
Garrett P. Lent
Associate

glent@postschell.com
717-612-6032 Direct
717-731-1979 Direct Fax
File #: 211975

May 15, 2025

VIA ELECTRONIC FILING

Matthew Homsher, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor North
P.O. Box 3265
Harrisburg, PA 17105-3265

**Re: Letter of Notification Of PPL Electric Utilities Corporation, Filed Pursuant To 52 Pa. Code Chapter 57 Subchapter G, For Approval To Rebuild The Existing Double-Circuit Montour-Saegers Transmission Lines Connecting The Montour 230-69 kV Substation Located In Montour County, And The Saegers 230-69 kV Substation Located In Lycoming County, Pennsylvania
Docket No. A-2025-_____**

Dear Secretary Homsher:

Attached for filing is the Letter of Notification of PPL Electric Utilities Corporation the above-referenced proceeding. As indicated on the Certificate of Service, copies of the Letter of Notification are being served by certified mail, return receipt requested, upon the involved governmental agencies, municipalities and property owners. Construction of the Project will commence upon the Pennsylvania Public Utility Commission's approval of this filing, with an estimated construction start date of August 1, 2025, with an anticipated in-service date of February 2027.

If you have any questions concerning this matter, please contact me at the address or telephone numbers provided above.

The associated \$350.00 filing fee has been paid by Post & Schell, P.C. as of the time of filing.

Matthew Homsher, Secretary
May 15, 2025
Page 2

Respectfully submitted,



Garrett P. Lent

GPL/dmc
Attachment

cc: Jordan Van Order (*via email; w/attachment*)
Debra Backer (*via email; w/attachment*)
Certificate of Service

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

VIA CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Pennsylvania Bureau of Investigation and Enforcement
Pennsylvania Public Utility Commission
Commonwealth Keystone Building 400 North Street
2nd Floor, Room-N201
Harrisburg, Pennsylvania 17120
Attn: Alison Kaster

Pennsylvania Department of Environmental Protection
400 Market Street
10th Floor Rachel Carson State Office Building
Harrisburg, Pennsylvania 17101
Attn: Regional Permit Coordination Office

Pennsylvania Department of Transportation
Commonwealth Keystone Building
400 North Street, Fifth Floor
Harrisburg, Pennsylvania 17120
Attn: Jeffrey Spotts, Chief Counsel

Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, Second Floor 400
North Street Harrisburg, Pennsylvania 17120-0053
Attn: Ms. Emma Diehl, Division Manager

Pennsylvania Department of Conservation and Natural Resources
Rachel Carson State Office Building
400 Market Street Harrisburg, Pennsylvania 17105-8767
Attn: Rebecca Bowen, Ecological Services Section Chief

Pennsylvania Game Commission
2001 Elmerton Avenue
Harrisburg, Pennsylvania 17110-9797
Attn: David J. Gustafson, Director, Bureau of Wildlife Habitat Management

Pennsylvania Fish and Boat Commission
Center Region Office
595 East Rolling Ridge Drive
Bellefonte, Pennsylvania 16823-9620
Attn: Christopher A. Urban, Chief, Natural Diversity Section

Pennsylvania Office of Consumer Advocate
555 Walnut Street 5th Floor Forum Place
Harrisburg, Pennsylvania 17101-1923
Attn: Darryl Lawrence, Acting Consumer Advocate

Pennsylvania Office of Small Business Advocate
555 Walnut Street
1st Floor Forum Place
Harrisburg, Pennsylvania 17101
Attn: NazAarah Sabree, Small Business Advocate

U.S. Army Corps of Engineers
Baltimore District Corporate
Communication Office
2 Hopkins Plaza
Baltimore, Maryland 21201
Attn: Planning Division

U.S. Fish and Wildlife Service
Pennsylvania Field Office
110 Radnor Road, Suite 101
State College, Pennsylvania 16801
Attn: Lesa Lindsay

Lycoming County Conservation District
542 County Farm Road, Suite 202
Montoursville, PA 17754
Attn: Matt Long, District Manager

Lycoming County Planning & Community
Development
48 West Third Street
Williamsport, PA 17701
Attn: Shannon L. Rossman, Director

Lycoming County Commissioners
48 West Third Street
Williamsport, PA 17701
Attn: Scott L. Metzger, Chairman

Montour County Conservation District
1210 Bloom Road
Danville, PA 17821
Attn: Sean Levan, District Manager

Montour County Planning Commission
435 East Front Street
Danville, PA 17821
Attn: Gregory Molter, Director

Montour County Commissioners
435 East Front Street
Danville, PA 17821
Attn: Rebecca Dressler, Chair

Northumberland County Conservation
District
228 Houser Road
Sunbury, PA 17801
Attn: Nathan Brophy, District Manager

Northumberland County Planning
399 Stadium Drive
Sunbury, PA 17801
Attn: Justin Skavery, Planning Coordinator

Northumberland County Commissioners
399 Stadium Drive
Sunbury, PA 17801
Attn: Samuel J. Schiccatano

Anthony Township Supervisors
1361 White Hall Road
Turbotville, PA 17772
Attn: Dennis C. Sheatler, Chair Supervisor

Clinton Township Supervisors
2106 Rt. 54 Hwy
Montgomery, PA 17752
Attn: Lanny Wertz, Chair Supervisor

Clinton Township Planning Commission
2106 Rt. 54 Hwy
Montgomery, PA 17752
Attn: Chip Frazier, Secretary

Derry Township
21 Shed Road
Danville, PA 17821
Attn: Natalie Nutt, Chair

Lewis Township Supervisors
1428 Rovendale Drive
Watsonstown, PA 17777
Attn: Ricky Dyer, Chairman

