergency Management Administration (FEMA). FEMA's National Flood Hazard Layer (Official). <http://fema.maps.arcgis.com/home/webmap/viewer.html?webmap=cbe088e7c8704464aa0fc34eb99e7f30>.
2012. Franklin County Commissioners (FCC). Franklin Forward: The Comprehensive Plan for Franklin County. Franklin County, Pennsylvania. <http://franklincountypa.gov/ckeditorfiles/files/Planning/planning-FranklinCountyForward.pdf>
- 1994 Greene Township Planning Commission. Greene Township Comprehensive Plan Update. Green Township, Franklin County, Pennsylvania. <http://www.twp.greene.franklin.pa.us/comprehensive-plan/>
- 2015a. Legal Information Institute. Maryland Code of Federal Regulations. 40 CFR 131.12 – Antidegradation Policy and Implementation Methods. <https://www.law.cornell.edu/cfr/text/40/131.12>.
- 2015b. Legal Information Institute. Maryland Code of Federal Regulations. 40 CFR 131.3 – Definitions. <https://www.law.cornell.edu/cfr/text/40/131.3>.
2016. Maryland Department of Natural Resources (MDNR). Sensitive Species Project Review Areas. [http://dnr.maryland.gov/wildlife/Pages/plants\\_wildlife/sspra.aspx](http://dnr.maryland.gov/wildlife/Pages/plants_wildlife/sspra.aspx)
- 2017a. Maryland Department of Natural Resources (MDNR). Central Region Public Hunting Lands. <http://dnr.maryland.gov/wildlife/Pages/publiclands/wmacentral.aspx>.

- 2017b. Maryland Department of Natural Resources (MDNR). Land Acquisition and Planning Maryland's Green Infrastructure Assessment.  
<http://dnr.maryland.gov/land/Pages/Green-Infrastructure-Mapping.aspx>.
- 2017c. Maryland Department of Natural Resources (MDNR). Land Acquisition and Planning Maryland's Rural Legacy Program.  
<http://dnr2.maryland.gov/land/Pages/RuralLegacy/home.aspx>.
- 2017d. Maryland Department of Natural Resources (MDNR). Maryland Environmental Trust.  
[http://dnr.maryland.gov/met/pages/tax\\_benefits.aspx](http://dnr.maryland.gov/met/pages/tax_benefits.aspx).
- 2017e. Maryland Department of Natural Resources (MDNR). Maryland's Natural Areas.  
<http://dnr2.maryland.gov/wildlife/Pages/NaturalAreas/Natural-Areas-by-County.aspx>.
- 2017f. Maryland Department of Natural Resources (MDNR). Maryland Wetlands of Special State Concern.  
[http://data.imap.maryland.gov/datasets/5c2fe45a02ec400ea62d57f366ae12db\\_4](http://data.imap.maryland.gov/datasets/5c2fe45a02ec400ea62d57f366ae12db_4).
- 2017g. Maryland Department of Natural Resources (MDNR). Maryland Public Lands Managed by the Wildlife and Heritage Service.  
<http://dnr.maryland.gov/Wildlife/Pages/publiclands/home.aspx>.
1997. Maryland Department of Natural Resources (MDNR). State Forest Conservation Manual, Third Edition, 1997. <http://www2.washco-md.net/planning/pdf/StateForestConsv.Tech.Manual.pdf>
- 2014a. Maryland Department of the Environment (MDE). Code of Maryland Regulations (COMAR), Title 26, Subtitle 08, Chapter 02, Section 01.  
<http://www.dsd.state.md.us/comar/comarhtml/26/26.08.02.01.htm>
- 2014b. Maryland Department of the Environment (MDE). Code of Maryland Regulations (COMAR), Title 26, Subtitle 08, Chapter 02, Section 02.  
<http://www.dsd.state.md.us/comar/comarhtml/26/26.08.02.02.htm>.
- 2014c. Maryland Department of the Environment (MDE). Code of Maryland Regulations (COMAR), Title 26, Subtitle 08, Chapter 02, Section 04.  
<http://www.dsd.state.md.us/comar/comarhtml/26/26.08.02.04.htm>.
2017. Maryland Department of the Environment (MDE). Tier II High Quality Waters Map.  
<http://mde.maryland.gov/programs/water/TMDL/WaterQualityStandards/Pages/HighQualityWatersMap.aspx>.
1967. Maryland Geological Survey. Generalized Geologic Map of Maryland.  
<http://www.mgs.md.gov/maps/gengeomap.pdf>.
2017. Maryland Manual On-line. State Parks (by county).  
<http://msa.maryland.gov/msa/mdmanual/01glance/html/parks.html>.

2017. Natural Resources Conservation Service (NRCS), United States Department of Agriculture (USDA), Land Use. Available URL:  
<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/>.
- 2017a. Pennsylvania Department of Conservation and Natural Resources (PADCNR). Bureau of Topographic and Geologic Survey. Map 1, Data.  
<http://www.dcnr.state.pa.us/topogeo/publications/pgspub/map/map1/index.htm>.
- 2017b. Pennsylvania Department of Conservation and Natural Resources (PADCNR). NonFuel Mineral Resources (2015). <http://maps.dcnr.pa.gov/topo/quarries/>.
- 2017c. Pennsylvania Department of Conservation and Natural Resources (PADCNR). Michaux State Forest. <http://www.dcnr.state.pa.us/forestry/stateforests/michaux/>.
- 2017d. Pennsylvania Department of Conservation and Natural Resources (PADCNR). State Parks  
<http://m.dcnr.state.pa.us/StateParks>
2017. Pennsylvania Department of Environmental Protection (PADEP). Chapter 93 *Water Quality Standards*.  
<http://www.pacode.com/secure/data/025/chapter93/chap93toc.html>.
- 2017a. Pennsylvania Fish and Boat Commission (PFBC). Approved Trout Streams (stocked).  
[http://pfbc.pa.gov/fishpub/summaryad/troutregs\\_sc.htm](http://pfbc.pa.gov/fishpub/summaryad/troutregs_sc.htm).
- 2017b. Pennsylvania Fish and Boat Commission (PFBC). Class A Wild trout Waters.  
<http://www.fishandboat.com/Fish/PennsylvaniaFishes/Trout/Documents/classa.pdf>.
- 2017c. Pennsylvania Fish and Boat Commission (PFBC). Pennsylvania Wilderness Trout Streams.  
<http://www.fishandboat.com/Fish/PennsylvaniaFishes/Trout/Documents/PAwildernessTroutStreams.pdf>
- 2017d. Pennsylvania Fish and Boat Commission (PFBC). Pennsylvania Wild Trout Waters (Natural Reproduction).  
[http://www.fishandboat.com/Fish/PennsylvaniaFishes/Trout/Documents/trout\\_repro.pdf](http://www.fishandboat.com/Fish/PennsylvaniaFishes/Trout/Documents/trout_repro.pdf).
2017. Pennsylvania Game Commission (PGC). PGC Mapping Center.  
<http://pagame.maps.arcgis.com/apps/webappviewer/index.html?id=98bd698a3d194a5797ce4c80ef34bbcb>.
2008. Reger, James P. and Emery T. Cleaves. Maryland Geological Survey. Physiographic Map of Maryland (scale 1:250,000). Version MDPHYS2003.2.  
[http://www.mgs.md.gov/geology/physiographic\\_map.html](http://www.mgs.md.gov/geology/physiographic_map.html).
2000. Sevon, W.D. Physiographic Provinces of Pennsylvania, Map 13. Pennsylvania Geologic Survey. Harrisburg, PA.  
[http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr\\_016202.pdf](http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_016202.pdf)



2001. Southampton Township Planning Commission. Southampton Township Comprehensive Plan Update. Southampton Township, Franklin County, Pennsylvania. <http://www.southamptontownship.org/information/planning/>
2004. The Nature Conservancy (TNC). *A Natural Areas inventory of Franklin County, Pennsylvania*, 2004. Middletown, PA.
2017. The Wilderness Society. Map of the National Wilderness Preservation System. <http://www.wilderness.net/map.cfm>.
2003. United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2003. Soil Survey of Washington County, Maryland. [https://www.nrcs.usda.gov/Internet/FSE\\_MANUSCRIPTS/maryland/washingtonMD2003/washingtonMD2003\\_1.pdf](https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/maryland/washingtonMD2003/washingtonMD2003_1.pdf).
1975. United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). Soil Survey of Franklin County, Pennsylvania. [https://www.nrcs.usda.gov/Internet/FSE\\_MANUSCRIPTS/pennsylvania/franklinPA1975/franklinPA1975.pdf](https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/pennsylvania/franklinPA1975/franklinPA1975.pdf).
2017. United States Fish and Wildlife Service (USFWS). National Wetlands Inventory – Wetlands Mapper. <https://www.arcgis.com/home/item.html?id=8adef46d09304946a2f112a232de19b1>.
2014. Washington County, Maryland. Forest Conservation Ordinance. [http://www2.washco-md.net/shared\\_docs/ords\\_res/FCO.pdf](http://www2.washco-md.net/shared_docs/ords_res/FCO.pdf).
2009. Washington County, Maryland. Ordinance No.: ORD-09-01 An Ordinance Entitled “Ordinance for the Establishment of Agricultural Preservation Districts.” [http://www2.washco-md.net/county\\_attorney/pdf/ords\\_res/2009/ORD-09-01.pdf](http://www2.washco-md.net/county_attorney/pdf/ords_res/2009/ORD-09-01.pdf).
2002. Washington County. Comprehensive Plan for the County 2002. [http://www2.washco-md.net/comp\\_plan/index.shtm](http://www2.washco-md.net/comp_plan/index.shtm).
2013. Washington County. Zoning Ordinance. August 23, 2013. [https://www2.washco-md.net/shared\\_docs/ords\\_res/ZoningOrd.pdf](https://www2.washco-md.net/shared_docs/ords_res/ZoningOrd.pdf)
2009. Washington Township Planning Commission. Washington Township and Waynesboro Borough Joint Comprehensive Plan. Washington Township, Franklin County, Pennsylvania. <http://www.washtwp-franklin.org/joint-comprehensive-plan/>
2009. Waynesboro Borough Planning Commission. Washington Township and Waynesboro Borough Joint Comprehensive Plan. Waynesboro Borough, Franklin County, Pennsylvania. <https://www.waynesboropa.org/joint-comprehensive-plan/>



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**Appendix A: GIS Data Sources**

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Appendix A: GIS Data Sources		
Siting Criteria	Source	Description
<b>Land Use</b>		
Number of parcels crossed by the ROW	Franklin County GIS Office (2017) Washington County GIS Office (2017)	Count of the number of parcels crossed by the ROW
Number of residences within 500 feet of the route centerline	Digitized from County acquired data (Franklin County), NAIP Aerial Imagery (2015) and field verified from points of public access	Count of the number of residences within the ROW and within 100 feet, 250 feet and 500 feet of potential routes
Number of commercial buildings within 500 feet of the route centerline	Digitized from County acquired data (Franklin County), NAIP Aerial Imagery (2015) and field verified from points of public access	Count of the number of commercial buildings within the ROW and within 100 feet, 250 feet and 500 feet of potential routes
Land use acreage and distance crossed by the ROW and acreage within the 130 foot ROW over centerline	US Geological Survey NLCD 2012 Land Cover (2014) and review of NAIP Aerial Imagery (2015) for forest cover type	The NLCD 2012 (NLCD 2012) compiled by the Multi-Resolution Land Characteristics (MRLC) Consortium includes 15 classes of land cover from Landsat satellite imagery
Acres of conservation easements crossed	National Conservation Easement Database (NCED) (2016)	Private conservation easements crossed by the routes from the NCED which is comprised of voluntarily reported conservation easement information from land trusts and public agencies
Acres of county agricultural easement land crossed	Franklin County GIS Office (2016) Washington County GIS Office (2016)	Protected land that is devoted exclusively to agricultural production or devoted to and qualified for compensation under a federal land retirement or conservation program that is at least 10 acres in size, or produces an average yearly gross income of at least \$2,500 during a 3-year period
Number of archeological resources within the ROW and within 65 feet from centerline	CRGIS (last updated December 2016); Medusa (last updated December 2016)	Previously identified archeological resources acquired through Pennsylvania's Cultural Resources Geographic Information System (CRGIS) and Maryland's Medusa System

Appendix A: GIS Data Sources		
Siting Criteria	Source	Description
Number of historic architectural resources within the ROW, within 1 mile	CRGIS (last updated December 2016); Medusa (last updated December 2016)	Previously identified historic architectural resource sites and districts listed or eligible on the NRHP acquired through Pennsylvania’s Cultural Resources Geographic Information System (CRGIS) and Maryland’s Medusa System
Institutional uses (schools, places of worship and cemeteries) within 1000 feet (schools and places of worship) or 250 feet (cemeteries and hospitals) of the route centerline	U.S. Geological Survey’s GNIS (2016), Franklin County GIS Office (2016) – Only Places of worship and cemeteries	This dataset includes the locations of cemeteries, churches, hospitals, parks, and schools. Features within 1000 feet (schools and places of worship) and 250 feet (cemeteries and hospitals) of potential routes were field verified.
Airfield and heliports within 1 mile of the route centerline	GNIS (2016) and the Federal Aviation Administration (FAA) database (2016) and field verified from points of public access	Distance from airfields and heliports
Natural Environment		
Forest clearing within the ROW	Digitized based on NAIP Aerial Imagery (2015)	Acres of forest within the ROW
Number of National hydrography dataset (NHD) stream and waterbody crossings within the ROW	USGS (2016)	The NHD is a comprehensive set of digital spatial data prepared by the USGS that contains information about surface water features such as lakes, ponds, streams, rivers, springs and wells
Acres of National Wetland Inventory (NWI) wetland crossings within the ROW	U.S. Fish and Wildlife Service (USFWS) (2009)	The NWI produces information on the characteristics, extent, and status of the Nation’s wetlands and deepwater habitats
Acres of 100-year floodplain crossing within the ROW	U.S. Federal Emergency and Management Agency (FEMA) Franklin County (2012 – Latest Study Effective Date)	Acres of 100-year floodplain within the ROW

Appendix A: GIS Data Sources		
Siting Criteria	Source	Description
	Washington County (2016)	
Miles of public lands crossed by the route	Pennsylvania Spatial Data Access (PASDA) (2015/2016), Franklin County GIS Office (2015), Maryland GIS Office (2016)	Miles of federal, state and local lands crossed by the ROW
Threatened, endangered, rare or sensitive species occurrence within the Project vicinity	Western Pennsylvania Conservancy (2014), PASDA (2015), Maryland DNR (2002/2008/2013)	Known occurrences; locations of potential habitat based on land use
Percent of hydric soils within the ROW	United States Department of Agriculture (USDA-NRCS), Natural Resources Conservation Service Soil Survey Geographic (SSURGO) Database (2015)	Percent of soil associations crossed by the ROW characterized as hydric, predominantly hydric, partially hydric and non-hydric
Percent of prime farmland soils and soils of statewide importance within the ROW	USDA-NRCS SSURGO Database (2015)	Percent of soil associations crossed by the ROW characterized as prime farmland or farmland of statewide importance
Technical		
Route length	Measured in GIS	Length of route in miles
Number and severity of angled structures	Developed in GIS	Anticipated number of angled structures < 3 degrees, 3 to 45 degrees and over 45 degrees based on preliminary design
Number of road crossings	ESRI road file (2010)	Count of federal, state and local roadway crossings
Number of pipeline crossings	POWERmap Gas Pipeline (2012)	Number of known pipelines crossed by the transmission ROW
Number of transmission line crossings	POWERmap existing transmission line system (2011)	Number of high voltage (100 kV or greater) transmission lines crossed by the ROW
Distance of steep slopes	Derived from seamless Digital	Miles of slope greater than 20 percent crossed by the routes

Appendix A: GIS Data Sources		
Siting Criteria	Source	Description
crossed	Elevation Models (DEMs) obtained from the U.S. Geologic Survey (2014)	
Length of transmission line parallel	POWERmap existing transmission line system (2011)	Miles of the route parallel to existing high voltage transmission lines
Length of pipeline parallel	POWERmap Gas Pipeline (2012)	Miles of the route parallel to existing pipelines
Length of road parallel	ESRI road file (2010)	Miles of the route parallel to existing roadways



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**Appendix B: Agency Correspondence**

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# **PENNSYLVANIA**

## **AGENCY CONSULTATION AND RESPONSES**



Transource, LLC  
 8500 Smith Mill Road  
 New Albany, OH 43054  
 Tel: 614.933.2600 main

January 31, 2017

Shawn Garvin, Regional Administrator  
 U.S. Environmental Protection Agency  
 Region 3  
 1650 Arch Street, Mail Code: 3RA00  
 Philadelphia, Pennsylvania 19103-2029

**Subject: Transource, LLC  
 Independence Energy Connection Transmission Line Project**

Dear Mr. Garvin,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation for the Project activities occurring Pennsylvania and Maryland. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those counties, and within Pennsylvania those municipalities, that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Counties and Municipalities</b>		
<b>Pennsylvania</b>		
<b>West Route – Franklin County</b>		<b>East Route – York County</b>
Letterkenny Township	Quincy Township	Chanceford Township
Southampton Township	Mont Alto Borough	East Hopewell Township
Greene Township	Antrim Township	Hopewell Township
Chambersburg Borough	Greencastle Borough	Fawn Township
Hamilton Township	Washington Township	Fawn Grove Borough
Guilford Township	Waynesboro Borough	Peach Bottom Township
<b>Maryland</b>		
<b>West Route – Washington County</b>		<b>East Route – Harford County</b>

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Transource will continue to provide updates to the EPA as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.

Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in blue ink that reads "Heather Brewster". The signature is written in a cursive style with a long horizontal stroke at the end.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource





Transource, LLC  
 8500 Smith Mill Road  
 New Albany, OH 43054  
 Tel: 614.933.2600 main

January 31, 2017

Lora Lattanzi, Project Leader  
 U.S. Fish & Wildlife Service  
 Pennsylvania Field Office, Northeast Region  
 110 Radnor Rd, Suite 101  
 State College, Pennsylvania 16801

**Subject: Transource, LLC  
 Independence Energy Connection Transmission Line Project**

Dear Ms. Lattanzi,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation specific to the Project activities occurring within Franklin and York Counties, Pennsylvania. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those municipalities that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Municipalities</b>		
<b>West Route – Franklin County</b>		<b>East Route – York County</b>
Letterkenny Township	Quincy Township	Chanceford Township
Southampton Township	Mont Alto Borough	East Hopewell Township
Greene Township	Antrim Township	Hopewell Township
Chambersburg Borough	Greencastle Borough	Fawn Township
Hamilton Township	Washington Township	Fawn Grove Borough
Guilford Township	Waynesboro Borough	Peach Bottom Township

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Once a formal route is selected, Transource will submit a Pennsylvania Natural Diversity Inventory (PNDI) request for review. Transource will continue to provide updates to the United States Fish and Wildlife Service (USFWS) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.

Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in blue ink that reads "Heather Brewster". The signature is fluid and cursive, with a long horizontal stroke at the end.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource

## **Brewster, Heather**

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**From:** Dershem, Bonnie <bonnie\_dershem@fws.gov>  
**Sent:** Tuesday, April 04, 2017 1:10 PM  
**To:** Brewster, Heather  
**Subject:** Transource Project

Heather,

Please conduct a PNDI search for your project and follow the instructions. Follow the link below:  
<https://conservationexplorer.dcnr.pa.gov>

## **Bonnie**

**Bonnie Dershem**  
**Endangered Species Biologist**  
U.S. Fish and Wildlife Service  
**Pennsylvania Field Office**  
**110 Radnor Rd; Suite 101**  
**State College, PA 16801**  
**814-206-7453**



Transource, LLC  
 8500 Smith Mill Road  
 New Albany, OH 43054  
 Tel: 614 933.2600 main

January 31, 2017

Wade Chandler, Chief Pennsylvania Section  
 U.S. Army Corps of Engineers  
 Baltimore District  
 Regulatory Branch  
 1631 South Atherton Street, Suite 102  
 State College, Pennsylvania 16801

**Subject: Transource, LLC  
 Independence Energy Connection Transmission Line Project**

Dear Mr. Chandler,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation specific to the Project activities occurring within Franklin and York Counties, Pennsylvania. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those municipalities that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Municipalities</b>		
<b>West Route – Franklin County</b>		<b>East Route – York County</b>
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Greene Township	Antrim Township	Hopewell Township
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Hamilton Township	Washington Township	Fawn Grove Borough
Guilford Township	Waynesboro Borough	Peach Bottom Township

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Once a formal route is selected, Transource will submit a pre-application meeting request. Transource will continue to provide updates to the United States Army Corps of Engineers (USACE) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.

Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Heather Brewster". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource





Transource, LLC  
 8500 Smith Mill Road  
 New Albany, OH 43054  
 Tel: 614.933.2600 main

January 31, 2017

Daniel Naylor, Supervisor  
 Pennsylvania Department of Agriculture - Region 6  
 2301 North Cameron Street, Suite G-6  
 Harrisburg, Pennsylvania 17110-0184

**Subject: Transource, LLC  
 Independence Energy Connection Transmission Line Project**

Dear Mr. Naylor,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

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Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Transource will continue to provide updates to the Pennsylvania Department of Agriculture (PADA) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.

Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in blue ink that reads "Heather Brewster". The signature is fluid and cursive, with the first name being more prominent.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource



Transource, LLC  
 8500 Smith Mill Road  
 New Albany, OH 43054  
 Tel: 614.933.2600 main

January 31, 2017

Ellen Shultzabarger, Division Chief  
 Pennsylvania Department of Conservation and Natural Resources  
 Conservation Science and Ecological Services Section  
 Rachel Carson State Office Building  
 400 Market Street, 6th Floor  
 Harrisburg, Pennsylvania 17105-8552

**Subject: Transource, LLC  
 Independence Energy Connection Transmission Line Project**

Dear Ms. Shultzabarger,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation specific to the Project activities occurring within Franklin and York Counties, Pennsylvania. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those municipalities that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Municipalities</b>		
<b>West Route – Franklin County</b>		<b>East Route – York County</b>
Letterkenny Township	Quincy Township	Chanceford Township
Southampton Township	Mont Alto Borough	East Hopewell Township
Greene Township	Antrim Township	Hopewell Township
Chambersburg Borough	Greencastle Borough	Fawn Township
Hamilton Township	Washington Township	Fawn Grove Borough
Guilford Township	Waynesboro Borough	Peach Bottom Township

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Once a formal route is selected, Transource will submit a Pennsylvania Natural Diversity Inventory (PNDI) request for review. Transource will continue to provide updates to the Pennsylvania Department of Conservation and Natural Resources (PADCNR) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.

Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in blue ink that reads "Heather Brewster". The signature is written in a cursive style with a long horizontal stroke at the end.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource

**Brewster, Heather**

---

**From:** Braund, Jaclyn <c-jbraund@pa.gov>  
**Sent:** Tuesday, February 07, 2017 12:45 PM  
**To:** Brewster, Heather  
**Subject:** Independence Energy Connection Transmission Line Project

Hi Heather,

I have received the Independence Energy Connection Transmission Line Project recently mailed to DCNR. At this time there is no further information I have to give to AECOM for the Project until the PNDI is completed. Please let me know if you need any assistance with the PNDI.

Thanks,

**Jaci Braund** | Ecological Information Specialist  
PA Department of Conservation & Natural Resources  
Bureau of Forestry | Natural Heritage Section  
400 Market Street | Harrisburg, PA 17105  
Phone: 717.214.3813 | Fax: 717.772.0271  
E-mail: [c-jbraund@pa.gov](mailto:c-jbraund@pa.gov)



Transource, LLC  
 8500 Smith Mill Road  
 New Albany, OH 43054  
 Tel: 614.933.2600 main

January 31, 2017

Joseph Adams, Regional Director  
 PA Department of Environmental Protection  
 South-central Regional Office  
 909 Elmerton Ave  
 Harrisburg, Pennsylvania 17110-8200

**Subject: Transource, LLC  
 Independence Energy Connection Transmission Line Project**

Dear Mr. Adams,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation specific to the Project activities occurring within Franklin and York Counties, Pennsylvania. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those municipalities that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Municipalities</b>		
<b>West Route – Franklin County</b>		<b>East Route – York County</b>
Letterkenny Township	Quincy Township	Chanceford Township
Southampton Township	Mont Alto Borough	East Hopewell Township
Greene Township	Antrim Township	Hopewell Township
Chambersburg Borough	Greencastle Borough	Fawn Township
Hamilton Township	Washington Township	Fawn Grove Borough
Guilford Township	Waynesboro Borough	Peach Bottom Township

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Once a formal route is selected, Transource will submit a pre-application meeting request. Transource will continue to provide updates to the Pennsylvania Department of Environmental Protection (PADEP) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.



Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in blue ink that reads "Heather Brewster". The signature is written in a cursive style with a long horizontal stroke at the end.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource



Transource, LLC  
 8500 Smith Mill Road  
 New Albany, OH 43054  
 Tel: 614.933.2600 main

January 31, 2017

John Arway, Executive Director  
 Pennsylvania Fish and Boat Commission  
 Natural Diversity Section  
 1601 Elmerton Ave  
 Harrisburg, Pennsylvania 17106

**Subject: Transource, LLC  
 Independence Energy Connection Transmission Line Project**

Dear Mr. Arway,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation specific to the Project activities occurring within Franklin and York Counties, Pennsylvania. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those municipalities that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Municipalities</b>		
<b>West Route – Franklin County</b>		<b>East Route – York County</b>
Letterkenny Township	Quincy Township	Chanceford Township
Southampton Township	Mont Alto Borough	East Hopewell Township
Greene Township	Antrim Township	Hopewell Township
Chambersburg Borough	Greencastle Borough	Fawn Township
Hamilton Township	Washington Township	Fawn Grove Borough
Guilford Township	Waynesboro Borough	Peach Bottom Township

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Once a formal route is selected, Transource will submit a Pennsylvania Natural Diversity Inventory (PNDI) request for review. Transource will continue to provide updates to the Pennsylvania Fish and Boat Commission (PAFBC) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.

Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Heather Brewster". The signature is fluid and cursive, with a long horizontal stroke at the end.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource



Transource, LLC  
 8500 Smith Mill Road  
 New Albany, OH 43054  
 Tel: 614.933.2600 main

January 31, 2017

Bradley J. Meyers, Director  
 Pennsylvania Game Commission  
 Southcentral Region  
 8627 William Penn Highway  
 Huntingdon, Pennsylvania 16652

**Subject: Transource, LLC  
 Independence Energy Connection Transmission Line Project**

Dear Mr. Meyers,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation specific to the Project activities occurring within Franklin and York Counties, Pennsylvania. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those municipalities that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Municipalities</b>		
<b>West Route – Franklin County</b>		<b>East Route – York County</b>
Letterkenny Township	Quincy Township	Chanceford Township
Southampton Township	Mont Alto Borough	East Hopewell Township
Greene Township	Antrim Township	Hopewell Township
Chambersburg Borough	Greencastle Borough	Fawn Township
Hamilton Township	Washington Township	Fawn Grove Borough
Guilford Township	Waynesboro Borough	Peach Bottom Township

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Once a formal route is selected, Transource will submit a Pennsylvania Natural Diversity Inventory (PNDI) request for review. Transource will continue to provide updates to the Pennsylvania Game Commission (PGC) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.

Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in blue ink that reads "Heather Brewster". The signature is fluid and cursive, with a long horizontal stroke at the end.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource



Transource, LLC  
 8500 Smith Mill Road  
 New Albany, OH 43054  
 Tel: 614.933.2600 main

January 31, 2017

Andrea L. MacDonald  
 Pennsylvania Historical & Museum Commission, Bureau Director  
 400 North Street  
 Commonwealth Keystone Building, 2<sup>nd</sup> Floor  
 Harrisburg, Pennsylvania 17120-0093

**Subject: Transource, LLC  
 Independence Energy Connection Transmission Line Project**

Dear Ms. MacDonald,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation specific to the Project activities occurring within Franklin and York Counties, Pennsylvania. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those municipalities that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Municipalities</b>		
<b>West Route – Franklin County</b>		<b>East Route – York County</b>
Letterkenny Township	Quincy Township	Chanceford Township
Southampton Township	Mont Alto Borough	East Hopewell Township
Greene Township	Antrim Township	Hopewell Township
Chambersburg Borough	Greencastle Borough	Fawn Township
Hamilton Township	Washington Township	Fawn Grove Borough
Guilford Township	Waynesboro Borough	Peach Bottom Township

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Once a formal route is selected, Transource will submit a Project review request. Transource will continue to provide updates to the Pennsylvania Historic Museum Commission (PHMC) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.



Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in blue ink that reads "Heather Brewster". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource



# Pennsylvania State Historic Preservation Office

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

March 6, 2017

Heather Brewster  
AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

ER 2017-0726-042-A

Dear Ms. Brewster:

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

## Archaeological Resources

Both of the proposed focus areas contain a number of previously recorded archaeological sites. Please have an AECOM archaeological professional who has a secure password to archaeological site locations in our Cultural Resources Geographic Information system look at these areas before routes or alternative routes are selected.

## Above Ground Resources

A preliminary review of this project indicates that there may be National Register-eligible historic buildings, structures, districts, and objects in the project area. In order to facilitate the review process, project planners must conduct surveys to identify these resources (both previously identified and newly identified) before final plans are developed. For any new proposed structures/lines and/or those proposed structures that will increase in height above 20' from the existing average, please consult our *Guidelines for Projects with Potential Visual Effects in Pennsylvania (September 2014)* available from the "Forms and Guidance" page on our website: <http://www.phmc.pa.gov/Preservation> for instructions, including delineating an Area of Potential Effects, identifying historic properties, and assessing effects.

Given the size and/or complexity of the above listed project, a reconnaissance survey is necessary to characterize the age, style, and types of resources in the Area of Potential Effect (APE). The reconnaissance survey should also provide the methodology for more detailed (intensive) level survey to assess National Register eligibility of resources in the APE. More guidance on preparation of reconnaissance surveys is found in *Guidelines for Architectural Investigations in Pennsylvania (2014)*, available via our website: <http://www.phmc.pa.gov/Preservation/About/Documents/Architectural-Guidelines.pdf>

To assist you in your identification of known above ground resources, the State Historic Preservation Office (SHPO) maintains records of National Register listed and eligible and

previously identified resources. Information on many of these resources is available on our web based Cultural Resources Geographic Information System (CRGIS) <http://crgis.state.pa.us>. Additional information is available in the survey reports and files of the PHMC-BHP's research room. Please consult the unpublished reports and files to determine what is known in the project area and whether the previous survey information may require an update. In addition, a comparison of historic (available at [pennpilot.psu.edu](http://pennpilot.psu.edu)) and current aerial mapping would be useful for identifying changes to the landscape over time as well as additional resources within the project vicinity that meet the National Register 50-year-age consideration.

For larger or more complex projects, you may also want to consult with the appropriate staff reviewer on the delineation and justification of the boundary of the APE. Their contact information is listed below.

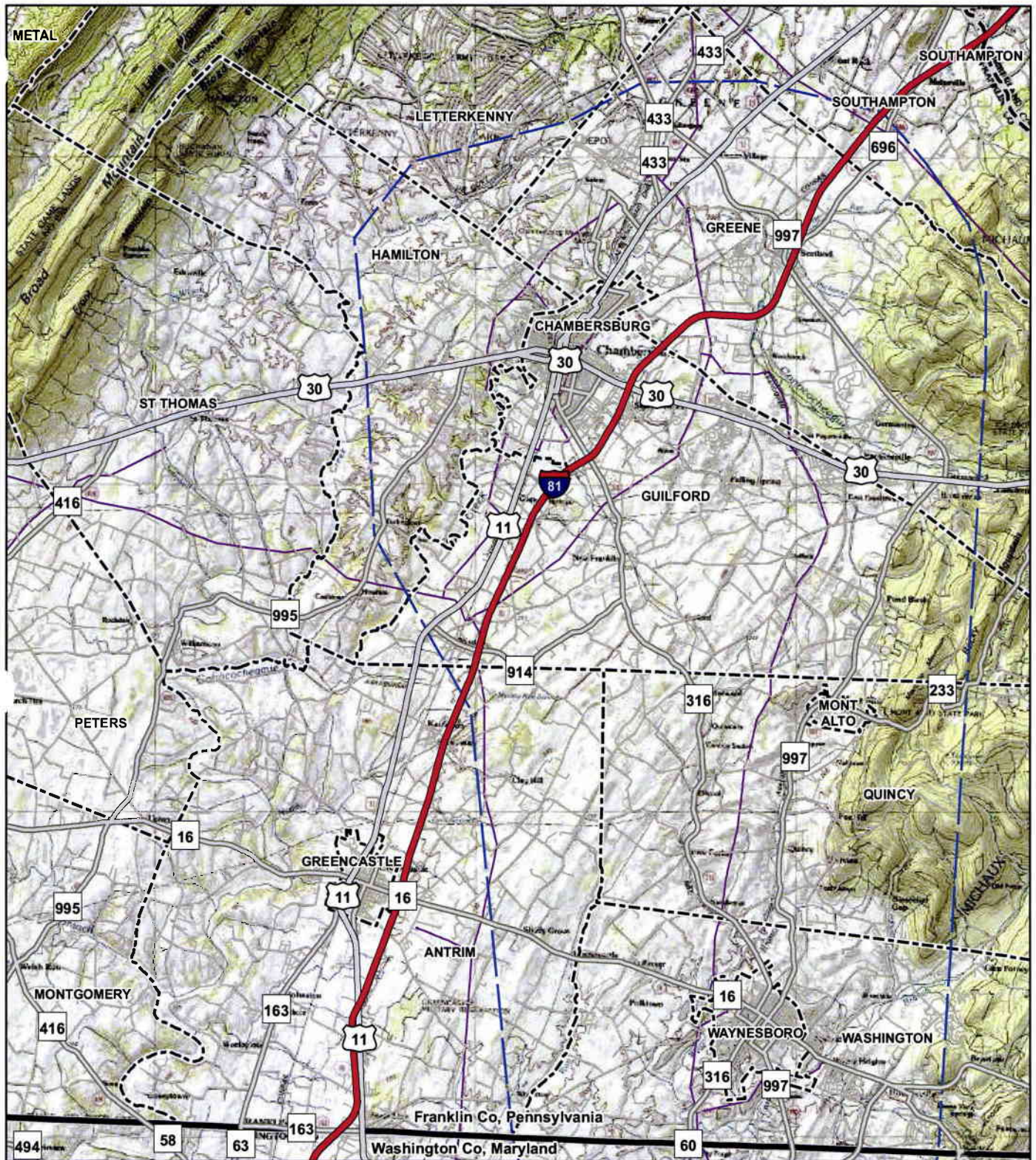
If you have any questions regarding archaeological resources, please contact me at 717-772-0925 or [dmclearen@pa.gov](mailto:dmclearen@pa.gov). If you have questions regarding above ground resources, please contact Cheryl L. Nagle at 717.772.4519 or [chnagle@pa.gov](mailto:chnagle@pa.gov).

Sincerely,



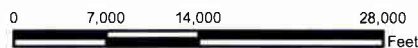
Douglas C. McLearen, Chief  
Division of Archaeology and Protection





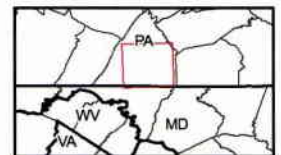
**Legend**

-  Existing Transmission Lines
-  County Boundary
-  Project Focal Area
-  State Boundary
-  Municipal Boundary



**Coordinate System:**  
 NAD 1983 UTM Zone 18N  
 Projection: Transverse Mercator  
 Linear Unit: Meter

**Data Sources:**  
 Platts Power Map Transmission Line (2011)  
 USA Topo Maps (ESRI)

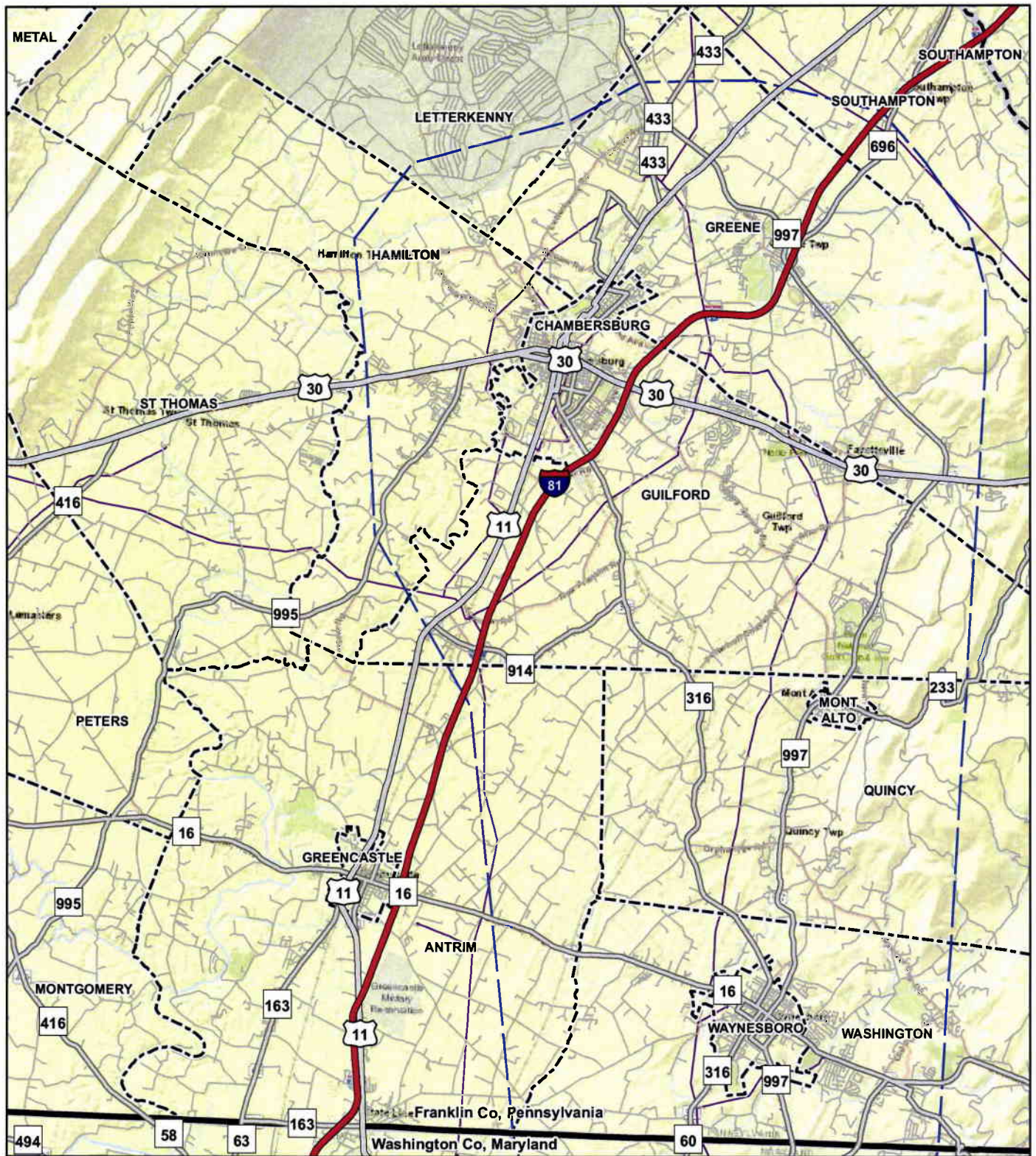


Job: 60529006  
 Prepared by: NB/BSF  
 Checked by: HB  
 Date: 1/30/2017

Independence Energy Connection - West  
 Transource, LLC  
 Focal Area - PA

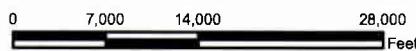
Confidential - Draft Work Product





**Legend**

- Existing Transmission Lines
- Project Focal Area
- Municipal Boundary
- County Boundary
- State Boundary



**Coordinate System:**  
 NAD 1983 UTM Zone 18N  
 Projection: Transverse Mercator  
 Linear Unit: Meter

**Data Sources:**  
 Platts Power Map Transmission Line (2011)  
 USA Topo Maps (ESRI)



Job: 60529006  
 Prepared by: NB/BSF  
 Checked by: HB  
 Date: 1/30/2017

Independence Energy Connection - West  
 Transource, LLC  
 Focal Area - PA

Confidential - Draft Work Product



Transource, LLC  
8500 Smith Mill Road  
New Albany, OH 43054  
Tel: 614.933.2600 main

November 8, 2017

Hathaway Jones, Management Analyst  
United States Department of Agriculture  
Natural Resources Conservation Service  
359 East Park Drive, Suite 2  
Harrisburg, Pennsylvania 17111

**Subject: Transource Pennsylvania, LLC  
Independence Energy Connection Project  
Natural Resources Conservation Service Agricultural Easements  
York and Franklin Counties, Pennsylvania**

Dear Ms. Hathaway,

Transource Pennsylvania, LLC (Transource PA) is proposing to build two new transmission lines and two new substations in Pennsylvania as part of the Independence Energy Connection Project (Project). Transource PA was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border (Transource Maryland, LLC, an affiliate, is responsible for the construction of related facilities in Maryland). Transource PA will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as the East Route and the West Route. The West Route is approximately 29 miles (24 miles in Pennsylvania) and begins at the proposed Rice Substation in Franklin County, Pennsylvania, and extends to the existing Ringgold Substation in Washington County, Maryland. The East Route is approximately 16 miles (13 in Pennsylvania) starting at the proposed Furnace Run Substation in York County, Pennsylvania, and extends to the existing Conastone Substation in Harford County, Maryland. Both transmission lines will require a 130 foot wide right-of-way (ROW) for both installation and operation. At this time, Transource PA has announced proposed routes for this Project after working through the siting process and completing public open houses.

Transource PA is formally requesting the Natural Resources Conservation Service's (NRCS) review of the proposed routes in Pennsylvania as it relates to Stewardship Lands Easements, including those under the Agricultural Conservation Easement Program (ACEP), formerly referred to as the Farm and Ranch Lands Protection Program (FRPP). Per past correspondence with NRCS, Transource PA is providing the following requested information including parcels identified along the ROW of the proposed routes, mapping, shapefiles of the routes, and a summary table of the identified parcels.

Transource PA would like to clarify that at this time the information used to identify the parcel boundaries and landowners is based on public county tax parcel data. Civil survey of property lines and deed title search is pending to finalize this information. With the public announcement of the proposed routes, landowners within the 130 foot ROW, based on county parcel data, and those within close proximity were notified via certified mailing. Until parcel data can be verified using field information, additional parcels within close proximity of the routes have also been included with the provided information. Final collection of field surveyed parcel lines may determine whether these parcels can be avoided.

Enclosed with this request, Transource PA is providing the agricultural easement deeds for those properties along the proposed routes identified as having NRCS easements. Those documents are provided herein for NRCS's information.



We appreciate your review and assistance with this request. Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in blue ink that reads "Heather Brewster". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: Proposed Route Aerial Maps  
Shapefile of Proposed Routes w/Parcel Data  
List of Notified Landowner with Parcel Data  
Agricultural Easement Deeds

cc: Laurie Spears – Transource



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF AGRICULTURE

November 29, 2017

Ms. Laurie Spears  
Transource®  
Senior Siting Specialist  
8500 Smith Mill Road  
New Albany, OH 43054

Dear Ms. Spears:

**RE: The Independent Energy Connection project and potential impacts to farmland.**

It has come to my attention that Transource® is developing the Independence Energy Connection (IEC) project, to include a new overhead electric transmission project. I understand that the project will be built in two segments, East and West, and will include land primarily in Franklin and York counties in Pennsylvania, land that is some of the richest and most productive agricultural land in the world. This is of concern to me as agriculture is a leading economic endeavor in Pennsylvania. The agriculture industry contributes over \$75 billion to our economy statewide. Products grown and processed here provide food for our nation, support jobs and a diverse economy.

In addition, Pennsylvania leads the nation in farmland preservation through the purchase of permanent agricultural conservation easements—and both York and Franklin counties have two of the most robust programs in the state with more than 58,807 acres preserved. In fact, over \$107 million in public funds have been invested in preserving farmland in these two counties alone.

Farm owners have given up the right to use their properties for other uses in support of maintaining a thriving agricultural industry in this region. Many are now questioning how the Independent Energy Connection project will impact their farming operations and why there are no additional protections or considerations for preserved farms. Since farmland is open and cleared it is often viewed as path of least resistance by comparison to other impacted resources. However, it cannot be overstated that farmland is valuable to both the farm owners whose livelihood depends on it and to the taxpayers who have made significant investments in preserving it.

In summary, as Transource® prepares to file with the Public Utility Commission later this year, I urge you to be mindful of agriculture and particularly preserved farms in planning and siting of this project. Please feel free to contact Doug Wolfgang, Director of Farmland Preservation, at (717) 783-3167 if there are questions or you would like further discussion.

Sincerely,

A handwritten signature in blue ink that reads "Russell C. Redding".

Russell C. Redding  
Secretary

## **AGENCY EMAILS**

## Brewster, Heather

---

**From:** Bess, Damian A CIV USARMY USAMC (US) <damian.a.bess.civ@mail.mil>  
**Sent:** Tuesday, May 16, 2017 6:11 PM  
**To:** Brewster, Heather  
**Subject:** RE: [Non-DoD Source] RE: meeting info for Letterkenny (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Heather

Thanks for your visit, it was very informative. If you wouldn't mind, please let me know when and where any public meetings are planned and what outlet you advertise it on so that we can keep track. We will be forwarding our boundary data to assist your planning.

Damian

-----Original Message-----

**From:** Brewster, Heather [<mailto:Heather.Brewster@aecom.com>]  
**Sent:** Thursday, May 11, 2017 10:07 AM  
**To:** Bess, Damian A CIV USARMY USAMC (US) <[damian.a.bess.civ@mail.mil](mailto:damian.a.bess.civ@mail.mil)>  
**Subject:** [Non-DoD Source] RE: meeting info for Letterkenny (UNCLASSIFIED)

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

-----

Thank you Damian. We will likely complete the form and go ahead and send it in via the provided email address.

Thank you ~Heather Brewster  
610-832-8819

-----Original Message-----

**From:** Bess, Damian A CIV USARMY USAMC (US) [Caution-<mailto:damian.a.bess.civ@mail.mil>]  
**Sent:** Thursday, May 11, 2017 10:02 AM  
**To:** Brewster, Heather  
**Subject:** meeting info for Letterkenny (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Heather

The public site below has directions to my office in bldg. 10. You and Barry should fill out the form attached and bring it with you for access or send it ahead to be ready. When you get here, I will meet you and escort you to get your visitor's pass. Just use my cell or work phone below to contact me when you arrive. If you want to send ahead, send it to [usarmy.letterkenny.usamc.list.lett.drsk-access-apprv@mail.mil](mailto:usarmy.letterkenny.usamc.list.lett.drsk-access-apprv@mail.mil).

Caution-<http://www.letterkenny.army.mil/directions.html>

VR  
Damian Bess  
Director, Public Works  
Letterkenny Army Depot  
Chambersburg, PA 17202  
Wk 717-267-9456  
Wk Cell 717-331-9313

CLASSIFICATION: UNCLASSIFIED

CLASSIFICATION: UNCLASSIFIED

## Brewster, Heather

---

**From:** Brubaker, Roy D (DCNR) <robrubaker@pa.gov>  
**Sent:** Thursday, July 06, 2017 1:34 PM  
**To:** Gribik, Jodie A  
**Cc:** Brewster, Heather; Ewan, Keith D  
**Subject:** FW: Transource Independence Energy Connection - Michaux State Forest  
**Attachments:** 11x17\_Michaux\_IndexMap\_West\_060617.pdf; 11x17\_AEP\_Overview\_West\_060217.pdf; PA\_PADCNr\_Transource\_20170131.pdf

Jodie,

I spoke with Heather by phone regarding this project and she may be calling you about setting up a meeting to discuss their route alternatives with the BOF. I believe Phil and Keith had been in contact with Dave and/or Bill regarding it. I will wait to hear from you on what next steps you will need our involvement in.