Lewis Township Planning Commission
1428 Rovendale Drive
Watsonstown, PA 17777
Attn: Charles Axtman, Chairman

Muncy Creek Township Supervisors
575 PA-442
Muncy, PA 17756
Attn: Gary Phillips, Chairman

Muncy Creek Planning Commission
575 PA-442
Muncy, PA 17756
Attn: Mark Kreisher, Chairman

Agler H Richard & Virginia S
10727 Footprint Ln
Port Richey, FL 34668

Beiler John S & Malinda
150 Arrowhead Rd
Danville, Pa 17821

Bishop Irene Revocable Trust
Po Box 38
Muncy, Pa 17756

Bishop James H
1283 Reynolds Hill Rd
Muncy, Pa 17756

Bishop James H & Gail L
1283 Reynolds Hill Rd
Muncy, Pa 17756

Blakeney Justin D & Brenda K
1140 Wertman School Rd
Muncy, Pa 17756

Blaser Freddie L & Donna M
1610 Showers Rd
Muncy, Pa 17756

Borek Adam W & Harer Rachel L
186 Fisher Ln
Muncy, Pa 17756

Bruckhart Loren R & Dana M
19 Hickory Rd
Turbotville, Pa 17772

Cero Michael A & Lorie M
Po Box 81
Washingtonville, Pa 17884

Chamberlain Irma & Eisenhauer James
1151 Showers Rd
Muncy, Pa 17756

Cotner Franklin E
252 Strick Rd
Milton, Pa 17847

Cummings Kevin J & Tara L
30 Dieffenbach Rd
Danville, Pa 17821

Cumulus Real Estate Holdings LLC
C/O Talen Energy Supply LLC
2929 Allen Pkwy 22nd Floor
Houston, Tx 77019

Current Owner
233 Gearhart Rd
Turbotville, Pa 17772

Dunlap Keith E & Luann W
11 Cherry Tree Ln
Mifflinburg, Pa 17844

Eisenhauer James
1151 Showers Rd
Muncy, Pa 17756

Everitt Brandon M & Hoffman Jeffrey D
1011 Montour Rd
Montoursville, Pa 17754

Everitt Michael D & Teresa M
255 Prokop Ln
Muncy, Pa 17756

Forman Farms
2837 Whitmoyer Rd
Watsonstown, Pa 17777

Frahn Diane M
242 Hill Rd
Muncy, Pa 17756

Guisewhite Gregor C
709 Musser Ln
Muncy, Pa 17756

Guisewhite Paul E
691 Musser Ln
Muncy, Pa 17756

Hagerman William J
31 Gearhart Rd
Turbotville, Pa 17772

Hall Rhonda
Po Box 223
Washingtonville, Pa 17884

Hall Walter W
71 Honey Ln
Danville, Pa 17821

Hall Walter W & Suzann M
56 Clover Ln
Danville, Pa 17821

Harrison Rick D & Traci J
256 Northbend Rd
Muncy, Pa 17756

Hauck Leslie W & McCarty Janet M
9520 Susquehanna Trl
Muncy, Pa 17756

Hertzler Amos R & Emma E
79 Arrowhead Rd
Danville, Pa 17821

Hiller Todd S & Peggy S
86 Hiller Ln
Allenwood, Pa 17810

Hostetler Ben L & Rachel B
184 Hickory Rd
Turbotville, Pa 17772

Hostetler John H & Mary D
405 Huffman Ln
Muncy, Pa 17756

Hostetter David J & Ada D
1623 White Hall Rd
Turbotville, Pa 17772

Jarrett Roger D & Denise L
415 Sterling Dr
Muncy, Pa 17756

Jones Curtis N & Eberle Kara D
23 Clover Ln
Danville, Pa 17821

Kahler Family Grantor Trust
800 Susquehanna Trail Rd
Muncy, Pa 17756

Kilgus Robert L & Susan M
421 Murray Rd
Muncy, Pa 17756

Lapp Frederick C & Vivianne T
10 Murray Rd
Muncy, Pa 17756

Marr John C
2663 Continental Blvd
Turbotville, Pa 17772

McCarty IRR Res Inc
9520 Susquehanna Trl
Muncy, Pa 17756

McCarty Max M
1890 Murray Rd
Muncy, Pa 17756

Merrill Michael R & Shirley
455 Hill Rd
Muncy, Pa 17756

Mounts Timothy W & Kasie L
126 Huffman Ln
Muncy, Pa 17756

Moyer Daniel L & Shirlene R
2706 Continental Blvd
Turbotville, Pa 17772

Moyer Farms
21 Moyer Rd
Turbotville, Pa 17772

Moyer Philip Timothy & Daniel
242 Waltimyer Rd
Turbotville, Pa 17772

Muncy Borough Municipal Auth
14 N Washington St
Muncy, Pa 17756

Muncy Historical Society & Museum
40 N Main St
Muncy, Pa 17756

Peachey Ben E & Sadie R
138 Gearhart Rd
Turbotville, Pa 17772

Powerview Farms Inc
368 Fairview Rd
Danville, Pa 17821

PPL Generation LLC
600 Hamilton St, Unit 600
Allentown, Pa 18101

PPL Montour LLC
C/O Talen Energy Supply LLC
2929 Allen Pkwy, 22nd Floor
Houston, Tx 77019

Rishel Bradley D & Melinda A
633 White Hall Rd
Danville, Pa 17821

Rishel William E
124 Huffman Ln
Muncy, Pa 17756

Rovenolt Farm Rental Property LLC
4810 State Route 642
Milton, Pa 17847

Rovenolt Virginia E
800 Harrison Rd
Muncy, Pa 17756

Rowe Judith
845 Susquehanna Trail Rd
Muncy, Pa 17756

Shrawder Nathaniel C & Brubaker Elise C
204 N Front St
Sunbury, Pa 17801

Snyder Luke C & Bridgette R
3270 Hockley Hill Rd
Muncy, Pa 17756

State Industrial Home
Rr 1
Montgomery, Pa 17752

Stoltzfus Abner S & Katie S
140 Gearhart Rd
Turbotville, Pa 17772

Stoltzfus Dan Z & Nannie M
239 Gearhart Rd
Turbotville, Pa 17772

Stoltzfus Reuben S & Sarah B
22 Betz Rd
Turbotville, Pa 17772

Swisher Linda L & Derstine Samuel L
620 Pepper St
Muncy, Pa 17756

Taylor Ryan M & Lenig Joy L
Po Box 426
Turbotville, Pa 17772

Vargo Troy J & Korena K
224 Gearhart Rd
Turbotville, Pa 17772

Watson Lynn E & Susanne J
2720 Whitmoyer Rd
Watsontown, Pa 17777

Watts Randall & Elizabeth
192 Gearhart Rd
Turbotville, Pa 17772

White Jessie
114 Gearhart Rd
Turbotville, Pa 17772

Dated: May 15, 2025



Garrett P. Lent

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Letter Of Notification Of PPL Electric :
Utilities Corporation, Filed Pursuant To 52 :
Pa. Code Chapter 57 Subchapter G, For : Docket No. A-2025-_____
Approval To Rebuild The Existing :
Double-Circuit Montour-Saegers :
Transmission Lines Connecting The :
Montour 230-69 kV Substation Located In :
Montour County, And The Saegers 230-69 :
kV Substation Located In Lycoming :
County, Pennsylvania :

LETTER OF NOTIFICATION

TO THE PENNSYLVANIA PUBLIC UTILITY COMMISSION:

PPL Electric Utilities Corporation (“PPL Electric”) hereby files this Letter of Notification pursuant to Section 57.72(d)(1)(i) of the Pennsylvania Public Utility Commission’s (“Commission”) regulations, 52 Pa. Code § 57.72(d)(1)(i), to rebuild approximately 12.7 miles of the existing double-circuit Montour-Saegers 230 kilovolt (“kV”) Transmission Lines connecting the Montour 230-69 kV Substation (“Montour Substation”) located in Montour County and the Saegers 230-69 kV Substation (“Saegers Substation”) located in Lycoming County, Pennsylvania (“Montour-Saegers 230 kV Rebuild Project” or the “Project”).¹

The proposed Project is required to address asset health and reliability concerns related to the deteriorated condition of the COR-TEN® lattice towers on the Montour-Saegers 230 kV Transmission Lines. The Project contemplates the replacement and rebuilding of these existing COR-TEN® lattice towers to address structural reliability concerns associated with the experience

¹ For a complete list of municipalities and counties crossed by the Project, please refer to the Letter of Notification, Attachment 5.

of “pack-out rust”² in many of the joints of the subject lattice towers. The experience of pack-out rust in the joints of the subject towers has accelerated asset health concerns and accelerated the rate at which the subject towers were expected to reach end-of-life. In addition, the Project is also required to comply with the Consolidated Transmission Owners Agreement (“TOA”) Rate Schedule - FERC No. 42 (FERC ER10-2713-000), which requires transmission systems to “[b]e kept in place and maintained in good operating condition in accordance with Good Utility Practice and principles, guidelines and standards of the applicable Regional Reliability Council and NERC.”

This project will be constructed in Anthony, Clinton, Derry, Lewis, and Muncy Creek Townships, which are either in Lycoming, Montour, or Northumberland Counties, Pennsylvania, respectively. PPL Electric has provided information regarding this Project to all identified political subdivisions, and none of them have objected to the Project. Construction of the Project will commence upon the Commission’s approval of this filing. PPL Electric is seeking the Commission’s decision by no later than the public meeting currently scheduled for July 24, 2025, so that construction may commence August 1, 2025, to support an in-service date of February 2027.

In support thereof, PPL Electric states as follows:

² As explained in Attachment 1 – Necessity Statement, “pack-out rust” is a form of localized corrosion typical of steel components that develop a crevice into an open atmospheric environment, which results in rust packing between conjoined steel components. As described further herein, pack-out rust accelerates the deterioration of asset health and can result in shearing off bolts, loss of structural integrity, members disconnecting from lattice towers, and tower failure.

I. INTRODUCTION

1. This Letter of Notification is filed by PPL Electric, a public utility that provides electric distribution, transmission, and provider of last resort services in Pennsylvania subject to the regulatory jurisdiction of the Commission.

2. PPL Electric's address is as follows:

PPL Electric Utilities Corporation
Two North Ninth Street
Allentown, Pennsylvania 18101

3. PPL Electric's attorneys are:

Michael J. Shafer (ID # 205681)
PPL Services Corporation
645 Hamilton Street, Suite 700
Allentown, PA 18104
Phone: 610-774-2599
Fax: 610-774-4102
E-mail: mjshafer@pplweb.com

David B. MacGregor (I.D. # 28804)
Garrett P. Lent (I.D. # 321566)
Post & Schell, P.C.
17 North Second Street
12th Floor
Harrisburg, PA 17101-1601
Voice: 717-731-1970
Fax: 717-731-1985
E-mail: dmacgregor@postschell.com
E-mail: glent@postschell.com

Alice A. Wade (PA ID # 335228)
Post & Schell, P.C.
One Oxford Centre
301 Grant Street, Suite 3010
Pittsburgh, PA 15219
Phone: 717-612-6052
Fax: 717-731-1985
E-mail: alice.wade@postschell.com

PPL Electric's attorneys are authorized to receive all notices and communications regarding this Letter of Notification.