Thanks.

RB

---

**From:** NR, FD01  
**Sent:** Thursday, July 06, 2017 10:22 AM  
**To:** Brubaker, Roy D (DCNR) <robrubaker@pa.gov>  
**Subject:** FW: Transource Independence Energy Connection - Michaux State Forest

Heather called this morning. I explained that our computers were down all day yesterday. She may call back later today as you were in a meeting when she called.

Thanks

**Colleen DeLauter** | Clerk Typist 1  
PA Department of Conservation and Natural Resources  
Bureau of Forestry, Michaux State Forest, District #1  
10099 Lincoln Way East | Fayetteville, PA 17222  
Phone: 717-352-2211 | Fax: 717-352-3007  
E-mail: [cdelauter@pa.gov](mailto:cdelauter@pa.gov)

[www.dcnr.state.pa.us](http://www.dcnr.state.pa.us)

---

**From:** Brewster, Heather [<mailto:Heather.Brewster@aecom.com>]  
**Sent:** Wednesday, July 05, 2017 3:51 PM  
**To:** NR, FD01 <[ra-fd01@pa.gov](mailto:ra-fd01@pa.gov)>  
**Subject:** Transource Independence Energy Connection - Michaux State Forest

Mr. Brubaker,

I left a voicemail message regarding Transource LLC's Independence Energy Connection Project. This project entails a new 230kV transmission line project commencing north of Chambersburg, Franklin County PA and traveling south into Washington County, MD. We provided an introduction letter to PADCNr in January letting them know about the Project. We have currently identified several Study Segments and are considering them for their siting opportunities and constraints in order to identify 2-3 alternative



routes. Michaux State Forest sits along the eastern boundary of the Project Study Area. I have included the following figures for your information:

1. An Overview map of the West Project area that shows all the study segments we have identified to date
2. Corresponding index aerial map showing those areas of Michaux State Forest in proximity to our Study Segments shown in greater detail.
3. Index Map F4 shows the one Study Segment 302 that crosses Michaux State Forest south of the Greene and Guilford Twp line east of Bikle Road.

I would appreciate the opportunity to talk and if preferred have schedule a meeting to discuss the Project with Michaux State Forest. AECOM is aware of the Environmental Assessment process required when traversing any State Forests. If there is someone else I should be reaching out to regarding this matter please let me know. Transource will be attending a meeting with PADEP SC on June 19<sup>th</sup> to discuss the Project.

**Thank you. ~Heather**

**Heather Brewster**

Associate Vice President

AECOM Environment

☎ 610-832-8819 (direct line)

✉ [heather.brewster@aecom.com](mailto:heather.brewster@aecom.com)

📱 215.869.4137 (mobile)

**AECOM**

625 West Ridge Pike, Conshohocken, Pennsylvania 19428

T 1-610-832-3500 F 1-610-832-3501

[www.aecom.com](http://www.aecom.com)



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## Brewster, Heather

---

**From:** Gribik, Jodie A <jgribik@pa.gov>  
**Sent:** Wednesday, July 26, 2017 3:07 PM  
**To:** Brewster, Heather  
**Subject:** RE: Independence Energy Connection Project Update - Michaux State Forest

Hello Heather –

I am back in my office! I just returned from field work for the end of the day today. I want to check out the info at the link you provided. Also, Roy has mentioned that his district has spoken to my staff regarding this, so I'm going to try and catch up with them this afternoon and then I will get in touch with you asap. Thank you very much for your patience!

Jodie

**Jodie Gribik, Section Chief**  
DCNR Bureau of Forestry  
Operations Section  
400 Market Street, P.O. Box 8552  
Harrisburg, PA 17105  
Phone: 717.787.2014  
E-mail: [jgribik@pa.gov](mailto:jgribik@pa.gov)  
[www.dcnr.state.pa.us/forestry](http://www.dcnr.state.pa.us/forestry)

---

**From:** Brewster, Heather [mailto:Heather.Brewster@aecom.com]  
**Sent:** Tuesday, July 25, 2017 2:39 PM  
**To:** Brubaker, Roy D (DCNR) <robrubaker@pa.gov>; Gribik, Jodie A <jgribik@pa.gov>  
**Cc:** Ewan, Keith D <kewan@pa.gov>; Laurie M Spears <lmspears@aep.com>  
**Subject:** Independence Energy Connection Project Update - Michaux State Forest

Jodie and Roy,

I want to follow-up regarding Transource's Independence Energy Connection Project. I will follow-up this email with a call to Jodie, as we have not been able to touch base and talk yet. Since talking with Roy, the Project has been further refined and 2 alternative routes are being considered. They can be reviewed at the project website, which is detailed below. At this time we are still considering an alternative that crosses the small area of Michaux State Forest, as discussed with Roy. Transource would like the opportunity to discuss this project further with the DCNR and setup a meeting. We will be having additional open houses the week of August 7<sup>th</sup> for the public to review and comment on these alternative routes. This information is all detailed below. If you click on the project aerial below or this link it will take you to the Project website and a viewer that shows the alternative routes. <http://www.transourceenergyprojects.com/IndependenceEnergyConnection/>.

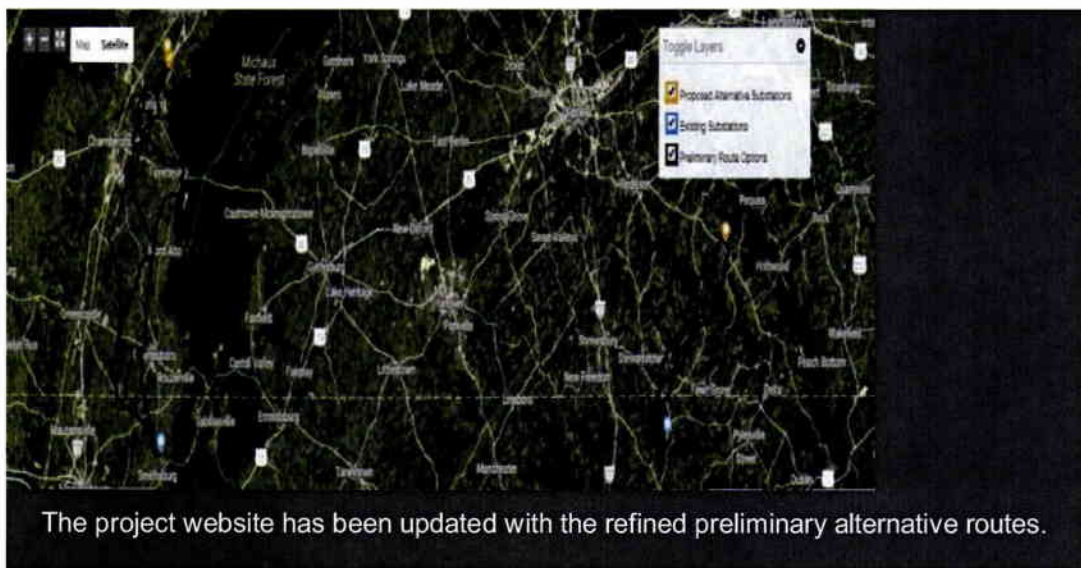
**Thank you ~Heather Brewster**  
**610-832-8819**

[View this email in your browser](#)



Thank you for your interest in the Independence Energy Connection (IEC), a new overhead electric transmission line project being built by Transource Energy.

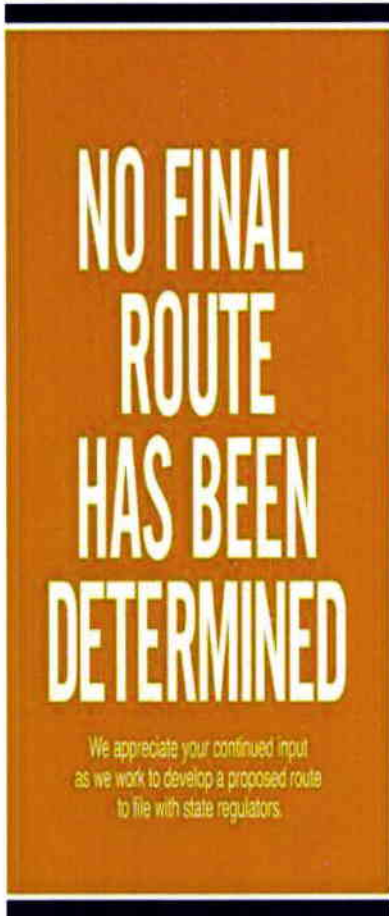
Beginning today, Transource is taking input on refined preliminary alternative routes. This is the second phase of public review before the company determines a proposed route to file with state regulators.



In June, the company presented study segments to the public and received comments. Many of the study segments initially presented have been removed to arrive at the preliminary alternative routes now being announced. The company continues to take comments online, by phone, mail and in person at the open houses in August.

**The open houses are scheduled for:**

- **Monday, August 7 from 6-9 p.m**  
Smithsburg Middle School (Gym)  
Smithsburg, Md.
- **Tuesday, August 8 from 6-9 p.m.**  
Kauffman Ruritan Club and Community Center  
Chambersburg, Pa.
- **Wednesday, August 9 from 6-9 p.m.**  
Norrisville Elementary School (Gym)  
White Hall, Md.
- **Thursday, August 10 from 6-9 p.m.**  
Kennard-Dale High School (Cafeteria)  
Fawn Grove, Pa.



## Ways to Provide Input:

**- IN PERSON:**

Attend a local open house event

**- BY PHONE:**

1-800-440-4213

**- ONLINE:**

[www.TransourceEnergyProjects.info](http://www.TransourceEnergyProjects.info)

**- BY MAIL:**

P.O. Box 573, Harrisburg, PA 17108-0573

- Or -

P.O. Box 192, White Hall, MD 21161-0192

As with the first open houses, attendees can talk with Transource team members, learn about the project, review maps and provide input. There is no formal presentation, so attendees are welcome to come at any point throughout the evening.

The comments we receive play an active role in our decision-making process to determine a proposed route. Additionally, based on feedback, Transource is now considering the use of a steel monopole in addition to lattice structures.

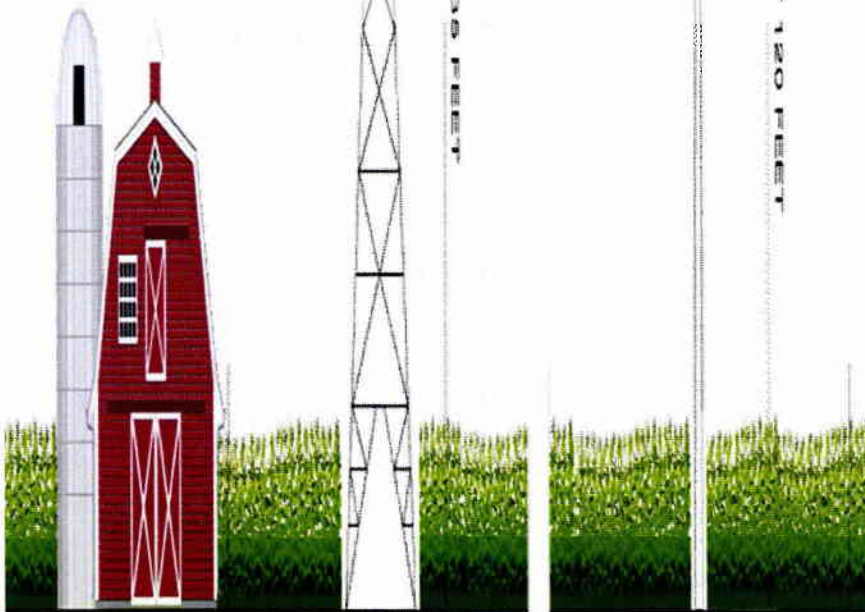
# Proposed Structures Under Consideration

The rendering depicts a typical 230 KV double-circuit lattice tower and a typical 230 KV double-circuit steel monopole. Actual structure type, height and base width may vary and/or result in a combination of structure types along the line route. While the structure type may vary, the typical right-of-way is 130 feet wide for safe construction, operation and maintenance of the facilities.

230 KV Double-Circuit Lattice Tower



230 KV Double-Circuit Steel Monopole





## Brewster, Heather

---

**From:** Plank, Christopher <cplank@pa.gov>  
**Sent:** Thursday, September 21, 2017 7:04 AM  
**To:** Mong, David E (DCNR); Brewster, Heather; Imspears@aep.com; Baker, Barry  
**Cc:** Bowen, Rebecca; Brubaker, Roy D (DCNR)  
**Subject:** RE: PA DCNR - TRANSOURCE - Independence Energy Connection Transmission Line - Project Overview Meeting (West)  
**Attachments:** j-35-2016mo - 10314240919600966.pdf; SR Line NEBA Report 27 July 2012\_FINAL\_PUBLIC Complete.pdf

Hello all,

Attached is the very recent (June 2017) PA Supreme Court Opinion regarding DCNR and the Commonwealth's obligation to act as "trustees" for the Commonwealth's natural resources. This opinion is in regards to Article 1 Section 27 of the Pennsylvania Constitution, otherwise known as the "Environmental Rights Amendment". The opinion underscores the Department's mandatory obligation to uphold this amendment, as well as the mandatory obligation to function as trustee for the environmental values of the State Forests.

Also attached is the Human Use and Ecological Impacts study that was performed for the Susquehanna-Roseland powerline crossing of the Delaware Water Gap National Recreation Area. The study was the basis for the \$66 mitigation fund established as compensation for crossing the public lands of the Delaware Water Gap.

(<http://www.poconorecord.com/article/20140513/news90/405130318>)

Both of these attachments were mentioned in our meeting yesterday.

Thank you for coming in to meet with us. We appreciate the information you were able to provide us on the project, and we hope that the information that we provided is helpful to you. We realize how terribly challenging the task of selecting a corridor can be. As Dave mentions below, please feel free to contact us at any time if we can be of any assistance.

Thanks again.

Chris

**Christopher J. Plank** | Assistant State Forester  
Director of Forestry Services  
Department of Conservation and Natural Resources  
Bureau of Forestry  
400 Market Street | Harrisburg, PA 17105  
Phone: 717.787.6055 | Fax: 717.783.5009  
E-mail: [CPlank@pa.gov](mailto:CPlank@pa.gov)  
<http://www.dcnr.state.pa.us/forestry/index.aspx>

---

**From:** Mong, David E (DCNR)  
**Sent:** Wednesday, September 20, 2017 4:27 PM  
**To:** Brewster, Heather <[Heather.Brewster@aecom.com](mailto:Heather.Brewster@aecom.com)>; [Imspears@aep.com](mailto:Imspears@aep.com); [barry.baker@aecom.com](mailto:barry.baker@aecom.com)

Cc: Bowen, Rebecca <[rebbowen@pa.gov](mailto:rebbowen@pa.gov)>; Plank, Christopher <[cplank@pa.gov](mailto:cplank@pa.gov)>; Brubaker, Roy D (DCNR) <[robrubaker@pa.gov](mailto:robrubaker@pa.gov)>

Subject: PA DCNR - TRANSOURCE - Independence Energy Connection Transmission Line - Project Overview Meeting (West)

Good Afternoon,

Attached is today's sign-in sheet for your records.

It was a pleasure in meeting you all in person today and good to converse with you once again Barry. We found it informative and I sensed that both parties gained in helping each other today with relative information and knowledge. Thank you for making the effort to reach out and meet with us in person; it seemed altogether fitting.

Please feel free to reach out to us at any time in the future and if we can be of help in any way.

David E. Mong, Forest Program Specialist - Right of Way Administration  
Department of Conservation & Natural Resources  
Bureau of Forestry/Central Office – Operations Section  
400 Market Street, 6<sup>th</sup> Floor  
Harrisburg, PA 17105  
Office Phone: 717-783-7947  
[www.dcnr.state.pa.us](http://www.dcnr.state.pa.us)

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## Brewster, Heather

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**From:** Jones, Hathaway - NRCS, Harrisburg, PA <Hathaway.Jones@pa.usda.gov>  
**Sent:** Thursday, August 31, 2017 11:43 AM  
**To:** Brewster, Heather  
**Subject:** Easements impacted by transource pipeline map  
**Attachments:** transource.pdf

Heather,  
Attached is the map showing the proposed pipeline and USDA/NRCS easements impacted. We are also showing easements in the proximity/close to the proposed pipeline in case the route changes in future.

Sincerely,

*Hathaway Jones*

Management Analyst  
USDA/NRCS  
359 East Park Drive, Suite 2  
Harrisburg, PA 17111  
717-237-2210

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**From:** Dunn, Marcie - NRCS, Harrisburg, PA  
**Sent:** Thursday, August 31, 2017 11:30 AM  
**To:** Jones, Hathaway - NRCS, Harrisburg, PA <[Hathaway.Jones@pa.usda.gov](mailto:Hathaway.Jones@pa.usda.gov)>  
**Subject:** Easements impacted by transource pipeline map

*Marcie Dunn*  
GIS Specialist  
359 East Park Drive, Suite 2  
Harrisburg, PA 17111-2747  
USDA - NRCS  
(717)237-2246

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**MARYLAND**

## **AGENCY CONSULTATION AND RESPONSES**



Transource, LLC  
 8500 Smith Mill Road  
 New Albany, OH 43054  
 Tel: 614 933.2600 main

January 31, 2017

Shawn Garvin, Regional Administrator  
 U.S. Environmental Protection Agency  
 Region 3  
 1650 Arch Street, Mail Code: 3RA00  
 Philadelphia, Pennsylvania 19103-2029

**Subject: Transource, LLC  
 Independence Energy Connection Transmission Line Project**

Dear Mr. Garvin,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation for the Project activities occurring Pennsylvania and Maryland. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those counties, and within Pennsylvania those municipalities, that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Counties and Municipalities</b>		
<b>Pennsylvania</b>		
<b>West Route – Franklin County</b>		<b>East Route – York County</b>
Letterkenny Township	Quincy Township	Chanceford Township
Southampton Township	Mont Alto Borough	East Hopewell Township
Greene Township	Antrim Township	Hopewell Township
Chambersburg Borough	Greencastle Borough	Fawn Township
Hamilton Township	Washington Township	Fawn Grove Borough
Guilford Township	Waynesboro Borough	Peach Bottom Township
<b>Maryland</b>		
<b>West Route – Washington County</b>		<b>East Route – Harford County</b>

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Transource will continue to provide updates to the EPA as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.



Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Heather Brewster". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource



Transource, LLC  
 8500 Smith Mill Road  
 New Albany, OH 43054  
 Tel. 614.933 2600 main

January 31, 2017

Joe DaVia, Chief, Maryland Section Northern  
 U.S. Army Corps of Engineers  
 Baltimore District  
 Regulatory Branch  
 10 South Howard Street  
 Baltimore, Maryland 21201-1715

**Subject: Transource, LLC  
 Independence Energy Connection Transmission Line Project**

Dear Mr. DaVia,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation specific to the Project activities occurring within Washington and Harford Counties, Maryland. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those counties that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Counties</b>	
<b>West Route – Washington County</b>	<b>East Route – Harford County</b>

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Once a formal route is selected, Transource will submit a formal pre-application meeting request. Transource will continue to provide updates to the United States Army Corps of Engineers (USACE) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.

Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in black ink that reads "Heather Brewster". The signature is written in a cursive style with a long horizontal stroke at the end.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource

## **Brewster, Heather**

---

**From:** Bole, Donald R CIV USARMY CELRP (US) <Donald.R.Bole@usace.army.mil>  
**Sent:** Wednesday, May 03, 2017 6:12 PM  
**To:** Brewster, Heather  
**Subject:** Independence Energy Connection Transmission Line Project

Ms. Brewster,

We have received your request for potential issues and/or constraints for the siting of transmission lines proposed for the Independence Energy Connection Transmission Line Project, located in Washington and Howard Counties, Maryland. We request that you strongly consider keeping wetland and stream impacts within the MDSPGP-5 thresholds. Generally, this is 2,000 lf of stream impact and 5,000 square feet of wetland impact; however, it depends on the activity type that your project falls under. If you exceed these thresholds, you will have to apply for an individual permit. To reduce stream and wetland impacts, you should consider bridges, steep side slopes, retaining walls and stream relocations opposed to filling/culverting. Also, consider using temporary construction road access bridges to span streams and wetlands. For any permanent roads, use of bridges to span streams and wetlands is preferred.

In addition, when considering alignments, please be aware of any ESA issues or historic/archeological sites. Based on your proposed footprint, part of your project may be within bog turtle habitat. As you are aware, we will need clearance for ESA and Section 106 of NHPA. Significant resources within the footprint of the project may significantly delay issuing a Department of the Army permit.

Also, it appears that part of your proposed project is within Pennsylvania. If you have impacts to jurisdictional streams and/or wetlands within Pennsylvania, you will need to coordinate with the Pennsylvania Section (State College). Wade Chandler is the Section Chief in Pennsylvania and his phone number is 814-235-0573.

If you have any additional questions, please don't hesitate to contact me. We strongly recommend a pre-application meeting with our office. If you want to have a pre-application meeting with our office before you finalize a route, we can be available.

Thanks,

Don

Donald R. Bole  
U.S. Army Corps of Engineers  
10 S. Howard Street  
Baltimore, MD 21201  
(410) 962-6079



Transource, LLC  
 8500 Smith Mill Road  
 New Albany, OH 43054  
 Tel: 614.933.2600 main

January 31, 2017

Genevieve LaRouche, Field Supervisor  
 U.S. Fish & Wildlife Service  
 Chesapeake Bay Field Office  
 177 Admiral Cochrane Drive  
 Annapolis, Maryland 21401

**Subject: Transource, LLC  
 Independence Energy Connection Transmission Line Project**

Dear Ms. LaRouche,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation specific to the Project activities occurring within Franklin and York Counties, Pennsylvania. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those counties that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Counties</b>	
<b>West Route – Washington County</b>	<b>East Route – Harford County</b>

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Once a formal route is selected, Transource will submit a project specific consultation for review. Transource will continue to provide updates to the United States Fish and Wildlife Service (USFWS) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.

Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in blue ink that reads "Heather Brewster". The signature is fluid and cursive, with a long horizontal stroke at the end.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource





Transource, LLC  
8500 Smith Mill Road  
New Albany, OH 43054  
Tel: 614.933.2600 main

January 31, 2017

Denise Keehner, Program Manager  
Maryland Department of Natural Resources  
Wildlife Heritage and Environmental Review Unit  
1800 Washington Boulevard  
Baltimore, Maryland 21230

**Subject: Transource, LLC  
Independence Energy Connection Transmission Line Project**

Dear Ms. Keehner,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation specific to the Project activities occurring within Washington and Harford Counties, Maryland. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those counties that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects</b>	
<b>West Route – Washington County</b>	<b>East Route – Harford County</b>

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Once a formal route is selected, Transource will submit a formal Environmental Review Request. Transource will continue to provide updates to the Maryland Department of Natural Resources (MDNR) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.

Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Heather Brewster". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource



Transource, LLC  
8500 Smith Mill Road  
New Albany, OH 43054  
Tel: 614.933.2600 main

January 31, 2017

Louise Lawrence, Program Manager  
Maryland Department of Agriculture  
Office of Resource Conservation  
50 Harry S. Truman Parkway  
Annapolis, Maryland 21401

**Subject: Transource, LLC  
Independence Energy Connection Transmission Line Project**

Dear Ms. Lawrence,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation specific to the Project activities occurring within Washington and Harford Counties, Maryland. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those counties that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Counties</b>	
<b>West Route – Washington County</b>	<b>East Route – Harford County</b>

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Transource will continue to provide updates to the Maryland Department of Agriculture (MDA) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.

Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

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Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource



Transource, LLC  
8500 Smith Mill Road  
New Albany, OH 43054  
Tel: 614.933.2600 main

January 31, 2017

Lynn Buhl, Director  
Maryland Department of the Environment  
Water Management Administration  
Director Office  
1800 Washington Boulevard  
Baltimore, Maryland 21230

**Subject: Transource, LLC  
Independence Energy Connection Transmission Line Project**

Dear Ms. Buhl,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation specific to the Project activities occurring within Washington and Harford Counties, Maryland. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those counties that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Counties</b>	
<b>West Route – Washington County</b>	<b>East Route – Harford County</b>

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Once a formal route is selected, Transource will submit a pre-application meeting request. Transource will continue to provide updates to the Maryland Department of Environment (MDE) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.

Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in blue ink that reads "Heather Brewster". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource





Transource, LLC  
8500 Smith Mill Road  
New Albany, OH 43054  
Tel: 614.933.2600 main

January 31, 2017

William Leahy, Executive Director  
Maryland Environmental Trust  
100 Community Place, 3<sup>rd</sup> Floor  
Crownsville, Maryland 21030-2023

**Subject: Transource, LLC  
Independence Energy Connection Transmission Line Project**

Dear Mr. Leahy,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation specific to the Project activities occurring within Washington and Harford Counties, Maryland. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those counties that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Counties</b>	
<b>West Route – Washington County</b>	<b>East Route – Harford County</b>

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Transource will continue to provide updates to the Maryland Environmental Trust (MET) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.

Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in blue ink that reads "Heather Brewster". The signature is fluid and cursive, with the first name being more prominent.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource



Transource, LLC  
8500 Smith Mill Road  
New Albany, OH 43054  
Tel: 614.933.2600 main

January 31, 2017

Natalie Loukianoff, Preservation Officer  
Maryland Historical Trust  
100 Community Place, 3<sup>rd</sup> Floor  
Crownsville, Maryland 21030-2023

**Subject: Transource, LLC  
Independence Energy Connection Transmission Line Project**

Dear Ms. Loukianoff,

Transource Energy, LLC (Transource) is proposing to build two new transmission lines and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project (Project). Transource was awarded the Project by PJM in August of 2016 to address transmission congestion across the Pennsylvania and Maryland border. Transource will be seeking approval to construct the Project from the Pennsylvania Public Utilities Commission and the Maryland Public Service Commission. The Project is in the initial data gathering phase and Transource is seeking input from agencies to help assist in the siting of the new transmission lines.

The Project components include two new 230 kV double circuit overhead transmission lines and two new 500/230 kV substations. The two transmission lines are separated by approximately 50 miles and are designated as either the East Route or West Route. The West route is approximately 23 miles and begins at the proposed Rice Substation in Franklin County, Pennsylvania and extends to the existing Ringgold Substation in Washington County, Maryland. The East route is approximately 13 miles starting at the proposed Furnace Run Substation in York County, Pennsylvania and extends to the existing Conastone Substation in Harford County, Maryland.

Transource has retained AECOM to assist with the transmission line siting and state applications necessary for approval of the proposed Project. At this time, AECOM is requesting consultation specific to the Project activities occurring within Washington and Harford Counties, Maryland. The Project is in the preliminary siting stages and therefore focal areas have been identified for the purposes of this consultation. USGS and road maps depicting the approximate focal areas are included for reference. The table below identifies those counties that fall within the Project focal areas.

<b>Independence Energy Connection West and East Projects Counties</b>	
<b>West Route – Washington County</b>	<b>East Route – Harford County</b>

Transource and AECOM are looking to obtain information from your agency on potential issues and/or constraints within the identified focal areas that would need to be considered during the siting of the transmission lines. Any information that you could provide at this time, would be greatly appreciated. Once a formal route is selected, Transource will submit a formal project review request. Transource will continue to provide updates to the Maryland Historical Trust (MHT) as the Project progresses and more specific routes are identified. We appreciate your assistance as we work through this iterative process and will be looking to schedule a meeting with your agency to further discuss this Project in the coming months.

Please contact me at (610) 832-8819 if you have any questions or require additional information and please provide any response to my attention at the AECOM address provided below.

Yours sincerely,

A handwritten signature in blue ink that reads "Heather Brewster". The signature is fluid and cursive, with a long horizontal stroke at the end.

Heather Brewster  
Project Manager  
heather.brewster@aecom.com

AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Enclosures: USGS Based Focal Area Map  
Road Based Focal Area Map

cc: Laurie Spears – Transource



Larry Hogan, Governor  
Boyd Rutherford, Lt. Governor

Wendi W. Peters, Secretary  
Ewing McDowell, Deputy Secretary

July 19, 2017

Ms. Heather Brewster  
AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

Re: MHT Pre-Application Review of Proposed Transource Transmission Lines and Substations  
Independence Energy Connection Project – Harford and Washington Counties, Maryland

Dear Ms. Brewster:

Thank you for providing the Maryland Historical Trust (MHT) with preliminary information regarding the above-referenced undertaking. We understand that Transource Energy, LLC is proposing to build two new transmission lines (East Route and West Route) and two new substations in Pennsylvania and Maryland as part of the Independence Energy Connection Project. AECOM is working with Transource to gather preliminary siting information and to evaluate various transmission line route alternatives. As the proposed transmission lines will require a variety of federal and state permits and licenses from agencies such as the U.S. Army Corps of Engineers, the Maryland Department of the Environment, and the Maryland Department of Natural Resources, MHT staff are reviewing your submittal in accordance with Section 106 of the National Historic Preservation Act and the Maryland Historical Trust Act, §§ 5A-325 and 5A-326 of the State Finance and Procurement Article and would like to offer the following preliminary comments and recommendations.

Following our review of the two proposed focal areas identified in the initial project submittal, it is clear that the proposed transmission lines will pass through a number of locales containing inventoried historic properties, historic districts, and archeologically sensitive areas. MHT files indicate that literally dozens of archeological sites (both prehistoric and historic) and over 200 Maryland Inventory of Historic Properties sites are, in fact, located within the two focal areas that are outlined in your submittal. The East Focal Area contains one known archeological site and 66 properties that are included in the Maryland Inventory, while the West Focal Area contains 69 known archeological sites and 136 Maryland Inventory properties – including six that are listed on the National Register of Historic Properties.

Due to the presence of these historic properties, archeological and/or architectural studies may be necessary, depending upon the actual location of proposed route alignments and all potential impact areas. However, given the notably extensive nature of the current study areas, we are unable to provide specific recommendations at this time. We are therefore recommending that Transource and AECOM continue to coordinate with our office and send a cultural resources consultant to the MHT Library to conduct the necessary research and obtain all available information on the historic properties located within the proposed project's Area of Potential Effect. Our library is open to the public on Tuesdays, Wednesdays, and Thursdays by

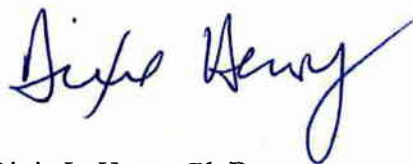
appointment only. To make an appointment, please contact Mary Louise de Sarran at 410-697-9546. Once this research has been completed, please submit the following information to our office for review:

- A detailed description of the proposed undertaking and its potential effects
- Transmission route maps for all alternatives being considered
- A clear delineation of the project's Area of Potential Effect (APE)
- A summary of the existing information on known and potential historic properties that may be affected by the undertaking
- Photographs (print or digital) of all structures that may be affected by the project

Upon our receipt of this information, we will continue our review of the undertaking and determine what architectural, historical, and archeological investigations will be necessary to identify and evaluate historic properties located within the project's APE. We would also recommend that AECOM and Transource contact the representatives from the Heart of the Civil War Heritage Area and involve them in this consultation, as a portion of this Heritage Area may be located within the West Focal Area. Elizabeth Scott Shatto is the Executive Director of the Heart of the Civil War Heritage Area, and she can be contacted at 301-600-4042.

We appreciate your effort to coordinate with our office early in the planning process, and we look forward to working with you to complete the historic preservation requirements for this undertaking. If you have any questions or require additional information, please do not hesitate to contact me at 410-697-9553 or [dixie.henry@maryland.gov](mailto:dixie.henry@maryland.gov).

Sincerely,



Dixie L. Henry, Ph.D.  
Preservation Officer  
Maryland Historical Trust

DLH/201700452/201700453

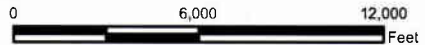
Cc: Joe DaVia (COE)  
Steve Elinsky (COE)  
Maria Teresi (COE)  
Abbie Hopkins (COE)  
Jeff Thompson (MDE)  
Susan Gray (DNR)





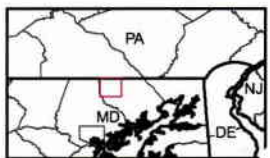
**Legend**

- Substation
- County Boundary
- Existing Transmission Lines
- Project Focal Area
- State Boundary



Coordinate System:  
NAD 1983 UTM Zone 18N  
Projection: Transverse Mercator  
Linear Unit: Meter

Data Sources:  
Platts Power Map Transmission Line (2011)  
USA Topo Maps (ESRI)

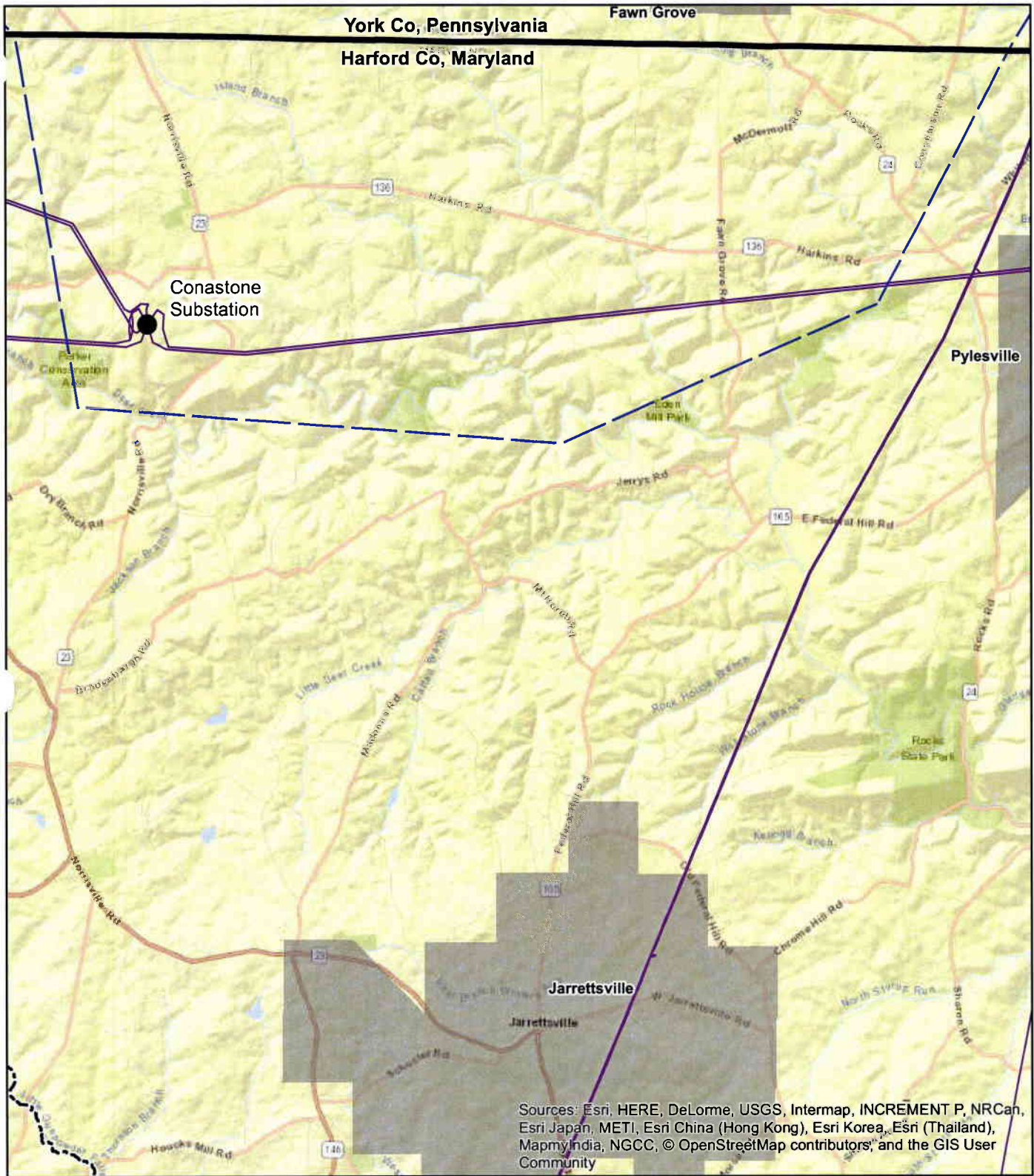


Job: 60528995
Prepared by: NB/BSF
Checked by: HB
Date: 1/27/2017

Independence Energy Connection - East  
Transource, LLC  
Focal Area - MD

Confidential - Draft Work Product

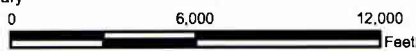




Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

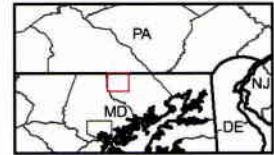
**Legend**

-  Substation
-  County Boundary
-  Existing Transmission Lines
-  State Boundary
-  Project Focal Area



**Coordinate System:**  
 NAD 1983 UTM Zone 18N  
 Projection: Transverse Mercator  
 Linear Unit: Meter

**Data Sources:**  
 Platts Power Map Transmission Line (2011)  
 USA Topo Maps (ESRI)

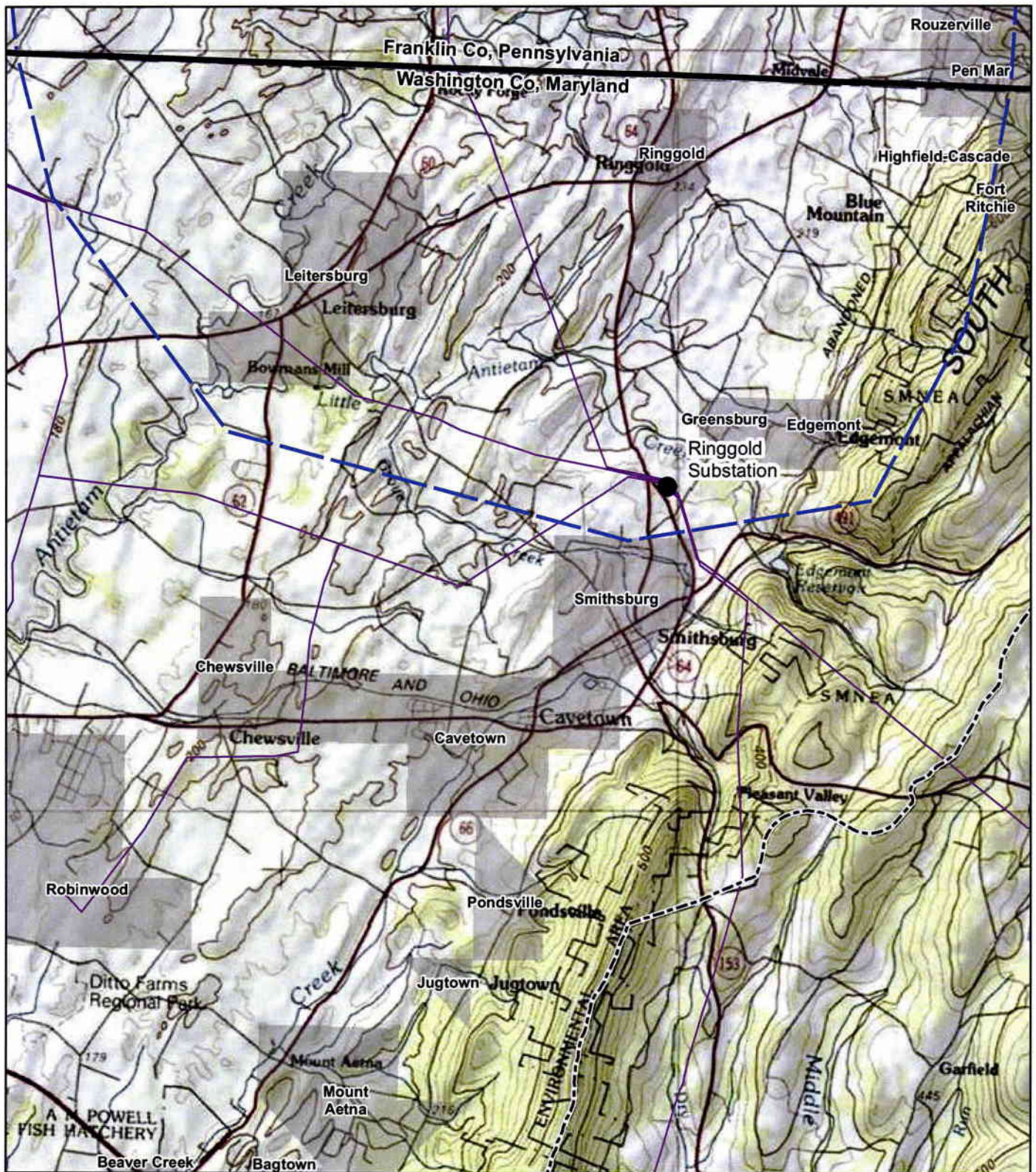


Job: 60528995
Prepared by: NB/BSF
Checked by: HB
Date: 1/27/2017

Independence Energy Connection - East  
 Transource, LLC  
 Focal Area - MD

Confidential - Draft Work Product





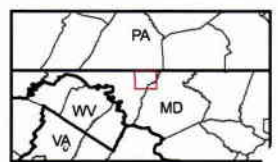
**Legend**

-  Substation
-  County Boundary
-  Existing Transmission Lines
-  Project Focal Area
-  State Boundary



**Coordinate System:**  
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 Projection: Transverse Mercator  
 Linear Unit: Meter

**Data Sources:**  
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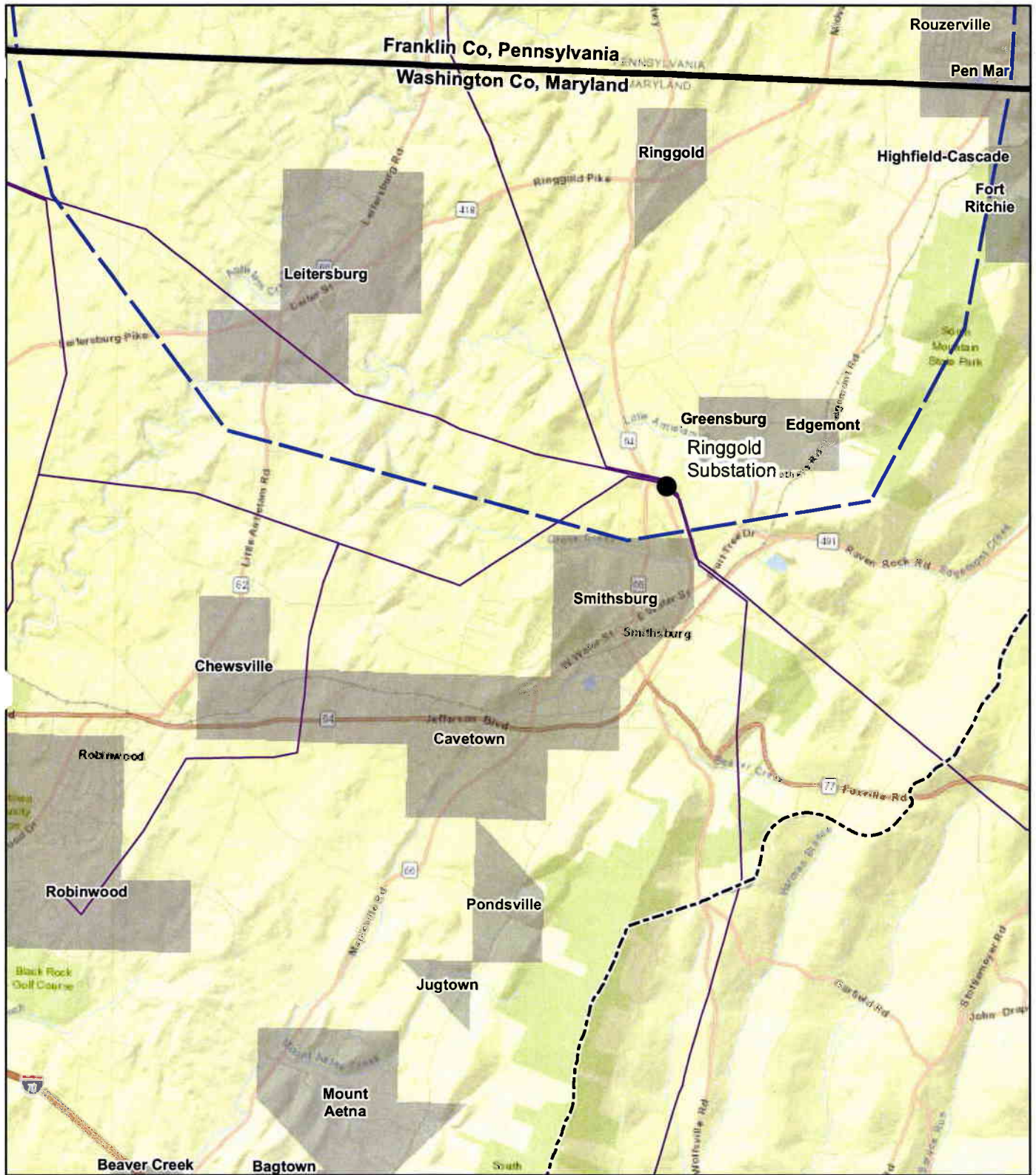


Job: 60528995
Prepared by: NB/BSF
Checked by: HB
Date: 1/30/2017

Independence Energy Connection - West  
 Transource, LLC  
 Focal Area - MD

Confidential - Draft Work Product





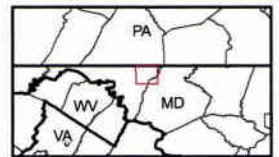
**Legend**

-  Substation
-  Existing Transmission Lines
-  Project Focal Area
-  County Boundary
-  State Boundary



**Coordinate System:**  
 NAD 1983 UTM Zone 18N  
 Projection: Transverse Mercator  
 Linear Unit: Meter

**Data Sources:**  
 Platts Power Map Transmission Line (2011)  
 USA Topo Maps (ESRI)



Job: 60528995
Prepared by: NB/BSF
Checked by: HB
Date: 1/30/2017

Independence Energy Connection - West  
 Transource, LLC  
 Focal Area - MD

Confidential - Draft Work Product

## **AGENCY EMAILS**

**From:** Frederick Kelley -DNR-  
**To:** [Laurie M Spears](#)  
**Subject:** [EXTERNAL] Re: Transource Project  
**Date:** Thursday, March 02, 2017 1:41:09 PM

---

This is an EXTERNAL email. STOP. THINK before you CLICK links or OPEN attachments.

---

Thanks Laurie,

I'll look to attend the March 10th at MDA; it'll be good to get back up to speed on the Transource Project.

I'll also keep tabs on the JE meetings; we usually receive notices of upcoming meeting agendas.

Thanks,  
Fred

On Mon, Feb 27, 2017 at 4:53 PM, Laurie M Spears <[lmspears@aep.com](mailto:lmspears@aep.com)> wrote:

Fred,

I'm sorry we missed you at our last meeting a few weeks ago. I wanted to give you a heads up that we are meeting with the Maryland Department of Agriculture on March 10 at 9 am at their offices in Annapolis (address below). I believe that some people from DNR may also attend but I haven't received a final headcount. You are more than welcome to attend that meeting with us if you would like.

We are also on the schedule for March 29<sup>th</sup> for the MDE Joint Evaluation Meeting at the Fish and Wildlife office in Annapolis. You are welcome to attend that one as well. There is a chance we may get bumped to a different day due to the schedule but right now we are on for the 29<sup>th</sup>. We should have a better idea of our time slot as it gets closer to the date.