4. PPL Electric furnishes electric service to approximately 1.4 million customers throughout its certificated service territory, which includes all or portions of twenty-nine counties and encompasses approximately 10,000 square miles in eastern and central Pennsylvania. PPL

Electric is a “public utility” and an “electric distribution company” as defined in Sections 102 and 2803 of the Pennsylvania Public Utility Code, 66 Pa.C.S. §§ 102, 2803.

5. PPL Electric owns approximately 5,000 miles of transmission lines operating at 69 kilovolts (“kV”) or higher, approximately 375 substations with a capacity of 10 megavolt amperes (“MVA”) or more, and approximately 43,000 miles of distribution lines operating at less than 69 kV.

6. This Letter of Notification includes the following accompanying Attachments:

- Attachment 1 Necessity Statement.
- Attachment 2 Engineering Description.
- Attachment 3 Description of Project Area.
- Attachment 4 PPL Electric Design Criteria and Safety Practices.
- Attachment 5 Landowners and Agencies List.

7. This Letter of Notification and accompanying Attachments, which are incorporated herein by reference, contain all the information required by 52 Pa. Code § 57.72(d)(4).

II. THE PROJECT

A. NEED FOR THE PROJECT

8. PPL Electric has a responsibility to provide transmission assets and maintain them in a manner that is safe, reliable, and resilient to meet the needs of the electric system and the service expectations of its customers. To meet this duty, PPL Electric applies its transmission asset management planning procedure, which includes system performance and condition assessments. These performance and condition assessments identify system needs and prioritize projects based on several variables such as equipment age, condition, maintenance schedule, and

impact on system reliability and performance to ensure a reliable electric grid and reasonable service to its customers.

9. As explained in greater detail below and in Attachment 1 – Necessity Statement, this Project is necessary to resolve significant asset health condition concerns across the existing double-circuit Montour-Saegers Transmission Lines connecting the Montour Substation and the Saegers Substation associated with the presence of pack-out rust in the existing COR-TEN® steel lattice towers and thereby resolve service reliability and safety risks associated with the potential failure of these structures.

10. As explained in greater detail below and in Attachment 1 – Necessity Statement, as the topic of severe weather patterns becomes increasingly relevant, there is a need to consider how changing weather patterns will impact the reliability of the existing COR-TEN® lattice structures. Over the last 20 years, PPL Electric has seen a trend of increasing storms per year within the PPL Electric service territory. With each storm comes more exposure to extreme precipitation and wind events. If a tower is structurally compromised due to COR-TEN® pack-out rust and section loss, that wind event creates an increased risk of structural failure. With projected increases of more frequent and intense heat waves over the next century in the Northeast, the occurrence of more severe wind and precipitation events is expected to rise as well. This is evident in the storms associated with Hurricane Ida that hit the Northeast in 2021 and remnants of tropical cyclone Debby, which hit the Northeast in 2024, as storms of this strength would have been rare decades ago. Both storms resulted in widespread, sustained power outages throughout the region. Due to drastic weather pattern changes, it is imperative to re-evaluate the COR-TEN® structures in the safest and most reliable way to protect against the pack-out rust issue in the joints of the structures and guard the transmission system from catastrophic failures of COR-TEN® towers.

11. Importantly, the existing double-circuit Montour-Saegers 230 kV Transmission Lines are presently in use and planned to continue to be in use to maintain the reliable and efficient operation of the transmission grid. Indeed, these existing transmission lines are included in PJM's transmission planning studies and are assumed to remain in-service and fully operational, asset retirement is not considered a feasible option.

12. The Project as proposed addresses these concerns in a cost-efficient manner, as compared to either a replacement alternative or a remediation and later replacement alternative. In particular, the Project as proposed avoids the substantial uncertainties surrounding potential remediation of the existing COR-TEN® steel lattice towers, avoids redundant inspection and/or additional remediation of these structures, and is the lowest cost alternative. Therefore, and for the reasons more fully explained below, the Commission should approve the Project as proposed.

1. Existing System

13. The Montour and Saegers Substations are connected by the double-circuit Montour-Saegers 230 kV Transmission Lines.

14. The Montour-Saegers 230 kV Transmission Lines is approximately 12.7 miles long and supported by 37 double-circuit COR-TEN® lattice towers, 67 double-circuit steel monopoles, seven single-circuit steel monopoles and two single-circuit H-frame structures. These structures are designed and being utilized for double-circuit 230 kV operation.

15. The double-circuit Montour-Saegers 230 kV Transmission Lines are in PPL Electric's Susquehanna Region and part of a larger 230 kV transmission network that connects generation in this region to load throughout PPL Electric and the rest of PJM's footprint.

16. A map of the existing system configuration is provided as Figure 1-1: One-Line Drawing of the Project, in Attachment 1 – Necessity Statement.

2. Definition of the Problem

17. Originally constructed in the early 1970s, the existing Montour-Saegers 230 kV Transmission Lines have 37 weathering-steel COR-TEN® lattice structures. COR-TEN® lattice towers were commonly installed by the industry during this time because it was believed that the corrosion-resistant properties of weathering-steel would reduce future maintenance needs/costs. These towers had an expected service life of approximately 75 years at the time they were installed.