Please let me know if you'll be able to attend any of these meetings or if you have any questions!

Thanks!

MDA Headquarters Address:

50 Harry S Truman Parkway



Annapolis, MD 21401

Laurie Spears

Sr. Siting Specialist

AEP Transmission

8500 Smith Mill Rd

New Albany, OH 43054

Office [\(614\)-933-2625](tel:6149332625)

Cell [\(440\)-561-9202](tel:4405619202)

Audinet 8-290-2625

[lmspears@aep.com](mailto:lmspears@aep.com)



MD Logo.png



[dnr.maryland.gov](http://dnr.maryland.gov)

**Frederick S. Kelley**

Power Plant Research Program

Department of Natural Resources

Tawes Building B-3

Annapolis, MD 21401

410-260-8672 (office)

410-260-8670 (fax)

[frederick.kelley@maryland.gov](mailto:frederick.kelley@maryland.gov)

Visit us on the web at -

<http://dnr.maryland.gov/pprp>

[Click here](#) to complete a three question customer experience survey.

**From:** Frederick Kelley -DNR-  
**To:** [Laurie M Spears](#)  
**Subject:** [EXTERNAL] Re: Notification zone  
**Date:** Friday, March 31, 2017 4:03:03 PM

---

This is an EXTERNAL email. STOP. THINK before you CLICK links or OPEN attachments.

---

Hi Laurie,

500 feet sounds fine to us for this first round of notice. Will Transource eventually host any sort of informational website about the project? That might be good for sharing updates about the project as it progresses.

Have a great weekend,  
Fred

On Fri, Mar 31, 2017 at 12:55 PM Laurie M Spears <[lmspears@aep.com](mailto:lmspears@aep.com)> wrote:

Hi Fred,

In follow up to our discussion earlier this week, is 500 feet on either side of centerline (1,000 ft corridor) sufficient from your perspective for the first round of open houses? We are up to 304 parcels on the west side and 359 parcels

on the east side. Let me know your thoughts!

Thank You!

Laurie Spears

Sr. Siting Specialist

AEP Transmission

8500 Smith Mill Rd

New Albany, OH 43054

Office (614)-933-2625

Cell (440)-561-9202

Audinet 8-290-2625

[lmspears@aep.com](mailto:lmspears@aep.com)

**From:** [Laurie M Spears](#)  
**To:** [Frederick Kelley \(frederick.kelley@maryland.gov\)](mailto:frederick.kelley@maryland.gov)  
**Subject:** Transource Data  
**Date:** Tuesday, May 02, 2017 11:38:00 AM

---

Fred,

I received a copy of the executed NDA and we are putting together the GIS files now. We plan to overnight you a CD with all the information and our study segments so you and your team can review. I am hoping to set up another in-person meeting with you before our open houses (June timeframe). Do you think that Thursday, May 18<sup>th</sup> would work for you and your team? I'm thinking a 2 hour meeting would probably be sufficient given the relatively short lengths in Maryland. Let me know your thoughts and if another date works better for your team.

Thank you!

Laurie Spears  
Sr. Siting Specialist  
AEP Transmission  
8500 Smith Mill Rd  
New Albany, OH 43054  
Office (614)-933-2625  
Cell (440)-561-9202  
Audinet 8-290-2625  
[lmspears@aep.com](mailto:lmspears@aep.com)



BOUNDLESS ENERGY

**From:** Frederick Kelley -DNR-  
**To:** [Laurie M Spears](#)  
**Subject:** Re: [EXTERNAL] Re: Transource Data  
**Date:** Monday, May 08, 2017 10:51:44 AM

---

I'll look to get an invite out by the end of the day. Yes, data CD received and already under review by our integrators.

Thanks,  
Fred

On Mon, May 8, 2017 at 8:24 AM, Laurie M Spears <[lmspears@aep.com](mailto:lmspears@aep.com)> wrote:

That works great for us! Thanks Fred!

Did you receive the shapefiles last week?

Laurie Spears

Sr. Siting Specialist

AEP Transmission

8500 Smith Mill Rd

New Albany, OH 43054

Office [\(614\)-933-2625](tel:6149332625)

Cell [\(440\)-561-9202](tel:4405619202)

Audinet 8-290-2625

[lmspears@aep.com](mailto:lmspears@aep.com)



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**From:** Frederick Kelley -DNR- [mailto:[frederick.kelley@maryland.gov](mailto:frederick.kelley@maryland.gov)]  
**Sent:** Friday, May 05, 2017 5:02 PM  
**To:** Laurie M Spears  
**Subject:** Re: [EXTERNAL] Re: Transource Data

I think Monday works best for most folks on PPRPs end. How about 2PM? If so I'll send around an invite and follow up with logistics.

Thanks,

Fred

On Fri, May 5, 2017 at 2:47 PM, Laurie M Spears <[lmspears@aep.com](mailto:lmspears@aep.com)> wrote:

Hi Fred,

Would Monday the 22<sup>nd</sup> or Tuesday the 23<sup>rd</sup> work for you?

Laurie

**From:** Frederick Kelley -DNR- [mailto:[frederick.kelley@maryland.gov](mailto:frederick.kelley@maryland.gov)]  
**Sent:** Tuesday, May 02, 2017 3:30 PM  
**To:** Laurie M Spears  
**Subject:** [EXTERNAL] Re: Transource Data

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Thanks, I'll look forward to receiving it.

18th is in a very busy week for us; how about the following week?

Fred



On Tue, May 2, 2017 at 11:38 AM, Laurie M Spears <[lmspears@aep.com](mailto:lmspears@aep.com)> wrote:

Fred,

I received a copy of the executed NDA and we are putting together the GIS files now. We plan to overnight you a CD with all the information and our study segments so you and your team can review. I am hoping to set up another in-person meeting with you before our open houses (June timeframe). Do you think that Thursday, May 18<sup>th</sup> would work for you and your team? I'm thinking a 2 hour meeting would probably be sufficient given the relatively short lengths in Maryland. Let me know your thoughts and if another date works better for your team.

Thank you!

Laurie Spears

Sr. Siting Specialist

AEP Transmission

8500 Smith Mill Rd

New Albany, OH 43054

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--

	<p><b>Frederick S. Kelley</b> Power Plant Research Program Department of Natural Resources Tawes Building B-3 Annapolis, MD 21401 <a href="tel:410-260-8672">410-260-8672</a> (office) <a href="tel:410-260-8670">410-260-8670</a> (fax) <a href="mailto:frederick.kelley@maryland.gov">frederick.kelley@maryland.gov</a></p>
 <a href="http://dnr.maryland.gov">dnr.maryland.gov</a>	Visit us on the web at - <a href="http://dnr.maryland.gov/pprp">http://dnr.maryland.gov/pprp</a>

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	<p><b>Frederick S. Kelley</b> Power Plant Research Program Department of Natural Resources Tawes Building B-3 Annapolis, MD 21401 <a href="tel:410-260-8672">410-260-8672</a> (office) <a href="tel:410-260-8670">410-260-8670</a> (fax) <a href="mailto:frederick.kelley@maryland.gov">frederick.kelley@maryland.gov</a></p>
 <a href="http://dnr.maryland.gov">dnr.maryland.gov</a>	Visit us on the web at - <a href="http://dnr.maryland.gov/pprp">http://dnr.maryland.gov/pprp</a>

[Click here](#) to complete a three question customer experience survey.

Laurie - I have put a hold the downstairs conference room for July 14 at 1.

On Thu, Jun 22, 2017 at 10:10 AM, Carol West -MDA-  
<[carol.west@maryland.gov](mailto:carol.west@maryland.gov)> wrote:  
I will work on securing a conference room. Say 1?

On Thu, Jun 22, 2017 at 10:08 AM, Laurie M Spears <[lmspears@aep.com](mailto:lmspears@aep.com)>  
wrote:  
Carol,

The only day we would be able to get out there would be Friday the 14<sup>th</sup>. I agree Bill is important to have at that meeting. If we can reschedule to the 14<sup>th</sup> in the morning, I think that will work just fine.

Thanks!

Laurie Spears  
Sr. Siting Specialist  
AEP Transmission  
8500 Smith Mill Rd  
New Albany, OH 43054  
Office (614)-933-2625  
Cell (440)-561-9202  
Audinet 8-290-2625  
[lmspears@aep.com](mailto:lmspears@aep.com)



**From:** Carol West -MDA- [<mailto:carol.west@maryland.gov>]  
**Sent:** Thursday, June 22, 2017 10:01 AM  
**To:** Laurie M Spears  
**Subject:** [EXTERNAL] Re: Transource Independence Energy Connection

This is an EXTERNAL email. STOP. THINK before you CLICK links or OPEN attachments.

Laurie - Bill Amoss, Harford County Program Administrator is on vacation the week of July 4 and is asking if we can reschedule to the following week. I would have no problem with that. He is an important player in this.

I am available on July 11 - 14 at any time.

On Mon, Jun 19, 2017 at 3:09 PM, Laurie M Spears <[lmspears@aep.com](mailto:lmspears@aep.com)> wrote:  
Carol,

In follow up to our meeting on March 10, we are hoping to set up a time to meet with you and your team to give you an update on the Independence project. As you may recall, we are proposing to build two new transmission lines in Washington and Harford Counties. We held 6 open houses over the last two weeks in which we presented our study segments to the public to get feedback. We are hoping to give you an update on those open houses and talk about next steps. Would you and your team be available July 6 or 7<sup>th</sup> to have a meeting? I would think an hour and a half would be sufficient. Let us know if a time works for you or if we need to find a different day.

Thanks and we look forward to meeting with you again!

Laurie Spears  
Sr. Siting Specialist  
AEP Transmission  
8500 Smith Mill Rd  
New Albany, OH 43054  
Office [\(614\)-933-2625](tel:614-933-2625)  
Cell [\(440\)-561-9202](tel:440-561-9202)  
Audinet 8-290-2625  
[lmspears@aep.com](mailto:lmspears@aep.com)



***Carol S. West***

Executive Director, MALPF  
Maryland Department of Agriculture  
50 Harry S. Truman Parkway, Room 104  
Annapolis, Maryland 21401

Office: [410-841-5860](tel:410-841-5860)  
Fax: [410-841-5730](tel:410-841-5730)  
<http://mda.maryland.gov/malpf>

Visit Our Website at: [www.mda.maryland.gov](http://www.mda.maryland.gov)

**From:** [Laurie M Spears](#)  
**To:** [Frederick Kelley \(frederick.kelley@maryland.gov\)](mailto:frederick.kelley@maryland.gov)  
**Subject:** Transource IEC Project  
**Date:** Monday, June 19, 2017 2:58:00 PM

---

Hi Fred,

Thanks again for stopping by our open houses last week. I think they went really well and we have gotten some great input. One item did come up that I think we should look into a little further and I'm hoping you can help me coordinate. A few landowners around Conastone mentioned they were working with MD DNR and USFWS to preserve bog turtle habitat. I think it's pretty critical to understand what is being proposed and where before we go too much further in siting. Do you think you could help coordinate a meeting or at least point us to the right person so we can set up a call to discuss? If these areas are being put into conservation easements, that would be good to know. Let me know how you want to proceed.

Thanks!

Laurie Spears  
Sr. Siting Specialist  
AEP Transmission  
8500 Smith Mill Rd  
New Albany, OH 43054  
Office (614)-933-2625  
Cell (440)-561-9202  
Audinet 8-290-2625  
[lmspears@aep.com](mailto:lmspears@aep.com)



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**From:** Kelly Neff -MDE-  
**To:** [Elinsky, Stephen M CIV USARMY CENAB \(US\)](mailto:Elinsky.Steven.M.CIV.USARMY.CENAB.US)  
**Cc:** [Laurie M Spears](mailto:Laurie.M.Spears)  
**Subject:** [EXTERNAL] Re: Transource Independence Project (UNCLASSIFIED)  
**Date:** Thursday, July 13, 2017 9:20:53 AM

---

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MDE did a large mitigation site using Nontidal Wetland Compensation Fund money on the Lynn Farm property.

Kelly P. Neff  
Maryland Department of the Environment  
Wetlands and Waterways Program  
Mitigation and Technical Assistance Section, Chief  
1800 Washington Blvd., Suite 430  
Baltimore, MD 21230-1708  
(Phone) 410-537-4018  
(Fax) 410-537-3751  
[Kelly.Neff@Maryland.gov](mailto:Kelly.Neff@Maryland.gov)

On Wed, Jul 12, 2017 at 2:18 PM, Elinsky, Stephen M CIV USARMY CENAB (US) <[Steve.Elinsky@usace.army.mil](mailto:Steve.Elinsky@usace.army.mil)> wrote:

CLASSIFICATION: UNCLASSIFIED

Hi Laurie,

I'm unfamiliar with the site. However, I made a few calls and found out that MDE used the site for restorations and/or enhancements under their fee in lieu program. Kelly Neff from MDE who has been copied knows about the site and can answer your questions.

Thanks,

Steve

Steve Elinsky  
Biologist  
U.S. Army Corps of Engineers - Baltimore District  
Regulatory Branch - Maryland Section Northern  
[410.962.4503](tel:410.962.4503)

-----Original Message-----

**From:** Laurie M Spears [mailto:[lmspears@aep.com](mailto:lmspears@aep.com)]  
**Sent:** Wednesday, July 12, 2017 1:05 PM  
**To:** Elinsky, Stephen M CIV USARMY CENAB (US) <[Steve.Elinsky@usace.army.mil](mailto:Steve.Elinsky@usace.army.mil)>  
**Subject:** [Non-DoD Source] Transource Independence Project

Hi Steve,



I wanted to follow up with you on a public comment we received at the open house. A landowner in Harford County stated they had an "old" wetland mitigation bank on their property (name is Jeffrey Lynn). Are you aware of any wetland mitigation banks in Harford County that we need to consider? This particular one is close to the MD/PA border. Any additional information that you have would be helpful!

Thanks!

Laurie Spears

Sr. Siting Specialist

AEP Transmission

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[lmspears@aep.com](mailto:lmspears@aep.com) <<mailto:lmspears@aep.com>>

CLASSIFICATION: UNCLASSIFIED

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## **Brewster, Heather**

---

**From:** Carol West -MDA- <carol.west@maryland.gov>  
**Sent:** Wednesday, August 23, 2017 9:52 AM  
**To:** Brewster, Heather  
**Subject:** Re: Transource IEC - Maryland Parcels with Ag Easements  
**Attachments:** Transource IEC MD\_ Agricultural Easements.xlsx

Heather - I was able to partially complete your chart. For the ones that I am not sure of, I reached out to the Harford and Washington County administrators. I have not heard back from the, so I am attaching my partially completed list. Hope this helps. If I get anything back from the administrators, I will forward it to you.

On Thu, Aug 17, 2017 at 3:42 PM, Brewster, Heather <[Heather.Brewster@aecom.com](mailto:Heather.Brewster@aecom.com)> wrote:

Carol,

Just checking in to see how your progress is going assisting us with pulling the preservation deeds for the properties we provided to you. Any update is appreciated and if you have any questions or require anything from us, please just let me now. Thank you in advance.

**Thank you ~Heather Brewster**

**610-832-8819**

---

**From:** Brewster, Heather  
**Sent:** Thursday, August 03, 2017 3:38 PM  
**To:** '[carol.west@maryland.gov](mailto:carol.west@maryland.gov)'  
**Cc:** Laurie M Spears  
**Subject:** Transource IEC - Maryland Parcels with Ag Easements

Carol,

Per my voicemail yesterday, on behalf of Laurie Spears/ Transource and their Independence Energy Connection Project, I am providing the attached list of parcels containing an Agricultural Easement in Washington and Harford Counties. At the last meeting held with Maryland Dept. of Agriculture, it was indicated you would be able to assist with pulling the easements for these parcels. With those easements in hand we can start identifying any easement language specific to limitations etc..for these parcels. If there is any additional information you would like to assist you in this effort, please just let me know.

**Thank you. ~Heather**

**Heather Brewster**

Associate Vice President

AECOM Environment

☎ [610-832-8819](tel:610-832-8819) (direct line)

✉ [heather.brewster@aecom.com](mailto:heather.brewster@aecom.com)

📱 [215.869.4137](tel:215.869.4137) (mobile)

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104  
Annapolis, Maryland 21401

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Fax: [410-841-5730](tel:410-841-5730)

## Brewster, Heather

---

**From:** Davis, Tiffany - NRCS, Annapolis, MD <Tiffany.Davis@md.usda.gov>  
**Sent:** Wednesday, September 06, 2017 11:05 AM  
**To:** Brewster, Heather  
**Cc:** Byam, Jackie - NRCS, Annapolis, MD; Esbensen, Gretchen - NRCS, Annapolis, MD; Jones, Hathaway - NRCS, Harrisburg, PA  
**Subject:** RE: Transource - PA NRCS - Shapefiles for Review

Heather,

The Maryland GIS Specialist has reported both projects are all clear of FRPP in Maryland.

M. Tiffany Davis  
Farm Bill Program Specialist (Easements)  
339 Busch's Frontage Rd, Suite 301  
Annapolis, MD 21409  
Natural Resources Conservation Service  
United States Department of Agriculture  
<http://www.md.nrcs.usda.gov>  
Desk Telephone 443-482-2960  
Cell Telephone 443-477-1227

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**From:** Brewster, Heather [mailto:Heather.Brewster@aecom.com]  
**Sent:** Tuesday, September 05, 2017 2:35 PM  
**To:** Davis, Tiffany - NRCS, Annapolis, MD <Tiffany.Davis@md.usda.gov>  
**Subject:** RE: Transource - PA NRCS - Shapefiles for Review

Tiffany,

Reaching out to see if you can be of any assistance with review of the shapefiles I provided last week for Non-Stewardship properties in Washington and Harford Counties. We checked the NRCS webviewer for Stewardship properties and avoided the one in Washington County. If you have any questions let me know and we appreciate any assistance.

**Thank you ~Heather Brewster**  
**610-832-8819**

---

**From:** Brewster, Heather  
**Sent:** Thursday, August 31, 2017 12:00 PM  
**To:** Davis, Tiffany - NRCS, Annapolis, MD  
**Subject:** RE: Transource - PA NRCS - Shapefiles for Review

Tiffany,

I have been working with Hathaway regarding PA NRCS easements. Transource would like NRCS MD to review their current Study Agreements for the Independence Energy Connection electric transmission line project. We have researched the NRCS viewer for the stewardship lands and are aware of those locations. However, we do want to get input for the additional data from 1996-2016 Non-

Stewardship easements. The attached shapefiles provide our Study Segments along with a 1,000 foot buffer that we would appreciate NRCS review on.

Next week we will be in the process of making some final decisions in regards to routing. Any information from NRCS would be greatly appreciated. If you have any questions about the attached information please let me know.

**Thank you ~Heather Brewster**  
**610-832-8819**

---

**From:** Jones, Hathaway - NRCS, Harrisburg, PA [<mailto:Hathaway.Jones@pa.usda.gov>]  
**Sent:** Thursday, August 31, 2017 11:35 AM  
**To:** Brewster, Heather  
**Cc:** Davis, Tiffany - NRCS, Annapolis, MD  
**Subject:** RE: Transource - PA NRCS - Shapefiles for Review

Our review only covers easements in PA. You'll want to talk to Tiffany Davis – cc'd above.

Thanks.

Sincerely,

*Hathaway Jones*

Management Analyst  
USDA/NRCS  
359 East Park Drive, Suite 2  
Harrisburg, PA 17111  
717-237-2210

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---

**From:** Brewster, Heather [<mailto:Heather.Brewster@aecom.com>]  
**Sent:** Thursday, August 31, 2017 10:48 AM  
**To:** Jones, Hathaway - NRCS, Harrisburg, PA <[Hathaway.Jones@pa.usda.gov](mailto:Hathaway.Jones@pa.usda.gov)>  
**Subject:** RE: Transource - PA NRCS - Shapefiles for Review

Hathaway,

Does your review only cover PA? If so, who in MD do I touch base with for a similar review?

**Thank you ~Heather Brewster**  
**610-832-8819**

---

**From:** Jones, Hathaway - NRCS, Harrisburg, PA [<mailto:Hathaway.Jones@pa.usda.gov>]  
**Sent:** Thursday, August 31, 2017 8:46 AM  
**To:** Brewster, Heather  
**Cc:** Laurie M Spears  
**Subject:** RE: Transource - PA NRCS - Shapefiles for Review

Heather,

Good morning. The GIS staff has mapped the shape files of the pipeline.

The proposed pipeline intersects 16 federal agricultural land preservation easements.

Sincerely,

*Hathaway Jones*

Management Analyst

USDA/NRCS

359 East Park Drive, Suite 2

Harrisburg, PA 17111

717-237-2210

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---

**From:** Brewster, Heather [<mailto:Heather.Brewster@aecom.com>]

**Sent:** Tuesday, August 29, 2017 11:12 AM

**To:** Jones, Hathaway - NRCS, Harrisburg, PA <[Hathaway.Jones@pa.usda.gov](mailto:Hathaway.Jones@pa.usda.gov)>

**Cc:** Laurie M Spears <[lmspears@aep.com](mailto:lmspears@aep.com)>

**Subject:** Transource - PA NRCS - Shapefiles for Review

Hathaway,

Transource would like to go ahead and provide NRCS their current Study Segment shapefiles for review, without requesting a Non-disclosure. We have researched the viewer at the link below. However, we do want to get input for the additional data from 1996-2016 that you reference below. The attached shapefiles provide our Study Segments along with a 1,000 foot buffer that we would appreciate NRCS review on.

Next week we will be in the process of making some final decisions in regards to routing. Any information from NRCS would be greatly appreciated. If you have any questions about the attached information please let me know.

**Thank you ~Heather Brewster**

i10-832-8819

---

**From:** Jones, Hathaway - NRCS, Harrisburg, PA [<mailto:Hathaway.Jones@pa.usda.gov>]

**Sent:** Monday, August 21, 2017 8:06 AM

**To:** Brewster, Heather

**Subject:** PA NRCS - Gas pipeline shape files and non-disclosure agreement for FOIA?

Heather,

I received the email below from our FOIA administrator. NRCS would likely not be able to sign a non-disclosure agreement.

You can view NRCS easements on the National Easements Database at this

link: <http://nrcs.maps.arcgis.com/apps/webappviewer/index.html?id=60cb4564f7b4461ca9a61fa224c066ba>

You can zoom in to specific locations in Pennsylvania to determine where easements are located.

HOWEVER – this map shows only what NRCS calls ‘stewardship lands’. Therefore the map only includes ag easements acquired between 2006 and 2008. NRCS has many, many ag easements acquired from 1996 – 2016 that are NOT stewardship and that do not show up on the map.

That being said, you will be able to see our wetland easements clearly from the database. These easements are very restrictive and will not allow a ROW installation.

Thanks much.

Sincerely,



*Hathaway Jones*

Management Analyst  
USDA/NRCS  
359 East Park Drive, Suite 2  
Harrisburg, PA 17111  
717-237-2210

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---

**From:** Kling, Andrew - NRCS, Harrisburg, PA  
**Sent:** Thursday, August 17, 2017 2:25 PM  
**To:** Jones, Hathaway - NRCS, Harrisburg, PA <[Hathaway.Jones@pa.usda.gov](mailto:Hathaway.Jones@pa.usda.gov)>; Smith, Shozette - NRCS, Harrisburg, PA <[Shozette.Smith@pa.usda.gov](mailto:Shozette.Smith@pa.usda.gov)>  
**Subject:** RE: Gas pipeline shape files and non-disclosure agreement for FOIA?

It is our policy now to direct companies asking for easement locations to go to the national site that shows all of the NRCS easements.

As far as a non-disclosure agreement, I would doubt that we would sign it as we have regulation about what we can and can't disclose, FOIA included.

Andy

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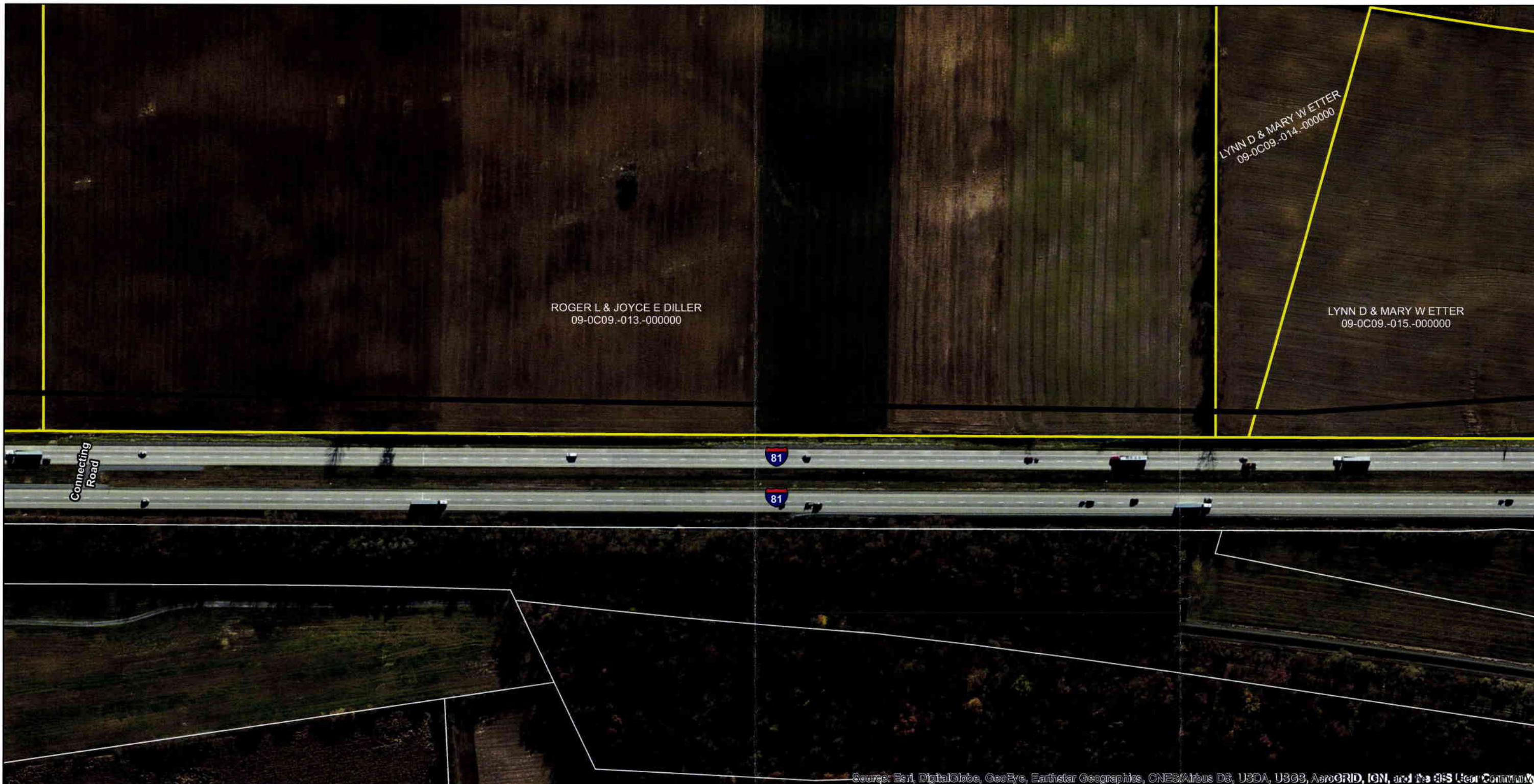
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**Appendix C: Aerial Mapbook**

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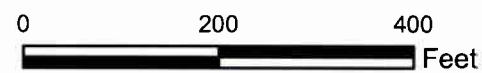
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

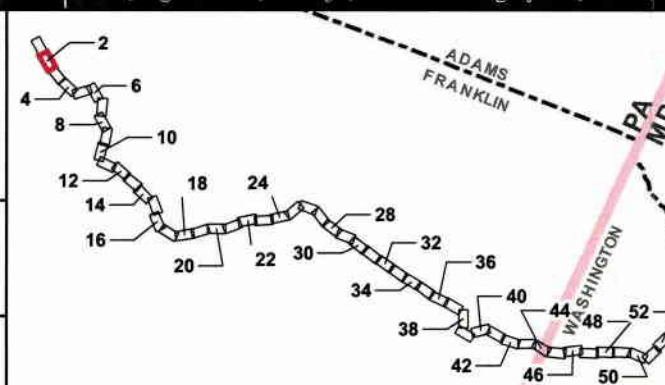
-  Proposed Route C
-  Notified Parcels
-  Parcel Boundary

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**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter

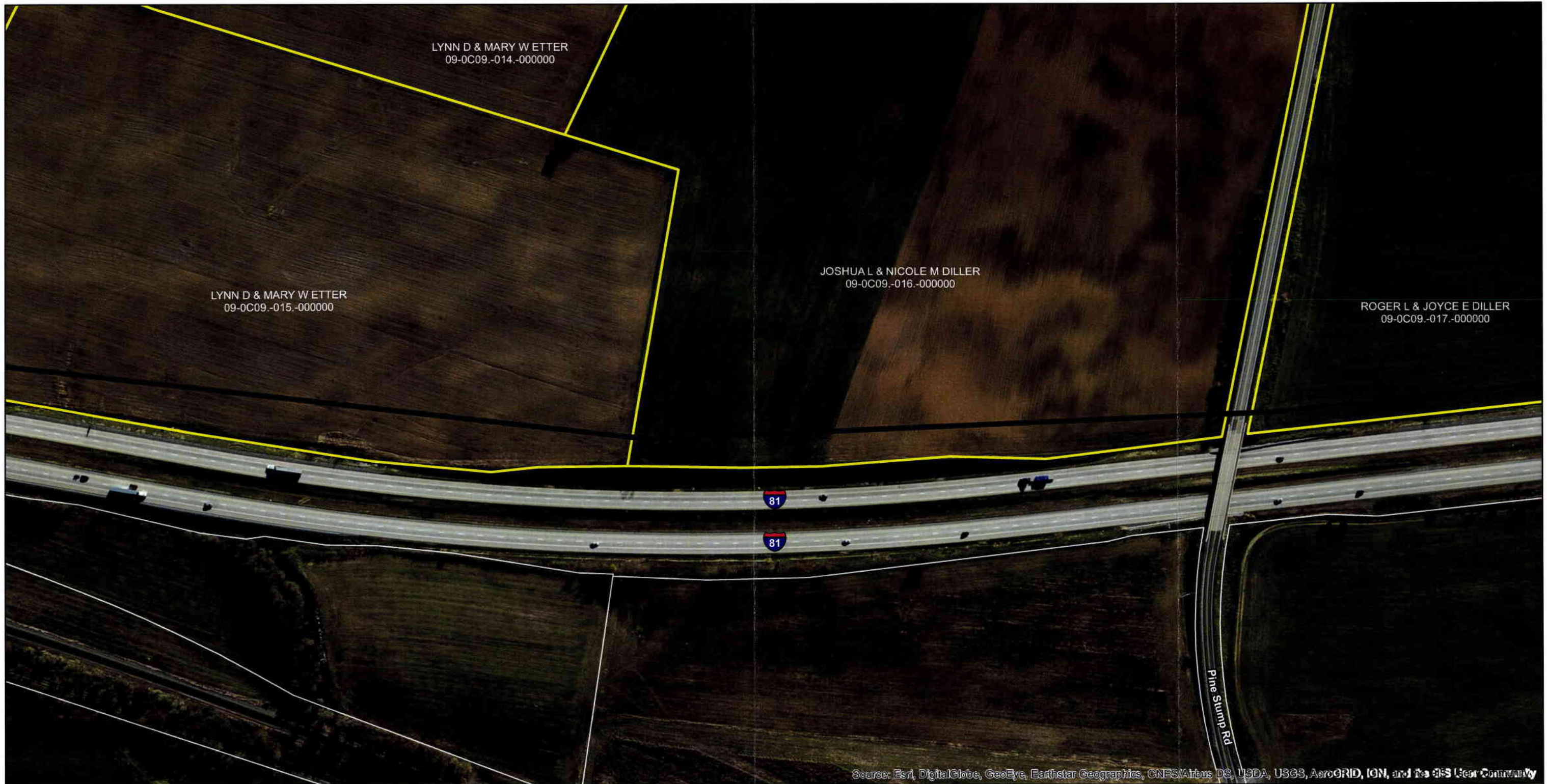


**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 2  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017







Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

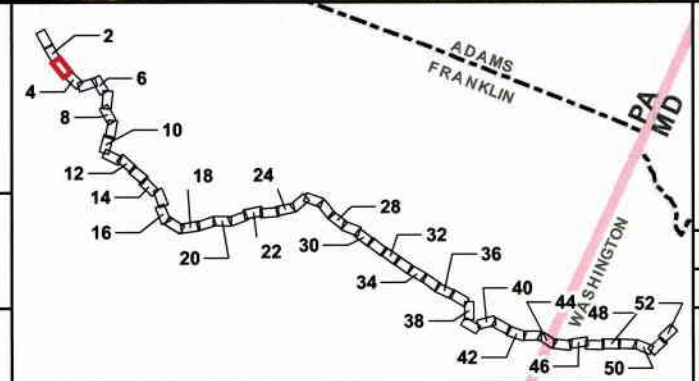
- Proposed Route C
- Notified Parcels
- Parcel Boundary

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 Washington County (Oct 2017)

0 200 400 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter

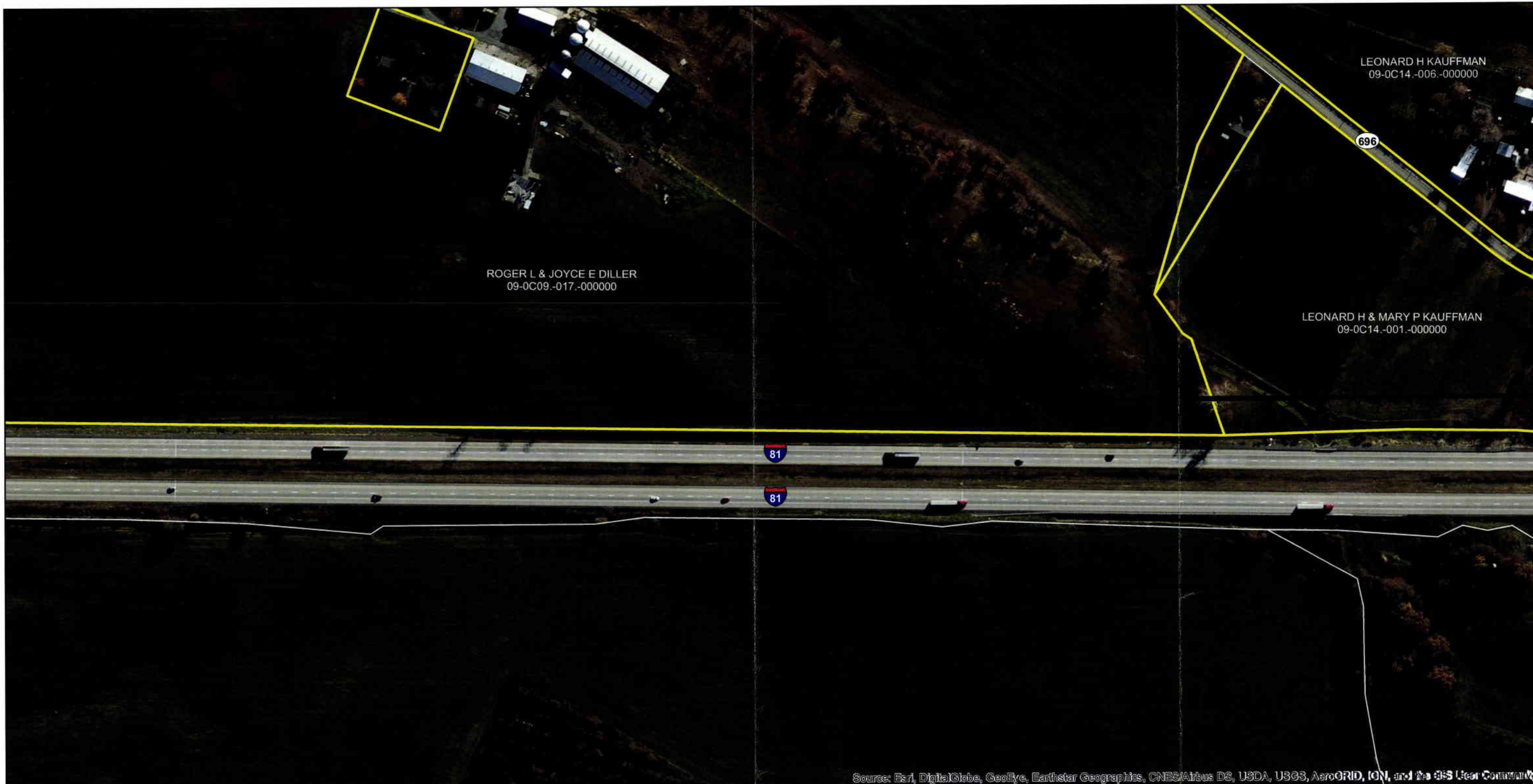


**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 3  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





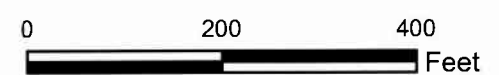
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

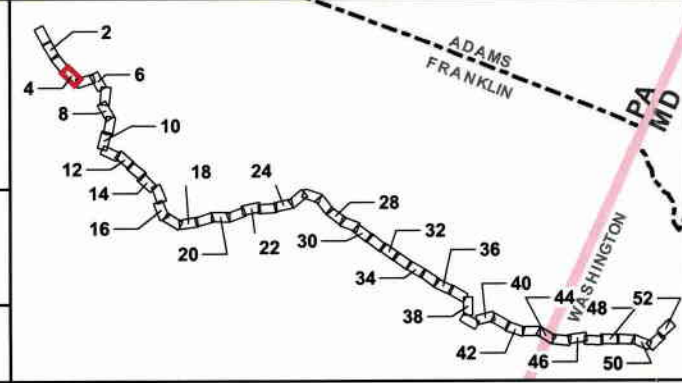
- Proposed Route C
- Notified Parcels
- Parcel Boundary

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**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



<b>Rice - Ringgold 230 kV          Transmission Line Project          Aerial Mapbook          Map Extent 4          Independence Energy Connection</b>	
Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017





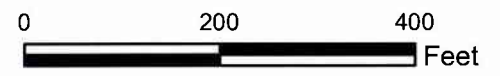
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

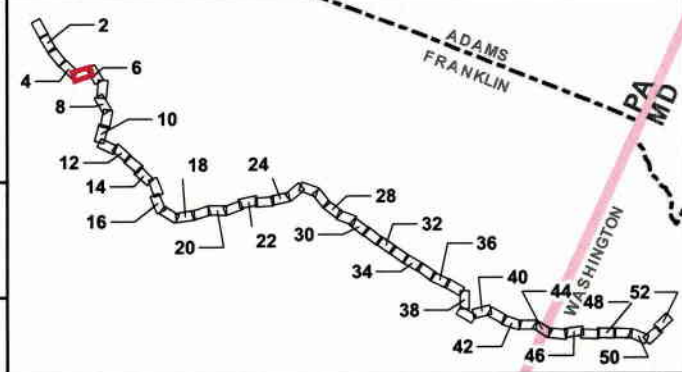
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



<b>Rice - Ringgold 230 kV          Transmission Line Project          Aerial Mapbook          Map Extent 5          Independence Energy Connection</b>	
Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

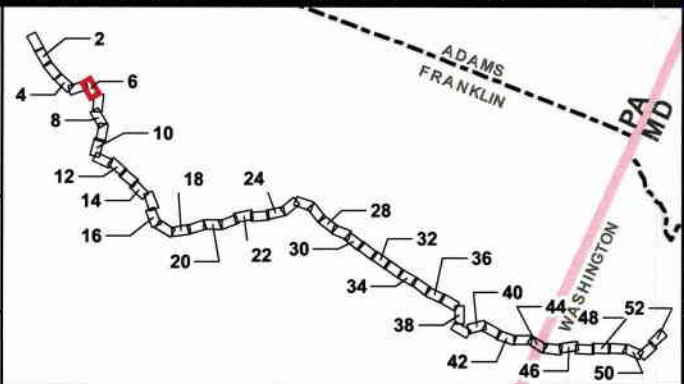
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 6  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

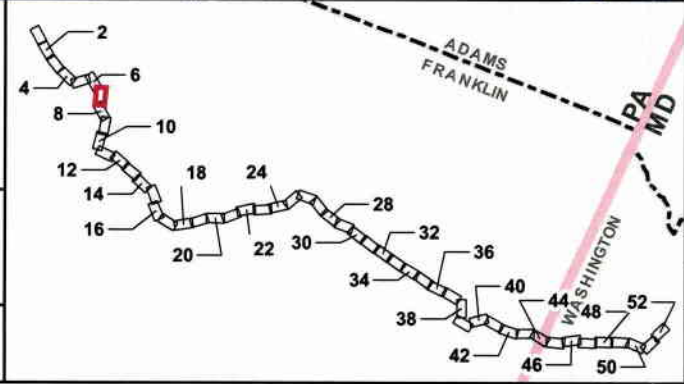
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0 200 400 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 7  
 Independence Energy Connection**

Prepared By: NAB      Checked By: HB  
 Job: 60528995/60529006      Date: November 27, 2017




**TRANSOURCE**





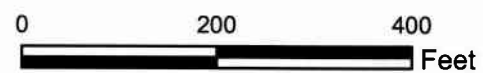
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

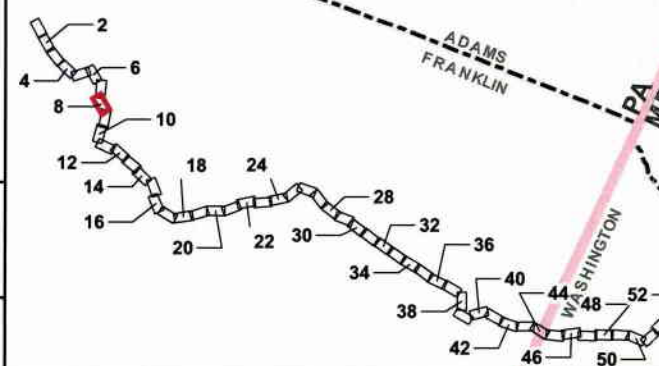
-  Proposed Route C
-  Notified Parcels
-  Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 8  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017










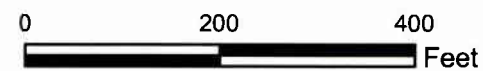
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

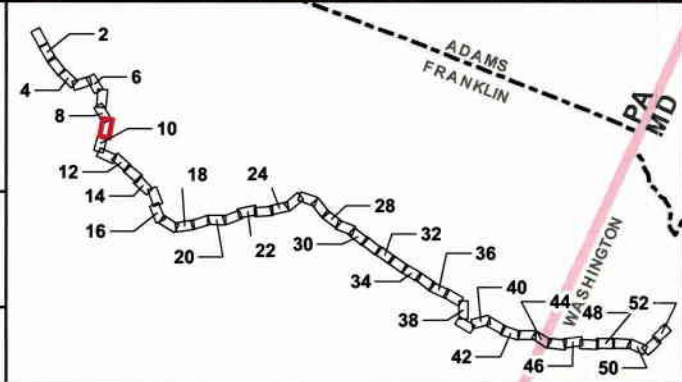
-  Proposed Route C
-  Notified Parcels
-  Parcel Boundary

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**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 9  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017







**Legend**

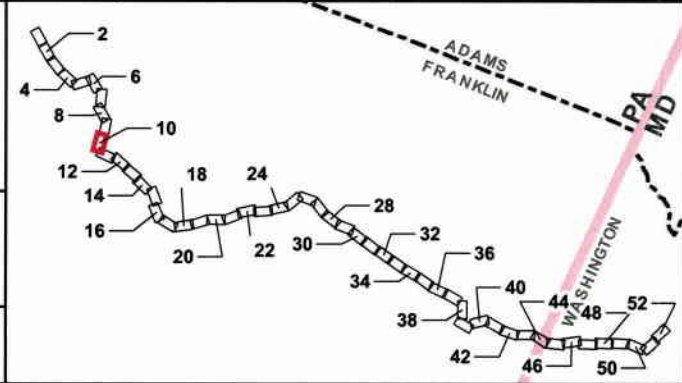
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 10  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

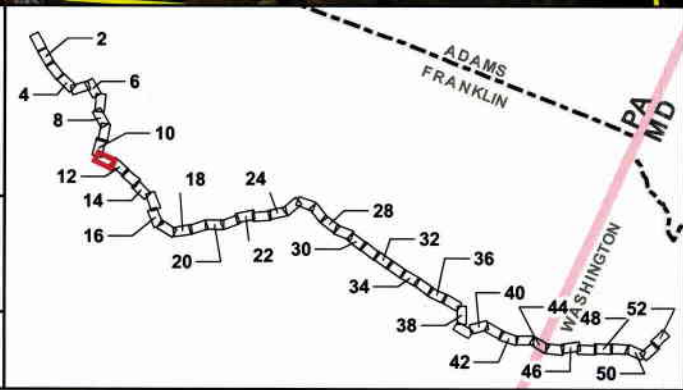
- Proposed Route C
- Notified Parcels
- Parcel Boundary

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**REFERENCES:**  
Aerial Basemap (ESRI)  
Franklin County (Sept 2017)  
Washington County (Oct 2017)

0 200 400 Feet

**COORDINATE SYSTEM:**  
NAD 1983 UTM Zone 18 North  
Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
Transmission Line Project  
Aerial Mapbook  
Map Extent 11  
Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar

**Legend**

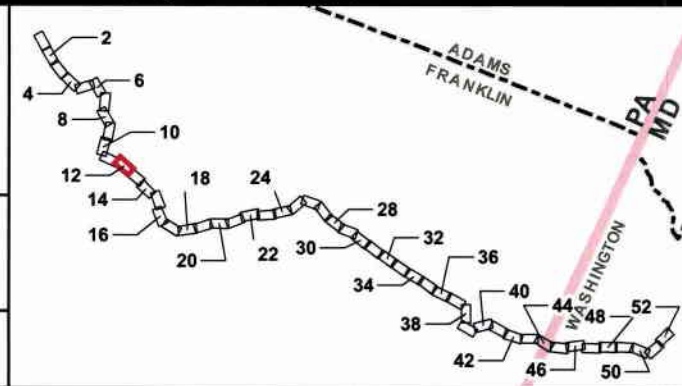
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
Aerial Basemap (ESRI)  
Franklin County (Sept 2017)  
Washington County (Oct 2017)

0 200 400 Feet

**COORDINATE SYSTEM:**  
NAD 1983 UTM Zone 18 North  
Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
Transmission Line Project  
Aerial Mapbook  
Map Extent 12  
Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





**Legend**

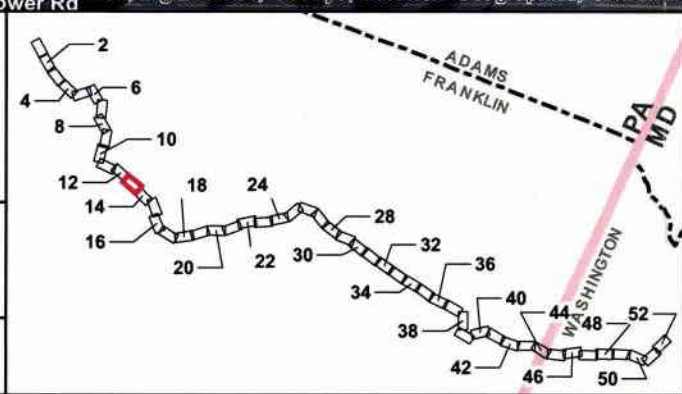
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 13  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

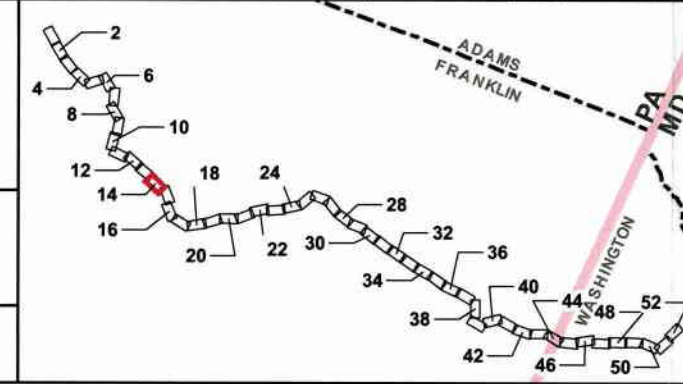
- Proposed Route C
- Notified Parcels
- Parcel Boundary

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**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 14  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





**Legend**

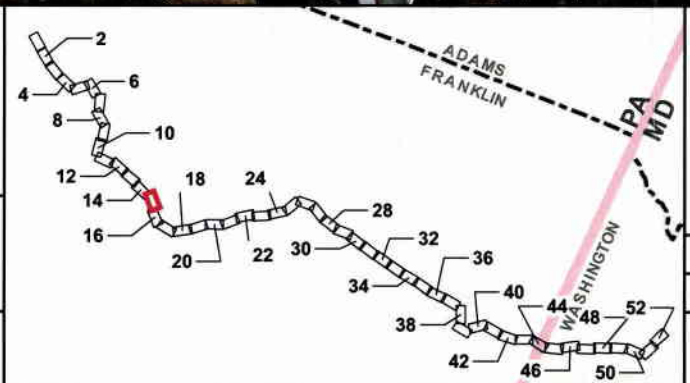
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 15  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

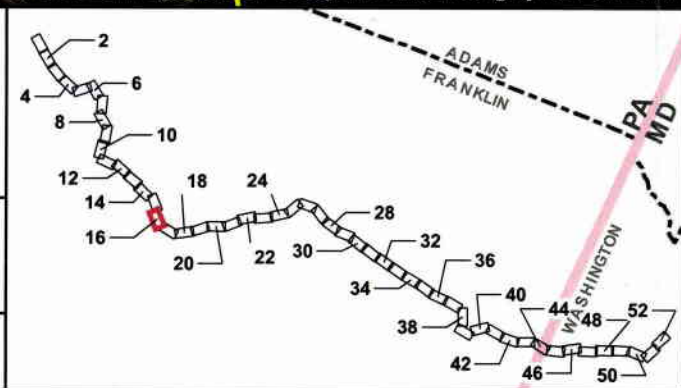
- Proposed Route C
- Notified Parcels
- Parcel Boundary

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**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 16  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

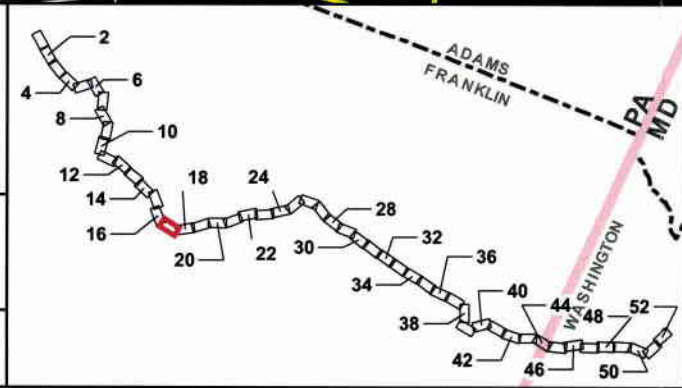
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 17  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

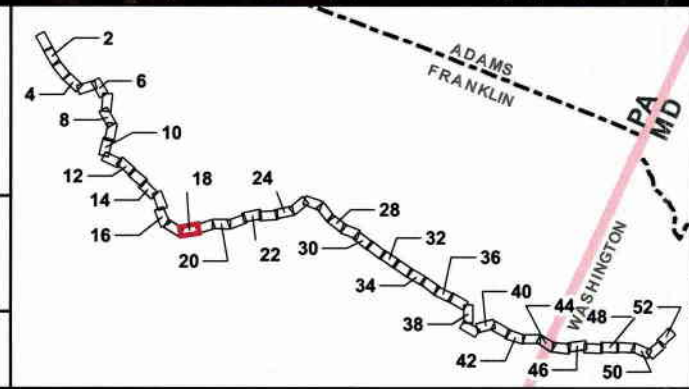
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 18  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





**Legend**

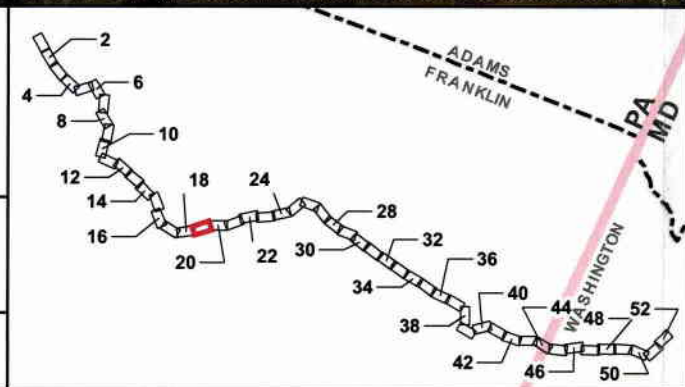
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
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 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 19  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





**Legend**

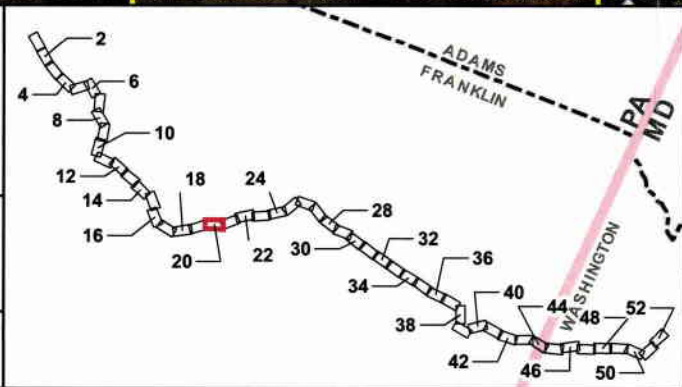
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 20  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

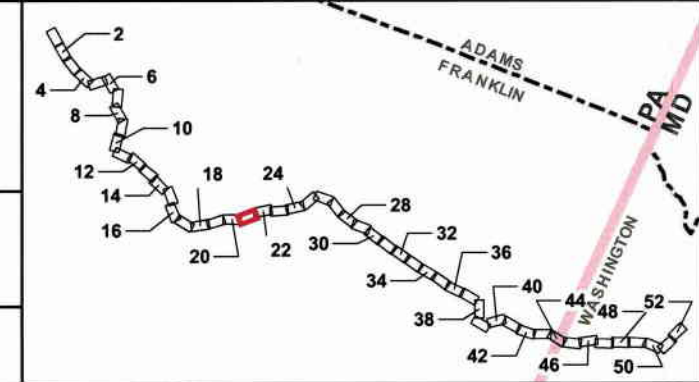
- Proposed Route C
- Notified Parcels
- Parcel Boundary

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**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 21  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

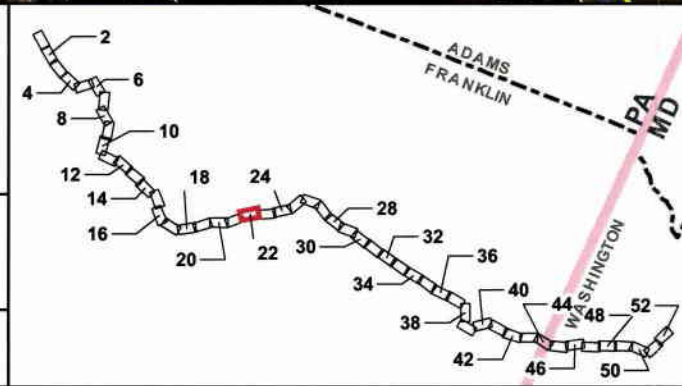
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 22  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, etc.

**Legend**

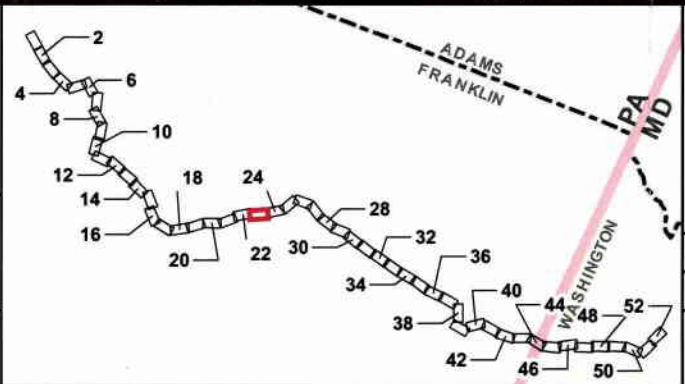
- Proposed Route C
- Notified Parcels
- Parcel Boundary

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**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0 200 400 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 23  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

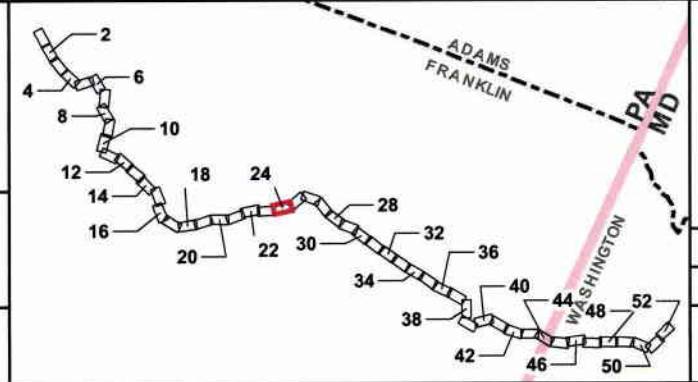
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0 200 400 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 24  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





**Legend**

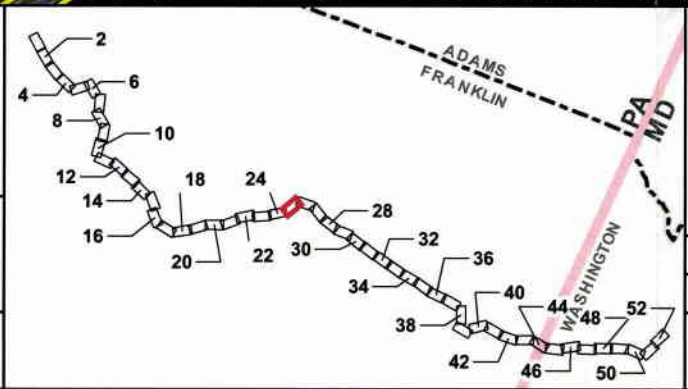
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0 200 400 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 25  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

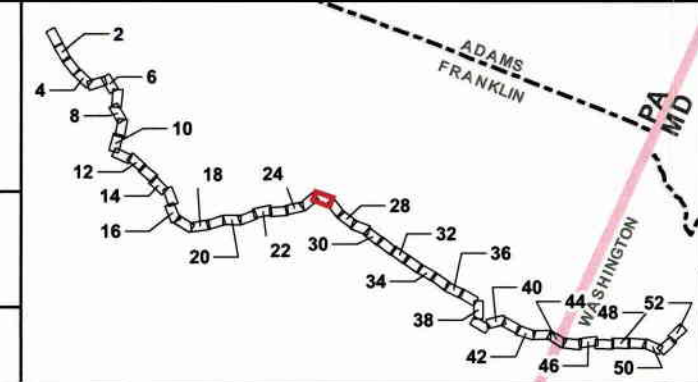
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
Aerial Basemap (ESRI)  
Franklin County (Sept 2017)  
Washington County (Oct 2017)

0 200 400 Feet

**COORDINATE SYSTEM:**  
NAD 1983 UTM Zone 18 North  
Projection: Transverse Mercator; Units: Meter

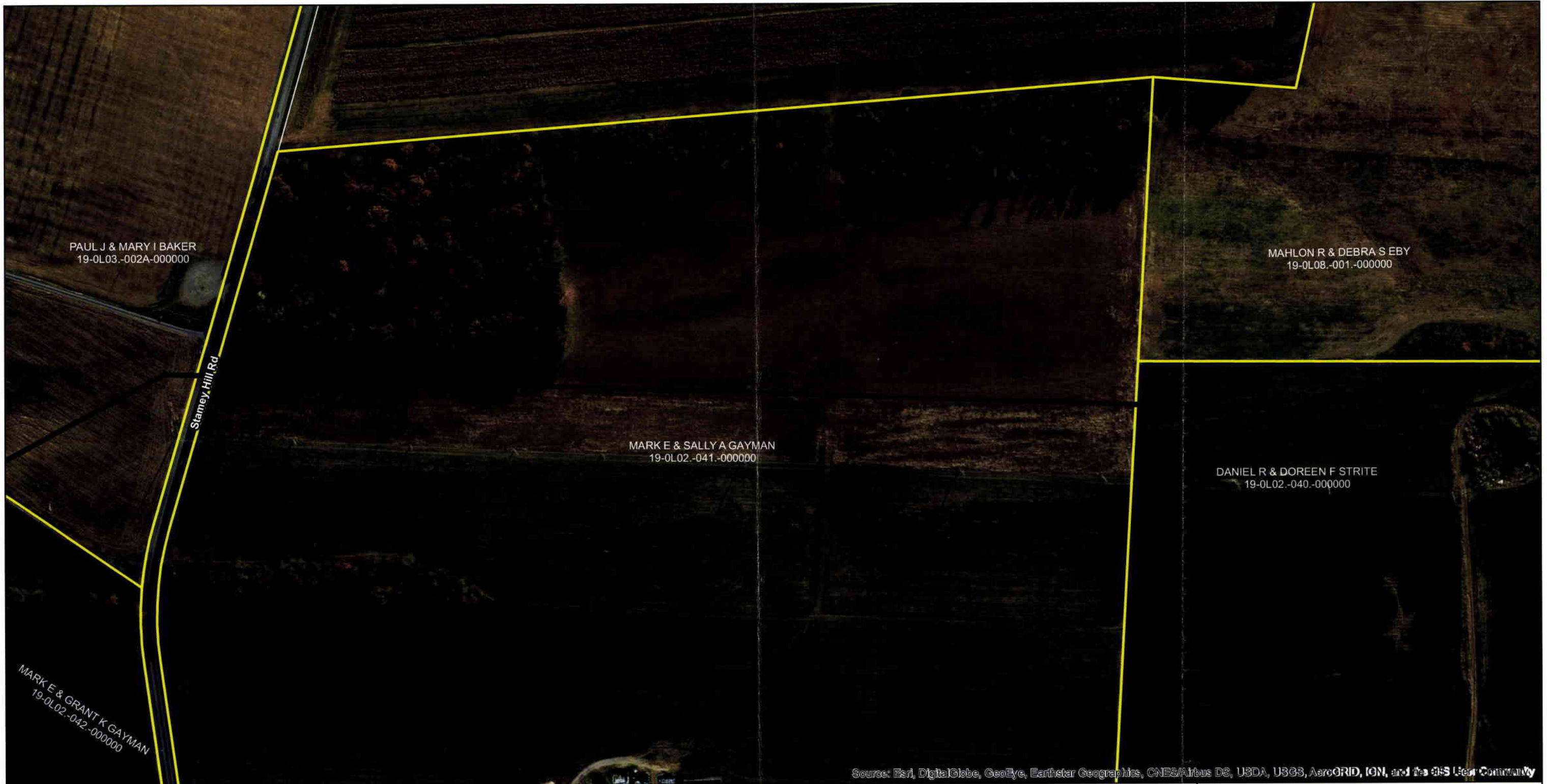


**Rice - Ringgold 230 kV  
Transmission Line Project  
Aerial Mapbook  
Map Extent 26  
Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017




**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

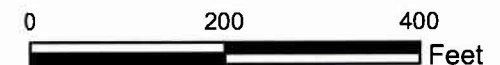
**Legend**

-  Proposed Route C
-  Notified Parcels
-  Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

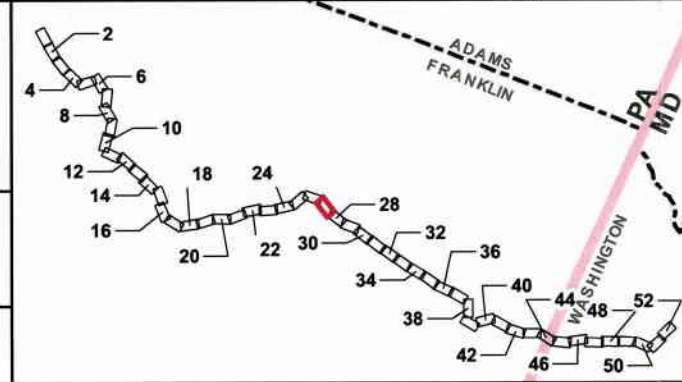
**REFERENCES:**

- Aerial Basemap (ESRI)
- Franklin County (Sept 2017)
- Washington County (Oct 2017)



**COORDINATE SYSTEM:**

NAD 1983 UTM Zone 18 North  
Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
Transmission Line Project  
Aerial Mapbook  
Map Extent 27  
Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017







Source: Esri, DigitalGlobe, GeoEye, Earthstar

**Legend**

- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 28  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017




**TRANSOURCE**





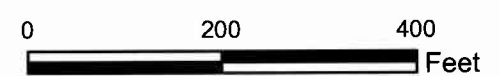
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

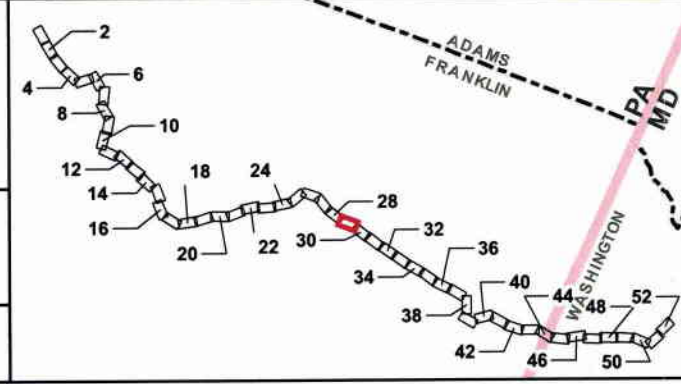
-  Proposed Route C
-  Notified Parcels
-  Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter

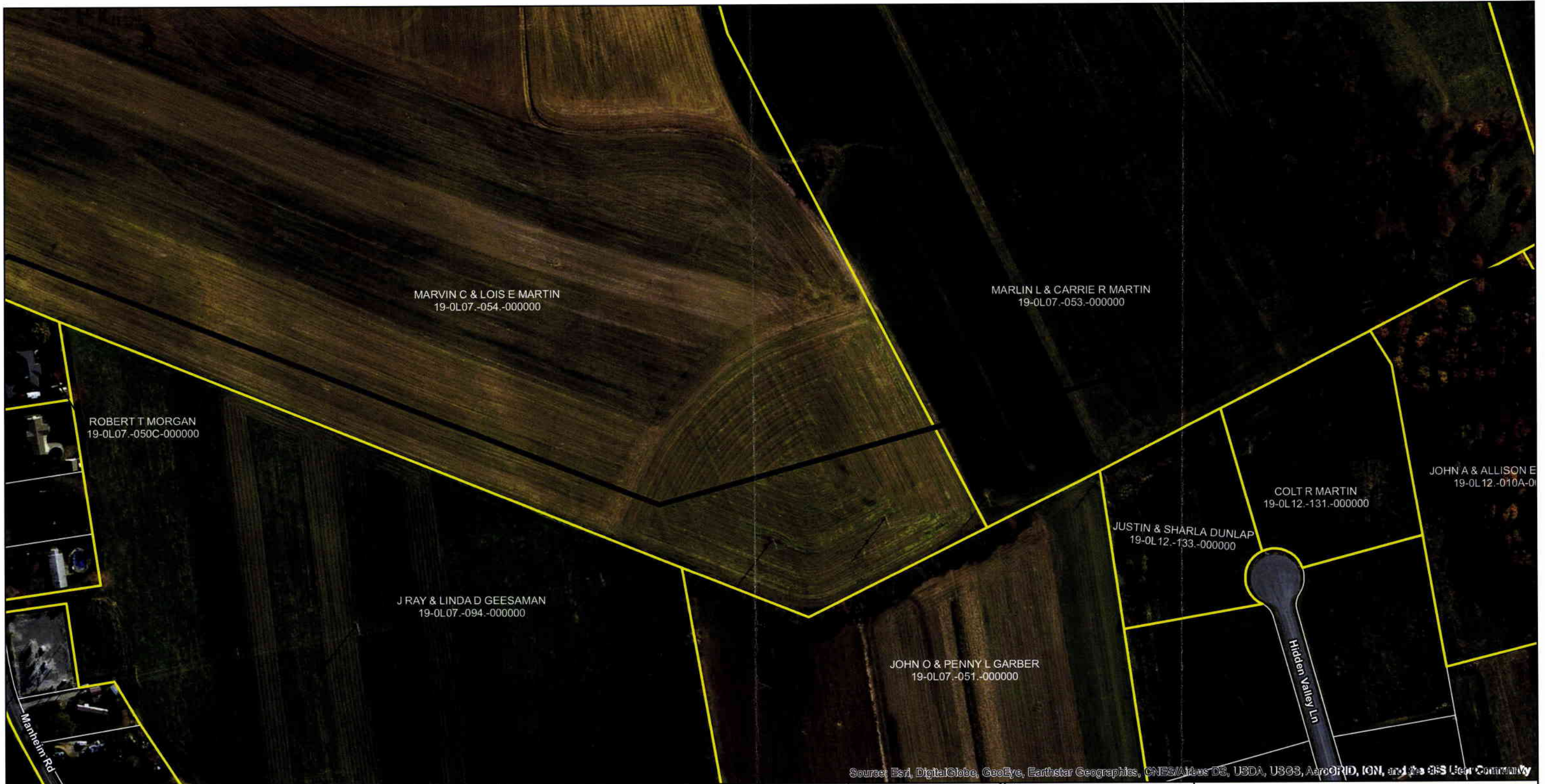


**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 29  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017







Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

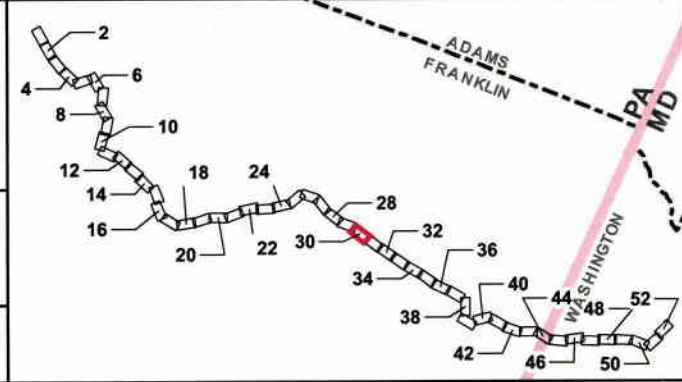
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 30  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017





BRETHREN UNITED  
ORPHANAGE  
19-0L12.-053.-000000

KENNETH M & MARIE A LEHMAN  
19-0L12.-011.-000000

MARLIN L & CARRIE R MARTIN  
19-0L07.-053.-000000

COLT R MARTIN  
19-0L12.-131.-000000

JOHN A & ALLISON E STEIGER  
19-0L12.-010A-000000

ROY B & SUSAN L BIESECKER  
19-0L12.-010.-000000

ROY B & SUSAN L BIESECKER  
19-0L12.-010.-000000

Hess Benedict Rd

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

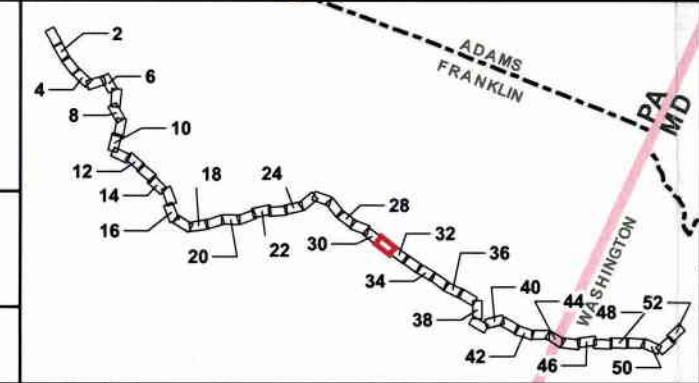
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
Aerial Basemap (ESRI)  
Franklin County (Sept 2017)  
Washington County (Oct 2017)

0 200 400 Feet

**COORDINATE SYSTEM:**  
NAD 1983 UTM Zone 18 North  
Projection: Transverse Mercator; Units: Meter

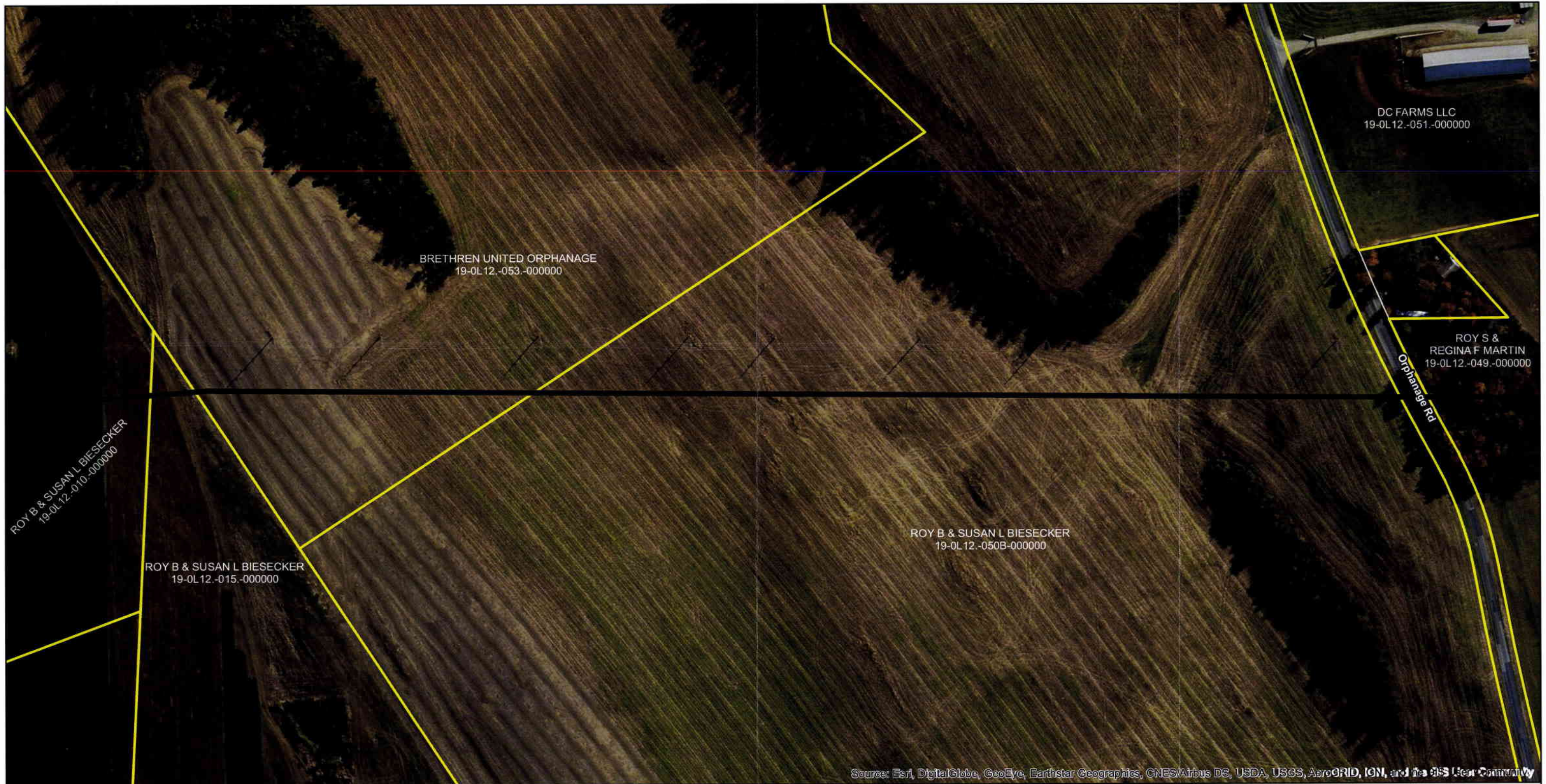


**Rice - Ringgold 230 kV  
Transmission Line Project  
Aerial Mapbook  
Map Extent 31  
Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017




**TRANSOURCE**





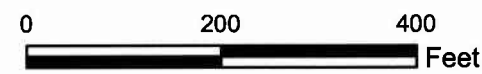
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

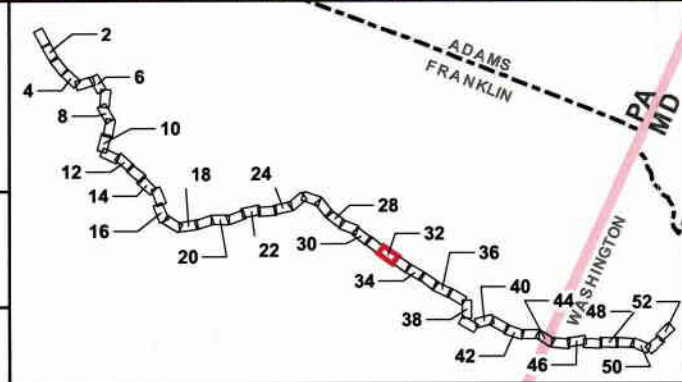
-  Proposed Route C
-  Notified Parcels
-  Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter

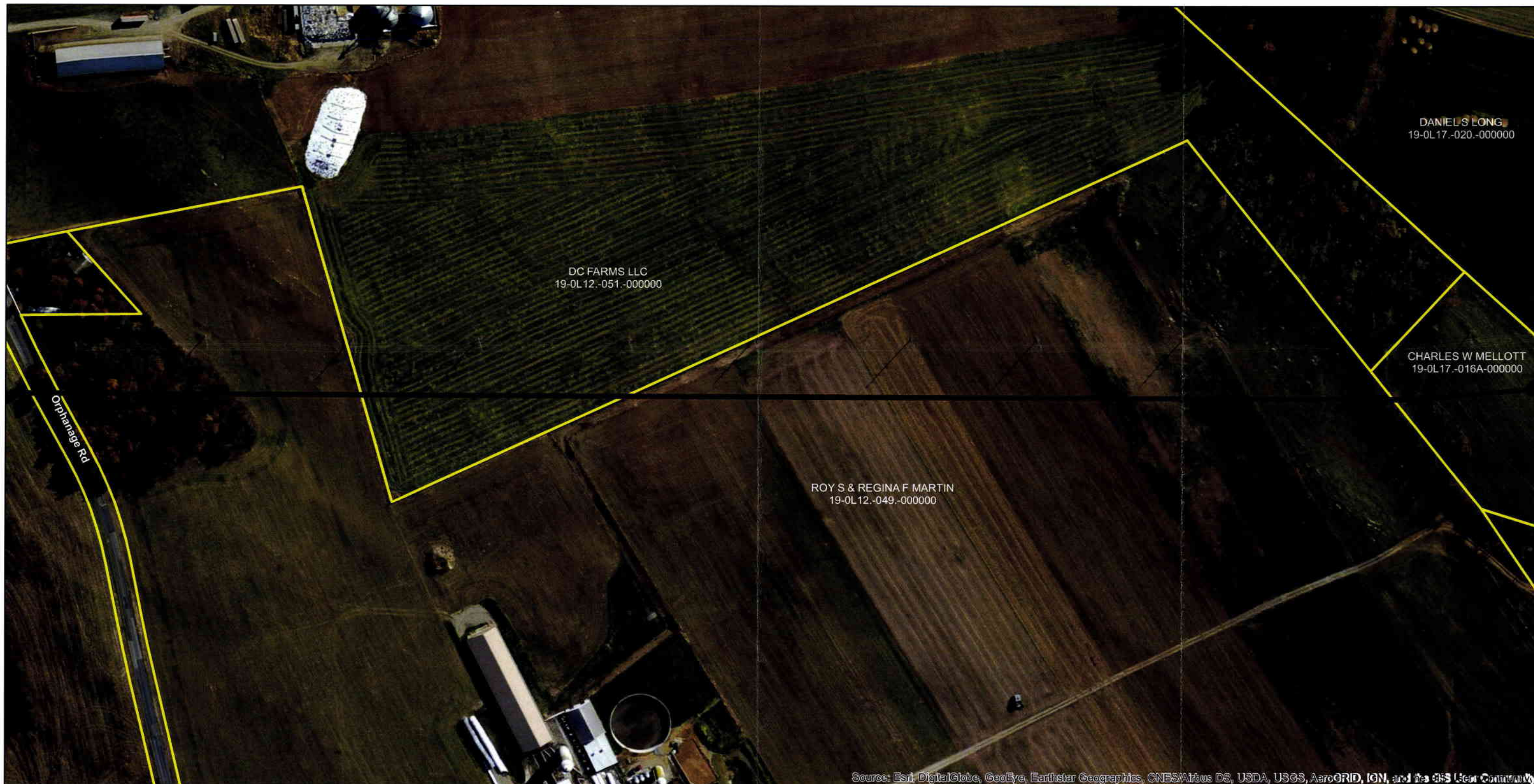


**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 32  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017







Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

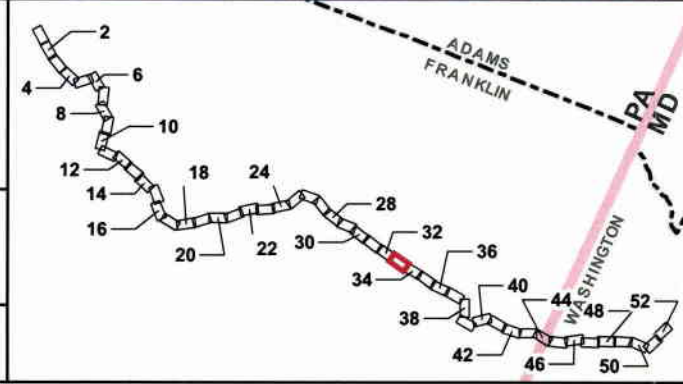
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 33  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DG, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

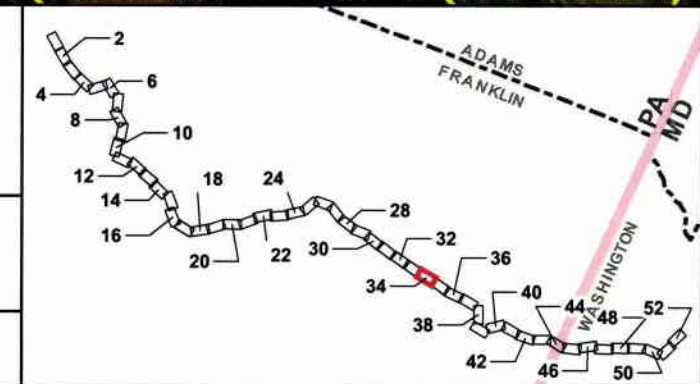
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 34  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





**Legend**

- Proposed Route C
- Notified Parcels
- Parcel Boundary

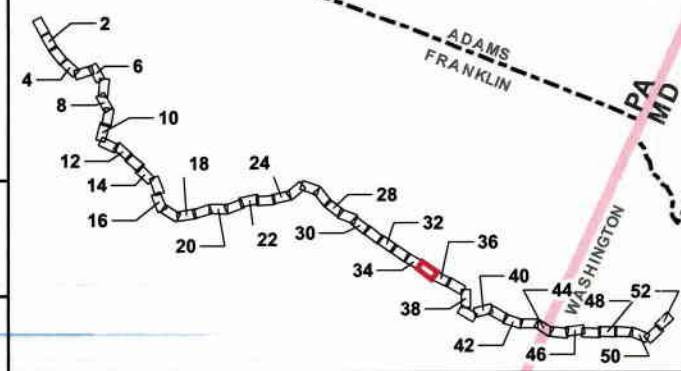
**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 35  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017







Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics,

**Legend**

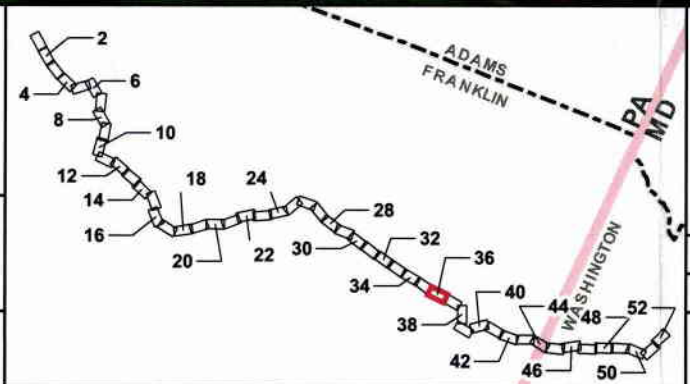
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 36  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geograph

**Legend**

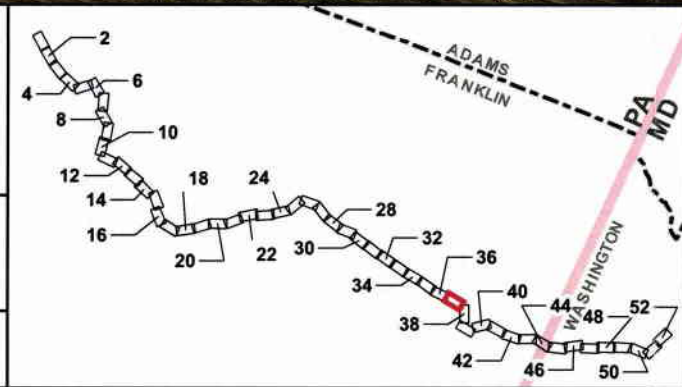
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0      200      400  
 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 37  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

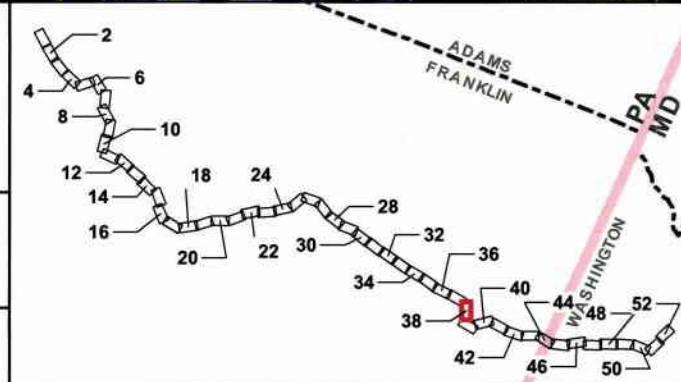
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0 200 400 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 38  
 Independence Energy Connection**




Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





**Legend**

-  Proposed Route C
-  Notified Parcels
-  Parcel Boundary

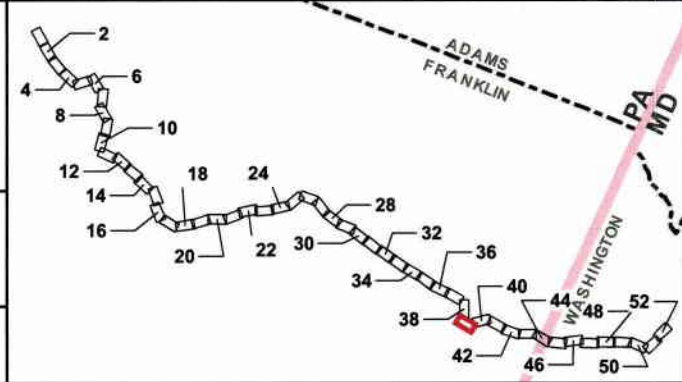
**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geograp



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 39  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**



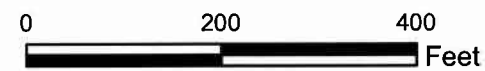


**Legend**

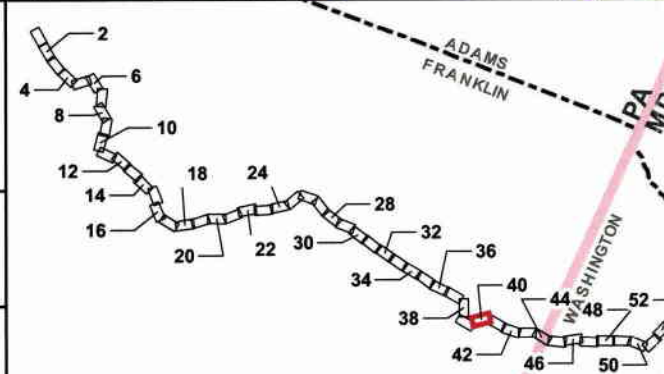
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 40  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017







**Legend**

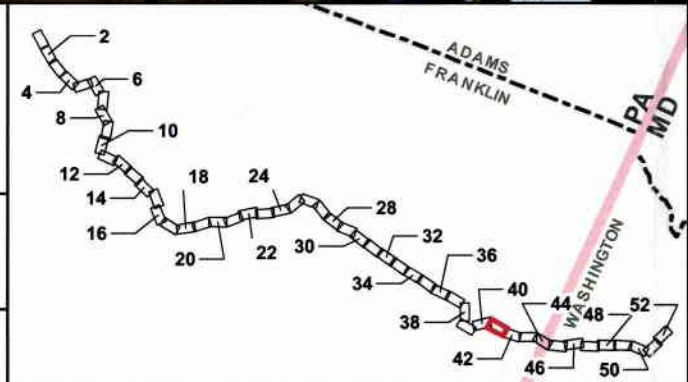
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0 200 400 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter

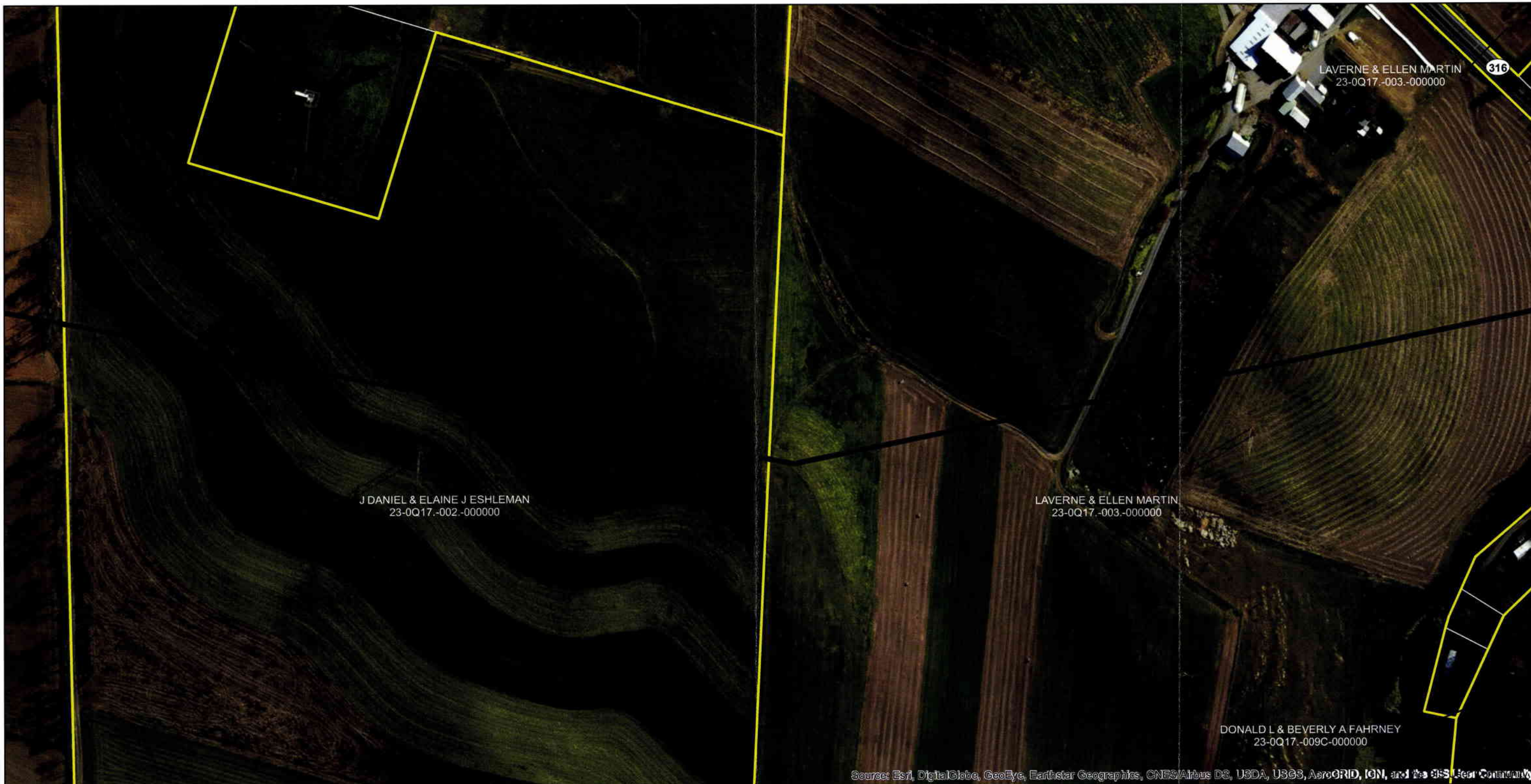


**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 41  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017




**TRANSOURCE**





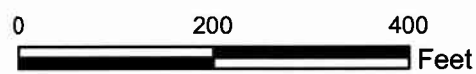
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

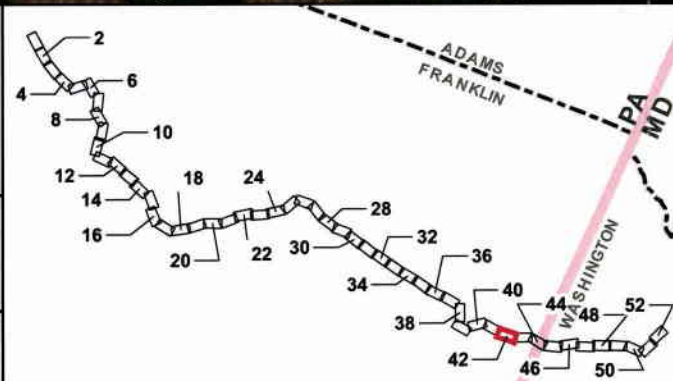
-  Proposed Route C
-  Notified Parcels
-  Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 42  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017







Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

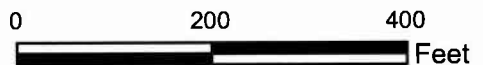
**Legend**

- Proposed Route C
- Notified Parcels
- Parcel Boundary

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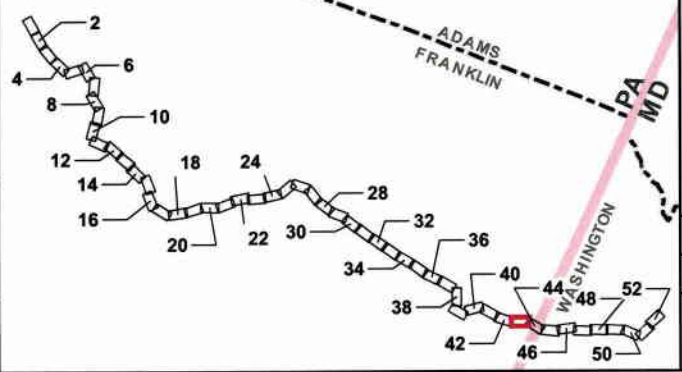
**REFERENCES:**