18. However, in 2013, PPL Electric hired a third-party contractor to perform an assessment of its 230 kV transmission lines under a steel structure capital maintenance program. The assessment identified that 126 of 131 surveyed structures (96%) had one or more structure legs rated Condition C (poor) or Condition D (very poor). Of those 126 structures, 25 had one or more structure legs that were identified as “priority,” requiring immediate attention. In order to extend the life of the asset and ensure no failures at the ground line, the 25 structures identified as “priority” received maintenance repairs in 2014, which included post leg, diagonal and base shoe repairs. Protective coating was applied to the remaining 101 COR-TEN® structures that rated Condition C or D but were not identified as “priority.” However, these remaining structures face constant asset health concerns due to the presence of pack-out rust.

19. The asset health concerns discovered by the 2013 assessment were heightened by the discovery of pack-out rust in the section joints of the subject COR-TEN® lattice towers. As explained in further detail in Attachment 1 – Necessity Statement, when the presence of pack-out rust becomes too severe, it can deform steel members and connecting hardware. Pack-out rust can also shear off bolts, cause loss of structural integrity, cause members to disconnect from the tower, and even result in tower failure. This now well-known inherent problem with COR-TEN® steel

is also being seen in other infrastructure where two pieces of COR-TEN® Steel overlap at joints, such as those present on lattice towers³ and other steel structures such as steel bridges.

20. PPL Electric further verified the results of the 2013 assessment by contracting with several independent, non-affiliated inspection companies to conduct evaluations of COR-TEN® lattice towers to determine the overall condition of these towers on the PPL Electric Transmission System in 2019. The 2019 evaluations included inspection of 15 randomly selected COR-TEN® lattice towers across the PPL Electric Transmission System by three separate contractors.⁴ Review of the three contractor reports revealed that over 90% of the joints at each structure exhibited visible pack-out rust in the connections. In addition, the review revealed that pack-out rust and section-loss was most prominent on the lower portions of the towers where there was higher likelihood of moisture build up.

21. Based on the prevalence of the observed deterioration, PPL Electric determined a more thorough and strategic evaluation was required to determine the full extent of the negative asset health impacts associated with COR-TEN® lattice towers. In early 2020, PPL Electric initiated a second more robust evaluation of the COR-TEN® lattice towers to determine the full extent of the deterioration on the transmission system. The details of this analysis are more fully detailed in Attachment 1 – Necessity Statement.

³ See, e.g., *Application of Virginia Electric and Power Company d/b/a Dominion Virginia Power For approval and certification of Carson-Rogers Road 500 kV Transmission Line Rebuild under Va. Code § 56-46.1 and the Utility Facilities Act, Va. Code § 56-265.1 et seq.*, Va. SCC Case No. PUE-2016-00078, at pp. 2-3, 9-10 (Hearing Examiner Report dated March 10, 2017) ; *Application of Virginia Electric and Power Company For approval and certification of Cunningham-Dooms 500kV Transmission Line Rebuild under Va. Code § 56-46.1 and the Utility Facilities Act, Va. Code § 56-265.1 et seq.*, Va. SCC Case No. PUE-2016-00020, at pp. 3-4 (Response of Dominion Virginia Power to Staff’s Supplemental Filing of March 30, 2017, filed April 13, 2017) (discussing the problems associated with “pack-out” rust on another utility’s COR-TEN® lattice tower structures).

⁴ Each contractor was asked to inspect 5 structures and prepare an engineering analysis of their condition, proposed remediation approach and estimated costs to remediate the identified structural defects.

22. The results of the 2020 inspection program again confirmed the severity of deterioration identified during the 2019 inspection program, as follows:

- Over 90% of the joints showed visible pack-out rust in the connections, which is anticipated to worsen over time.
- The protective patina needed to protect the steel from corrosion did not properly develop at numerous members resulting in section-loss across the entire structure.
- Pack-out rust damage was typically more prevalent on lower sections of the tower except for some specific attachment points where severe pack-out rust was observed on higher sections.
- Structural damage was found on several members from pack-out rust that ruptured bolts and split/deformed members.

23. Finally, PPL Electric contracted RTR Energy Solutions, Inc. (“RTR”) to perform a condition assessment of the Montour-Saegers Transmission Lines in early 2024. The details of the RTR April 2024, Assessment are set forth in Attachment 1 – Necessity Statement. In addition, the average structure classified as “Moderate” is in similar condition to structures classified as “Severe.” RTR classifies any structure with over 50% of its joints containing pack-out rust as “Severe.” Importantly, 78% of the COR-TEN® lattice towers on the Montour-Saegers 230kV Transmission Lines were classified as severe. None of the COR-TEN® lattice towers on the line were classified as mild. The specific numbers supporting these percentages are outlined in Table 1-3 in Attachment 1- Necessary Statement.

24. The majority of pack-out rust observed on each structure was found in the lower sections of the post leg where horizontal and diagonal members are bolted to the post leg. This assessment shows that the asset health conditions observed in the system-wide assessment are being exhibited on the specific structures targeted for replacement by the Project.

25. Based on the results of the inspection programs described above, it is clear that the issue with COR-TEN® lattice towers has accelerated the deterioration of these structures and has

brought the assets to the end of their service life much sooner than would have been anticipated. At roughly 50 years of age, the COR-TEN® lattice towers that comprise the Montour-Saegers 230 kV Transmission Lines have exceeded their useful life and can no longer be relied upon to safely operate as designed.

26. Furthermore, these asset health concerns are particularly important as the Montour-Saegers 230 kV Transmission Lines are critical components of PPL Electric's Bulk Transmission System and are required to serve local load to several critical customer facilities.