- Aerial Basemap (ESRI)
- Franklin County (Sept 2017)
- Washington County (Oct 2017)



**COORDINATE SYSTEM:**

NAD 1983 UTM Zone 18 North  
Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
Transmission Line Project  
Aerial Mapbook  
Map Extent 43  
Independence Energy Connection**

Prepared By: NAB

Checked By: HB

Job: 60528995/60529006

Date: November 27, 2017










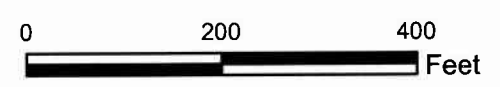
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

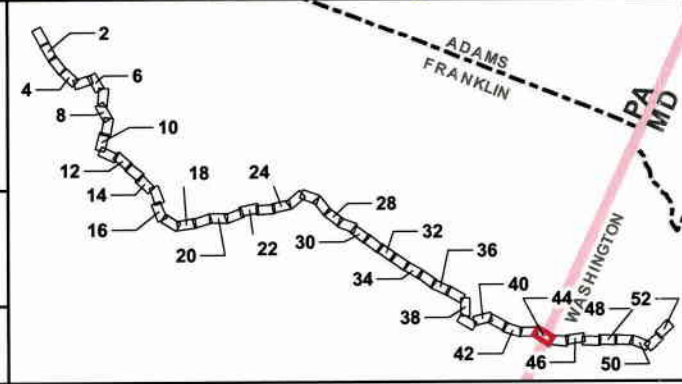
-  Proposed Route C
-  Notified Parcels
-  Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 44  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017




**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

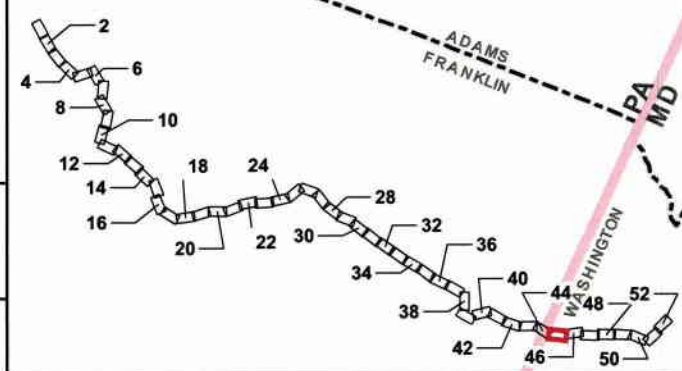
-  Proposed Route C
-  Notified Parcels
-  Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 45  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017










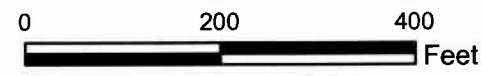
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

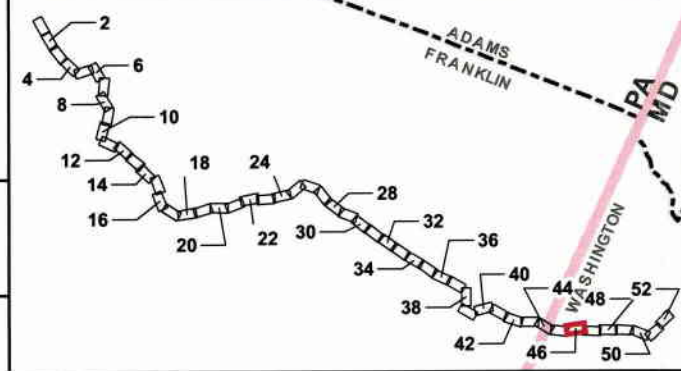
-  Proposed Route C
-  Notified Parcels
-  Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 46  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017




**TRANSOURCE**





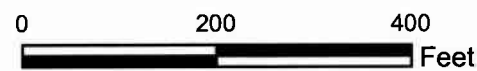
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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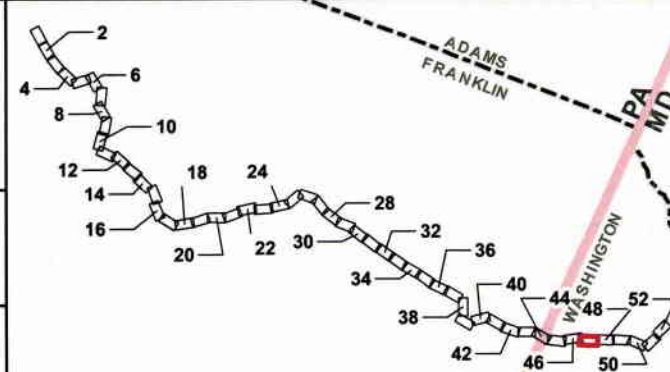
-  Proposed Route C
-  Notified Parcels
-  Parcel Boundary

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**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter






<b>Rice - Ringgold 230 kV          Transmission Line Project          Aerial Mapbook          Map Extent 47          Independence Energy Connection</b>	
Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017
	



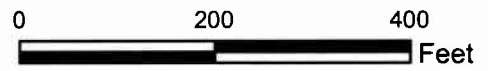


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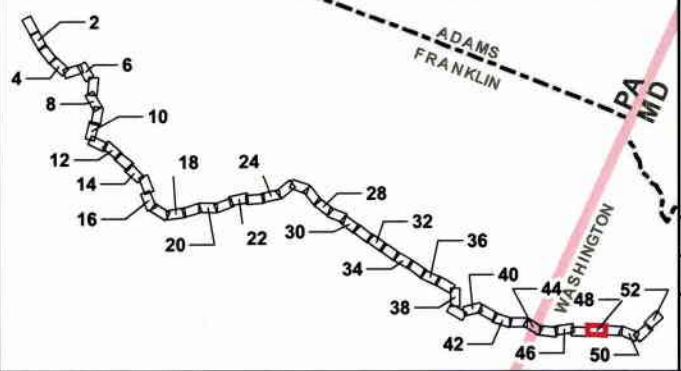
-  Proposed Route C
-  Notified Parcels
-  Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



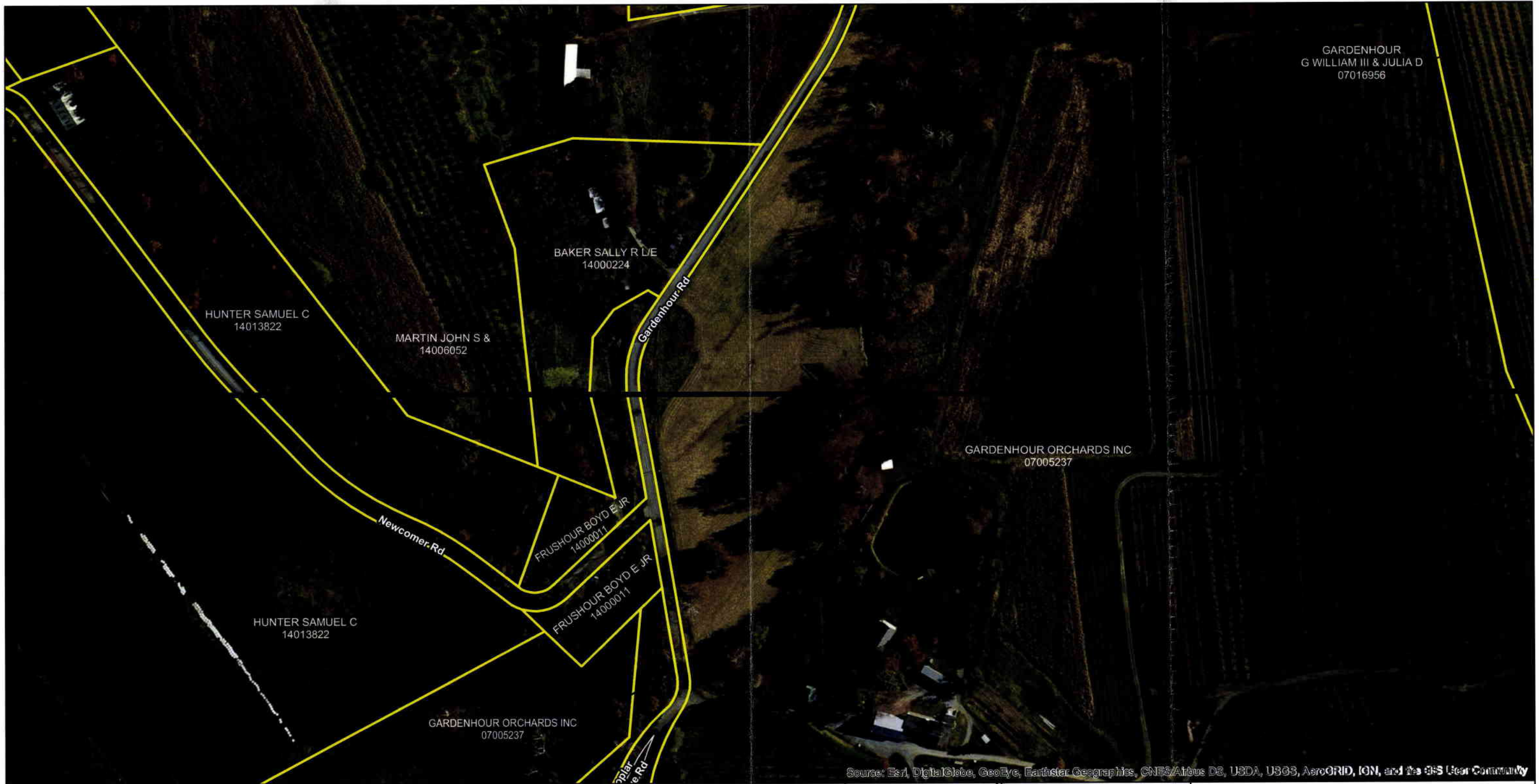
**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



<b>Rice - Ringgold 230 kV          Transmission Line Project          Aerial Mapbook          Map Extent 48          Independence Energy Connection</b>	
Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017
	



GARDENHOUR  
G WILLIAM III & JULIA D  
07016956



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

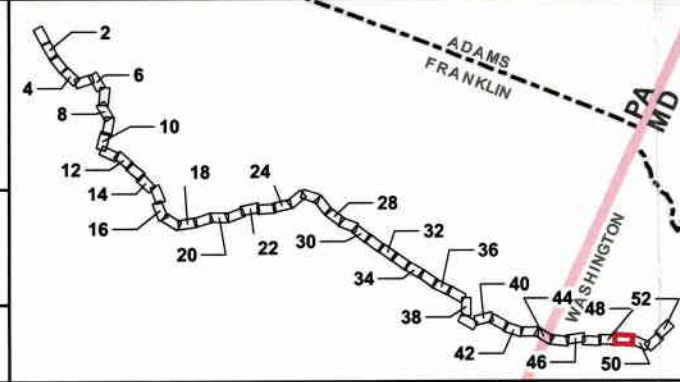
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
Aerial Basemap (ESRI)  
Franklin County (Sept 2017)  
Washington County (Oct 2017)

0 200 400 Feet

**COORDINATE SYSTEM:**  
NAD 1983 UTM Zone 18 North  
Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
Transmission Line Project  
Aerial Mapbook  
Map Extent 49  
Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017




**TRANSOURCE**





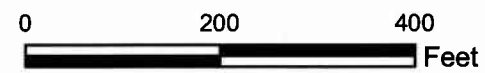
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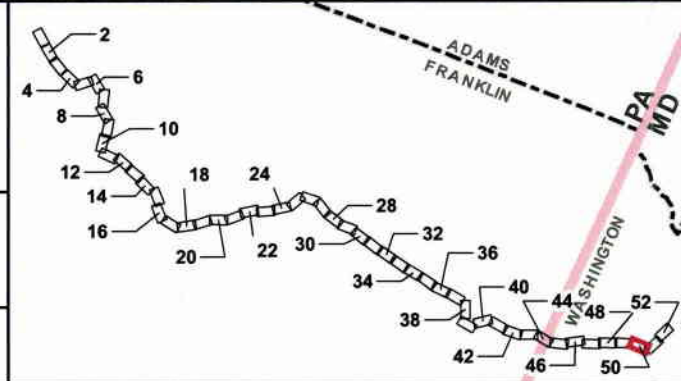
-  Proposed Route C
-  Notified Parcels
-  Parcel Boundary

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 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)



**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 50  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

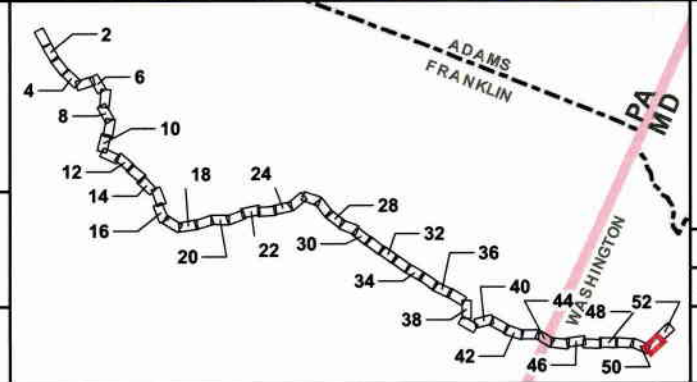
- Proposed Route C
- Notified Parcels
- Parcel Boundary

**Disclaimer:** The images and data on this figure are provided by Transource, LLC for information purposes only and represent only approximate locations and distances since final detailed survey and related field work have not yet been completed. Transource LLC makes no warranty with respect to the accuracy of the images or information reflected on this figure. The property lines shown on this figure are based on tax parcel data obtained from the County and does not constitute legal description of any of the applicable land parcels.

**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0 200 400 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 51  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

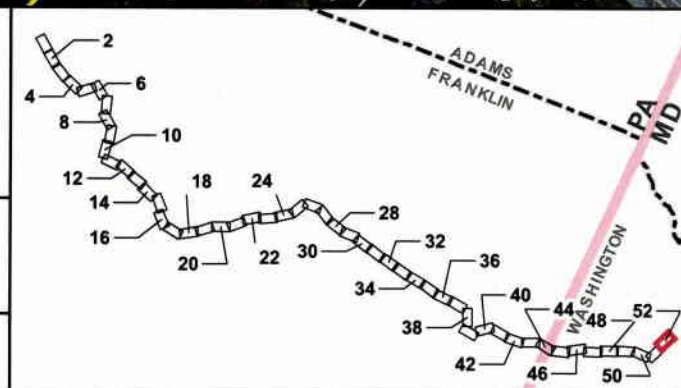
- Proposed Route C
- Notified Parcels
- Parcel Boundary

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**REFERENCES:**  
 Aerial Basemap (ESRI)  
 Franklin County (Sept 2017)  
 Washington County (Oct 2017)

0 200 400 Feet

**COORDINATE SYSTEM:**  
 NAD 1983 UTM Zone 18 North  
 Projection: Transverse Mercator; Units: Meter



**Rice - Ringgold 230 kV  
 Transmission Line Project  
 Aerial Mapbook  
 Map Extent 52  
 Independence Energy Connection**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: November 27, 2017

**TRANSOURCE**

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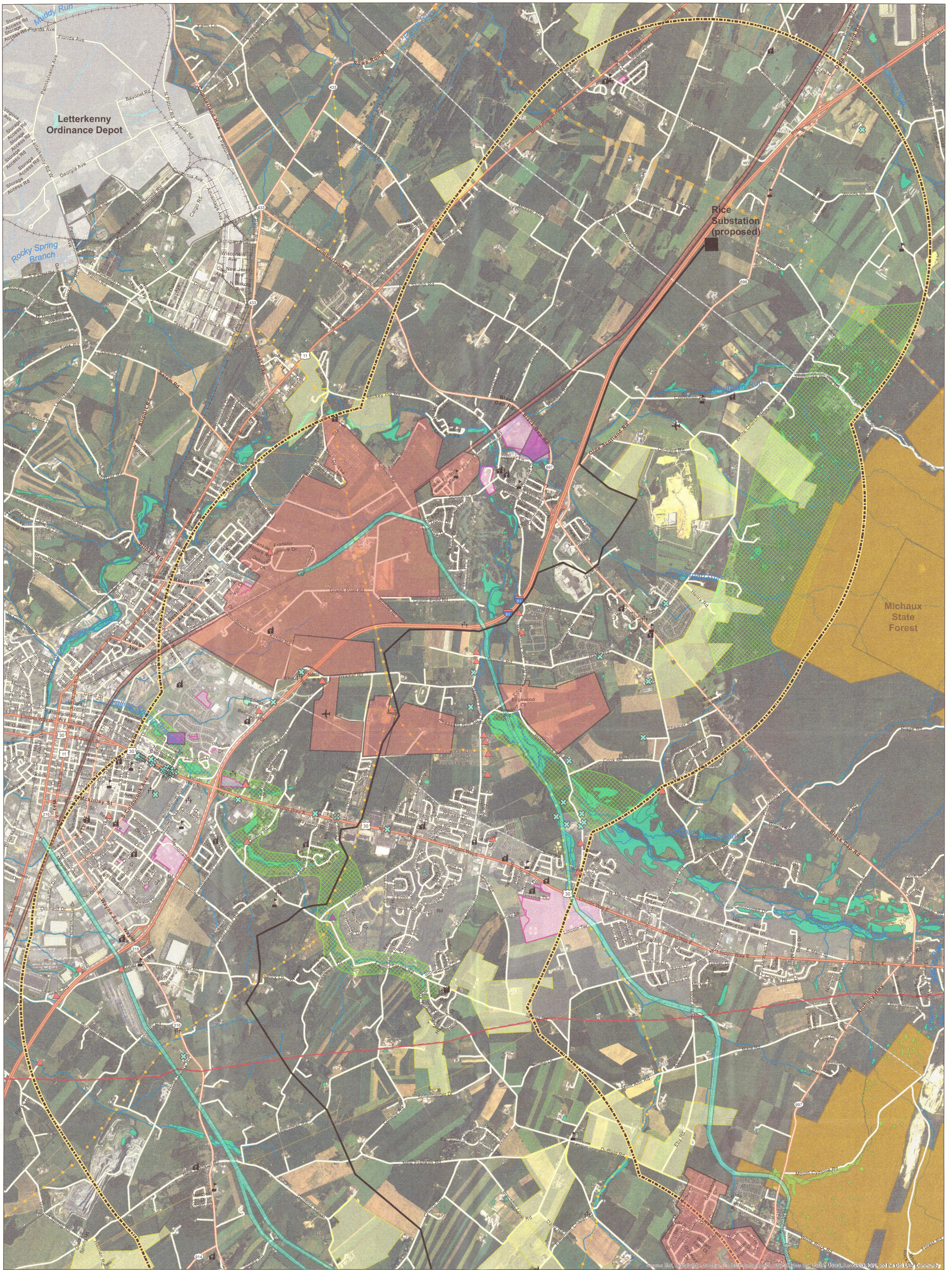
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**Appendix D: Proposed Route 2 Mile Overview Drawing (Figure 15)**

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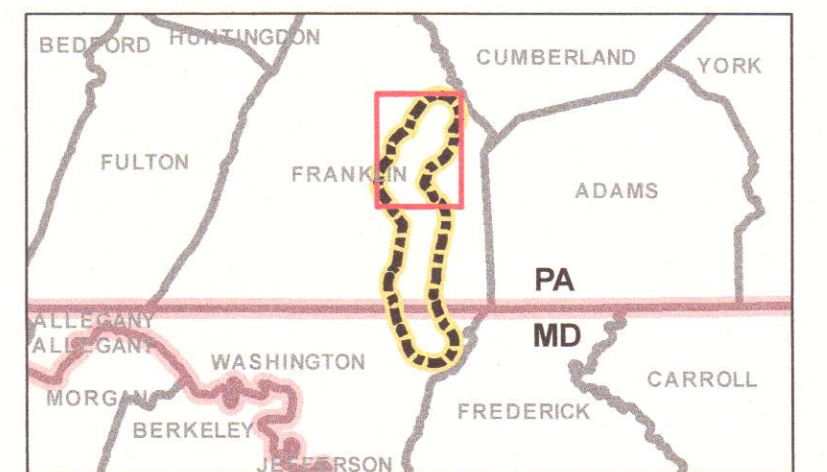
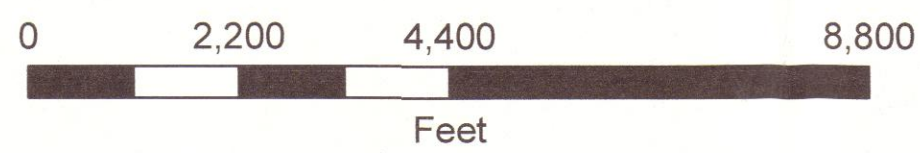
---





- Legend**
- Airports
  - Schools
  - Churches
  - Cemeteries
  - Proposed Route C
  - 2 Mile Buffer
  - Existing Electric Transmission Line**
    - Less than 100 kV
    - 115 kV - 230 kV
    - Greater than 345 kV
    - Gas Pipeline
  - Railroad
  - Stream
  - NRHP Listed Above Ground Resource
  - NRHP Eligible Above Ground Resource
  - State Identified Above Ground Resource
  - NRHP Listed Above Ground Resource - Polygon
  - NRHP Eligible Above Ground Resource - Polygon
  - NRHP Listed Historic District
  - NRHP Eligible Historic District
  - State Identified Historic District
  - Local Agricultural Preservation
  - Local Government Land
  - State Land
  - PA Core Habitat of Biological Diversity Area
  - Wetland

**Disclaimer:** Due to the sensitivity of archeological resources, their location is considered proprietary and is not included in this figure.

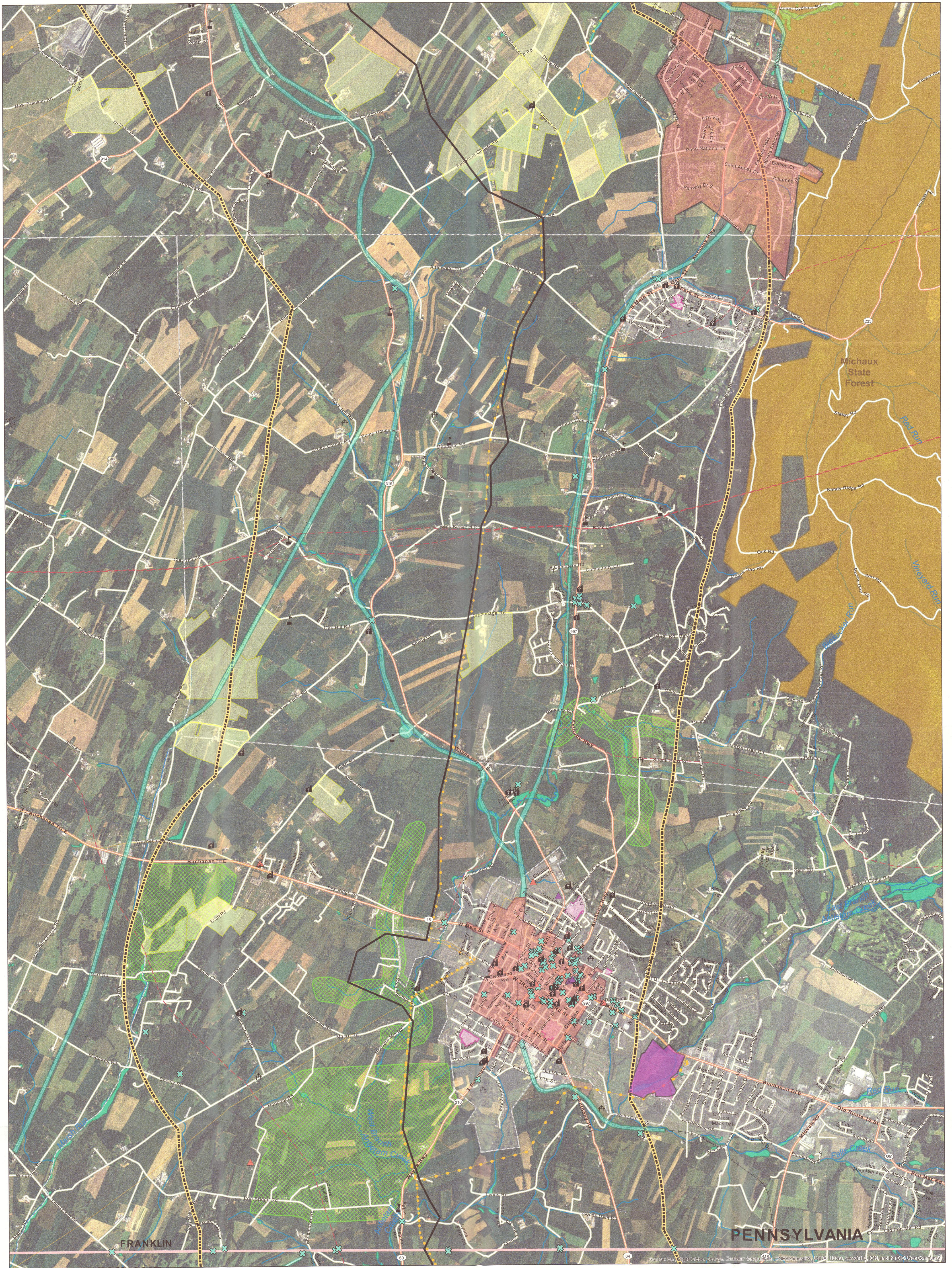


**Independence Energy Connection  
Transource, LLC**

Job: 60528995/ 60529006  
Prepared by: NB  
Checked by: HB  
Date: 12/5/2017

**Figure 15, 1 of 2  
Proposed Route - 2 Mile Overview of  
Sensitive Features - PA**

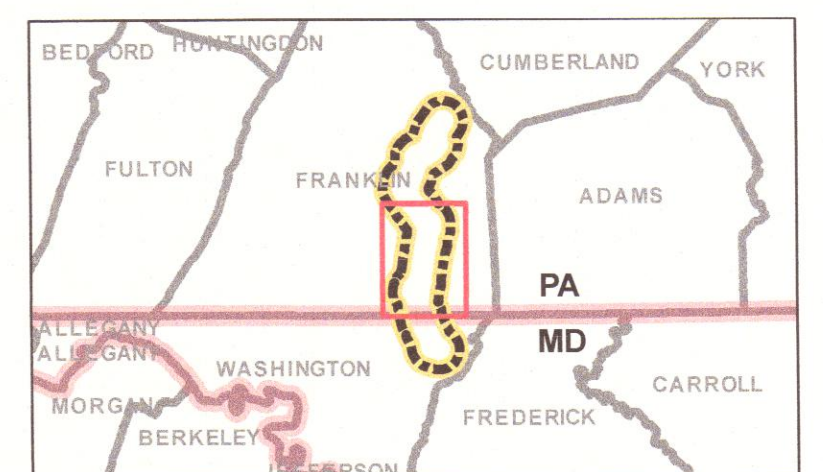
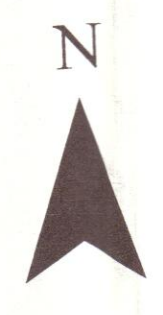
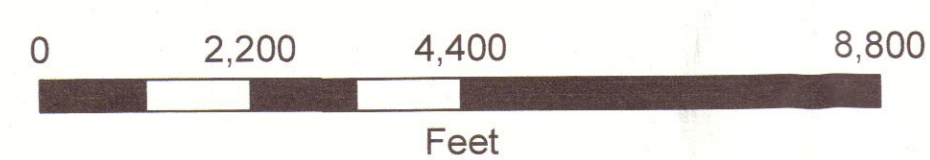




**Legend**

- ✈ Airports
- 🏫 Schools
- ⛪ Churches
- ⚰ Cemeteries
- ➡ Proposed Route C
- 📏 2 Mile Buffer
- Existing Electric Transmission Line**
- Less than 100 kV
- 115 kV - 230 kV
- Greater than 345 kV
- Gas Pipeline
- 🚂 Railroad
- 🌊 Stream
- ▲ NRHP Listed Above Ground Resource
- △ NRHP Eligible Above Ground Resource
- ⊠ State Identified Above Ground Resource
- 🟪 NRHP Listed Above Ground Resource - Polygon
- 🟫 NRHP Eligible Above Ground Resource - Polygon
- 🟩 NRHP Listed Historic District
- 🟨 NRHP Eligible Historic District
- 🟦 State Identified Historic District
- 🟨 Local Agricultural Preservation
- 🟪 Local Government Land
- 🟨 State Land
- 🟩 PA Core Habitat of Biological Diversity Area
- 🟩 Wetland

**Disclaimer:** Due to the sensitivity of archeological resources, their location is considered proprietary and is not included in this figure.

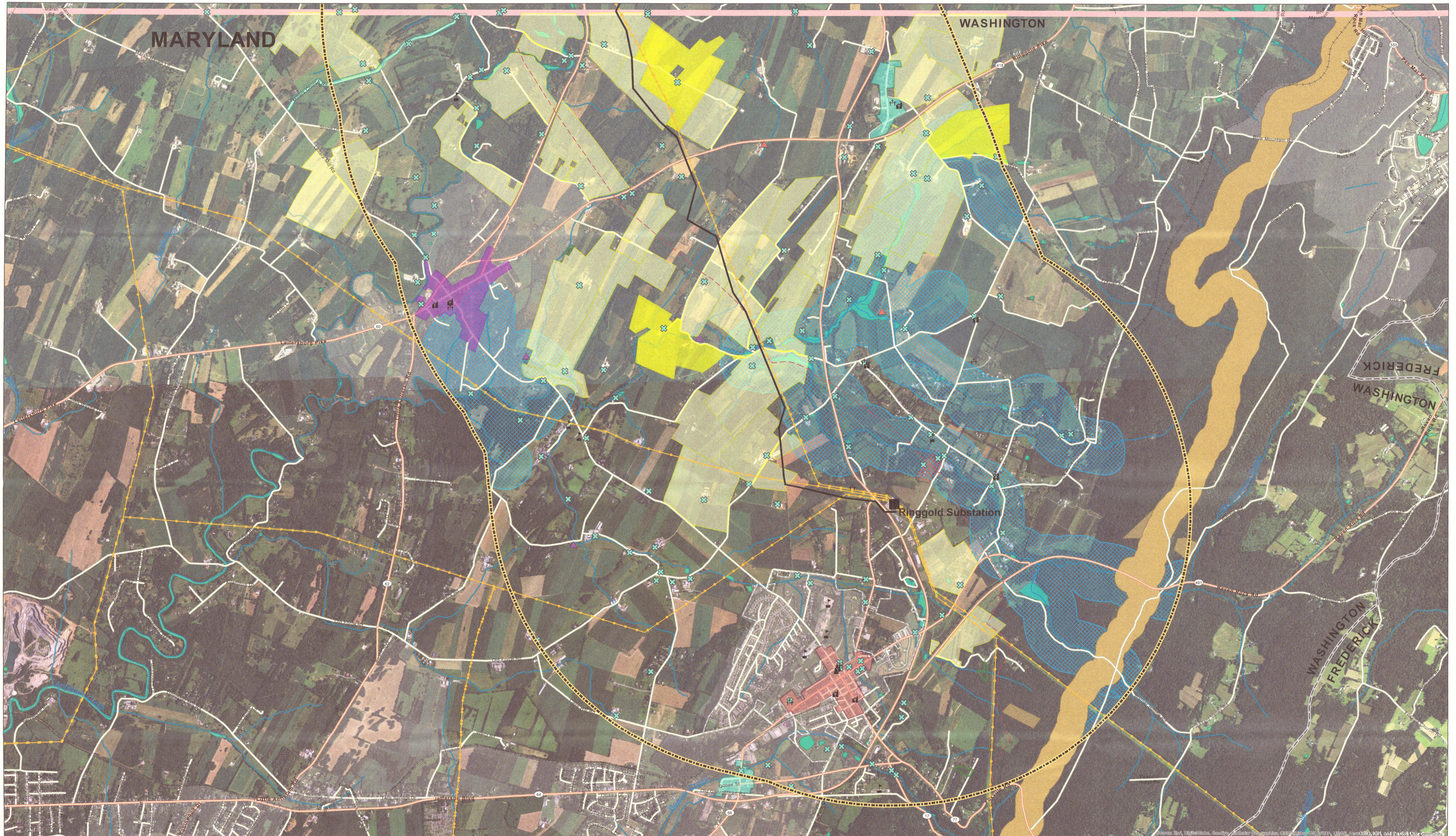


**Independence Energy Connection**  
Transource, LLC

Job: 60528995/ 60529006  
Prepared by: NB  
Checked by: HB  
Date: 12/5/2017

**Figure 15, 2 of 2**  
**Proposed Route - 2 Mile Overview of Sensitive Features - PA**





**Legend**

✈ Airports	— Gas Pipeline	State Identified Historic District
🏫 School	🚂 Railroad	Local Agricultural Preservation
⛪ Churches	🌊 Stream	State Agricultural Preservation
⚰ Cemeteries	▲ NRHP Listed Above Ground Resource	Maryland Environmental Trust Easements
🛣 Proposed Route C	▲ NRHP Eligible Above Ground Resource	Maryland Forest Conservation
🛣 2 Mile Buffer	⊗ State Identified Above Ground Resource	National Parks Service Land
🛣 Existing Electrical Transmission Lines	⊗ NRHP Listed Above Ground Resource - Polygon	Maryland Green Infrastructure Corridor and Hubs
— Less than 100 kV	⊗ NRHP Eligible Above Ground Resource - Polygon	MD Sensitive T&E Area
— 115 kV - 230 kV	⊗ NRHP Listed Historic District	Wetland
— Greater than 345 kV	⊗ NRHP Eligible Historic District	

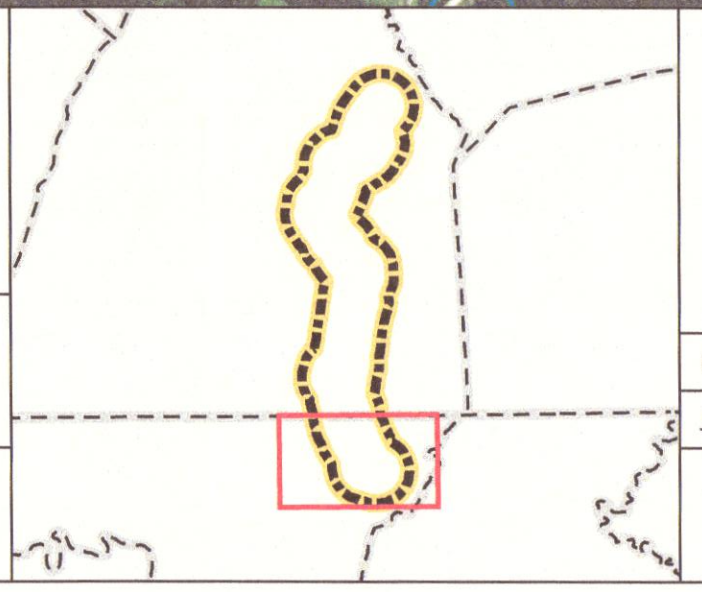
**Disclaimer:** Due to the sensitivity of archeological resources, their location is considered proprietary and is not included in this figure.

**Independence Energy Connection  
Transource, LLC**

0 1,500 3,000 4,500 6,000 Feet

COORDINATE SYSTEM:  
NAD 1983 UTM Zone 18 North  
Projection: Transverse Mercator; Units: Meter

REFERENCES:  
Platts Power Map (2012)  
Aerial Imagery (ESRI)



**Figure 15  
Proposed Route - 2 Mile Overview  
of Sensitive Features - MD**

Prepared By: NAB	Checked By: HB
Job: 60528995/60529006	Date: December 05, 2017

**TRANSOURCE**



**ATTACHMENT 4**

**ENGINEERING DESCRIPTION**

**ATTACHMENT 4  
ENGINEERING DESCRIPTION**

---

**1.0 INTRODUCTION**

As explained in Attachment 2, Transource Pennsylvania, LLC (“Transource PA”) proposes to construct the Pennsylvania portion of the Independence Energy Connection-West Project (“IEC-West Project”) in Franklin County, Pennsylvania. This Attachment provides an engineering description of the transmission line associated with the IEC-West Project.

**2.0 PROPOSED LINE DESIGN**

The IEC-West Project involves the construction of the new Rice-Ringgold 230 kV Transmission Line that will extend approximately 28.8 miles, connecting the existing Ringgold Substation located near Smithsburg, Washington County, Maryland, and the new Rice Substation to be located in Franklin County, Pennsylvania. The Pennsylvania portion of the IEC-West Project is approximately 24.4 miles as further described in Attachment 3.

The new transmission line associated with the IEC-West Project will be designed as a double-circuit 230 kV transmission line. The 230 kV double-circuit design will utilize twelve power conductors, with two conductors being used for each of the six phase positions, and two overhead ground wires. The power conductors will be 795 kcmil<sup>1</sup> 26/7 Aluminum Conductor Steel Supported (“ACSS”) “Drake” conductors in each of the six (6) phase conductor positions. The overhead ground wires will provide lightning protection and in some cases communication between circuit breakers that remove the line from service should a fault on the line be detected.

The Pennsylvania portion of the IEC-West Project will require the install of approximately 162 steel structures with an average height of 135 feet. Approximately 2 to 4 structures may be taller structures (up to approximately 250’ feet) to ensure appropriate clearances for certain structures and other utility facilities. The average span length will be approximately 800 feet.

---

<sup>1</sup> A kcmil is a thousand circular mils. A circular mil is the cross-sectional area of a wire one mil in diameter, where 1 kcmil = 0.5067 mm<sup>2</sup>.

The Pennsylvania portion of the new IEC-West Project will consist of a combination of tubular steel monopole and multi-pole structures, with the occasional steel lattice structure where environmental, engineering, constructability, and land use constraints dictate such application. The tubular steel monopole structures will be used at tangent and light-angle locations. The tubular steel multi-pole structures will be used at medium-angle locations and most of the heavy-angle and deadend locations. The steel lattice structures will be used, if necessary, at heavy-angle and deadend locations where engineering constraints, such as structure and/or foundation size, dictate such application. The foundation systems will be a combination of direct-embedded and drill-shafts.

Diagram 4.1 depicts the typical structures that will be used for the IEC-West Project.

### **3.0 DESIGN CRITERIA AND SAFETY PRACTICES**

The IEC-West Project will be designed according to all National Electrical Safety Code (“NESC”) standards. The NESC is a set of rules to safeguard people during the installation, operation, and maintenance of electric power lines. The NESC contains the basic provisions considered necessary for the safety of employees and the public. Although it is not intended as a design specification, its provisions establish minimum design requirements. Transource PA has developed design specifications and safety rules which meet or surpass all requirements specified by the NESC and the PJM Minimum Design Standards.

The NESC includes loading requirements and clearances for the design, construction, and operation of power lines. The “loads” on conductors and supporting structures are the mechanical forces that develop from the weight of the conductors, the weight of ice on the conductors, plus wind pressure on the conductors and supporting structures. Loading requirements are the loads on the conductors and structures that are anticipated assuming certain ice and wind conditions. Loading requirements contain a combination of strength factors and load factors. These factors account for unknown or unanticipated contingencies in both material variability and structural loading. The clearances and loading requirements contained in the NESC are designed to maintain public safety.



The IEC-West Project will be designed to meet or surpass the NESC clearances and loading requirements. For example, the relative order of grades of construction for conductors and supporting structures is B, C, and N; Grade B being the highest. According to the NESC standards, construction Grades B, C, or N may be used for transmission lines (except at crossings of rail road tracks and limited access highways where Grade B construction is specified). Transource PA will design its transmission lines for the IEC Project as Grade B construction. The use of Grade B design and construction specifies enhancements such as larger-minimum crossarm dimensions and increased safety factors.

In addition to the above considerations, Transource PA utilizes additional loading conditions to account for enhanced structural performance, which results in increased safety performance. A heavy ice loading, including 1 ¼” radial ice is included in the design considerations. The design also accounts for longitudinal loading cases, including both a broken phase condition, and an iced/bare wire condition. The longitudinal cases are used by Transource PA to mitigate the possibility for cascading failures. Use of these additional load cases means Transource PA’s lines are designed to operate safely and reliably during inclement weather even more severe than assumed by the NESC.

Engineering Clearance Design Criteria and Parameters

The transmission lines for the IEC Project are designed with more clearance to the ground and underlying objects than required by the NESC. The following table contains examples of Transource and NESC clearance comparisons for 230kV lines.

**230kV Design Clearance Comparison**

<u>Surface Underneath Conductors</u>	<u>Vertical Clearance to Ground</u>	
	<u>NESC Standard</u>	<u>Transource Min. Design</u>
1. Roads, streets, alleys	22.5'	24.5' <sup>2</sup>
2. Other land traversed by vehicles (such as cultivated field, forest, etc.)	22.5'	24.5'
3. Spaces accessible to pedestrians only	18.5'	20.5' <sup>3</sup>
4. Railroad tracks	30.5'	32.5' <sup>4</sup>

**Steel Structure Safety Considerations**

All steel structures installed on the IEC Project will be labeled with Danger Signs to discourage public tampering. Additionally, the maintenance climbing systems for the tubular structures will be designed to start at a height well out of reach, typically 12' above ground line. Further, the maintenance climbing systems will be a clipped ladder system known as a McGregor Ladders. The structures will be installed with the ladder clips, but the ladders will not be installed unless needed for future maintenance activities. After maintenance activities are complete, the ladders will be removed. These considerations render the structures virtually unclimbable, and further enhance the safe operation of the line.

**Relay Protection Systems**

A relay protection system is used to protect the public safety and welfare as well as associated equipment and the transmission system. Relay protection will be installed for all IEC Project transmission lines to automatically de-energize the line in the unlikely event that the line or supporting structure fails and the line contacts the ground.

---

<sup>2</sup> In areas where line is designed to accommodate oversized vehicles and equipment (greater than 14'), this clearance is increased by the difference between the known vehicle/equipment heights and 14'.

<sup>3</sup> To ensure safe clearance is accounted for in future land use changes, this clearance is not used for new construction. Minimum clearance design clearance to all surfaces is per item 1.

<sup>4</sup> Coordination during railroad permitting processes may require increasing this clearance depending on rail use.



### Periodic Maintenance Program on All Transmission Lines

To ensure continued public safety and integrity of service, a periodic maintenance and inspection program will be implemented for every transmission line. The program will be administered through the use of helicopter patrols, with supplemental foot and structure climbing patrols. A number of helicopter patrols will be performed on all lines annually. During the patrols, the two-man helicopter crew flies parallel, to the left, and above the line so that the observer can look for signs of line damage or deterioration and observe clearances between vegetation and conductors. The observations are included in a report that is forwarded to the appropriate department for corrective action.

Foot and structure climbing patrol programs for a transmission line begin approximately three to five years after the line is energized, unless a helicopter patrol reports a need for earlier action. The frequency of foot patrols varies from once every year to once every several years depending on line type and age.

An assigned foot patroller checks right-of-way conditions, including access roads, bridges, pole washouts, tower footers, vegetation height and clearance to conductors, pole and tower deterioration and, with the use of binoculars, insulators, and condition of hardware. Identified problems are included in a report that is forwarded to the appropriate department for corrective action.

A scheduled line outage is required to perform an overhead patrol because of “hands-on” inspection of hardware. Overhead patrols are conducted on a schedule determined by line age, operating record, and observed general condition. The necessary repairs are also done during the inspection outage.

### IEC Construction Safety

Safety will be of highest importance during all aspects of the IEC Project. The construction specifications prepared for the IEC Project will incorporate AEP experience regarding safety. The IEC Project will be constructed according to well-defined procedures that utilize standard construction practices to perform all work safely and in compliance with Occupational Safety

and Health Administration (“OSHA”) Rules and Regulations, while keeping environmental impact to a minimum. Transource will have dedicated safety personnel on the project, and each contractor will be required to have an adequate safety program in place, monitored by a full-time on-site safety representative.

All work will be done in accordance with NESC, OSHA and any applicable state or federal requirements.

#### **4.0 ELECTRIC AND MAGNETIC FIELD MANAGEMENT**

Transource PA applies its magnetic field policies and practices to new transmission line projects. Transource PA does not believe that the current scientific evidence demonstrates that magnetic fields cause any adverse health effects or pose a health or safety danger to the public. Nevertheless, Transource PA has determined, as a matter of policy, to design its new transmission lines to reduce the potential for exposure to magnetic fields when that can be done at low or no cost and consistent with functional requirements. Transource PA’s electric and magnetic field policies and practices are detailed in Attachment 10.

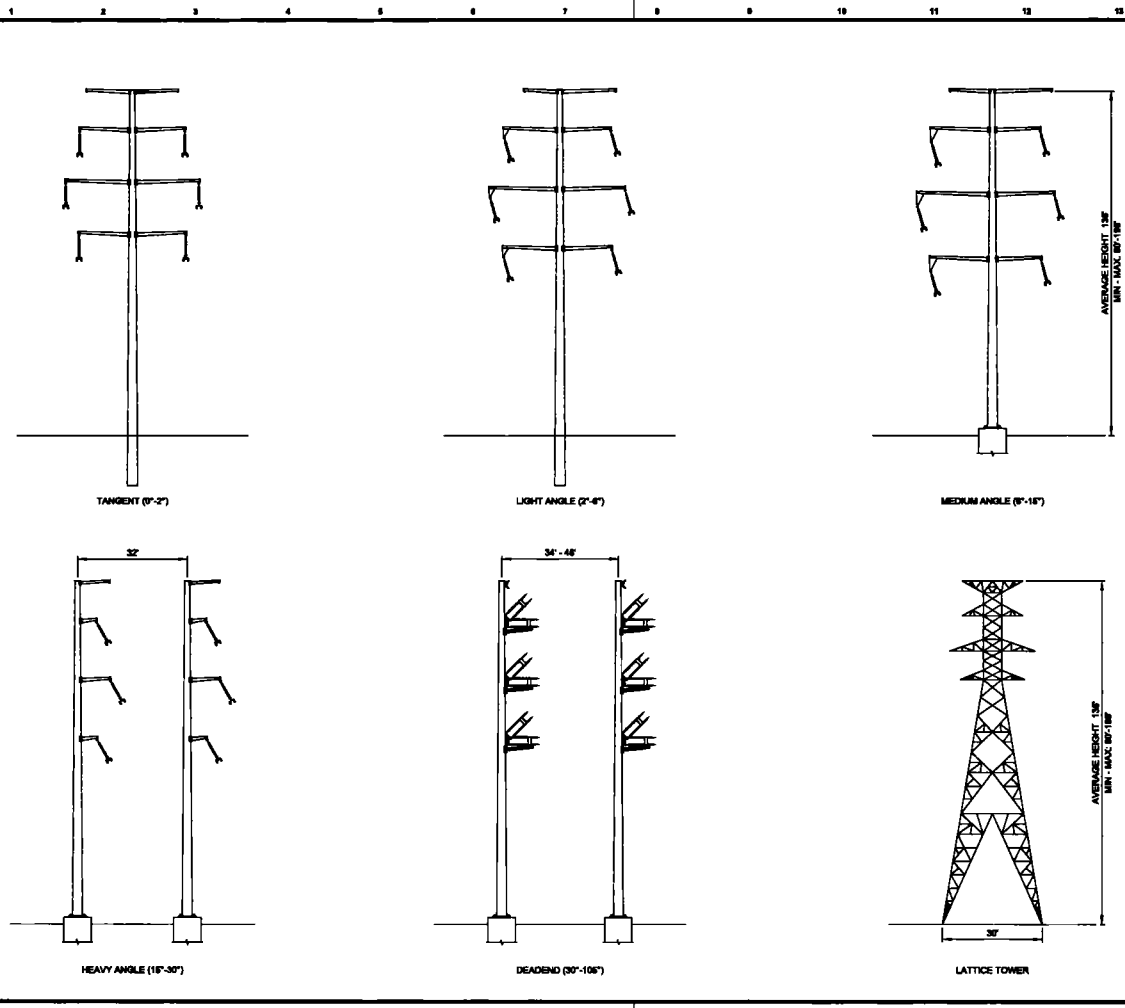
#### **5.0 RIGHT OF WAY REQUIREMENTS**

Transource PA’s standard right-of-way width for a double circuit 230 kV transmission line is 130 feet, 65 feet either side of the proposed centerline of the transmission line. The right-of-way is determined by the structure type, design tensions, span length, and conductor “blowout” (the distance the wires are moved by a crosswind). The right-of-way for the IEC-West Project is planned to be approximately one hundred and thirty feet (“130”) but may vary in certain areas in order to accommodate environmental, engineering, and constructability issues, as well as ensure compliance with the NESC clearances.