27. If the Montour-Saegers 230 kV Transmission Lines were to fail, ElimSPORT's Substation load would be at risk for the next contingency. The next contingency could be either loss of the causing the loss of the Lycoming, Lock Haven, and Clinton 69 kV Substations and any attached customers 1. This collapse would travel through the Clinton and Lycoming 69 kV Substations, stopping at any connected normally open points on the system as well as opening the breakers at the Sunbury 69 kV Substation after it cascades through the Sunbury-Lock Haven 69 kV Line. This would result in approximately 109,000 customers losing service, including a number of Critical Customers (such as health care and public safety facilities) and 69 kV customers that are identified in Attachment 1 – Necessity Statement.

28. The load at the Clinton 230 kV Substation is served by the Montour-Saegers 230 kV Transmission Lines. A failure of the Montour-Saegers 230 kV Transmission Lines will put Clinton's Substation load at risk for the next contingency. While the Montour-Saegers 230 kV Transmission Lines are out of service, if there was a double circuit tower loss of the Saegers-Elimswood and Clinton-Elimswood 230 kV Transmission Lines, there would be a collapse around the Clinton 230 kV substation due to all of the Patriot Generation attempting to flow through the two Clinton 230/69 kV transformers. This would result in the loss of the Clinton 69 kV substation

to any of the connected normally open points on the system and approximately 28,000 customers losing service, including a number of Critical Customers (such as health care and public safety facilities) and 69 kV customers that are identified in Attachment 1 – Necessity Statement.

29. Furthermore, as the topic of severe weather patterns becomes increasingly relevant, there is a need to consider how changing weather patterns will impact the reliability of the existing COR-TEN® lattice structures. Over the last 20 years, PPL Electric has seen a trend of increasing storms per year within the PPL Electric service territory. With each storm comes more exposure to extreme precipitation and wind events. If a tower is structurally compromised due to COR-TEN® pack-out rust and section loss, that wind event creates an increased risk of structural failure. With projected increases of more frequent and intense heat waves over the next century in the Northeast, the occurrence of more severe wind and precipitation events is expected to rise as well. This is evident in the storms associated with Hurricane Ida that hit the Northeast in 2021 and remnants of tropical cyclone Debby, which hit the Northeast in 2024, as storms of this strength would have been rare decades ago. Both storms resulted in widespread, sustained power outages throughout the region. Due to drastic weather pattern changes, it is imperative to re-evaluate the COR-TEN® structures in the safest and most reliable way to protect against the pack-out rust issue in the joints of the structures and guard the transmission system from catastrophic failures of COR-TEN® towers.

30. Importantly, the existing double-circuit Montour-Saegers 230 kV Transmission Lines are presently in use and planned to continue to be in use to maintain the reliable and efficient operation of the transmission grid. Indeed, these existing transmission lines are included in PJM's transmission planning studies and are assumed to remain in-service and fully operational, asset retirement is not considered a feasible option.

31. At the October 2020 PJM TEAC meeting,⁵ PPL Electric presented its plan to address COR-TEN® needs on the 230 kV system. As part of this plan, PPL Electric also shared the need with PJM stakeholders to address COR-TEN® towers on the Montour-Saegers 230 kV Transmission Lines (need # PPL-2020-0009). The need # PPL-2020-0009 will be addressed by the rebuild of the Montour-Saegers 230 kV Transmission Lines rebuild under supplemental project s2370, which will be completed at an estimated cost of \$65 million. As presented at the PJM TEAC meeting,⁶ PPL Electric determined that remediation of the towers was not cost effective over the life of the asset and removal of the circuits was infeasible due to a 465 mega-watt (“MW”) load drop.

B. THE PROPOSED PROJECT

32. In order to resolve the identified COR-TEN® lattice tower health condition, PPL Electric proposes to rebuild the existing Montour-Saegers 230 kV Transmission Lines to resolve the COR-TEN® lattice tower health condition. As part of the rebuild, all the COR-TEN® lattice structures as well as the conductors and associated hardware will be replaced, effectively addressing the asset health conditions described above.

33. The proposed Project will address the asset health needs associated with COR-TEN® lattice tower replacement, as well as improve overall reliability, safety, and system resiliency. It will also address the above-identified reliability needs. With respect to the COR-TEN® asset health condition, the Project will immediately and fully resolve the deteriorated condition of the existing structures on a long-term basis by removing the existing COR-TEN® lattice towers and replacing them with steel monopoles. By rebuilding these structures, PPL

⁵ Refer to slides at <https://www.pjm.com/~media/committees-groups/committees/teac/2020/20201006/20201006-item-09-ppl-supplemental.ashx>

⁶ Refer to slides 27 and 28 at <https://www.pjm.com/~media/committees-groups/committees/teac/2020/20201006/20201006-item-09-ppl-supplemental.ashx>

Electric will resolve the existing COR-TEN® issue and avoid the possibility of the issue worsening and/or recurring with respect to these structures and developing into both a reliability and public safety issue.

34. Importantly, as explained in Attachment 1 – Necessity Statement, the Project as proposed also avoids the additional costs and uncertainties surrounding the alternative remediation solution contemplated in Alternative 2. As noted therein, PPL Electric evaluated and rejected the remediation alternative because it carries substantial uncertainties regarding its immediate and long-term effectiveness to address the subject COR-TEN® lattice lowers. There are few, if any, other examples of fully remediating substantially deteriorated COR-TEN® towers which PPL Electric could review to benchmark the effectiveness of this alternative against. Although remediation could potentially extend the life of the structures, it would, at a minimum, require that the remediation work be re-evaluated and potentially repeated every ten years after the initial remediation. In addition, the initial cost of remediation could be substantially greater than anticipated, and the cost of repeated remediation would result in additional Operations and Maintenance (“O&M”) expense. The Project as proposed avoids these additional costs and uncertainties and proposes to rebuild the transmission lines in a cost-efficient manner to ensure the continued provision of safe and reliable service.

35. The approximate cost of the entire transmission line rebuild Project is \$65 Million. On a total cost of service basis, the Proposed Solution is approximately 79% of the cost of Alternative 1 (replacing each of the existing structures) on a 45-year basis and 59% of the cost of Alternative 1 on 75-year basis. In addition, on a total cost of service basis, the Proposed Solution is approximately 71% of the cost of Alternative 2 (remediating the existing structures) on a 45-year basis and 61% of the cost of Alternative 2 on 75-year basis.

III. HEALTH AND SAFETY

36. The proposed lines will not create any unreasonable risk of danger to public health or safety. The proposed lines will be designed, constructed, operated, and maintained in a manner that meets or surpasses all applicable National Electrical Safety Code (“NESC”) minimum standards and all applicable legal requirements. Descriptions of the NESC standards, PPL Electric’s design criteria, and PPL Electric’s safety practices are provided in Attachment 4 to this Letter of Notification.

37. Attachment 4 accompanying this Letter of Notification also explains PPL Electric’s standards for Magnetic Field Management. Ground clearances for the proposed Project will be increased approximately 3 feet higher than those required by the NESC standard in order to reduce the magnetic field exposure. The proposed rebuild of the Montour-Saegers 230 kV Transmission Lines will continue to allow for double-circuit operation, which will allow for reverse phasing where it is feasible to do so at low or no cost. A reduction in magnetic field exposure is anticipated due to the higher ground clearances.

IV. DESCRIPTION OF THE RIGHT-OF-WAY

38. The rebuilt Montour-Saegers 230kV Transmission Lines will be slightly offset from the existing structure alignment and in the same right-of-way (“ROW”) as the existing transmission line. The Project will remain on the same PPL Electric fee-owned properties and existing ROW. The existing fee-owned properties and ROW vary in width from 100 to 150 feet wide. The existing fee-owned properties and ROW vary in width from 100 to 150 feet wide. As part of the Project, 108 existing structures will be replaced with 107 new structures. As discussed in Attachment 2, three single-circuit steel monopole structures closest to Saegers Substation meet

the current design and reliability standards and do not require replacement or reconductoring. Two of these structures are not part of the Project; the third will have a new shield wire installed and is part of the Project. A network of existing access roads or temporary roads will be utilized during construction of the rebuilt transmission lines. Detailed maps of the proposed rebuilt Montour-Saegers 230 kV Transmission Lines and associated structures are provided in Attachment 3.

39. The proposed monopole structures for the rebuilt Montour-Saegers 230 kV Transmission Lines will be constructed in generally the same location as the existing structures. However, the transmission lines cannot be fully deenergized during the construction process, which will require the new monopoles to be offset typically 35 feet ahead or behind and horizontally offset approximately 10 to 15 feet from the COR-TEN® structure locations as a safety precaution. PPL Electric has designed the proposed transmission line system so that it fits entirely within the existing ROW. Additionally, the existing number of structures on each parcel will not change, and no new structures will be added to properties that do not currently have a structure. Because the new pole locations are generally similar to the original locations, PPL Electric does not anticipate any objections.

40. As explained in Attachment 2, existing COR-TEN® lattice tower structures range in height from between approximately 123 and 159 feet with an average structure height of approximately 132 feet. The existing single-circuit H-frame structures are 80 feet tall. The proposed structures for the rebuilt Montour-Saegers 230 kV Transmission Lines will range in height from between approximately 95 and 180 feet with an average height of approximately 122 feet.

41. Two aerial plot plans are provided at the end of Attachment 1 to this Letter of Notification. Figure 1-2 depicts the location of the existing transmission facilities associated with

this Project. Figure 1-3 depicts the location of the proposed transmission facilities associated with this Project.

V. LAND USE AND ENVIRONMENTAL EVALUATION

42. As explained above, construction of the proposed Project will take place entirely within existing rights-of-way. Therefore, it is anticipated that the proposed Montour-Saegers 230 kV Transmission Lines will have minimal incremental impacts on land use in the area.

43. A network of existing access roads or temporary roads will be utilized during construction of the rebuilt transmission lines. A detailed description of the route of each individual component of the Project can be found in Attachment 3.

44. PPL Electric evaluated the existing land uses on the PPL Electric owned properties, within the existing ROW, and the adjacent land within approximately 0.25 mile of the rebuilt centerline (“Project Area”). This broader Project Area was reviewed to provide a sense of the landscape in which the Project is located. Based on review of the 2021 National Land Cover Data (“NLCD”), and current aerial imagery, land use in the Project Area primarily consists of agricultural land (cultivated crops or pasture/hayfield) or undeveloped forest (deciduous and mixed). The remaining 21% of existing land uses within the Project Area consists of barren land, developed land (open space, low intensity, medium intensity, and high intensity), wetlands, open water, or evergreen forest, grassland, and scrub/shrub habitat.