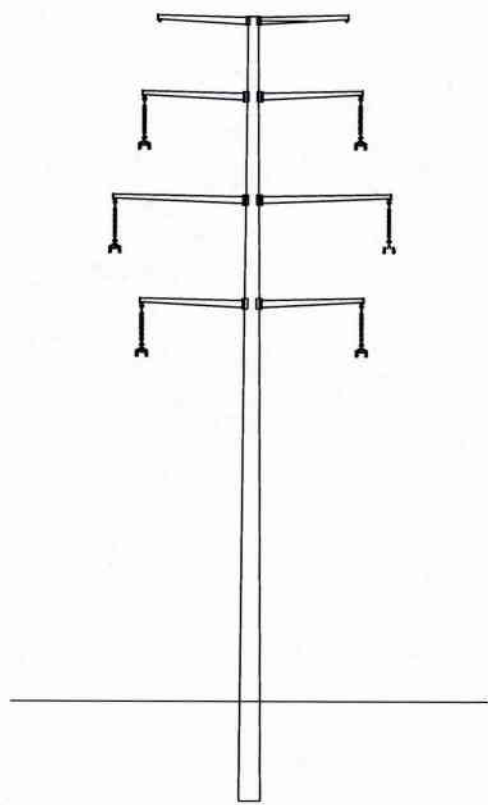
**Diagram 4.1**

**Typical Structures Used for the IEC-West Project**

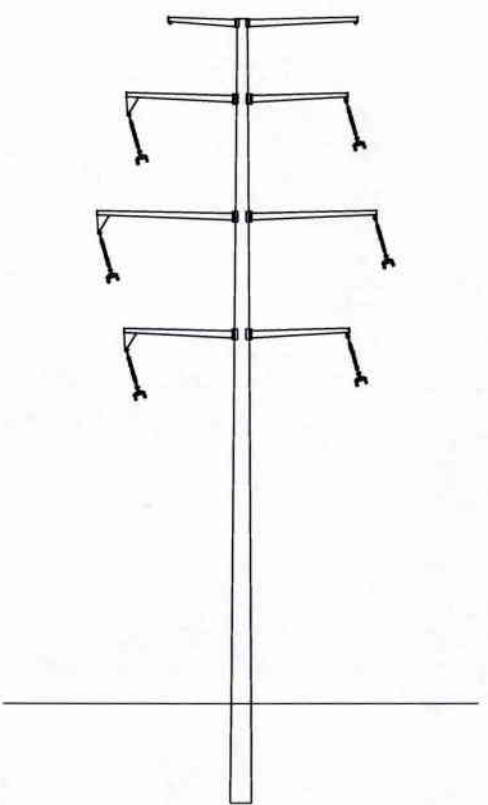


Rev	Date	By	Check	Description
<b>IEC-West Project Attachment 4 Diagram 4.1</b>				
<b>TRANSOURCE</b>				
Date	11/10/17	Design	P. OWILEY	
Checked	G. BROWN	Reviewed	J. CLOUSE	
INDEPENDENCE ENERGY CONNECTION PROJECT STRUCTURE FAMILY				
<b>BURNS MEDONNELL</b>				
Project	0848	Issue	TRANSOURCE	
Structure	TRW	Structure Family	1	
Sheet	1	of	1	02000
Scale	A			

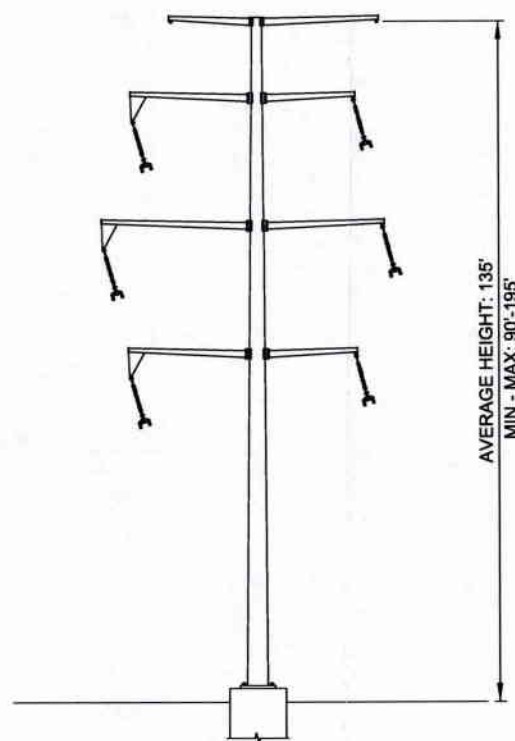




TANGENT (0°-2°)

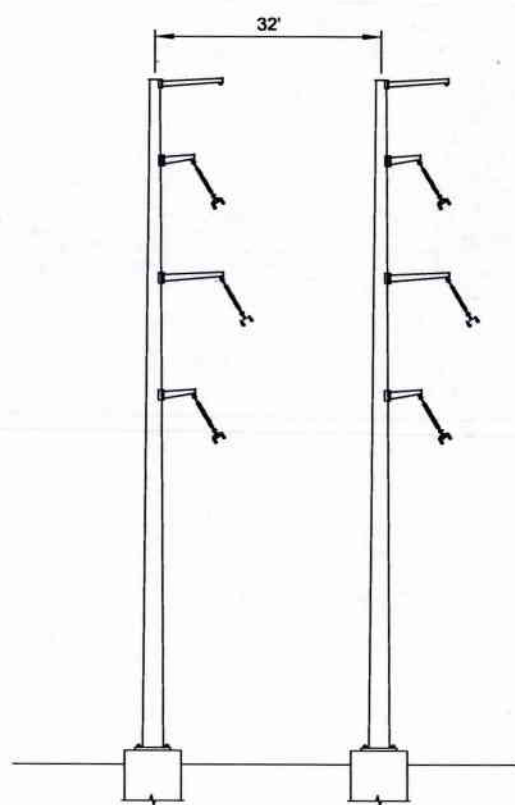


LIGHT ANGLE (2°-6°)

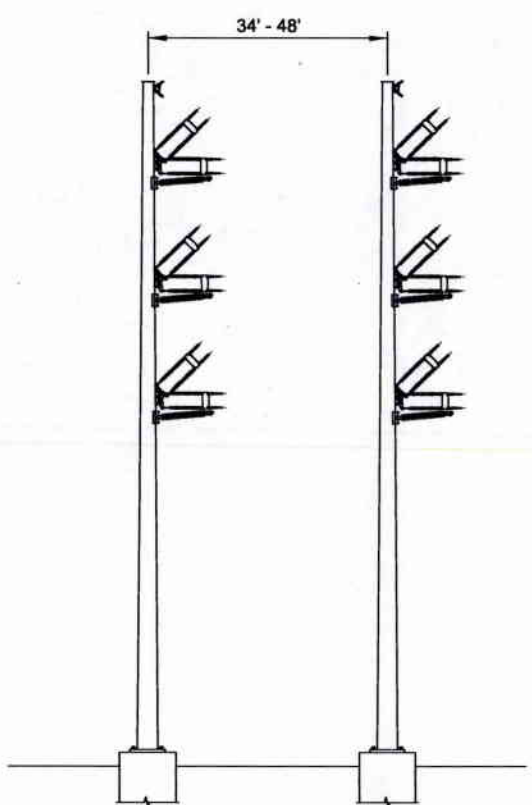


MEDIUM ANGLE (6°-15°)

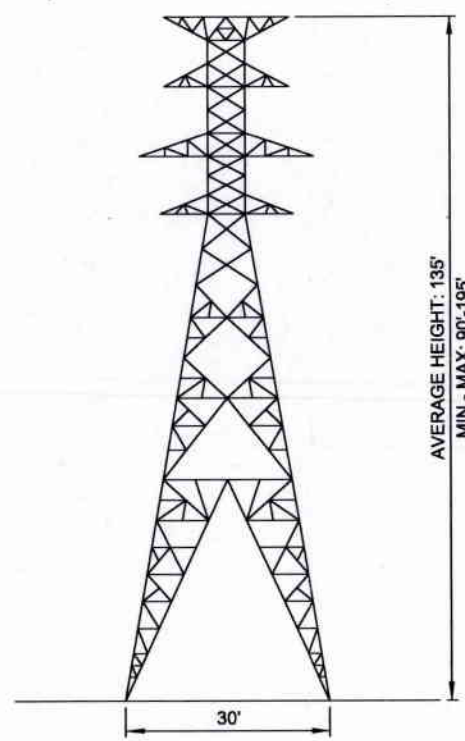
AVERAGE HEIGHT: 135'  
MIN - MAX: 90'-195'



HEAVY ANGLE (15°-30°)



DEADEND (30°-105°)



LATTICE TOWER

AVERAGE HEIGHT: 135'  
MIN - MAX: 90'-195'

Scale For Microfilming  
Millimeters  
Inches

no. | date | by | ckd | description

IEC-West Project  
Attachment 4  
Diagram 4.1



date	11/10/17	detailed	P.OWSLEY
designed	G.BROWN	checked	J. CLOUSE

INDEPENDENCE ENERGY CONNECTION PROJECT  
STRUCTURE FAMILY



project	92486	client	TRANSOURCE
drawing	STRUCTURE FAMILY	rev.	1
sheet	1	of	1 sheets
file	A		

**ATTACHMENT 5**

**LIST OF OWNERS OF PROPERTY WITHIN THE RIGHT-OF-WAY**



TRANSOURCE PENNSYLVANIA, LLC  
 INDEPENDENCE ENERGY CONNECTION-WEST  
 ATTACHMENT 5 – LIST OF LANDOWNERS POTENTIALLY WITHIN ROW

**ATTACHMENT 5  
 LIST OF OWNERS OF PROPERTY  
 WITHIN THE RIGHT-OF-WAY**

Owner	Owner Address	Owner City	Owner State	Owner Zip	Parcel County	County Parcel ID	Mapbook Sheet
SANDS FARM LP	5985 OLDE SCOTLAND ROAD	SHIPPENSBURG	PA	17257	FRANKLIN	21-0N19.-001.-000000	1
SANDS FARM LP	6000 OLDE SCOTLAND ROAD	SHIPPENSBURG	PA	17257	FRANKLIN	09-0C09.-068.-000000	1 & 2
ROGER L & JOYCE E DILLER	5505 OLDE SCOTLAND ROAD	SHIPPENSBURG	PA	17257	FRANKLIN	09-0C09.-013.-000000	1 & 2
LYNN D & MARY W ETTER	5167 OLDE SCOTLAND ROAD	SHIPPENSBURG	PA	17257	FRANKLIN	09-0C09.-015.-000000	2 & 3
LYNN D & MARY W ETTER	5167 OLDE SCOTLAND ROAD	SHIPPENSBURG	PA	17257	FRANKLIN	09-0C09.-014.-000000	2 & 3
JOSHUA L & NICOLE M DILLER	4913 OLDE SCOTLAND ROAD	SHIPPENSBURG	PA	17257	FRANKLIN	09-0C09.-016.-000000	3
ROGER L & JOYCE E DILLER	5505 OLDE SCOTLAND ROAD	SHIPPENSBURG	PA	17257	FRANKLIN	09-0C09.-017.-000000	3 & 4
LEONARD H & MARY P KAUFFMAN	4297 OLDE SCOTLAND ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C14.-001.-000000	4 & 5
LEONARD H KAUFFMAN	4297 OLDE SCOTLAND ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C14.-006.-000000	4 & 5
FORRESTER FARMS II	3162 WHITE CHURCH ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C14.-006B-000000	5 & 6
IESI PA BLUE RIDGE LANDFILL	PO BOX 399	SCOTLAND	PA	17254	FRANKLIN	09-0C14.-019.-000000	6
KEVIN L & FAYE I GAYMAN	9611 PINE ROAD	ORRSTOWN	PA	17244	FRANKLIN	09-0C14.-019B-000000	6
EDWIN W & DAWN L SHANK	3854 OLDE SCOTLAND ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C14.-007.-000000	5 & 6
KEVIN L & FAYE I GAYMAN	9611 PINE ROAD	ORRSTOWN	PA	17244	FRANKLIN	09-0C14.-016.-000000	6 & 7
KEVIN L & FAYE I GAYMAN	9611 PINE ROAD	ORRSTOWN	PA	17244	FRANKLIN	09-0C14.-017A-000000	6 & 7
CHAMBERSBURG MALL REALTY LLC	150 GREAT NECK ROAD	GREAT NECK	NY	11021	FRANKLIN	09-0C14.-116.-000000	7 & 8

**TRANSOURCE PENNSYLVANIA, LLC**  
**ATTACHMENT 5 – LIST OF LANDOWNERS POTENTIALLY WITHIN ROW**

<b>Owner</b>	<b>Owner Address</b>	<b>Owner City</b>	<b>Owner State</b>	<b>Owner Zip</b>	<b>Parcel County</b>	<b>County Parcel ID</b>	<b>Mapbook Sheet</b>
CHAMBERSBURG MALL REALTY LLC	150 GREAT NECK ROAD	GREAT NECK	NY	11021	FRANKLIN	09-0C14.-137.-000000	7
CHAMBERSBURG MALL REALTY LLC	150 GREAT NECK ROAD	GREAT NECK	NY	11021	FRANKLIN	09-0C18.-069A-000000	7 & 8
ALAN C ROTZ	1683 ROCK ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C18.-068.-000000	8
FRED J BYERS	1863 COLDSMITH ROAD	SHIPPENSBURG	PA	17257	FRANKLIN	09-0C18.-070A-000000	8
ELAM H & MARY Z REIFF	275 GOODHART ROAD	SHIPPENSBURG	PA	17257	FRANKLIN	09-0C18.-060A-000000	8 & 9
LEMMA & O'CONNOR INVESTORS LLC	3645 FOX HILL DRIVE	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C18.-063.-000000	9
GERALD L & ELAINE EBERLY	78 GARAGE PLACE ROAD	GHENT	NY	12075	FRANKLIN	09-0C18.-155.-000000	9
LEMMA & O'CONNOR INVESTORS LLC	3645 FOX HILL DRIVE	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C18.-063.-000000	9
KEITH H BENEDICT	3766 BRECHBILL LOOP ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C18.-015.-000000	9, 10 & 11
KAREN S WILDESON	2778 MONT ALTO ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C18.-011.-000000	10
LOIS M WHITE	1406 WALKER ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C18.-006A-000000	11
LOIS M WHITE	1406 WALKER ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C18.-005.-000000	10, 11 & 12
CHARLES R DILLER	552 KOHLER ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C18.-019.-000000	11
MARLIN & MARILYN WINGERT	1550 WALKER ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C18.-121.-000000	11 & 12
MARGARET L MOWER	683 MOWER ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C18.-029.-000000	12 & 13
WEST PENN POWER COMPANY	76 S MAIN ST	AKRON	OH	44308	FRANKLIN	09-0C18.-098.-000000	12
WAYNE E LEHMAN	7518 FRIENDSHIP VILLAGE ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	09-0C18.-030.-000000	12 & 13
GBR LINCOLN HIGHWAY LIMITED	150 WHITE PLAINS ROAD	TARRYTOWN	NY	10591	FRANKLIN	10-0D05.-004.-000000	12, 13 & 14
SALT CREEK PARTNERS LLC	1112 KENNEBEC DRIVE	CHAMBERSBURG	PA	17201	FRANKLIN	10-0D05J-011.-000000	13 & 14
REK PROPERTIES LLC	3528 CONCORD ROAD	YORK	PA	17402	FRANKLIN	10-0D05.-060.-000000	14
PATRIOT FEDERAL CREDIT UNION	800 WAYNE AVENUE	CHAMBERSBURG	PA	17201	FRANKLIN	10-0D05.-044A-000000	14
LOWE'S HOME CENTERS	1000 LOWES BLVD	MOORESVILLE	NC	28117	FRANKLIN	10-0D05.-044.-000000	14



**TRANSOURCE PENNSYLVANIA, LLC**  
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DOUGLAS L & NELLIE M STRALEY	89 CHERRY AVENUE	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D05.-045.-000000	14
C LOUISE SKELLY	1175 FALLING SPRING ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D09.-001C-000000	14, 15 & 16
GUILFORD WATER AUTHORITY	115 SPRING VALLEY RD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D09.-102.-000000	15 & 16
CHAMBERSBURG AREA SCHOOL	511 SOUTH SIXTH STREET	CHAMBERSBURG	PA	17201	FRANKLIN	10-0D08.-036C-000000	15 & 16
ALLEN A STINE	867 CIDER PRESS ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D08.-036.-000000	16
WILLIAM K & DIANE R NITTERHOUSE	1130 CIDER PRESS ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D08.-043.-000000	16
RICHARD L & AGNES M LESHER	1126 CIDER PRESS ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D08.-133.-000000	16 & 17
MARY HENRY	506 SOUTH EDWARDS AVENUE	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D08.-038.-000000	16 & 17
ALLEN W & LORI C RICE	1430 HENRY LANE	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D08.-057.-000000	16, 17 & 18
HAROLD H & ELVA M WENGER	2146 CIDER PRESS ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D08.-058.-000000	17 & 18
WILLIS M LESHER PARTNERSHIP	1153 SWAMP FOX ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D14.-019.-000000	18 & 19
COLBY S & LEAH A NITTERHOUSE	2479 NEWCOMER ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D15.-002.-000000	19 & 20
ROGER A & MARGARET L GARBER	2815 NEWCOMER ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D15.-003.-000000	19 & 20
DONALD L & DENISE M MARTIN	1946 NEWCOMER ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D15.-011.-000000	19 & 20
IVAN H & RUBY E BENEDICT	3307 COLLEGE DRIVE	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D15.-009.-000000	20 & 21
WILLIS M LESHER PARTNERSHIP	1153 SWAMP FOX ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D15.-036.-000000	20 & 21
IVAN D & ELLEN M HORST	2732 SOLLENBERGER DRIVE	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D15.-037.-000000	20 & 21
JASON M & ROSALIE J HOSTETTER	2048 GUILFORD STATION ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D15.-038.-000000	21
WILLIS M LESHER PARTNERSHIP	1153 SWAMP FOX ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D22.-012.-000000	21 & 22

**TRANSOURCE PENNSYLVANIA, LLC**  
**ATTACHMENT 5 – LIST OF LANDOWNERS POTENTIALLY WITHIN ROW**

<b>Owner</b>	<b>Owner Address</b>	<b>Owner City</b>	<b>Owner State</b>	<b>Owner Zip</b>	<b>Parcel County</b>	<b>County Parcel ID</b>	<b>Mapbook Sheet</b>
CHARLES S FOX	37 FIFTH AVENUE	CHAMBERSBURG	PA	17201	FRANKLIN	10-0D22.-069.-000000	22 & 23
CHARLES A FOX	37 FIFTH AVENUE	CHAMBERSBURG	PA	17201	FRANKLIN	10-0D22.-022.-000000	22 & 23
WILLIS M LESHER PARTNERSHIP	1153 SWAMP FOX ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D22.-024.-000000	23 & 24
ROY M & EMMA L CORDELL	4690 FETTERHOFF CHAPEL ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D22.-056.-000000	23 & 24
WILLIS M LESHER PARTNERSHIP	1153 SWAMP FOX ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D29.-011.-000000	24 & 25
DANIEL W & CLARA SUE BENEDICT	4574 ALTENWALD ROAD	WAYNESBORO	PA	17268	FRANKLIN	10-0D29.-012A-000000	24 & 25
MICHEAL D CORDELL	4219 ALTENWALD RD	WAYNESBORO	PA	17268	FRANKLIN	10-0D22.-059.-000000	24 & 25
RICHARD L & FERN L PECK	4017 ALTENWALD RD	WAYNESBORO	PA	17268	FRANKLIN	10-0D22.-060.-000000	24 & 25
MICHAEL D FREDERICK	2509 COUNTRY ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D29.-015A-000000	25
MICHAEL D FREDERICK	2509 COUNTRY ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D29.-015.-000000	24 & 25
DONALD L & DENISE M MARTIN	1946 NEWCOMER ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D22.-065.-000000	25
DONALD L & DENISE M MARTIN	1946 NEWCOMER ROAD	CHAMBERSBURG	PA	17202	FRANKLIN	10-0D23.-006.-000000	25 & 26
DARYL H BENDER	5079 YOHE ROAD	WAYNESBORO	PA	17268	FRANKLIN	10-0D30.-001A-000000	25 & 26
DARYL H BENDER	5079 YOHE ROAD	WAYNESBORO	PA	17268	FRANKLIN	10-0D30.-001A-000000	25 & 26
MARK E & GRANT K GAYMAN	11742 GEHR ROAD	WAYNESBORO	PA	17268	FRANKLIN	10-0D29.-019.-000000	25 & 26
MARK E & GRANT K GAYMAN	11742 GEHR ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L02.-042.-000000	26 & 27
PAUL J & MARY I BAKER	4270 OAK HILL ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L03.-002A-000000	26 & 27
MARK E & SALLY A GAYMAN	5460 STAMEY HILL ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L02.-041.-000000	26 & 27
DANIEL R & DOREEN F STRITE	6032 BUTTERMILK ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L02.-040.-000000	27 & 28
MAHLON R & DEBRA S EBY	6685 ANTHONY HIGHWAY	WAYNESBORO	PA	17268	FRANKLIN	19-0L08.-001.-000000	27 & 28
DANIEL R & DOREEN F STRITE	6032 BUTTERMILK ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L07.-036.-000000	28



**TRANSOURCE PENNSYLVANIA, LLC**  
**ATTACHMENT 5 – LIST OF LANDOWNERS POTENTIALLY WITHIN ROW**

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JOHN V & EUNICE RUDOLPH	7270 BUTTERMILK ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L07.-038A-000000	28 & 29
RODNEY A MEYER	5413 MANHEIM ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L07.-038.-000000	29
JOHN V & EUNICE J RUDOLPH	7270 BUTTERMILK ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L07.-047A-000000	29 & 30
DONALD L & ISABELLE M HESS	5215 HESS BENEDICT ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L07.-092.-000000	29
JAY C & RUTH I FRECH	5617 MANHEIM ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L07.-046.-000000	29
ROBERT T MORGAN	5516 MANHEIM ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L07.-050C-000000	29 & 30
J RAY & LINDA D GEESAMAN	4986 MANHEIM ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L07.-094.-000000	29 & 30
MARVIN C & LOIS E MARTIN	7016 MENTZER GAP ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L07.-054.-000000	29 & 30
JOHN O & PENNY L GARBER	7787 BURKHOLDER ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L07.-051.-000000	30
JUSTIN & SHARLA DUNLAP	11451 WEST BUHRMAN DRIVE	WAYNESBORO	PA	17268	FRANKLIN	19-0L12.-133.-000000	30
MARLIN L & CARRIE R MARTIN	7665 ANTHONY HIGHWAY	WAYNESBORO	PA	17268	FRANKLIN	19-0L07.-053.-000000	30 & 31
COLT R MARTIN	8020 HIDDEN VALLEY LANE	WAYNESBORO	PA	17268	FRANKLIN	19-0L12.-131.-000000	30 & 31
JOHN A & ALLISON E STEIGER	5465 HESS BENEDICT ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L12.-010A-000000	30 & 31
ROY B & SUSAN L BIESECKER	8410 WAYNE HIGHWAY	WAYNESBORO	PA	17268	FRANKLIN	19-0L12.-010.-000000	30, 31 & 32
KENNETH M & MARIE A LEHMAN	6403 HESS BENEDICT ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L12.-011.-000000	30 & 31
ROY B & SUSAN L BIESECKER	8410 WAYNE HIGHWAY	WAYNESBORO	PA	17268	FRANKLIN	19-0L12.-015.-000000	31 & 32
BRETHREN UNITED ORPHANAGE	6596 ORPHANAGE ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L12.-053.-000000	31 & 32
ROY B & SUSAN L BIESECKER	8410 WAYNE HIGHWAY	WAYNESBORO	PA	17268	FRANKLIN	19-0L12.-050B-000000	32 & 33
ROY S & REGINA F MARTIN	4925 SHADY LANE	WAYNESBORO	PA	17268	FRANKLIN	19-0L12.-049.-000000	32, 33 & 34
DC FARMS LLC	13689 DREAM HIGHWAY	NEWBURG	PA	17240	FRANKLIN	19-0L12.-051.-000000	32, 33 & 34

**TRANSOURCE PENNSYLVANIA, LLC**  
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CHARLES W MELLOTT	9702 WAYNE HIGHWAY	WAYNESBORO	PA	17268	FRANKLIN	19-0L17.-016A-000000	33 & 34
DANIEL S LONG	6405 NUNNERY ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L17.-020.-000000	33, 34 & 35
DANIEL S LONG	6405 NUNNERY ROAD	WAYNESBORO	PA	17268	FRANKLIN	19-0L17.-019A-000000	34 & 35
DANIEL S LONG	6405 NUNNERY ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q02.-016.-000000	35 & 36
IVAN D & ELLEN M HORST	2732 SOLLENBERGER DRIVE	CHAMBERSBURG	PA	17202	FRANKLIN	23-0Q06.-008C-000000	36
LAMAR D & ESTHER M HORST	11599 KOONS ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q06.-023.-000000	36, 37 & 38
JOHN E N BLAIR	11611 PRICES CHURCH ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q06.-021.-000000	36 & 37
SUMMIT PARTNERS LLC	100 COLONIAL WAY	WEST CHESTER	PA	19382	FRANKLIN	23-0Q06.-026.-000000	38
JANE M ZAIGER	5886 HESS BENEDICT ROAD	WAYNESBORO	PA	17268	FRANKLIN	26-5A00.-004B-000000	38
DENVER N & KATRINA J MARTIN	6973 NUNNERY ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q06.-016.-000000	38 & 39
JACK E & EMILY L MARTIN	12574 POLKTOWN ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q11.-001.-000000	39
RONALD P & DORIS M STONER	11623 KOONS ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q11.-002.-000000	38, 39 & 40
JACK E & EMILY L MARTIN	12574 POLKTOWN ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q11.-003B-000000	39 & 40
JACK E & EMILY L MARTIN	12574 POLKTOWN ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q11.-003.-000000	40
JOSEPH N WEAGLEY	6413 MARSH ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q11.-057.-000000	40
OWLS CLUB INCORPORATED	87 WEST MAIN STREET	WAYNESBORO	PA	17268	FRANKLIN	23-0Q11.-017.-000000	40 & 41
J DANIEL & ELAINE J ESHLEMAN	13310 NORTH HOOVERS MILL ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q11.-018.-000000	40 & 41
J DANIEL & ELAINE J ESHLEMAN	13310 NORTH HOOVERS MILL ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q11.-018A-000000	41
J NORMAN & BONNA J DILLER	20660 MILLERS CHURCH ROAD	HAGERSTOWN	MD	21742	FRANKLIN	23-0Q11.-019.-000000	41 & 42
J DANIEL & ELAINE J ESHLEMAN	13310 NORTH HOOVERS MILL ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q17.-002.-000000	41 & 42
LAVERNE & ELLEN MARTIN	14578 WAYNE HIGHWAY	WAYNESBORO	PA	17268	FRANKLIN	23-0Q17.-003.-000000	42 & 43
DONALD L & BEVERLY A FAHRNEY	9249 HARLEE ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q17.-009C-000000	42 & 43



TRANSOURCE PENNSYLVANIA, LLC  
ATTACHMENT 5 – LIST OF LANDOWNERS POTENTIALLY WITHIN ROW

Owner	Owner Address	Owner City	Owner State	Owner Zip	Parcel County	County Parcel ID	Mapbook Sheet
MARY ANN FOX	6977 IRON BRIDGE ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q17.-004E-000000	43
JACK E & EMILY L MARTIN	5299 POLKTOWN ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q17.-074.-000000	43
DAVID F & KIMBERLY JO NEIBERT	14898 WAYNE HIGHWAY	WAYNESBORO	PA	17268	FRANKLIN	23-0Q17.-004.-000000	43
JACK E & EMILY L MARTIN	5299 POLKTOWN ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q17.-073.-000000	43
DAVID F & KIMBERLY JO NEIBERT	14898 WAYNE HIGHWAY	WAYNESBORO	PA	17268	FRANKLIN	23-0Q17.-072.-000000	43
BRUCE I NEIBERT	7353 IRON BRIDGE ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q17.-004C-000000	43
BRUCE I NEIBERT	7353 IRON BRIDGE ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q17.-004B-000000	43
GERALD L & JENNIFER S ZEIGLER	PO BOX 121	WAYNESBORO	PA	17268	FRANKLIN	23-0Q17.-043.-000000	43
TUNDE T TIJANI	503 BROOKVIEW DRIVE	GREENCASTLE	PA	17225	FRANKLIN	23-0Q17.-019.-000000	43 & 44
SAMUEL A & MANDY L JONES	7583 LYONS ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q17.-016.-000000	44
KYLE F & KELLY A SCHINDEL	22032 ROCKY FORGE ROAD	HAGERSTOWN	MD	21740	FRANKLIN	23-0Q17.-034.-000000	44
MYRON J & FERN L MILLER	9180 GOODS DAM ROAD	WAYNESBORO	PA	17268	FRANKLIN	23-0Q17.-035C-000000	43 & 44

**ATTACHMENT 6**

**AGENCY REQUIREMENTS**



**ATTACHMENT 6  
PRELIMINARY PERMIT MATRIX**

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INDEPENDENCE ENERGY CONNECTION PROJECT  
PRELIMINARY PERMIT MATRIX

Permit Jurisdiction	Project Permit ID #	Status	Name of Permit, Approval, Review, License Type	Office/Agency Issuing Permit/ Approval/ Review	Review, Approval or Permit	Notes (When required)	Application Requirements	Estimated Application Submittal Date	Actual Application Submittal Date	Estimated Permit Issuance Date	Actual Permit Issuance Date
<b>Federal</b>											
Federal	PAFED-01	Not Started	Section 404 of the Clean Water Act (CWA) , Section 10 of the Rivers and Harbors Act PASPGP-4 Associated with Chapter 105 Permits	U.S. Army Corps of Engineers (USACE), Baltimore District (Pennsylvania and Maryland Sections)	Permit	Required for impacting jurisdictional wetlands and/or streams. Not currently known if federal permits will be required. This will depend on final pole locations and access road impacts.  Permitting for non-tidal waters delegated to Pennsylvania. State Programmatic General Permits in place with USACE.	- Pre-construction Notification (PCN) or Joint Permit Application (JPA) - Wetland Delineation - Temporary and Permanent Wetland/Stream Impact Summary - Mitigation Evaluation	8/1/2018	TBD	5/31/2019	TBD
Federal	MDFED-01	Not Started	Section 404 of the CWA , Section 10 of the Rivers and Harbors Act MDSPGP-5 for Maryland		Permit	Required for impacting jurisdictional wetlands and/or streams. Not currently known if federal permits will be required. This will depend on final pole locations and access road impacts.  Permitting for non-tidal waters delegated to Maryland. State Programmatic General Permits in place with USACE.	- PCN or JPA - Wetland Delineation - Temporary and Permanent Wetland/ Stream Impact Summary - Mitigation Evaluation	8/1/2018	TBD	5/31/2019	TBD
Federal	PAFED-02	In Progress	Consultations under Section 7 of the Endangered Species Act PA - Pennsylvania Natural Diversity Inventory (PNDI) Coordination Review	U.S. Fish and Wildlife Service (USFWS), Northeast Region (State College, PA, and Chesapeake Bay, MD field office)	Concurrence	Requires agency consultation if Section 404 permit required or if there is potential to impact federally listed species or their habitat. For PA, required through the PNDI process, USFWS will be contacted to provide information on threatened and endangered (T&E) species that may be within the project area.	- PNDI Results - Habitat Assessment - Species Specific Habitat Report - Potential impacts	Draft: 12/1/2017 Final: 8/1/2018	TBD	10/31/2018	TBD
Federal	MDFED-02	Not Started	Consultations under Section 7 of the Endangered Species Act MD - Standalone consultation		Concurrence	Requires agency consultation if Section 404 permit required or if there is potential to impact federally listed species or their habitat. Can be completed initially by conducting a USFWS Information for Planning and Conservation (IPaC) review online or via letter to the USFWS Field Office at Chesapeake Bay, MD.	- PNDI Results - Habitat Assessment - Species Specific Habitat Report - Potential impacts	12/1/2017	TBD	10/31/2018	TBD
Federal	FED-01	Not Started	Federal Right-of-Way (ROW) Use/ Occupancy Permits	U.S. Department of Transportation (USDOT), Federal Highway Administration	Permit	For actions that impact Federal highway ROWs.	- Application - Location Figures - Access or Crossing Plans - Insurance and Bond Requirements	TBD	TBD	TBD	TBD
Federal	FED-02	Not Started	FAA Notification (FAA Form 7460-1 )	Federal Aviation Administration (FAA)	Notice of Proposed Construction	Must notify the FAA if structures will exceed 200 feet in height or if the structures are located within the distance to height ratio from the nearest point of the nearest FAA designated airport runway, including temporary use of cranes.	- Structure Heights and Elevations - Structure locations - Completion of Form 7460-1 (for each notice requirement)	4/1/2018	TBD	5/16/2018	TBD
<b>Pennsylvania - State</b>											
State	PASTA-01	In Progress	Certificate of Public Convenience and Necessity (CPCN)	Pennsylvania Public Utility Commission (PAPUC)	Certificate	CPCN is authorized through the PAPUC in keeping with the requirements of 52 Pa. Code 57.72 for the siting and licensing of electric transmission lines.	- Routing Study - PUC Application & Exhibits - Waivers/Exemption requests	12/1/2017	TBD	5/24/2019	TBD
State	PASTA-02	Not Started	PADEP JPA or GPs Wetlands and Water Obstructions (Chapter 105)	PADEP Bureau of Waterways Engineering and Wetlands (Southwest and Southcentral Regional Offices)	Permit	PADEP permits are required for activities in, along, or across watercourses, floodways, or bodies of water (incl. wetlands). At this time, it is hoped that General Permits and waivers may be applicable for this project, to avoid a Joint Permit Application, but this will depend on final pole locations and access road impacts.	- Chp 105 App. or JPA - Wetland Delineation - Temporary and Permanent Wetland/Stream Impact Summary - Mitigation Evaluation	8/1/2018	TBD	5/31/2019	TBD
State	PASTA-03	Not Started	Floodplain Permit (Chapter 106)		Permit	PADEP floodplain permits are required for activities in, along, or across watercourses, floodways, or bodies of water (incl. wetlands).	- Chp 105/106 App. - Permanent/Temp. Floodplain Assessment - Location and Plan figures	8/1/2018	TBD	5/31/2019	TBD
State	PASTA-04	Not Started	NPDES Permit and Post-Construction Stormwater Review (Chapter 102)		Notice/Permit	A permit and Erosion and Sediment (E&S) Control Plan are required when construction activities will include earth disturbances greater than or equal to one acre. An E&S Control Plan and Individual NPDES Permit will be required for the project. The process will require a review by the local County Conservation District (CCD) and approval by PADEP.	- Notice of Intent (NOI)/App. - Stormwater Mgmt Study - Stormwater calculations - E&S Control plan text and detailed figures	2/1/2019	TBD	5/31/2019	TBD
State	PASTA-05	Not Started	Submerged Lands License Agreement (SLLA)		License/ Agreement	Projects that cross over/under a state-designated navigable waterway requires a SLLA with the PA DEP.	- SLLA Form/App. - Location figure - Plan and Profiles Figure	TBD	TBD	TBD	TBD



INDEPENDENCE ENERGY CONNECTION PROJECT  
PRELIMINARY PERMIT MATRIX

Permit Jurisdiction	Project Permit ID #	Status	Name of Permit, Approval, Review, License Type	Office/Agency Issuing Permit/ Approval/ Review	Review, Approval or Permit	Notes (When required)	Application Requirements	Estimated Application Submittal Date	Actual Application Submittal Date	Estimated Permit Issuance Date	Actual Permit Issuance Date
State	PASTA-06	In Progress	Pennsylvania Natural Diversity Inventory (PNDI) Review - Pennsylvania Fish and Boat Commission (PFBC)	Pennsylvania Fish and Boat Commission (PFBC)	Concurrence	As required through the PNDI process, PFBC may need to be contacted to provide information on threatened and endangered (T&E) species that may be within the project area.	- PNDI Results - Habitat Assessment - Species Specific Habitat Report - Potential impacts	Draft: 12/1/2017 Final: 8/1/2018	TBD	10/31/2018	TBD
State	PASTA-07	Not Started	Pennsylvania Natural Diversity Inventory (PNDI) Review - Pennsylvania Game Commission (PGC)	Pennsylvania Game Commission (PGC)	Concurrence	As required through the PNDI process, PGC will be contacted to provide information on T&E species that may be within the project area.	- PNDI Results - Habitat Assessment - Species Specific Habitat Report - Potential impacts	Draft: 12/1/2017 Final: 8/1/2018	TBD	10/31/2018	TBD
State	PASTA-08	Not Started	Pennsylvania Natural Diversity Inventory (PNDI) Review - Pennsylvania Department of Conservation and Natural Resources (DCNR)	Pennsylvania Department of Conservation and Natural Resources (DCNR)	Concurrence	As required through the PNDI process, DCNR will be contacted to provide information on T&E species that may be within the project area.	- PNDI Results - Habitat Assessment - Species Specific Habitat Report - Potential impacts	Draft: 12/1/2017 Final: 8/1/2018	TBD	10/31/2018	TBD
State	PASTA-09	In Progress	Cultural Resources Consultation under Section 106 of the NHPA or State Law PHMC Cultural Resources Consultation	Pennsylvania Historical and Museum Commission (PHMC)	Clearance	A PHMC review of the potential cultural resources in the project area will be required due to the level of earth disturbance and potential for Section 106 NHPA compliance.	- Background review - Field Survey - Background and Field Survey Report - Summary of Historic Properties Affected - Photos and Figures	Initial: 12/1/2017 Final: 8/1/2018	TBD	10/31/2018	TBD
State	PASTA-11	Not Started	PennDOT Minimum Use Driveway (MUD) Permits	Pennsylvania Department of Transportation (PennDOT)	Permit	May require coordination with PennDOT for state roadways. Project will likely require MUDs for accessing project area from state roadways.	- Applications (with landowner sig.) - Location Figures - Access Plans - Online Submittal/Reg. Certification	2/1/2019	TBD	5/1/2019	TBD
State	PASTA-12	Not Started	PennDOT Highway Occupancy Permits (HOP) Permits	Pennsylvania Department of Transportation (PennDOT)	Permit	May require coordination with PennDOT for state roadways. Nonlimited access roadways may not require crossing permits.	- Applications - Location Figures - Plan and Profile figures - Online Submittal/Reg. Certification	2/1/2019	TBD	5/1/2019	TBD
Pennsylvania - Local											
Local	PALOC-02	Not Started	NPDES Permit/Chapter 102 E&S Plan	York and Franklin County Conservation District (CCD)	Notice/Permit and Approval	An approved E&S Plan and an Individual NPDES Permit (instead of a General Permit) are required for this project due to high quality or exceptional value waters being crossed by the project.	- Notice of Intent (NOI)/App. - Stormwater Mgmt Study - Stormwater calculations - E&S Control plan text and detailed figures	9/1/2018	TBD	1/31/2019	TBD
Local	PALOC-06	Not Started	Driveway Permit	PA Townships - Substations	Permit	Substations are located in Southampton Twp and Lower Chanceford Twp. Although Transource may be exempt from the local ordinances in these townships, pending exemption approval as part of the PAPUC filings, a driveway permit will likely be required.	- Application - Location Figure - Typical driveway detail	9/1/2018	TBD	10/15/2018	TBD
Local	PALOC-07	Not Started	Notification letter of work. May require E&S Plan review, Driveway Permits, and maybe road crossing permits.	PA Townships - Transmission Lines	Permits	Transmission lines may still be required to obtain driveway permits, road crossing permits, and may be required to have the township review the E&S Control Plans.	- Application - Location Figure - Typical driveway detail - Plan and Profile Crossing drawings	9/1/2018	TBD	10/15/2018	TBD
Local	PALOC-08	Not Started	Notification letter of work. May require E&S Plan review, Driveway Permits, and maybe road crossing permits.	Waynesboro Borough	Permits	Transmission lines may still be required to obtain driveway permits, road crossing permits, and may be required to have the township review the E&S Control Plans.	- Application - Location Figure - Typical driveway detail - Plan and Profile Crossing drawings	9/1/2018	TBD	10/15/2018	TBD
Local	PALOC-09	Not Started	RR Crossing Permit/Agreement	Railroad - TBD	Permit or Agreement	Railroad crossings are part of the project. Coordination with the railroad for this permit will be conducted by Transource.	- Application - Location Figure - Plan and Profile Crossing drawings - Insurance and Bond Requirements	TBD	TBD	TBD	TBD

INDEPENDENCE ENERGY CONNECTION PROJECT  
PRELIMINARY PERMIT MATRIX

Permit Jurisdiction	Project Permit ID #	Status	Name of Permit, Approval, Review, License Type	Office/Agency Issuing Permit/ Approval/ Review	Review, Approval or Permit	Notes (When required)	Application Requirements	Estimated Application Submittal Date	Actual Application Submittal Date	Estimated Permit Issuance Date	Actual Permit Issuance Date
<b>Maryland - State</b>											
State	MDSTA-01	In Progress	Certificate of Public Convenience and Necessity (CPCN)	Maryland Power Plant Research Program (PPRP) (Maryland Department of Natural Resources – MD DNR)	Review/ Approval/ Authorization	CPCN must be obtained from the Maryland Public Service Commission (PSC). The Power Plant Siting Act of 1971, augmented by the Electric Utility Industry Restructuring Act of 1999, provides for a consolidated review of CPCN applications in Maryland.	- Routing Study - CPCN Application & Exhibits - Waivers/Exemption requests	12/1/2017	TBD	5/24/2019	TBD
State	MDSTA-02	Not Started	Nontidal Wetlands and Waterways Permit/Water Quality Certification (MDSPPG-5)	Maryland Department of the Environment (MDE)	Permit	Joint Federal (USACE)/State Application for the Alteration of Any Floodplain, Waterway, Tidal or Nontidal Wetland in Maryland; a State Water Quality Certification (Section 401) is incorporated into this authorization.  An authorization is required for any activity that alters a nontidal wetland or its 25-foot buffer. The 25-foot buffer is expanded to 100 feet for wetlands of special state concern. Authorization also required for projects in 100-year floodplain. An alternatives analysis may be required; mitigation is required for all authorized impacts.	- State App. or JPA - Wetland Delineation - Temporary and Permanent Wetland/Stream Impact Summary - Mitigation Evaluation	8/1/2018	TBD	5/31/2019	TBD
State	MDSTA-03	Not Started	NPDES General Permit for Stormwater Associated with Construction Activity	MDE	Notice/ Permit	File Notice of Intent (NOI). Must first submit an erosion and sediment control plan to the appropriate approval authority (e.g., the local soil conservation district). Required for soil disturbance of one acre or more. Coverage under this General Permit should be pursued unless MDE advises an individual permit is necessary. (Also, citizens can review the NOI during the public notification period and request that an individual permit be required.)	- Notice of Intent (NOI)/App. - Stormwater Mgmt Study - Stormwater calculations - E&S Control plan text and detailed figures	3/1/2019	TBD	5/2/2019	TBD
State	MDSTA-04	Not Started	Consultation for Cultural Resources - Section 106 of the NHPA or State Law	Maryland Department of Planning, Maryland Historical Trust (MDSHPO)	Clearance	Serves as the SHPO in Maryland. Required for any activity that receives federal funding or approval, or requires a federal permit or license.	- Background review - Field Survey - Background and Field Survey Report - Summary of Historic Properties Affected - Photos and Figures	Initial: 12/1/2017 Final: 8/1/2018	TBD	10/31/2018	TBD
State	MDSTA-05	Not Started	Maryland Natural Heritage Program Consultation for State-Listed Species	MD DNR, Wildlife and Heritage Section	Concurrence	Environmental review for rare, threatened and endangered species, unique natural communities, and other significant natural resources.	- Request Letter - Habitat Assessment - Species Specific Habitat Report - Potential impacts	Initial: 12/1/2017 Final: 8/1/2018	TBD	10/31/2018	TBD
State	MDSTA-06	Not Started	Development of a Forest Stand Delineation and Forest Conservation Plan.	MD DNR – Forest Conservation Act	Review/ Approval	Must be reviewed and approved prior to Soil Erosion and Sedimentation Plan development.	- Request Letter/Agreement - Forest Impact Summary - Forest Mitigation Plan	Draft: 6/1/2017 Final: 9/1/2018	TBD	10/31/2018	TBD
State	MDSTA-07	Not Started	Highway Occupancy Permits (HOP)	Maryland State Highway Administration (MSHA)	Permit	Coordination with the MSHA will be required for access, lane closure, utility, and other permits needed that may impact Maryland roadways. Most public roadways in Maryland are either State or County owned/maintained.	- Applications - Location Figures - Plan and Profile figures	11/1/2019	TBD	1/31/2019	TBD
State	MDSTA-08	Not Started	Highway Access Permits (HAP)	MSHA	Permit	Coordination with the MSHA will be required for access off of a state highway.	- Applications - Location Figures - Access Plans	2/1/2019	TBD	5/1/2019	TBD
<b>Maryland - Local</b>											
Local	MDLOC-01	Not Started	Erosion/Sediment Control and Stormwater Management Plan Approval	Washington County Soil Conservation Districts (SCD)	Review/ Approval	Plans must meet state soil erosion and sediment control standards and specifications.	- SWP3/E&S Control plan text and figures	11/1/2018	TBD	2/28/2019	TBD
Local	MDLOC-02	Not Started	Erosion/Sediment Control and Stormwater Management Plan Approval	Harford County SCD	Review/ Approval	Plans must meet state soil erosion and sediment control standards and specifications.	- SWP3/E&S Control plan text and figures	11/1/2018	TBD	2/28/2019	TBD
Local	MDLOC-03	Not Started	License or Notice	Railroad - TBD	Permit or Agreement	Railroad crossings may be part of the project. Coordination with the railroad for this permit will be conducted by Transource.	- Application - Location Figure - Plan and Profile Crossing drawings - Insurance and Bond Requirements	TBD	TBD	TBD	TBD



**ATTACHMENT 7**

**LIST OF GOVERNMENTAL AGENCIES, MUNICIPALITIES AND  
OTHER PUBLIC ENTITIES RECEIVING THE APPLICATION**

**ATTACHMENT 7**  
**LIST OF GOVERNMENTAL AGENCIES, MUNICIPALITIES AND OTHER PUBLIC**  
**ENTITIES RECEIVING THE APPLICATION**

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**RECIPIENTS OF FULL SITING APPLICATION**

**State Agencies**

Pennsylvania Department of Environmental Protection  
P.O. Box 2063  
Market Street State Office Building  
Harrisburg, PA 17105-2063  
Attn: Office of Field Operations

Office of Consumer Advocate  
555 Walnut Street  
5<sup>th</sup> Floor, Forum Place  
Harrisburg, PA 17101-1925

Bureau of Investigation and Enforcement  
Pennsylvania Public Utility Commission  
P.O. Box 3265  
Commonwealth Keystone Building  
400 North Street  
Harrisburg, PA 17105-3265

Office of Small Business Advocate  
Commerce Building  
300 North Street, Suite 1102  
Harrisburg, PA 17101

**County Agencies**

Franklin County Planning Department  
218 North Second Street  
Chambersburg, PA 17201  
Contact: Phil Tarquino, Director; Planning



**Municipalities**

Southampton Township  
705 Municipal Drive  
Shippensburg, PA 17257  
Contact: Maria Misner, Planning & GIS; Greg Richardson, Supervisor; Paul Witter, Chairman

Greene Township  
1145 Garver Lane  
Scotland, PA 17254  
Contact: Todd Burns, Township Supervisor; Dan Bachman, Zoning Officer; Gregory Lambert, Township Engineer; Shawn Corwell, Township Supervisor

Guilford Township  
115 Spring Valley Road  
Chambersburg, PA 17202  
Contact: Don Clapper, Chairman/Board of Supervisors; Wayne Statler, Zoning Officer

Quincy Township  
7575 Mentzer Gap Road  
Waynesboro, PA 17268  
Contact: Kerry Brumbaugh, Chairman; Travis Schooley

Borough of Waynesboro  
55 E. Main Street  
Waynesboro, PA 17268  
Contact: Dan Scheffler, Code Enforcement Officer

Washington Township  
13013 Welty Road  
Waynesboro, PA 17268  
Contact: Michael Christopher, Township Manager; Jeff Geesamen, Assistant Township Manager

**Public Utilities**

West Penn Power Company  
76 South Main Street  
Akron, OH 44308

Potomac Edison Co.  
76 South Main Street  
Akron, OH 44308

Pennsylvania Electric Company (PENELC)  
76 South Main Street  
Akron, OH 44308

Rockies Express Pipeline, LLC  
4200 West 115th Street  
Suite 350  
Leawood, KS 66211

Texas Eastern Transmission, L.P.  
5400 Westheimer Court  
Houston, TX 77056-5310

Columbia Gas Transmission Corp.  
700 Louisiana Street  
Houston, TX 77002

Dominion Transmission Inc.  
5000 Dominion Boulevard  
Glen Allen, VA 23060

## **NOTICE OF FILING RECIPIENTS**

### **Federal Agencies**

U.S. Army Corps of Engineers  
Baltimore District-(Pennsylvania Section)  
Regulatory Branch  
1631 South Atherton Street  
Suite 102  
State College, PA 16801  
Contact: Wade Chandler, Chief Pennsylvania Section

US Fish and Wildlife Service  
PA Field Office Northeast Region  
110 Radnor Rd, Suite 101  
State College, PA 16801  
Contact: Lora Lattanzi, Project Leader

U.S. Environmental Protection Agency – Region 3  
1650 Arch Street  
Mail Code: 3RA00  
Philadelphia, PA 19103  
Contact: Shawn Garvin, Regional Administrator



**State Agencies**

Pennsylvania Department of Transportation  
Keystone Building  
400 North St., Fifth Floor  
Harrisburg PA 17120  
Contact: Leslie S. Richards, Secretary of Transportation

Pennsylvania Department of Conservation and Natural Resources  
400 Market Street, 6<sup>th</sup> floor  
Rachel Carson State Office Building  
Harrisburg, PA 17105  
Contact: Ellen Shultzabarger, Division Chief

Pennsylvania Department of Environmental Protection  
Southcentral Regional Office  
909 Elmerton Avenue  
Harrisburg, PA 17110  
Contact: Joseph Adams, Regional Director

Pennsylvania Fish and Boat Commission  
1601 Elmerton Avenue  
Harrisburg, PA 17106  
Contact: John Arway, Executive Director

Pennsylvania Game Commission  
8627 William Penn Highway  
Southcentral Region  
Huntingdon, PA 16652  
Contact: Bradley J. Meyers, Director

Pennsylvania Department of Agriculture  
2301 North Cameron Street  
Suite G-6  
Harrisburg, PA 17110  
Contact: Daniel Naylor, Supervisor; Douglas M. Wolfgang, Director

Pennsylvania Historical & Museum Commission  
400 North Street, 2<sup>nd</sup> floor  
Commonwealth Keystone Building  
Harrisburg, PA 17120  
Contact: Andrea L. MacDonald

**Property Owners**

See list in Attachment 5.

**ATTACHMENT 8**

**LIST OF GOVERNMENTAL AGENCIES, MUNICIPALITIES AND  
OTHER PUBLIC ENTITIES CONTACTED**



**ATTACHMENT 8**  
**LIST OF GOVERNMENTAL AGENCIES, MUNICIPALITIES AND OTHER PUBLIC**  
**ENTITIES CONTACTED**

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**Federal Agencies**

U.S. Army Corps of Engineers  
Baltimore District-(Pennsylvania Section)  
Regulatory Branch  
1631 South Atherton Street  
Suite 102  
State College, PA 16801  
Contact: Wade Chandlers, Chief PA Section

US Fish and Wildlife Service  
PA Field Office Northeast Region  
110 Radnor Rd  
Suite 101  
State College, PA 16801  
Contact: Lora Lattanzi, Project Leader

U.S. Environmental Protection Agency – Region 3  
1650 Arch Street  
Mail Code: 3RA00  
Philadelphia, PA 19103  
Contact: Shawn Garvin, Regional Administrator

U.S. Department of Agriculture  
National Resource Conservation Service  
359 East Park Drive, Suite 2  
Harrisburg, PA 17111  
Contact: Hathaway Jones, Management Analyst

**State Agencies**

Pennsylvania Department of Conservation and Natural Resources  
400 Market Street, 6<sup>th</sup> floor  
Rachel Carson State Office Building  
Harrisburg, PA 17105  
Contact: Ellen Shultzabarger, Division Chief

Pennsylvania Department of Environmental Protection  
Southcentral Regional Office  
909 Elmerton Ave.  
Harrisburg, PA 17110

Contact: Joseph Adams, Regional Director  
Pennsylvania Fish and Boat Commission  
1601 Elmerton Ave.  
Harrisburg, PA 17106  
Contact: John Arway, Executive Director

Pennsylvania Game Commission  
8627 William Penn Highway  
Southcentral Region  
Huntingdon, PA 16652  
Contact: Bradley J. Meyers, Director

Pennsylvania Department of Agriculture  
2301 North Cameron Street  
Suite G-6  
Harrisburg, PA 17110  
Contact: Daniel Naylor, Supervisor; Douglas M. Wolfgang, Director

Pennsylvania Historical & Museum Commission  
400 North Street, 2<sup>nd</sup> floor  
Commonwealth Keystone Building  
Harrisburg, PA 17120  
Contact: Andrea L. MacDonald

### **County/Municipal Agencies**

Franklin County Planning Department  
218 North Second Street  
Chambersburg, PA 17201  
Contact: Phil Tarquino, Director;

Southampton Township  
705 Municipal Drive  
Shippensburg, PA 17257  
Contact: Maria Misner, Planning & GIS; Greg Richardson, Supervisor; Paul Witter, Chairman

Greene Township  
1145 Garver Lane  
Scotland, PA 17254  
Contact: Todd Burns, Township Supervisor; Dan Bachman, Zoning Officer; Gregory Lambert, Township Engineer; Shawn Corwell, Township Supervisor



Guilford Township  
115 Spring Valley Road  
Chambersburg, PA 17202  
Contact: Don Clapper, Chairman/Board of Supervisors; Wayne Statler, Zoning Officer

Quincy Township  
7575 Mentzer Gap Rd.  
Waynesboro, PA 17268  
Contact: Kerry Brumbaugh, Chairman; Travis Schooley

Washington Township  
13013 Welty Rd.  
Waynesboro, PA 17268  
Contact: Michael Christopher, Township Manager; Jeff Geesamen, Assistant Township Manager

Waynesboro Borough  
5 E. Main Street  
Waynesboro, PA 17268  
Contact: Jason Stains, Borough Manager; Dan Sheffler, Code Enforcement Officer

### **Elected Officials**

Senator Richard Alloway via Chad Reichard, Chief of Staff  
33<sup>rd</sup> District  
Harrisburg Office  
172 Main Capitol  
Harrisburg, PA 17120

State Representative Paul Schemel  
90<sup>th</sup> District  
Room 121B, East Wing  
PO Box 202090  
Harrisburg PA 17120-2090

State Representative Stan Saylor via Chad Weaver, Chief of Staff  
94<sup>th</sup> District  
Capitol Office  
245 Main Capitol Building  
Harrisburg, PA 17120

State Representative Robert Kaufmann  
89<sup>th</sup> District  
Rm 312 Main Capitol  
PO Box 202089  
Harrisburg, PA 17120-2089

State Senator Scott Wagner via Jon Hopcraft, Chief of Staff  
28<sup>th</sup> District  
Senate Box 203028  
Harrisburg, PA 17120

State Representative Kristin Phillips-Hill  
93<sup>rd</sup> District  
Room 123B, East Wing  
PO Box 202093  
Harrisburg PA 17120-2093

U.S. Rep. Scott Perry via Rob Reilly, Deputy Chief of Staff  
4<sup>th</sup> District  
2209 East Market Street  
York, PA 17402

U.S. Rep. Bill Shuster via Nancy Bull, Constituent Services  
9<sup>th</sup> District  
100 Lincoln Way East, Suite B  
Chambersburg, PA 17201



**ATTACHMENT 9**

**LIST OF PUBLIC LOCATIONS WHERE APPLICATION CAN BE  
VIEWED BY THE PUBLIC**

**ATTACHMENT 9**  
**LIST OF LOCATIONS APPLICATION CAN BE VIEWED BY THE PUBLIC**

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Alexander Hamilton Memorial Free Library

45 E Main Street

Waynesboro, PA 17268

Mont Alto Campus Library (Penn State Library)

1 Campus Drive

Mont Alto, PA 17237

John Stewart Memorial Library

1015 Philadelphia Avenue

Chambersburg, PA 17201



**ATTACHMENT 10**

**ELECTRIC AND MAGNETIC FIELDS POLICY AND PRACTICES  
OF TRANSOURCE PA, LLC**

**ATTACHMENT 10**  
**ELECTRIC AND MAGNETIC FIELDS POLICY AND PRACTICES**

---

Electric and Magnetic Fields Policy and Practices  
of Transource Pennsylvania and Transource Maryland

Introduction

Electric and magnetic fields (EMF) are everywhere. Virtually all human beings in industrialized countries are exposed to them most of the time. Electric and magnetic fields are produced by household wiring and appliances, cell phones, and by all other electric equipment.

One of the many sources of electric and magnetic fields are the electric lines needed to power today's modern society. In order to meet their customers' needs by providing service that is reliable, economical, and as safe as possible, Transource Pennsylvania and Transource Maryland foster communication with customers and employees regarding EMF, keep well-informed about worldwide scientific studies and developments related to EMF, and participate in EMF research through their relationship with American Electric Power and Great Plains Energy affiliates, and their membership and engagement in industry associations.

Measures for Mitigating EMF Impacts

Transource Pennsylvania and Transource Maryland employ a variety of standards and practices to mitigate the EMF impact of their transmission facilities, and to address public concerns about EMF produced by power lines. These practices can be classified into three general categories – informational, technical and line siting – all reflecting the principles of precautionary measures and prudent avoidance, which are applied when the associated costs are low or negligible.

*a. Informational*

The informational practices include communicating with customers, employees, and the general public regarding EMF, following closely the EMF scientific developments, and participating in and sponsoring EMF research. In this regard, Transource Pennsylvania and



Transource Maryland (through their affiliate American Electric Power Service Corporation) are members of the Electric Power Research Institute (EPRI), a non-profit organization that, among other activities and areas of research, sponsors studies to enhance the understanding of EMF health effects, as well as methods to mitigate the EMF impact of electric transmission facilities.

These informational practices focus on enhancing public understanding about EMF. For example, and depending on specific circumstances, public information about EMF may highlight the fact that EMF exist not only near electric utility lines but also around electrical wiring in homes and electric appliances, sometimes with considerably greater personal exposures. Furthermore, they explain that electric and magnetic fields decrease, at certain points dramatically, the greater the distance between the source and the point where the field's strength is measured (commonly in kilovolts per meter (kV/m) for electric fields and gauss, or milligauss (mG), for magnetic fields). A greater understanding of the fact that in typical transmission lines both electric and magnetic field levels drop sharply from the centerline to the edge of the right-of-way (ROW), and continue to drop with distance, is helpful and reassuring information for customers, the general public, and employees, as is knowledge that a specific line's field levels are well within the limits specified in industry standards, such as The Institute of Electrical and Electronics Engineers (IEEE) Standard C95.6<sup>TM</sup>-2002 (R2007), which sets the safety levels with respect to human exposure to electromagnetic fields.

Finally, the companies conduct EMF measurements on a case-by-case basis, free of charge, upon request from property owners who are directly-affected by existing facilities, and have concerns about the EMF health effects or impact on medical devices.

*b. Technical*

Transource Pennsylvania and Transource Maryland EMF mitigation practices in the technical category are based on the companies' engagement in EMF scientific developments and research, as well as their compliance with applicable industry standards such as IEEE Std C95.6 and the National Electrical Safety Code (NESC) Rule 232C.

The companies' line design practices take into consideration their facilities' electric and magnetic fields, and their compliance with these standards. In situations where further mitigation measures are determined to be appropriate based on a case-by-case review and evaluation, practical means for reducing ground-level EMF exposures or concerns regarding such exposures include direct communication and educational meetings, field measurements, using particular conductor configurations and/or phase arrangements (such as a compact and/or delta configuration of line conductors, or arranging the phases of a double-circuit line to achieve most EMF cancellation), increasing conductor ground clearances beyond those based on industry standards, and reducing electric fields by employing various screening techniques, depending on the particular circumstances.

c. Line Siting

In siting new lines, the route selection process considers proximity to residences, schools, daycares, hospitals, and other community facilities. Consideration of these features in the route development and selection process ultimately supports the identification of a route that has the least overall impact on land use in the area. At the same time, consideration of the proximity of the line to these features also inherently reduces potential EMF exposure.

In summary, the companies strive to employ precautionary measures to achieve the prudent avoidance of electromagnetic fields effect, employing, where appropriate or as necessary, mitigation practices with low or negligible additional costs.



**ATTACHMENT 11**

**VEGETATION MANAGEMENT**

**ATTACHMENT 11  
VEGETATION MANAGEMENT**

---

Transource Pennsylvania, LLC (“Transource PA”) will implement and adhere to the American Electric Power’s (“AEP”) Transmission Vegetation Management Program (TVMP) as described in AEP Document # TVDM-001. A copy of the AEP Document # TVDM-001 is provided as Appendix 11.1.

The factors that dictate when each method is utilized are provided on pages 14-15 of Appendix 11.1 (TVMD-001 III. FAC-003-4 Requirements C. Requirement 3 (Maintenance Strategy)).

Vegetation management practices near aquatic and other sensitive locations are provided on pages 18-19 of Appendix 11.1 (TVMD-010 VI. Transmission E. Transmission Forestry Construction Guidelines 3).

The Notice procedures for vegetation management activities are provided in Appendix 11.1 on pages 8 (TVMD-010 III. Contractor Guidelines G. Public Relations) and pages 17-18 (TVMD-010 VI. Transmission E. Transmission Forestry Construction Guidelines).

Transource PA is responsible for the safe operation and maintenance of its facilities and, therefore, is directly responsible for the management and maintenance of tall growing vegetation that could potentially effect the safe and reliable operation of its transmission lines.

Commercial orchard operations are one potential exception to this policy wherein Transource PA will partner with the commercial orchard owner to share vegetation management and maintenance responsibilities of the right-of-way and any vegetation that could potentially interfere with the safe operation of the line. Such exceptions are considered only for existing orchards wherein specific design modifications to the line can be made prior to construction, and, an agreement can be made with the orchard owner to maintain any orchard trees within the right-of-way to an agreed upon height for the duration of the active operation of the orchard.



**APPENDIX 11.1**

**American Electric Power's Transmission Vegetation Management Program**

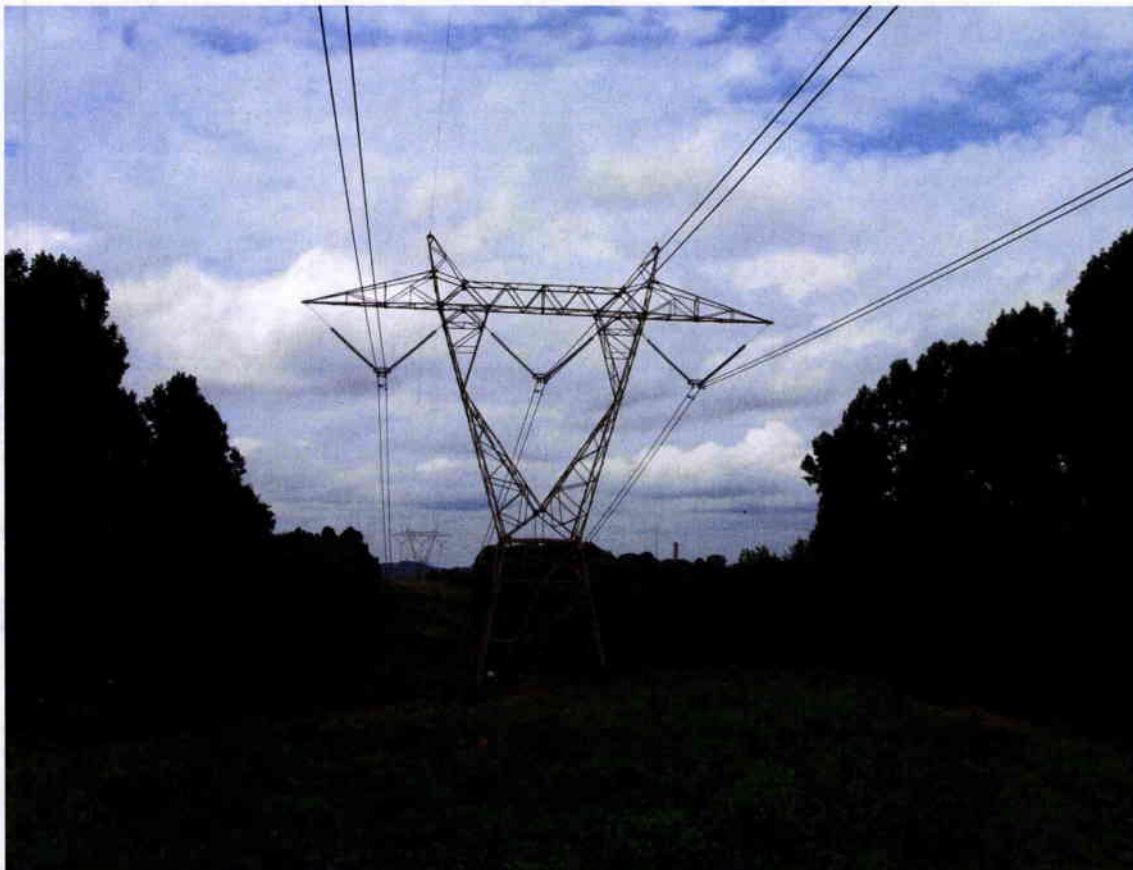
# Transmission Vegetation Management Program (TVMP)

## Document # TVMD-001 Revision 16

Transmission Vegetation Management Document


Effective July 31, 2017

Supersedes TVMD-001 Rev. 15



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### Transmission Vegetation Management Program (TVMP)

	Responsible Engineer: Lynn Hayward	Copyright 2017 American Electric Power	Rev. 16	TVMD-001
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## Review Cycle

Version	Description	Review Cycle	Retention Period	Review Date
1	Reviewed with Changes to Ver. 0.	Annual	3 Yrs	01/16/2006
2	Reviewed with Changes to Ver. 1 and 2.	Annual	3 Yrs	03/12/2007
5	Reviewed with Changes to Ver. 3, 4, and 5.	Annual	3 Yrs	05/06/2008
8	Reviewed with Changes to Ver. 6.	Annual	5 Yrs	05/26/2009
9	Reviewed with Changes to Ver. 8.	Annual	5 Yrs	07/27/2010
10	Reviewed with Changes to Ver. 9.	Annual	5 Yrs	07/21/2011
11	Reviewed with Changes to Ver. 10.	Annual	5 Yrs	07/12/2012
12	Reviewed with Changes to Ver. 11.	Annual	5 Yrs	07/15/2013
13	Reviewed with Changes to Ver. 12.	Annual	5 Yrs	07/18/2014
14	Reviewed with Changes to Ver. 13	Annual	5 Yrs	07/17/2015
15	Reviewed with Changes to Ver. 14	Annual	5 Yrs	07/8/2016
16	Reviewed with Changes to Ver. 15	Annual	5 Yrs	07/21/2017

# Revision History

Version	Description	Prepared By	Reviewed By	Approved By	Effective Date
1	Added Appendixes A and B.	H.R. Jones, Principal Engineer	-	J. E. Schechter, Mgr., Trans. Line Asset Engineering	01/16/2006
2	Added Appendix C.	H.R. Jones, Principal Engineer	-	J. E. Schechter, Mgr., Trans. Line Asset Engineering	10/02/2006
3	Added Revision History.	H.R. Jones, Principal Engineer	-	J. E. Schechter, Mgr., Trans. Line Asset Engineering	03/12/2007
3	Revised Appendix C from Version 2. Clarified video text associated with aerial patrols, page 8.	H.R. Jones, Principal Engineer	-	J. E. Schechter, Mgr., Trans. Line Asset Engineering	03/22/2007
4	Revised Maintenance Clearances in Table I, page 11. Removed Appendix A from Revision 0 and inserted a new Appendix A. Removed Appendix B from Revision 0 and renamed Appendix C from Revision 0 to Appendix B.	H.R. Jones, Principal Engineer	-	J. E. Schechter, Mgr., Trans. Line Asset Engineering	11/09/2007
5	Revised Maintenance Clearances text page 10. Revised Appendix B.	H.R. Jones, Principal Engineer	-	J. E. Schechter, Mgr., Trans. Line Asset Engineering	05/06/2008



Version	Description	Prepared By	Reviewed By	Approved By	Effective Date
6	Added third level of review/approval. Added Internal Mailing list. Added Standard mapped to TVMP. Revised Contents and page numbers. Revised Maintenance Clearances, pages 13 and 14. Revised Imminent Threat, pages 10 and 11. Revised Appendix A. Added new Appendix C. Added new Appendix D. Added hyperlinks.	S .J. Reaves, Forestry Program Coordinator I	J. E. Schechter, Mgr., Trans. Line Asset Engineering	D. R. Boezio, Dir., Trans. Asset Engineering	06/15/2009
8	Revised Version History. Revised Personnel Qualifications, Appendix D. Included References on Contents Page. Revised Subject Matter Experts (SMEs).	S .J. Reaves, Forestry Program Coordinator I	J. E. Schechter, Mgr., Trans. Line Asset Engineering	D. R. Boezio, Dir., Transmission Asset Engineering	07/31/2009
9	Revised Reviewer and Approval List. Revised TVMP Internal Mailing List. Changed Landowner and <b>Community Relations</b> section to Land Owner Relationships and Environmental Sustainability. Revised Subject Matter Experts (SMEs). Revised Personnel Directly Involved.	D.K. Killingsworth, Engineer I	J. E. Momme, Dir., Trans. Line Projects Engineering	D. J. Recker, Managing Dir., Trans. Projects Engineering	07/30/2010
10	Reformatted Document to match Transmission Forum Model TVMP.	D.K. Killingsworth, Engineer I	J. E. Momme, Dir. Trans. Line Projects Engineering	D. J. Recker, Managing Dir. Trans. Projects Engineering	7/30/2011

<b>Version</b>	<b>Description</b>	<b>Prepared By</b>	<b>Reviewed By</b>	<b>Approved By</b>	<b>Effective Date</b>
11	Revised Reviewer and Approval List. Revised TVMP Internal Mailing List. Changed Land Owner Relationships and Environmental Sustainability to Land Owner Relationships and revised. Revised Subject Matter Experts (SMEs). Revised Personnel Directly Involved. Removed Appendix C. Revised Personnel Qualifications. Revised New Construction Clearing. Added Document Team.	K. B. Patton, Utility Forester II	J. E. Momme, Dir., Trans. Line Projects Engineering	D. J. Recker, Managing Dir., Trans. Projects Engineering	7/31/2012
12	Revised Document Team. Revised Subject Matter Experts (SMEs). Revised Appendix A Imminent Threat Communication and Procedures. Revised Appendix B Imminent Threat Communication. Revised Appendix C TVMP Internal Mailing List. Revised Forestry Patrol Procedures. Revised Imminent Threat Report Form.	K. B. Patton, System Forestry Coordinator	J. E. Momme, Dir., Trans. Line Projects Engineering	D. J. Recker, Managing Dir., Trans. Projects Engineering	7/30/2013



<b>Version</b>	<b>Description</b>	<b>Prepared By</b>	<b>Reviewed By</b>	<b>Approved By</b>	<b>Effective Date</b>
13	Revised Document Team. Revised Signature page. Updated References. Revised entire document to align with changes to NERC Standard FAC-003-3. Revised Personnel Directly Involved. Moved Right-of-Way Clearance Guidelines to Appendix A. Updated Appendix C: Subject Matter Experts. Revised Appendix D TVMP Internal Mailing List.	Lynn Hayward Lead Engineer	J. E. Momme, Dir., Trans. Line Projects Engineering	J. E. Momme, Dir., Trans. Line Projects Engineering	7/31/2014
14	Revised Document Team. Updated References. Removed Imminent Threat Procedure. Updated MVCD distances.	Lynn Hayward Senior Engineer	J. E. Momme, Dir., Trans. Line Projects Engineering	J. E. Momme, Dir., Trans. Line Projects Engineering	7/31/2015
15	Revised Document Team. Updated MVCD distances per new FAC-003-4 Standard. Minor wording changes. Updated Distribution List.	Lynn Hayward Senior Engineer	J. E. Momme, Dir., Trans. Line Projects Engineering	J. E. Momme, Dir., Trans. Line Projects Engineering	7/31/2016
16	Updated Document Team. Minor wording changes. Updated Distribution List.	Lynn Hayward Senior Engineer	J. E. Momme, Dir., Trans. Line Projects Engineering	J. E. Momme, Dir., Trans. Line Projects Engineering	7/31/2017

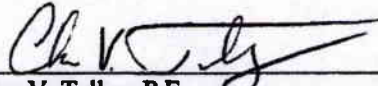
# Signatures

## Prepared By

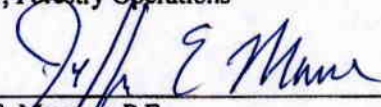
  
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Senior Engineer, Transmission Line Engineering

07-21-2017  
Date


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07/21/2017  
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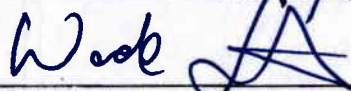
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Charles V. Talley, Manager, System Forestry Operations

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# I. Referenced Specifications

Title	Date	Revision	Pages
<i>AEP Forestry Goals, Procedures &amp; Guidelines for Distribution and Transmission Line Clearance Operations,</i>	2016	4	1-26
American Electric Power (AEP). <i>Transmission Right of Way Clearing and Maintenance: A Balanced Approach to Vegetation Management.</i> American Electric Power, Columbus, OH 43215.	2008		
American National Standard Institute. <i>for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices (Pruning).</i> Tree Care Industry Association, Inc. Londonderry, NH 03053.	2014	A300 (Part 1)-2008 (R2014)	1-13
American National Standard Institute. <i>for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices Part 7 – Integrated Vegetation Management a.</i> Electric Utility Rights-of-way. Tree Care Industry Association, Inc. Londonderry, NH 03053.	2012	A300 (Part 7)-2012	1-15
American National Standard Institute. <i>American National Standards for Arboriculture Operations – Safety Requirements.</i> International Society of Arboriculture (ISA). Champaign, IL 61826.	2012	Z133.1-2012	1-71
TVMD-003 <i>AEP Vegetation Inspection and Patrol Practices</i>	2015	0	4-8
TVMD-009 <i>AEP Imminent Threat Communication and Procedures</i>	2017	2	5-8
TVMD-011 <i>AEP Guideline Accounting for Maximum Conductor and Sag Blowout for Vegetation Management</i>	2017	1	4-23
TVMD-014 <i>AEP Risk Assessment &amp; Procedures</i>	2017		

## II. The Transmission Vegetation Management Program (TVMP)

### A. Scope

The American Electric Power (AEP) Transmission Vegetation Management Program (TVMP) has been developed and implemented to ensure compliance with the North American Electric Reliability Corporation (NERC) reliability standard FAC-003-4. This program is intended to maintain a reliable electric transmission system by using a defense-in-depth strategy to manage vegetation located on transmission rights-of-way (ROW) and minimize encroachments from vegetation located adjacent to the ROW, thus preventing the risk of those vegetation-related outages that could lead to Cascading.

This program applies to AEP's transmission and generation facilities as defined in FAC-003-4. Facilities referred to as NERC-applicable are:

- Transmission lines operated at 200 kV and above ( $\geq 200\text{kV}$ );
- Other lower-voltage transmission or generation lines that have been designated as an Interconnection Reliability Operating Limit (IROL);
- Each overhead transmission line identified above, located outside the fenced area of the switchyard, station or substation, and any portion of the span of the transmission line that is crossing the substation fence;
- Overhead generation lines that extend greater than one mile beyond the fenced area of the generating station switchyard to the point of interconnection with a transmission facility or that do not have a clear line of sight, and are operated at 200 kV and above ( $\geq 200\text{kV}$ ).

AEP's Transmission Forestry Operations group manages and executes the program for vegetation along approximately 8,700 miles of NERC-applicable transmission rights-of-way in portions of eleven states. This is accomplished through the implementation and oversight of a comprehensive, systematic, vegetation management program.


### B. Vegetation Management Objectives

The TVMP is an integral part of providing for the safe, reliable operation of the AEP transmission system. The key measure of success is zero reportable vegetation-related outages on NERC-applicable facilities.

For NERC-applicable facilities, AEP's intent is to clear the right-of-way to the maximum appropriate width by removing all woody-stemmed vegetation within the right-of-way<sup>1</sup> and potential hazard trees.

AEP conducts inspections, aerial and targeted ground inspections, and develops annual vegetation management work plans to ensure the program objective is achieved in the most efficient, environmentally sound, and economical manner practical.

<sup>1</sup>Upon completion of vegetation maintenance.

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AEP strives to manage its rights-of-way in accordance with its Environmental, Safety and Health (ES&H) Philosophy: “No aspect of operations is more important than the health and safety of people. Our customer’s needs are met in harmony with environmental protection.”

Additional considerations include:

- Minimizing adverse environmental impacts.
- Complying with laws and regulations.
- Achieving cost efficiency.
- Maintaining a positive relationship with landowners and the public.

## C. Definitions

**Cascading:** “The uncontrolled successive loss of System Elements triggered by an incident at any location. Cascading results in widespread electric service interruption that cannot be restrained from sequentially spreading beyond an area predetermined by studies.”<sup>2</sup>

**Hazard trees:** Trees that are structurally unsound and could strike a target (such as electric facilities) when they fail.<sup>3</sup>

**Interconnection Reliability Operating Limit (IROL):** “A system Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading outages that adversely impact the reliability of the Bulk Electric System.”<sup>2</sup>

**Inspector:** Individual assigned with the responsibility of evaluating clearances in the Transmission Right-of-Way and minimizing encroachments into the ROW from vegetation located adjacent to the ROW.


**Minimum Vegetation Clearance Distance (MVCD):** “The calculated minimum distance stated in feet (meters) to prevent flash-over between conductors and vegetation, for various altitudes and operating voltages.”<sup>2</sup>

**Remediation:** The evaluation of a point of interest, and if necessary, taking action to resolve the identified vegetative issues.

**Right-of-Way (ROW):** “The corridor of land under a transmission line(s) needed to operate the line(s). The width of the corridor is established by engineering or construction standards as documented in either construction documents, pre-2007 vegetation maintenance records, or by the blowout standard in effect when the line was built. The ROW width in no case exceeds the applicable Transmission Owner’s or applicable Generator Owner’s legal rights but may be less based on the aforementioned criteria.”<sup>2</sup>

<sup>2</sup>North American Electric Reliability Corporation, *Glossary of Terms Used in NERC Reliability Standards* (Atlanta, GA: North American Electric Reliability Corporation, 2017), accessed June 23, 2017, [http://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary\\_of\\_Terms.pdf](http://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf).

<sup>3</sup>American National Standard Institute, “Part 7 – Integrated Vegetation Management,” “a. Electric Utility Rights-of-way” in *for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices*, (Londonderry, NH: 2006), 58.

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**Sustained Outage:** “The de-energized condition of a transmission line resulting from a fault or disturbance following an unsuccessful automatic reclosing sequence and/or unsuccessful manual reclosing procedure.”<sup>2</sup>

**Vegetation Inspection:** “The systematic examination of vegetation conditions on a Right-of-Way and those vegetation conditions under the applicable Transmission Owner’s or applicable Generator Owner’s control that are likely to pose a hazard to the line(s) prior to the next planned maintenance or inspection. This may be combined with a general line inspection”<sup>4</sup>

**WECC Transfer Path:** The transmission paths monitored by the WECC (Western Electric Coordinating Council) regional Reliability coordinators.<sup>4</sup> Note: AEP does not operate in the WECC region.

### III. FAC-003-4 Requirements


#### A. Requirement 1 (Applicable Lines That are an Element of an IROL or Major WECC Transfer Path)

AEP maintains records of sustained outages from all causes. All outages determined to be caused by vegetation are investigated by appointed AEP employees, and information is obtained specific to the line designation, voltage, date and time of the disturbance, species, location relative to the line, NERC outage category, and duration of the outage if it was sustained. Sustained transmission line outages that are determined to have been caused by vegetation are reported to the Regional Entities or their designees. The supporting document AEP utilizes to identify vegetation outage information is a periodic report generated from an internal AEP system. The report lists vegetation-related outages by Regional Entities. The report lists the names of circuits where outages occurred; operated voltages; the date, time, and duration of the outage; and a description of the cause of the outage.

AEP conducts bi-annual vegetation inspections of all applicable facilities. During this inspection AEP inspects the vegetation-to-conductor clearances and identifies vegetation on and along transmission ROWs that could pose a reliability risk to the facility. Aerial patrols, except where the FAA or other ordinance prohibits flight, cover substantial portions of the transmission system to identify areas where remediation may be needed to prevent vegetation from interfering with circuit operation. Ground patrols are used to supplement aerial patrols and where aerial patrols are restricted.

A confirmed encroachment into the MVCD as identified in NERC Standard FAC-003-4 Minimum Vegetation Clearance Distances (MVCD) Table 2, Page 18, observed in real time during the inspection, is reported to the transmission forestry manager. Appropriate data and photographs are taken and submitted to the manager. These events are reported to the Regional Entity in accordance with NERC policy.

<sup>4</sup>North American Electric Reliability Corporation, Glossary of Terms Used in NERC Reliability Standards (Atlanta, GA: North American Electric Reliability Corporation, 2017), accessed June 23, 2017, [http://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary\\_of\\_Terms.pdf](http://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf).

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## **B. Requirement 2 (Applicable Lines That are Not an Element of an IROL or Major WECC Transfer Path)**

AEP maintains records of sustained outages from all causes. All outages determined to be caused by vegetation are investigated by appointed AEP employees, and information is obtained specific to the line designation, voltage, date and time of the disturbance, species, location relative to the line, NERC outage category, and duration of the outage if it was sustained. Sustained transmission line outages that are determined to have been caused by vegetation are reported to the Regional Entities or their designees. The supporting document AEP utilizes to identify vegetation outage information is a periodic report generated from an internal AEP system. The report lists vegetation-related outages by Regional Entities. The report lists the names of circuits where outages occurred; operated voltages; the date, time, and duration of the outage; and a description of the cause of the outage.

AEP conducts bi-annual vegetation inspections of all applicable facilities. During this inspection AEP inspects the vegetation-to-conductor clearances and identifies vegetation on and along transmission ROWs that could pose a reliability risk to the facility. Aerial patrols, except where the FAA or other ordinance prohibits flight, cover substantial portions of the transmission system to identify areas where remediation may be needed to prevent vegetation from interfering with circuit operation. Ground patrols are used to supplement aerial patrols and where aerial patrols are restricted.

A confirmed encroachment into the MVCD as identified in NERC Standard FAC-003-4 Minimum Vegetation Clearance Distances (MVCD) Table 2, Page 18, observed in real time during the inspection, is reported to the transmission forestry manager. Appropriate data and photographs are taken and submitted to the manager. These events are reported to the Regional Entity in accordance with NERC policy.

## **C. Requirement 3 (Maintenance Strategy)**


For NERC-applicable facilities, AEP's fundamental strategy is to clear the right-of-way to the maximum appropriate width by removing all woody-stemmed vegetation within the right-of-way<sup>5</sup> and potential hazard trees.

AEP considers conductor location and movement, the MVCD, and vegetation growth between maintenance activities when developing its maintenance plan. Maintenance does not occur on a rigid "cycle" basis; rather, the maintenance technique and schedule are driven by the condition of the vegetation observed during bi-annual inspections. Vegetation-to-conductor distances are based on completed work meeting or exceeding the minimum approach distances to energized conductors for persons other than qualified line-clearance arborists and qualified line-clearance arborist trainees (Columns A and C in Table 3: Transmission Line Clearance Guidelines in Appendix A on page 20).

AEP Transmission Forestry's goal is to convert the vegetative cover types on its transmission rights-of-way to low growing grass-forbs-herb covers that inhibit the germination, establishment, and growth of most incompatible vegetative species.

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<sup>5</sup>Upon completion of vegetation maintenance.

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The AEP transmission vegetation management program emphasizes tree removal to promote long-term vegetation control and to minimize future maintenance expenditures. Additionally, AEP foresters and contractor personnel inspect for hazard trees during scheduled maintenance. Hazard trees are addressed on a case-by-case basis by the responsible forester.

Manual clearing is employed where the terrain is too steep or rough for mechanized equipment, where the vegetation is too tall for herbicide applications and aerial application is not possible, or where the immediate removal of vegetation is necessary. Contract employees use chainsaws or brush saws to selectively remove vegetation from the rights-of-way.

Mechanical clearing may be employed where terrain and access allow and where the vegetation is not too large for mechanical equipment to handle, where the vegetation is too tall for herbicide applications, where aerial application is not possible, or where the immediate removal of vegetation is necessary.

When tree removal or clearing is not practical or feasible, tree pruning may be employed. Fast-growing trees, where removal permission is not obtained, are pruned to yield greater clearance distances than slower-growing varieties. AEP Transmission Forestry may employ tree growth regulators (TGRs) to reduce the frequency and amount that trees must be pruned.

Mechanical pruning operations employ a variety of boom-mounted saws on vehicles capable of traversing the rights-of-way. Access, terrain, and tree heights influence the type of equipment used. When applicable, rights-of-way may be maintained with an aerial saw. These rights-of-way possess one or more of the following characteristics: steep, mountainous terrain; limited access; or prohibitive costs to prune by conventional means.

Manual and mechanical clearing without follow-up herbicide applications does not control the root systems of incompatible vegetation and could increase the future maintenance requirements in the areas where it is employed. Aerial, high-volume foliar, low-volume foliar, ultra-low-volume foliar, cut stubble, stump, basal, and granular applications may be employed. United States EPA-registered herbicides are applied by licensed pesticide application businesses contracted by AEP.



## D. Requirement 4 (Vegetation Condition That is Likely to Cause a Fault at any Moment)

A vegetation condition that is likely to cause a fault at any moment is considered an imminent threat to the reliable operation of a NERC- or an IROL-applicable facility. An imminent threat must be mitigated within 24 hours of confirmation. This condition may be characterized by either vegetation or hazard trees that are approaching or threatening to approach the Minimum Vegetation Conductor Distance. For locations found during patrols, routine work, or other observations, where a potential imminent threat condition is confirmed by transmission forestry, an immediate notification<sup>6</sup> to the local dispatching authority is required. This will allow for mitigating actions, such as removal of the vegetation, temporary reduction in circuit rating, or switching the circuit out of service, until the imminent threat is relieved.

Refer to TVMD-009 *Imminent Threat Communication and Procedures*.


## E. Requirement 5 (Vegetation Constraint May Lead to an Encroachment Into the MVCD)

Restrictions on scheduled work may include refusals by property owners to access or perform work, orders to stop work by local authorities, restrictions by federal and/or state agencies, or legal injunctions. The maintenance strategy in section III.C defines the expected extent of clearing. If the clearance specifications cannot be achieved at the time of scheduled maintenance, AEP shall implement corrective action. This corrective action may include more-frequent maintenance or more-frequent inspections to monitor the risk to the system and is documented in AEP's restriction log.

AEP has implemented procedures for achieving sufficient clearances in those locations on its rights-of-way where AEP is restricted from attaining the clearance listed in Column C of Table 3: Transmission Line Clearance Guidelines to prevent encroachment into the MVCD. This is described in AEP's Right-of-Way Clearance Guidelines; see "Appendix A: Right-of-Way Clearance Guidelines," which starts on page 19.

During bi-annual patrols, AEP monitors locations where these clearances cannot be achieved and determines if more-frequent maintenance is required in order to assure the safe, reliable operation of the circuit.

<sup>6</sup>NOPR RM-12-4-000, page 50, #85 (10/18/2012)—NERC explains that the obligation to notify without intentional delay generally "can be understood to include an immediate (within 1 hour of observation) communication notwithstanding a safety issue to personnel, other immediate priority maintenance functions to ensure reliability or system stability, or communication equipment failures that precludes immediate communication."

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## F. Requirement 6 (Annual Inspections)

### 1. Vegetation Inspections and Patrols

Aerial patrols are conducted to identify areas of the transmission system where remediation may be needed to prevent vegetation from interfering with circuit operation except where the FAA or other ordinance prohibits flight. Ground patrols are used to supplement aerial patrols and where aerial patrols are restricted. Aerial and ground patrol inspections aid in the development of the vegetation maintenance work plan.

### 2. Forestry Patrol Procedures

#### a. Patrol of the AEP Transmission System

AEP shall perform bi-annual inspections on 100% of all transmission facilities subject to FAC-003-4. Patrols provide Transmission Foresters a view of right-of-way conditions and the effectiveness of the vegetation management program.

#### b. Patrol Schedule

Patrol schedules are summarized in the table below.

**Table 1: Patrol Schedule**

	<b>Fall Patrol</b>	<b>Spring Patrol</b>
Patrol	<ul style="list-style-type: none"> <li>Aug 15–Nov 15.</li> </ul>	<ul style="list-style-type: none"> <li>By May 21.</li> <li>In areas at higher elevation or with later vegetation emergence, this date may be extended to June 4.</li> </ul>
Remediation	<ul style="list-style-type: none"> <li>A1 Condition: addressed within 24 hours of confirmation.</li> <li>P1 Condition: complete by March 1 of the following year.</li> </ul>	<ul style="list-style-type: none"> <li>A1 Condition: addressed within 24 hours of confirmation.</li> <li>P1 Condition: complete by May 30. In areas at higher elevation or with later vegetation emergence, this date may be extended to June 14.</li> </ul>

### 3. Exceptions

Aerial patrols may be interrupted by force majeure, such as severe storms or floods. If patrols are interrupted, the time extension to complete the inspection shall not exceed the duration of the time AEP was prevented from performing the vegetation inspection.



## G. Requirement 7 (Annual Work Plan)

AEP shall complete 100% of its annual vegetation work plan miles on NERC-applicable facilities to ensure no vegetation encroachments occur within the MVCD. Modifications to the work plan in response to changing conditions or to findings from vegetation inspections may be made (provided they do not allow encroachment of vegetation into the MVCD) and must be documented. The work plan starts on January 1 and ends on December 31.

AEP has a process for documenting the vegetation management activities to ensure the following:

- Scheduled work is properly identified and listed in the work plan.
- Adjustments to the work plan are properly noted and recorded. This plan may be modified for the following reasons:
  - Change in expected growth rate/environmental factors
  - Circumstances that are beyond the control of an applicable Transmission Owner or applicable Generator Owner
  - Rescheduling work between growing seasons
  - Crew or contractor availability/mutual assistance agreements
  - Identified, unanticipated high-priority work
  - Weather conditions/accessibility
  - Permitting delays
  - Land ownership changes/change in land use by the landowner
  - Emerging technologies
- Timesheets and maintenance methods employed are noted for each type of work on each project listed in the work plan.
- Work quality inspections are performed, and work completed meets company specifications.

# Appendix A: Right-of-Way Clearance Guidelines

When performing maintenance, the objective for locations on spans with less than 100' vertical clearance at maximum sag from conductor to ground is removal of all woody-stemmed vegetation to the appropriate width<sup>7</sup>, leaving the cleared area of the right-of-way populated with grasses and herbaceous growth. Under certain circumstances (unique topographic and/or environmentally sensitive conditions), AEP may allow compatible, low-growing species to remain in the right-of-way. In maintained areas (mowed yards, lawns, and public areas), trees deemed compatible with safe operation of the line may remain, although AEP strongly discourages this practice. Compatible species will be limited to those that grow no more than 15' tall. Actively maintained trees that could be considered a crop such as in nurseries or orchards will be maintained in accordance with the clearance table guidelines specified in Table 2: Clearance Table Guidelines below. Table 3: Transmission Line Clearance Guidelines on page 20 shows Transmission Line Clearance Guidelines.

**Table 2: Clearance Table Guidelines**

<b>Right-of-Way with No Restrictions</b>	<b>Right-of-Way With Restrictions</b>
<p><b>&lt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b></p> <ol style="list-style-type: none"> <li>1. Remove all woody stemmed vegetation.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol>	<p><b>&lt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b></p> <ol style="list-style-type: none"> <li>1. Trim or remove vegetation to meet column C, Table 3.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol>
<p><b>&gt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b></p> <ol style="list-style-type: none"> <li>1. Trim or remove vegetation to meet column B, Table 3.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol>	<p><b>&gt; 100' Vertical Clearance Between Conductors at Maximum Sag and Ground</b></p> <ol style="list-style-type: none"> <li>1. Trim or remove vegetation to meet column C, Table 3.</li> <li>2. Do not allow vegetation closer than column E, Table 3.</li> <li>3. Trigger distance to schedule maintenance per column D, Table 3.</li> </ol>

<sup>7</sup>Upon completion of vegetation maintenance.



**Table 3: Transmission Line Clearance Guidelines<sup>8</sup>**

Column A	Column B	Column C	Column D	Column E	MVCD <sup>9</sup>
Nominal Voltage (kV phase to phase)	AEP Clearance (no restrictions) Desired Clearance Between Conductor and Vegetation	AEP Clearance (with restrictions) Desired Clearance between Conductor & Vegetation	ANSI <sup>10</sup> Clearance between Conductor & Vegetation	AEP Clearance between Conductor & Vegetation	Over Sea Level up to 5,000 ft.
765kV	45'	35'00"	27'04"	14'00"	12'05"
500kV	45'	26'08"	19'00"	10'00"	7'07"
345kV	30'	20'05"	13'02"	7'06"	4'08"
230kV	30'	16'05"	7'11"	5'02"	4'05"
161kV <sup>11</sup>	25'	14'00"	6'00"	3'05"	3'00"
138kV <sup>11</sup>	25'	13'02"	5'02"	2'11"	2'06"
115kV <sup>11</sup>	25'	12'04"	4'06"	2'06"	2'01"
88kV <sup>11</sup>	25'	12'04"	4'06"	2'06"	1'08"
69kV <sup>11</sup>	25'	10'09"	4'02"	2'06"	1'02"

<sup>8</sup>Conductor at maximum sag and movement.

<sup>9</sup>The distances in this Table are the minimums required by FAC-003-4 Industry Advisory Minimum Vegetation Clearance Distances (MVCD) May 14, 2015 to prevent Flash-over; however, prudent vegetation maintenance practices dictate that substantially greater distances will be achieved at time of vegetation maintenance.

<sup>10</sup>ANSI Z133-2012.

<sup>11</sup>Such lines are applicable to this standard only if Planning Coordinator has determined such per FAC-014.

## Appendix B: Subject Matter Experts

FAC-003-4 Requirement	Description	Preparer	SME	Reviewer
R1.-M1.	Manage vegetation to prevent encroachment into MVCD for IROL lines	Lynn Hayward Senior Engineer 614-933-2429 <a href="mailto:lehayward@aep.com">lehayward@aep.com</a>	Kevin Patton Business Analyst Principal 614-716-1231 <a href="mailto:kbpatton@aep.com">kbpatton@aep.com</a>	J.E. Momme Director, Trans. Line Engineering 614-993-2046 <a href="mailto:jemomme@aep.com">jemomme@aep.com</a>
R2.-M2.	Manage vegetation to prevent encroachment into MVCD for non- IROL lines	Lynn Hayward Senior Engineer 614-933-2429 <a href="mailto:lehayward@aep.com">lehayward@aep.com</a>	Kevin Patton Business Analyst Principal 614-716-1231 <a href="mailto:kbpatton@aep.com">kbpatton@aep.com</a>	
R3.-M3.	Documented maintenance strategies	Lynn Hayward Senior Engineer 614-933-2429 <a href="mailto:lehayward@aep.com">lehayward@aep.com</a>  Kevin Patton Business Analyst Principal 614-716-1231 <a href="mailto:kbpatton@aep.com">kbpatton@aep.com</a>	E. K. Engdahl, Staff Engineer 614-933-933-2429 <a href="mailto:ekengdahl@aep.com">ekengdahl@aep.com</a>  Kevin Irvine Engineer 614-552-2281 <a href="mailto:kcirvine@aep.com">kcirvine@aep.com</a>  Barrett Thomas Supervisor Planning & Engineering 918-599-2386 <a href="mailto:bathomas@aep.com">bathomas@aep.com</a>  John Booze Engineer 540-562-7061 <a href="mailto:jrbooze@aep.com">jrbooze@aep.com</a>	
R4.-M4.	Notify the control center holding switching authority of a confirmed vegetation condition	Kevin Patton Business Analyst Principal 614-716-1231 <a href="mailto:kbpatton@aep.com">kbpatton@aep.com</a>	Lynn Hayward Senior Engineer 614-933-2429 <a href="mailto:lehayward@aep.com">lehayward@aep.com</a>	



<b>FAC-003-4 Requirement</b>	<b>Description</b>	<b>Preparer</b>	<b>SME</b>	<b>Reviewer</b>
R5.-M5.	Constrained from performing vegetation work	Kevin Patton Business Analyst Principal 614-716-1231 <a href="mailto:kbpatton@aep.com">kbpatton@aep.com</a>	Lynn Hayward Senior Engineer 614-933-2429 <a href="mailto:lehayward@aep.com">lehayward@aep.com</a>	
R6.-M6.	Complete inspections on 100% of applicable transmission lines	Kevin Patton Business Analyst Principal 614-716-1231 <a href="mailto:kbpatton@aep.com">kbpatton@aep.com</a>	Lynn Hayward Senior Engineer 614-933-2429 <a href="mailto:lehayward@aep.com">lehayward@aep.com</a>	
R7.-M7.	Complete 100% of annual plan	Kevin Patton Business Analyst Principal 614-716-1231 <a href="mailto:kbpatton@aep.com">kbpatton@aep.com</a>	Lynn Hayward Senior Engineer 614-933-2429 <a href="mailto:lehayward@aep.com">lehayward@aep.com</a>	

# Appendix C: TVMP Internal Mailing List

Role definitions: A—Accountable; C—Consult; I—Informed; R—Responsible; S—Support

Name/E-mail Group	Department	Title	Role
Smith, Allan Wade	Transmission Grid Development	SVP Grid Development	A
Smith, Scott N	Trans Controls & Field Services	SVP Trans Fld Svcs & Controls	A
Moore, Scott P	Trans Eng & Proj Svcs	VP Trans Eng & Proj Svcs	A
Kirkpatrick, Thomas L	Customer and Distr Services	VP Cust Svcs, Mktg & Dist Svcs	A
Fox, Kip M	Electric Transmission Texas	Mng. Dir. Elec. Trans TX	A
Recker, Daniel J	Transmission Engineering	Mng Dir Trans Engrg	A
Momme, Jeffrey E	Transmission Line Engineering	Dir. Trans. Line Projects Engineering	A
Johnson, Paul B	Transmission Operations	Mng. Dir. Transmission Ops	A
Fecho, Thomas R	GET Eng Elec Interent Plng	Mgr-Gen & Elec Intrenctn Plnng	C
Parrish, T. David	Trans Line Standards	Mgr. Trans. Line Design Standards	C
Wagner, Robert C	Transmission Field Services	VP Trans Field Services	I
TRELCOMP	Transmission Reliability Compliance	Group Mailing List	I
Schaffer, Thomas O	Trans Line Engrg Right-of-Way	Mgr Trans Right of Way	I
Curiel III, Nicolas	Trans Line Engrg Right-of-Way	Supv Trans Right of Way	I
Bergeret, Rene J	Trans Line Engrg Right-of-Way	Supv Trans Right of Way	I
Huddleston, Mary A	Trans Line Engrg Right-of-Way	Supv Trans Right of Way	I
Unternaher, Brenda L	Trans Line Engrg Right-of-Way	Supv Trans Right of Way	I
Smith, Matthew J	Trans Line Engrg Right-of-Way	Supv Trans Right of Way	I
Nguyen, Thuy P	Trans Tech Svcs Wrk Plan	Mgr. Trans Work Planning	I
Rappach, James A	Generation NERC Compliance	Mgr-Regional Eng Svcs	I
Fuller, Terry A	GET Eng Elec Interent Plng	Principal Engineer	I
Daniels, David	Generation NERC Compliance	Principal Engineer	I
Carlson, John P	ESH Management Systems	Mgr ESH Mngmnt System	I
Liebrecht, John J	Trans Tech Svcs Wrk Plan Line	Supv Planning & Engineering	I



Role definitions: A—Accountable; C—Consult; I—Informed; R—Responsible; S—Support

<b>Name/E-mail Group</b>	<b>Department</b>	<b>Title</b>	<b>Role</b>
Ordner, Lance	Trans Tech Svcs Wrk Plan Line	Senior Engineer	I
Cotant, Ronald D	Trans Tech Svcs Wrk Plan Line	Senior Engineer	I
Robinson, Kip	Trans Tech Svcs Wrk Plan Line	Senior Engineer	I
Martin, Amanda	Trans Tech Svcs Wrk Plan Line	Engineering Technologist	I
Linkous II, Charles N.	Trans Tech Svcs Wrk Plan Line	Senior Engineering Technologist	I
York, Leo	Electric Transmission Texas	Mgr Transmission Bus Dev	I
Macias, Michael M	Electric Transmission Texas	ETT Technical Project Lead Sr	I
Siefker, Matthew L	Electric Transmission Texas	ETT Technical Project Lead Sr	I
Garrett, James G	Trans Reliability Compliance	Trans Relblty Complc Spec	R
Shepard, Darren A.	Distribution Services	Dir Distribution Svcs Suppt	A
Talley, Charles V	System Forestry	Mgr. Forestry Operations	R
T Forestry	Trans. Foresters and Forestry Management	Group Mailing List	R
Ball, David R	Transmission Dispatch	Dir. Transmission Dispatching	R
Rodriguez, Linda L	Trans Dispatch Corpus Christi	Mgr. Transmission Dispatching	R
Milford, David L	Trans Dispatch Shreveport	Mgr. Transmission Dispatching	R
Moses, Clinton D	Trans Dispatch Columbus	Mgr. Transmission Dispatching	R
Guill, Darrell E	Trans Dispatch Roanoke	Mgr. Transmission Dispatching	R
Wagner, Billy W	Roanoke Dist Dispatch	Mgr. Distribution Dispatching	R
Knight, Randall L	AEP Ohio Distr Dispatch	Mgr. Distribution Dispatching	R
Sturtz, Robert D	Ft Wayne Distrib Dispatch	Mgr. Distribution Dispatching	R
Apple, Dwayne L	PSO Distribution Dispatch	Mgr. Distribution Dispatching	R
Lyles, James S	SWEPSCO Distrib Dispatch	Mgr. Distribution Dispatching	R
Dunlap IV, Bailey H	Texas Distrib Dispatch	Mgr. Distribution Dispatching	R
Dunlap IV, Hauge	C Christi Distrib Dispatch	Mgr. Distribution Dispatching	R
Blankenship, Stephen D	Kentucky Distribution Dispatch	Distribution Dispatch Supv.	R
Patton, Kevin B	System Forestry	Principal Business Analyst	R

Role definitions: A—Accountable; C—Consult; I—Informed; R—Responsible; S—Support

<b>Name/E-mail Group</b>	<b>Department</b>	<b>Title</b>	<b>Role</b>
Hughes, Joey	System Forestry	Business Analyst	R
Engdahl, Eric K	Trans Line Engrg Design Standards	Staff Engineer	R
Irvine, Kevin C	Trans Line Eng Ohio	Engineer	R
Thomas, Barret A	Transmission Line Engrg	Supv Planning & Engineering	R
Whitaker, Robert	Transmission Line Engrg	Senior Engineer	R
Booze, John R	Transmission Line Engrg	Engineer	R
Hayward, Lynn E	Transmission Line Engrg	Senior Engineer	R
Krause, Stan A	Trans Line Engrg ERCOT	Mgr. Trans. Line Engineering	S
Overduyn, Rebecca, M	Trans Line Engrg SPP	Mgr. Trans. Line Engineering	S
Hannah, Eddie D	Trans Line Engrg I&M	Mgr. Trans. Line Engineering	S
Grawe, Rob	Trans Line Eng Ohio	Mgr. Trans. Line Engineering	S
Bledsoe, James K	Trans Line Eng APCO	Mgr. Trans. Line Engineering	S
TLPE All	Transmission Line Project Engineering	Group Mailing List	S
TCI PM ALL	Transmission Project Mgt. & Control	Group Mailing List	S
McAuley, Rosalyn N	Transmission Operations Engineering	Mgr. Operations Engineering	S
Sauriol, Dennis R	Transmission Real Time Operations	Dir Trans Ops. Reliability	S
Robinson, Shawn	Transmission Field Services	Mng. Dir. Transmission West	S
Pugh, Archie D	Transmission Field Services	Mng. Dir. Transmission East	S
Boezio, Daniel R	Transmission Field Services	Dir Trans Region Tech Support	S
Cook, James K	Trans Field Construction East	Dir Trans Region Construction	S
Avanessian, Paul D	Trans Field Construction West	Dir TFS Construction	S
Workman, Mark A	Trans Construction Mgmt	Mng Dir Trans Constr Mgmt	S
Colvin, Kenneth A	Trans Const Mgmt – Gah PJM Ohio	Mgr – Trans Construction	S
Galyean, Rue F	Trans Const Mgmt – Tulsa ERCOT	Mgr – Trans Construction	S
Emberger, Joseph H	Trans Const Mgmt – Gah PJM AP	Mgr – Trans Construction	S
Ball, Nathan M	Trans Const Mgmt – Tulsa SPP	Mgr – Trans Construction	S
Heck, Jeffrey A	Trans Const Mgmt – Gah PJM IM	Mgr – Trans Construction	S



Role definitions: A—Accountable; C—Consult; I—Informed; R—Responsible; S—Support

<b>Name/E-mail Group</b>	<b>Department</b>	<b>Title</b>	<b>Role</b>
Bocaneregra, Rene	Trans Const Mgmt – Gah PJM AP	Mgr – Trans Construction	S
Deskens, Terry	Trans Construction Mgmt	Mgr – Trans Constr Outage Coord	S

**ATTACHMENT 12**

**AGENCY COORDINATION**



**ATTACHMENT 12  
AGENCY COORDINATION**

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In January of 2017, Transource PA initiated coordination with agencies, municipalities, and elected officials. Initial consultation letters were mailed to state and federal agencies listed in Appendix 12.1. These letters introduced Transource PA, the Independence Energy Connection Project, and requested data related to the agencies specific jurisdiction. In addition to the initial letters, follow up meetings or correspondence is also listed Appendix 12.1. Copies of the initial agency consultation letters and responses are provided in Attachment 3 Siting Study, Appendix B.

**APPENDIX 12.1**

**List of Agency Coordination**



Independence Energy Connection Project  
Attachment 12  
Agency Coordination

DATE/TIME	COMMUNICATION TYPE	STATE	COUNTY	MUNICIPALITY / OFFICE	CONTACT	TRANSOURCE ATTENDEES	CONSULTANT ATTENDEES	STATE / COUNTY / LOCAL ATTENDEES
January 12, 2017	Meeting	Maryland	State	PPRP	Susan Gray	Peggy Simmons, Laurie Spears, Tim Gaul	Barry Baker (AECOM)	Susan Gray, Fred Kellex, Shawn Seaman, Steve Talson
January 31, 2017	Letter	Maryland	Federal	USACE - Baltimore District MD Northern Section	Joe DaVia - Chief	N/A	N/A	N/A
January 31, 2017	Letter	Pennsylvania	Federal	USACE - Baltimore District	Wade Chandler - Chief	N/A	N/A	N/A
January 31, 2017	Letter	Maryland	Federal	USFWS - Cheaseapeake Field Office	Genevieve LaRouche	N/A	N/A	N/A
January 31, 2017	Letter	Pennsylvania	Federal	USFWS - Pennsylvania Field Office	Lora Lattanzi	N/A	N/A	N/A
January 31, 2017	Letter	Both	Federal	EPA Region 3	Shawn Garvin - Regional Administrator	N/A	N/A	N/A
January 31, 2017	Letter	Pennsylvania	State	PA Department of Environmental Protection	Joseph Adams - Regional Director	N/A	N/A	N/A
January 31, 2017	Letter	Pennsylvania	State	PA Fish and Boat Commission	John Arway - Executive Director	N/A	N/A	N/A
January 31, 2017	Letter	Pennsylvania	State	PA Game Commission	Bradely Meyers - Director	N/A	N/A	N/A
January 31, 2017	Letter	Pennsylvania	State	PA Department of Conservation and Natural Resources	Ellen Schultzabarger - Division Chief	N/A	N/A	N/A
January 31, 2017	Letter	Pennsylvania	State	PA Historical & Museum Commission	Andra MacDonald - Bureau Director	N/A	N/A	N/A
January 31, 2017	Letter	Pennsylvania	State	PA Department of Agriculture	Doug Wolfgang - Supervisor	N/A	N/A	N/A
January 31, 2017	Letter	Maryland	State	Maryland Department of the Environment	Lynn Buhl - Director	N/A	N/A	N/A
January 31, 2017	Letter	Maryland	State	Maryland Department of Natural Resources	Denise Keehner - Program Manager	N/A	N/A	N/A
January 31, 2017	Letter	Maryland	State	Maryland Historical Trust	Natalie Loukianoff - Preservation Officer	N/A	N/A	N/A
January 31, 2017	Letter	Maryland	State	Maryland Environmental Trust	William Leahy - Executive Director	N/A	N/A	N/A
January 31, 2017	Letter	Maryland	State	Maryland Department of Agriculture	Louise Lawrence - Program Manager	N/A	N/A	N/A
February 6, 2017	Meeting	Maryland	Harford	State Senate	J.B. Jennings, Senator	Todd Burns	Rick Abbruzzese, Mary Urban	Senator J.B. Jennings
February 6, 2017	Meeting	Maryland	Harford	Harford County	Barry Glassman, County Executive	Todd Burns	Rick Abbruzzese, Mary Urban	Barry Glassman, County Executive Chad Shrodes, County Administrator
February 6, 2017	Meeting	Maryland	Harford	Harford County	Chad Shrodes, County Councilman	Todd Burns & Laurie Spears	Mary Urban (KOFA)	
February 6, 2017	Meeting	Maryland	Washington	State Senator	Senator Andrew Serafini	Todd Burns	Rick Abbruzzese, Mary Urban	Senator Andrew Serafini
February 7, 2017	Meeting	Pennsylvania	Franklin	State Senator	Sen. Richard Alloway	Todd Burns & Laurie Spears	Steve Kratz, Dennis Walsh, Margaret Durkin	Sen. Richard Alloway
February 7, 2017	Meeting	Pennsylvania	Franklin	State Representative	Rep. Paul Schemel	Todd Burns & Laurie Spears	Steve Kratz, Dennis Walsh, Margaret Durkin	Rep. Paul Schemel
February 7, 2017	Email Correspondence	Maryland	State	PPRP	Fred Kelly	Laurie Spears	N/A	Email regarding

Independence Energy Connection Project  
Attachment 12  
Agency Coordination

DATE/TIME	COMMUNICATION TYPE	STATE	COUNTY	MUNICIPALITY / OFFICE	CONTACT	TRANSOURCE ATTENDEES	CONSULTANT ATTENDEES	STATE / COUNTY / LOCAL ATTENDEES
February 8, 2017	Meeting	Pennsylvania	York	Lower Chanceford Township	Sue Wiley, Zoning Officer	Todd Burns & Laurie Spears	Chris Getman	Sue Wiley
February 8, 2017	Meeting	Pennsylvania	York	Chanceford Township	Kent Heffner	Spears	Chris Getman	Kent Heffner
February 8, 2017	Meeting	Pennsylvania	Franklin	Southampton Township	Maria Misner	Spears	Chris Getman	Maria Misner, Paul Witter
February 8, 2017	Meeting	Pennsylvania	Franklin	Greene Township		Spears	Chris Getman	
February 9, 2017	Conference Call	Pennsylvania	Franklin	State Representative	Rep. Rob Kaufmann	Todd Burns & Laurie Spears	Steve Kratz, Dennis Walsh, Margaret Durkin	Rep. Rob Kaufmann
February 9, 2017	Conference Call	Pennsylvania	York	State Senator	Jason High, Chief of Staff	Todd Burns & Laurie Spears	Walsh, Margaret Durkin	Jason High, Chief of Staff for State Senator Scott Wagner
February 9, 2017	Conference Call	Pennsylvania	York	State Representative	Chad Weaver, Chief of Staff	Todd Burns & Laurie Spears	Steve Kratz, Dennis Walsh, Margaret Durkin	Chad Weaver, Chief of Staff for State Representative Stan Saylor
January 12, 2017	Meeting	Maryland	State	PPRP	Susan Gray	Peggy Simmons, Laurie Spears, Tim Gaul	Barry Baker (AECOM)	Susan Gray, Fred Kellex, Shawn Seaman, Steve Talson
February 13, 2017	Conference Call	Pennsylvania	Franklin	Franklin County Planning Office	Phil Tarquino, County Planning Director	Todd Burns & Laurie Spears	Steve Kratz	Phil Tarquino
February 15, 2017	Conference Call	Pennsylvania	York	York County Planning Office	Felicia Dell, County Planning Director	Todd Burns & Laurie Spears	Chris Getman	Felicia Dell
March 2, 2017	Email Correspondence	Maryland	State	PPRP	Fred Kelly	Laurie Spears	N/A	Email regarding MDE Joint Evaluation Meeting.
March 8, 2017	Meeting	Maryland	Washington	Washington County	Rob Slocum, Director of Engineering & Construction Management	Laurie Spears	Mary Urban, Barry Baker & Dave Yezuita (AECOM)	Rob Slocum
March 8, 2017	Meeting	Pennsylvania	Franklin	Franklin County Planning Office	Phil Tarquino, County Planning Director	Laurie Spears	Baker & Dave Yezuita (AECOM)	Phil Tarquino, Rochelle Barvinchack, Elizabeth Grant
March 9, 2017	Meeting	Pennsylvania	York	York County Planning Office	Felicia Dell, County Planning Director	Laurie Spears	Baker & Dave Yezuita (AECOM)	Roy Livergood, Kurt Leitholf, Joe Heffner, Wade Gobrecht
March 9, 2017	Meeting	Maryland	Harford	Harford County	Bradley Killian, Director of Planning & Zoning	Laurie Spears	Mary Urban, Barry Baker & Dave Yezuita (AECOM)	Brad Killian, Director of Harford County Planning and Zoning Shane Grimm, Chief, Long Range Planning Bill Amoss, Harford County Agricultural Land Preservation Maury Thackston, GIS Technician, Mapping and Data Services
March 10, 2017	Meeting	Maryland	State	Department of Agriculture	Carrol West	Laurie Spears & Tim Gaul	Barry Baker (AECOM)	
March 29, 2017	Meeting	Maryland	Federal/State	MDE Joint Evaluation Meeting	Jonathan Stewart	Peggy Simmons, Laurie Spears & Tim Gaul	Mary Urban, Barry Baker & Dave Yezuita	See sign-in sheet over 17 people in attendance from agencies
March 31, 2017	Email Correspondence	Maryland	State	PPRP	Fred Kelly	Laurie Spears	N/A	Email regarding open house landowner notification distance.
April 5, 2017	Meeting	Pennsylvania	Franklin	Rep. Paul Schemel	Rep. Schemel	N/A	Margaret Durkin (BRAVO)	Rep. Schemel
April 10, 2017	Meeting	Pennsylvania	State	PA Department of Agriculture	Doug Wolfgang, Farmland Preservation, Bureau Director	Laurie Spears	Barry Baker & Dave Yezuita(AECOM)	Doug Wolfgang



Independence Energy Connection Project  
Attachment 12  
Agency Coordination

DATE/TIME	COMMUNICATION TYPE	STATE	COUNTY	MUNICIPALITY / OFFICE	CONTACT	TRANSOURCE ATTENDEES	CONSULTANT ATTENDEES	STATE / COUNTY / LOCAL ATTENDEES
April 11, 2017	Meeting	Pennsylvania	Franklin	Franklin County Planning Office	Phil Tarquino, County Planning Director	Laurie Spears	Chris Getman, Abby Foster, Barry Baker (AECOM)	Phil Tarquino, Rochelle Barvinchack, Elizabeth Grant
April 11, 2017	Meeting	Pennsylvania	York	York County Planning Office	Felicia Dell, County Planning Director	Laurie Spears	Steve Kratz, Abby Foster, Barry Baker (AECOM)	Roy Livergood, Kurt Leitholf, Joe Heffner, Felicia Dell
April 19, 2017	Meeting	Pennsylvania	York	State Representative	Rep. Kristin Phillips-Hill		Dennis Walsh, Margaret Durkin, Abby Foster (Bravo)	Rep. Kristin Phillips-Hill
May 2, 2017	Email Correspondence	Maryland	State	PPRP	Fred Kelly	Laurie Spears	N/A	Email regarding May meeting coordination.
May 4, 2017	Meeting	Pennsylvania	Franklin	Southampton Township	Maria Misner, Township Planner	Laurie Spears, Todd Burns	Abby Foster, Barry Baker (AECOM)	Maria Misner (planner), Township Supervisor, Zoning Officer
May 4, 2017	Meeting	Pennsylvania	Franklin	Hamilton Township & Chambersburg Borough	Deb Hollenshead, Secretary/Treasurer and Ron Pezon, Chambersburg Electric Superintendent, Jamia Wright, Chambersburg secretary	Laurie Spears, Todd Burns	Abby Foster, Barry Baker (AECOM)	Deb Hollenshead, Secretary/Treasurer; Randall Negley, Supervisor; Mike Kessinger, Supervisor; Ron Pezon, Chambersburg Electric Superintendent; Jeff Heverley, Chambersburg Electric Assistant; Bill Rudy
May 4, 2017	Meeting	Pennsylvania	Franklin	Guilford Township	Wayne Statler	Laurie Spears, Todd Burns	Abby Foster, Barry Baker (AECOM)	Wayne Statler, Zoning and Don Clapper, Supervisor
May 4, 2017	Meeting	Pennsylvania	Franklin	Greene Township	Gina	Laurie Spears, Todd Burns	Abby Foster, Barry Baker (AECOM)	Todd Burns, Chairman; Sean Corwell, Supervisor; Dan Bachman, Zoning Officer; Greg Lambert, Township Engineer; Travis Brookens, Vice-Chair
May 4, 2017	Meeting	Pennsylvania	Franklin	Antrim Township	Silvia House	Laurie Spears, Todd Burns	Abby Foster, Barry Baker (AECOM)	Sylvia House, Zoning Officer/Code Enforcement; Fred Young, Supervisor
May 4, 2017	Meeting	Pennsylvania	Franklin	Quincy Township	Kerry Brumbaugh, Supervisor, Bob Gunder, Supervisor and Travis Schooley	Laurie Spears, Todd Burns	Abby Foster, Barry Baker (AECOM)	Kerry Brumbaugh, Supervisor, Travis Schooley
May 4, 2017	Meeting	Pennsylvania	Franklin	Washington Township	Michael Christopher, Township Manager	Laurie Spears, Todd Burns	Abby Foster, Barry Baker (AECOM)	Michael Christopher, Township Manager; Jeff Geesamen, Assistant Township Manager
May 5, 2017	Meeting	Pennsylvania	York	Hopewell & East Hopewell Township & South Penn Code Consultants Office	Keith Hunnings, Code Enforcement Officer	Laurie Spears, Todd Burns	Abby Foster, Barry Baker (AECOM)	Keith Hunnings, Code Enforcement Officer (Potentially others from Hopewell/E Hopewell township)
May 5, 2017	Meeting	Pennsylvania	York	Fawn Township	Amy	Laurie Spears, Todd Burns	Abby Foster, Barry Baker (AECOM)	Robert Birley, Supervisor and Randy Lowe, Roadmaster
May 5, 2017	Meeting	Pennsylvania	York	Chanceford Township	Tanya	Laurie Spears, Todd Burns	Abby Foster, Barry Baker (AECOM)	Kent Heffner, C Supervisor and Roadmaster, Sue Wiley, Dave Glenn, LC Supervisor; Allen Taylor; LC Supervisor; Gus Parlet, LC Supervisor
May 16, 2017	Meeting	Pennsylvania	Franklin	Federal - Letterkenny	Damian Bess		Barry Baker & Heather Brewster (AECOM)	Bill Tarman - DPW Deputy, Bill Boehmer - Energy Manager, Douglas Warnock - Chief Environmental Management Division, Damian Bess - DPW Director, Scott Yeager - DPW Planning Engineering, Kelly Barnes - DPW Planning Engineering, Walt Findley - DPW Planning Engineering, Jim Coccagna - Chief, Engineering and Planning Division
May 17, 2017	Email Correspondence	Pennsylvania	Franklin	Federal - Letterkenny	Damian Bess		Heather Brewster (AECOM)	

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DATE/TIME	COMMUNICATION TYPE	STATE	COUNTY	MUNICIPALITY / OFFICE	CONTACT	TRANSOURCE ATTENDEES	CONSULTANT ATTENDEES	STATE / COUNTY / LOCAL ATTENDEES
May 22, 2017	Meeting	Maryland	State	PPRP	Don Strebels	Laurie Spears & Tim Gaul	Barry Baker (AECOM)	Don Strebels, Ginny Rogers, Fred Kelly, Connie Faustini, Susan Gray, Kevin (?),
June 19, 2017	Email Correspondence	Maryland	State	PPRP	Fred Kelly	Laurie Spears	N/A	Email regarding information tied to bog turtles in the area of Conastone Substation.
June 22, 2017	Meeting	Maryland	Harford	Jarrettsville Norrisville Community Advisory Board		Laurie Spears	Barry Baker, Mary Urban	Kristin Kirkwood, Executive Director of Harford Land Trust and a member from the Farm Bureau
June 22, 2017	Email Correspondence	Maryland	State	PPRP	Fred Kelly	Laurie Spears	N/A	Email regarding coordination of July meeting.
July 6, 2017	Email Correspondence	Pennsylvania	Franklin	PA DCNR - Bureau of Forestry	Roy Brubaker		Heather Brewster (AECOM)	
July 13, 2017	Email Correspondence	Maryland	State	MDE	Kelly Neff	Laurie Spears	N/A	Email requesting information about wetland mitigation site in project area.
July 14, 2017	Meeting	Maryland	State	Department of Agriculture	Carol West	Laurie Spears	Barry Baker (AECOM)	
July 18, 2017	Meeting	Maryland	Washington	County Commissioners			Rick Abburzese	County Commissioners
July 25, 2017	Meeting	Maryland	State	PPRP	Don Strebels Fred Kelley	Laurie Spears Rachel Anderson	Dave Yezuita (AECOM) Rob Everard (BurnsMac)	Don Strebels, Ginny Rogers, Fred Kelly, Lori Byrne
July 6, 2017	Email Correspondence	Pennsylvania	Franklin	PA DCNR - Bureau of Forestry	Jodi Gribik		Heather Brewster (AECOM)	
July 26, 2017	Meeting	Maryland	Federal/State	MDE Joint Evaluation Meeting	Jonathan Stewart	Laurie Spears Rachel Anderson	Dave Yezuita (AECOM) Rob Everard (BurnsMac)	Amanda Sigillito, Jonathan Stewart, April Field, Andy May, David Walbeck, Lou Parnes, Denise Kechner, Greg Golden, Don Strebels, Dixie Henry, Joseph DaVia, Steve Elinsky, Trevor Clark, Tamene Dilnesahr
August 8, 2017	Meeting at open house	Pennsylvania	Franklin	Franklin County Planning Commission, Franklin	Katie Hess	Laurie Spears, Barry Baker	Abby Foster (Bravo)	Katie Hess, Elizabeth Grant, Janet Pollard
August 9, 2017	Meeting	Pennsylvania	York	Planning Commission	Felicia Dell, County Planning Director	Laurie Spears, Todd Burns, Rachel	Barry Baker (AECOM) Abby Foster (Bravo)	Felicia Dell, Wade Grobrecht, Roy Livergood. Commssioners: Kevin Clark, Cheryl Rascoe, Eric Bortner, Thomas Earp, Matthew Chronister, Brian Brenneman, Sean Kenny, Mary Coble, Walter Kuhl
August 16, 2017	Call	Pennsylvania	Franklin	Quincy Township	Kerry Brumbaugh and Travis Schooley		Abby Foster (Bravo)	Travis Schooley and Kerry Brumbaugh
August 17, 2017	Meeting	Pennsylvania	Franklin	State Representative Kauffman			Abby Foster (Bravo)	Rep. Kauffman
August 17, 2017	Meeting	Pennsylvania	Franklin	Congressman Shuster	Nancy Bull, Deputy District Director		Abby Foster (Bravo)	Rep. Rob Kaufmann
August 17, 2017	Meeting	Pennsylvania	Franklin	Franklin County Chamber of Commerce	Doug Harmon, Membership Director		Abby Foster (Bravo)	Nancy Bull, Deputy District Director
August 17, 2017	Call	Pennsylvania	York	Antrim Township	Brad Antrim		Abby Foster (Bravo)	Brad Graham, Township Administrator
August 21, 2017	Call	Pennsylvania	York	York County Planning Office	Roy Livergood		Abby Foster (Bravo)	Roy Livergood
August 23, 2017	Email Correspondence	Maryland	Washington Harford	Maryalnd Dept of Agriculture	Carol West		Heather Brewster (AECOM)	
August 30, 2017	Call	Pennsylvania	Franklin	State Senator Eichelberger	Kathleen Gunnell, Legislative Aide		Abby Foster (Bravo)	Kathleen Gunnell, Legislative Aide
August 31, 2017	Call	Pennsylvania	York	State Senator Wagner	Leisa Miller, Constituent Relations		Abby Foster (Bravo)	Leisa Miller, Constituent Relations
August 31, 2017	Email Correspondence	Pennsylvania	Franklin York	USDA NRCS - PA	Hathaway Jones		Heather Brewster (AECOM)	



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DATE/TIME	COMMUNICATION TYPE	STATE	COUNTY	MUNICIPALITY / OFFICE	CONTACT	TRANSOURCE ATTENDEES	CONSULTANT ATTENDEES	STATE / COUNTY / LOCAL ATTENDEES
September 6, 2017	Email Correspondence	Maryland	Harford Washington	USDA NRCS - MD	Tiffany Davis		Heather Brewster (AECOM)	
Septmeber 7, 2017	Call	Pennsylvania	Franklin	State Senator Alloway	Stacy Gregson, Field Representative		Abby Foster (Bravo)	Stacy Gregson, Field Representative
September 11, 2017	Meeting	Pennsylvania	York	State Representative Phillips-Hill	Rep. Phillips-Hill		Abby Foster, Dennis Walsh, Margaret Durkin (Bravo)	State Representative Phillips-Hill
September 14, 2017	Call	Pennsylvania	York	Fawn Township	Bob Birley		Abby Foster (Bravo)	Bob Birley
September 20, 2017	Meeting	Pennsylvania	York	State Representative Saylor	Chad Weaver, Chief of Staff and Jeffrey Clukey, Budget Analyst		Abby Foster, Dennis Walsh, Margaret Durkin (Bravo)	Chad Weaver, Chief of Staff and Jeffrey Clukey, Budget Analyst
September 20, 2017	Call	Pennsylvania	Franklin	Franklin County Planning Commission	Phil Tarquino, County Planning Director		Abby Foster (Bravo)	Phil Tarquino
September 20, 2017	Meeting	Pennsylvania	Franklin	State Representative Alloway	Chad Reichard		Abby Foster (Bravo)	Chad Reichard
September 20, 2017	Meeting	Pennsylvania	State	PADCNR Bureau of Forestry - Michaux State Forest	Chris Plank	Laurie Spears	Barry Baker (AECOM) Heather Brewster (AECOM)	Chris Plank, Dave Mong, Roy Brubaker, Rebecca Bowen
September 20, 2017	Email Correspondence	Pennsylvania	Frankliin	PADCNR Bureau of Forestry - Michaux State Forest	Chris Plank		Heather Brewster (AECOM)	
September 21, 2017	Open House	Maryland	Washington	Delegate Wivell			Abby Foster (Bravo)	Delegate Wivell (FE Open House)
September 25, 2017	Meeting	Pennsylvania	Franklin	State Represetative Paul Schemel	Representative Schemel		Abby Foster, Dennis Walsh, Margaret Durkin (Bravo)	
September 25, 2017	Call	Pennsylvania	Pennsylvania	US Senator Casey	Brooke Souder, Constituent Services		Abby Foster (Bravo)	Brooke Souder
Septemeber 28, 2017	Call	Maryland	State	Senator Jennings/Delegate Szeliga		N/A	Rick Abbruzzese (KOFA) Mary Urban (KOFA)	
September 29, 2017	Meeting	Maryland	State	PPRP	Don Strebel Fred Kelley	Laurie Spears	Barry Baker (AECOM) Dave Yezuita (AECOM)	Don Strebel, Ginny Rogers, Fred Kelly, Lori Byrne
October 17, 2017	Call	Pennsylvania	Franklin	Senator Alloway	Jeremy Shoemaker		Abby Foster (Bravo)	Jeremy Shoemaker, COS
October 24, 2017	Meeting Field Reivew of East Proposed Route	Maryland	State	PPRP	Don Strebel Fred Kelley		Barry Baker (AECOM) Dave Yezuita (AECOM) Rob Everard (BurnsMac)	
November 1, 2017	Letter	Pennsylvania	State	Congress of the United States - House of Representative	Congressman Scott Perry	N/A	N/A	Letter from Congressman Perry regarding the Project.
November 8, 2017	Letter	Pennsylvania	State	USDA NRCS	Hathaway Jones	N/A	N/A	Consultation request for review of West and East proposed routes related to agriculture easements.
November 29, 2017	Letter	Pennsylvania	State	PA Dept Agricultural	Russell Redding	N/A	N/A	Letter from PA Dept Agri regarding the Project and potential impacts to farmland.

**ATTACHMENT 13**

**PUBLIC NOTICE REQUIREMENTS**



**ATTACHMENT 13  
PUBLIC NOTICE REQUIREMENTS**

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Pursuant to Subchapters G and I of the Commission regulations, 52 Pa. Code §§ 57.71-57.77, 57.91-57.93, and the Commission’s Interim Siting Guidelines, 52 Pa. Code §§ 69.3101-69.3107, Transource Pennsylvania, LLC has provided packets of information to fully notify landowners who will be subject to the rights-of-way and easements for the proposed Project. These packets of information include the following:

- A Cover Letter from Transource Pennsylvania, LLC.
- Notification to Contact the Commission or Office of Consumer Advocate for Improper Land Agent Practice required by 52 Pa. Code § 69.3102(a)(2).
- Notification of Right-of-Way Maintenance Practices required by 52 Pa. Code § 57.91
- A Disclosure of Eminent Domain Power of Electric Utilities required by 52 Pa. Code § 57.91
- Transource Pennsylvania, LLC Internal Practices for Dealing with the Public on Power Line Project required by 52 Pa. Code § 69.3102
- A Request for Survey Permission.

Appendix 13.1 is a representative information packet that was sent to all landowners that will be subject to the rights-of-way and easements for the Project. In addition, copies of the Application and supporting Attachments or Notice of Filing are being served in accordance with the provisions of Section 57.74 of the Commission’s regulations, 52 Pa. Code 57.74.

**APPENDIX 13.1**

**Information Packet Sent to All Owners of Land within Right-of-Way**





October 12, 2017

<<Name>>

<<Address 1>>

<<Address 2>>

Re: Pennsylvania Public Utility Commission Required 15-day Landowner Notice

Dear Landowner,

You are receiving this letter because records indicate you own property along an overhead electric transmission line route being proposed for the Independence Energy Connection Project (IEC).

The project will include two new overhead double-circuit 230 kilovolt (kV) electric transmission lines totaling approximately 45 miles located in Pennsylvania and Maryland. The lines are identified as Independence Energy Connection – West (also known as the Rice-Ringgold 230 kV transmission line) located in Franklin County and Independence Energy Connection – East (also known as the Furnace Run-Conastone 230 kV transmission line) located in York County.

The project developer, Transource Pennsylvania, LLC (Transource PA), is currently seeking public utility status in your state. The Pennsylvania Public Utility Commission (PAPUC) requires public utilities to notify you about plans to acquire an easement on your property for location of, or for access to, a proposed transmission line. The project is part of PJM Interconnection's \$320 million market-efficiency upgrade. PJM identified the electrical problem and is the regional transmission organization responsible for managing the high-voltage electric grid for 13 states, including Pennsylvania and Maryland.

The PAPUC's regulations require a 15-day landowner notification prior to the start of the right-of-way acquisition process. In the coming weeks, a right-of-way agent from Western Land Services, representing Transource PA, will be contacting you about acquiring an approximately 130-foot wide easement needed for the safe construction, operation and maintenance of the transmission line.

Since you are a landowner along a proposed line route, please review the enclosed required notices with information about Land Agent Practices, Right-of-Way Maintenance Practices, and Eminent Domain Power. I'm also enclosing a copy of the company's Internal Practices for Dealing with the Public on Power Line Projects.

In order for Transource PA to design these transmission lines, various surveys and tests need to be performed. As such, Transource PA is requesting permission to access your property for purposes of completing the surveys and tests needed. Please review, complete and sign the attached Access Permit – Survey Permission form, and return in the enclosed self-addressed envelope.

If you have any questions, don't hesitate to call or email me.

Sincerely,

Patrick Murphy, SR/WA, Land Acquisition Manager

Email: [landownerinfo@transourceenergyprojects.com](mailto:landownerinfo@transourceenergyprojects.com)

Phone: 717-402-1199 (local) & 844-233-1545 (toll free)

Mailing Address: PO box 463, Chambersburg, PA 17201

Web site: [transourceenergyprojects.com/IndependenceEnergyConnection](http://transourceenergyprojects.com/IndependenceEnergyConnection)

## NOTICE

### RIGHT OF WAY MAINTENANCE PRACTICES

The Pennsylvania Public Utility Commission requires that Transource Pennsylvania, LLC ("Transource PA") give you the following information on the RIGHT OF WAY MAINTENANCE PRACTICES for the two new overhead double-circuit 230 kV interstate transmission lines to be constructed in Franklin and York Counties, Pennsylvania as part of the Independence Energy Connection Project:

The methods currently used by Transource PA are set forth in (*American Electric Power's Transmission Vegetation Management Program (TVMP) TVMD-001*), which will be made available to you for your inspection upon request. If you wish further information concerning right-of-way maintenance methods, you may contact the person named in the cover letter. You may discuss with this person, either before or during negotiation of the right-of-way agreement, these methods and any other questions you may have about right-of-way maintenance.

Once Transource PA has constructed an electric transmission line on a right-of-way across your land, it must maintain the right-of-way free of tall-growing trees and brush which might impair the reliability of electric service, the safety of the line, and access to the line or its towers. Transource PA or its contractors may remove and control tall-growing trees and brush by several methods: handcutting of trees, limbs, and brush; mechanical cutting with chain saws or motorized cutting machines; and application of herbicides, either from the ground or from a helicopter. Transource PA must confine its maintenance activities to the approved right-of-way across your land, except where tall-growing trees or brush or their root systems grow into the right-of-way from adjoining land and constitute a threat to the electric transmission line and its structures.

If you believe that the maintenance method(s) used by Transource PA would raise problems with your use of your land adjacent to the right-of-way, it is your responsibility as the landowner to bring this to the attention of Transource PA before you sign the right-of-way agreement.

Transource PA has the responsibility to maintain its rights-of-way, and regular maintenance must occur. Although you as the landowner cannot determine whether or not maintenance will occur, your right-of-way agreement may specify certain conditions on the performance of the maintenance program which are important to you. These conditions can be part of the negotiations between you and Transource PA for your land, since a right-of-way agreement is a legal contract between the landowner and Transource PA. It is important for you to also understand that the maintenance methods used by Transource PA may change over time as the costs of maintenance or the methods of performing maintenance change. You may want to specify in your right-of-way agreement that Transource PA inform you of changes in its maintenance methods or in the maintenance schedule for your land.



**NOTICE**  
**EMINENT DOMAIN POWER**

The Pennsylvania Public Utility Commission requires that Transource Pennsylvania, LLC ("Transource PA") give you the following information:

Transource PA is presently planning to construct two new overhead double-circuit 230 kV interstate transmission lines, the Rice-Ringgold 230 kV Transmission Line and the Furnace Run-Conastone 230 kV Transmission Line, as part of the Independence Energy Connection Project. Upon receipt of all necessary approvals, the new Rice-Ringgold 230 kV Transmission Line will be sited to extend approximately 29 miles, connecting the existing Ringgold Substation located near Smithsburg, Washington County, Maryland, and the new Rice Substation to be located in Franklin County, Pennsylvania. Upon receipt of all necessary approvals, the new Furnace Run-Conastone 230 kV Transmission Line will be sited to extend approximately 16 miles, connecting the existing Conastone Substation located near Norrisville, Hartford County, Maryland, and the new Furnace Run Substation to be located in York County, Pennsylvania.

Since a field survey and detailed engineering has not been completed, the physical dimensions of the proposed new transmission lines and the type and height of supporting structures to be used cannot be precisely determined at this time. However, based on past experience, it is expected that the structures will normally be approximately 135 feet in height. There may be isolated physical conditions that would require either higher or lower structures than those mentioned. At this time, we do not know the number of structures to be placed on any properties. Transource PA's current 230 kV standard right-of-way width is 130 feet.

Since the route for one of the two transmission lines presently under consideration could affect your property, a representative of Transource PA will contact you in the near future to discuss Transource PA's plans as they may affect your property. In order to better prepare you for these discussions and to avoid possible misunderstandings, we want to take this opportunity to inform you of your legal rights and the legal rights and duties of Transource PA with regard to this project. You have the right to have legal counsel represent you in these negotiations. You do not have to sign any agreement without the advice of counsel. If you do not know an attorney you may contact your local bar association.

***MUST YOU ACCEPT AN OFFER MADE BY TRANSOURCE PA FOR YOUR PROPERTY?***

No. You may refuse to accept it. However, the Transource PA will have the power to take property by eminent domain, subject to the approval of the Public Utility Commission, for the construction of transmission lines if the Transource PA is unable to negotiate an agreement to buy a right-of-way. If your property is condemned, you must be paid "just compensation." "Just compensation" has been defined by the courts in Pennsylvania as the difference between the fair market value of your property



### **Internal Practices for Dealing with the Public on Power Line Projects**

Our success is built on our commitment to respecting the people and the environment in which we operate.

- Proactive and early engagement with potential route landowners and stakeholders
- Transparent proceedings throughout the project timeline
- Being available and providing various platforms for open dialogue with the community
- Maintaining a positive working relationship with all regulatory and environmental entities for guideline adherence throughout the planning and development phases

By respecting the people and the environment in which we operate, Transource PA is committed to listening to the communities and working with the landowners before finalizing project routes. With the combined experience of more than a century of responsible infrastructure development, Transource uses construction methods and practices to strike a balance between meeting energy needs and minimizing disturbance to communities and the environment.

All communications and interactions with property owners and occupants of property by all right-of-way agents and subcontractor employees representing Transource PA in the negotiation of right-of-way and the performance of surveying, environmental assessments and other activities for the Project must be based in factual information, made in good faith and adhere to the following standards:

- Do not make false or misleading statements. If you do not know the answer to a question, do not guess. Tell the property owner that you will investigate the question and provide a timely answer.
- Follow-up in a timely manner on all commitments to provide additional information.
- Do not misrepresent any fact.
- Do not send written communications (to a landowner or to Project personnel) suggesting an agreement has been reached if it has not.

All communications and interactions with property owners and occupants of property must be respectful and reflect fair dealing practices, including:

- Transource PA representatives, contractors, and agents promptly must identify themselves by showing their employment photo I.D. badge and have it displayed at all times while working on the project.
- Transource PA representatives, contractors, and agents contacting a property owner by telephone, promptly identify themselves as representing Transource.
- Do not engage in behavior that may be considered harassing, coercive, manipulative, intimidating or causing undue pressure.
- All communications by a property owner, whether in person, by telephone or in writing, in which the property owner indicates that he or she does not want to negotiate or does not want to give permission for surveying or other work on his or her property must be respected and politely accepted without argument. Unless specifically authorized by the Land Acquisition Manager, do not contact the property owner again regarding negotiations or requests for permission.





**ACCESS PERMIT - SURVEY PERMISSION  
INDEPENDENCE ENERGY CONNECTION PROJECT**

I/We hereby give Transource Pennsylvania, LLC, a Delaware limited liability company ("Transource PA"), its affiliates, agents, employees, contractors and to the appropriate federal, state and local agencies, archeologists, biologists, and/or environmental scientists, permission to enter upon my/our premises to conduct civil, environmental, cultural resource surveys, soundings, drillings, appraisals, examination and all other surveys and tests necessary (including the right to drill holes for testing soil and bedrock) for the proposed electric transmission line route.

Transource PA has the rights to trim or cut vegetation necessary for survey purposes and agrees to pay the prevailing market price for standing timber for any marketable trees cut down in the course of such survey. Transource PA will be responsible for any damage done to such property and further agrees to indemnify against all liability to third persons caused by negligent acts of Transource PA's employees or representatives while on the property.

**Property Location:** \_\_\_\_\_

**Dated:** \_\_\_\_\_, \_\_\_\_\_, 2017

**Owner of Record:**

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Print/Type Name)

**Mailing Address:** \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
(Address) (City) (State) (ZIP)

\_\_\_\_\_  
(Preferred Contact Number)

\_\_\_\_\_  
(Alt. Number/Method of Contact)

**COMMENTS:**

**For Office Use Only:**

Project Parcel ID:	Line Name:
County:	TLN #:
Property Tax ID:	