45. No communication towers or antennae were identified within the Project Area. No cell tower attachments are located on the existing Montour-Saegers 230 kV Transmission Lines. The Project crosses two gas transmission pipelines: one operated by United States Gypsum Company, located between Structure 13 and Structure 14 and one operated by UGI Energy Services, located between Structure 19 and Structure 20. An additional UGI Energy Services gas

pipeline crosses the Project Area along State Route 405 but is not crossed by the existing or proposed Montour-Saegers 230 kV Transmission Lines. Impact to the pipelines is not anticipated and PPL Electric will coordinate with the pipelines owners/operators prior to commencing the Project.

46. The Project crosses other PPL Electric utility ROWs near the existing Montour Substation. No additional pipelines, or other utilities will be affected by the proposed Project.

47. The closest active airport to the Project Area is the Williamsport Regional Airport, a publicly owned facility, located approximately 6 miles northwest of the existing Saegers Substation. Additionally, a private heliport (Muncy Valley Hospital) is located approximately 3 miles northeast of the existing Saegers Substation. PPL Electric does not anticipate any interference with airport or heliport operations since the Project consists of electrical facilities that are of a similar height as the existing electrical facilities and within existing ROW. However, PPL Electric will file any required documentation with the Federal Aviation Administration and the Pennsylvania Department of Transportation, Bureau of Aviation.

48. Several private railroad tracks service a coal power plant adjacent to the existing Montour Substation. As such, the Project requires two railroad crossings immediately after exiting the Montour Substation, specifically between Structures 3 and 6. Near the existing Saegers Substation, the Project requires one crossing of the Norfolk Southern Buffalo Line railroad corridor between Structures 106 and the Saegers Substation, and one crossing of the Lycoming Valley Railroad (“LVRR”), located between structures 96 and 97. PPL Electric is currently coordinating with the railroad companies and does not anticipate any impact to the railroads as part of the Project.

49. The proposed Project will not affect any national parks, state parks, local parks, recreational areas or natural landmarks. Two state recreational trails are located within the Project Area. The West Branch Susquehanna River provides a water trail through central Pennsylvania from Clearfield County to Sunbury where it joins the North Branch. The existing Montour-Saegers 230 kV Transmission Lines span the West Branch Susquehanna River and the proposed rebuild is not anticipated to impact associated recreational activities. State Route 405 provides a bicycling corridor (Route J) for the greater statewide BicyclePA network; however, the recreational trail is located northwest and past the existing Saegers Substation and will not be impacted by the Project. The proposed Project is not anticipated to result in new impacts to any local or state parks or recreation areas, conservation areas, or protected lands. No national, state, or local parks or natural landmarks are located within the Project area.

50. Pennsylvania Game Commission (“PGC”) State Game Land #325 is located within Lewis Township approximately 0.8 mile southeast of the State Route 180 corridor. The existing Montour-Saegers 230 kV Transmission Lines ROW and existing access roads are located entirely outside of State Game Land #325. The next closest conserved property is the Logue/McMahon conservation easement, managed by a non-governmental organization (“NGO”) known as the Northcentral Pennsylvania Conservancy. The Logue/McMahon conservation easement is located adjacent to and east of the West Branch Susquehanna River. The existing Montour-Saegers 230 kV Transmission Lines ROW and existing access roads are located entirely outside of the Logue/McMahon conservation easement. Neither of these conserved properties will be affected by the Project.

51. No agricultural conservation easements are directly crossed by the Project nor located within the Project Area. The nearest agricultural easements are located at least 1.5 miles from the Project Area.

52. An online review of the Project Area and surrounding landscape was conducted through the Pennsylvania Historical and Museum Commission (“PHMC”) State Historic and Archaeological Resource Exchange site. Based on State Historic Preservation Office (“SHPO”) data, one eligible historic district, the Philadelphia & Reading Railroad, is crossed by the Project. The Philadelphia & Reading Railroad is located in the current Lycoming Valley Railroad corridor (See Attachment 3, pages 15-17 of 17 in **Figure 3-1**). No other eligible or listed architectural resources are crossed by the Project or located in proximity to the Project Area.

53. PPL Electric is in the initial stage of coordination with the SHPO for the modifications being made to the transmission lines. This coordination will be required to receive permits to construct the Project and will be conducted in the near future. PPL Electric does not anticipate any impacts to the SHPO eligible district. PPL Electric will perform any reviews and field survey/sampling work required by the PHMC to avoid, minimize, and mitigate impacts to archaeological or historic architectural resources that may be located within the Project Area.

54. No unique geological, scenic, or natural areas are located within the Project Area, according to the Pennsylvania DCNR (“DCNR”).

55. The Project Area is gently undulating, crossing a mixed landscape of farmland and developed areas primarily consisting of mixed-use commercial/industrial and residential land. Topography varies from approximately 465 feet to approximately 1,165 feet above mean sea level (“msl”). Soils present within the Project Area predominantly consist of silt loams, ranging between 0 and 80 percent slopes.

56. Erosion and Sedimentation (“E&S”) control plans will be developed and implemented for the Project to minimize the displacement of soils. These plans will require prior approval from the applicable counties’ conservation districts. National Pollutant Discharge Elimination System (“NPDES”) permits will also be required from the Pennsylvania Department of Environmental Protection (“PADEP”) as needed. During construction, PPL Electric will adhere to all conditions specified in the NPDES permit. Impacts to local soil resources are anticipated to be minimal.

57. The existing transmission line spans approximately 12 National Hydrography Dataset waterways that will remain in place after the Project construction activities have occurred. The waterways crossed by the Project include Chillisquaque Creek, County Line Branch, McKee Run, Turkey Run, West Branch Chillisquaque Creek, and West Branch Susquehanna River, as well as four UNTs of County Line Branch and two UNTs of Warrior Run. Chillisquaque Creek, County Line Branch, McKee Run, West Branch Chillisquaque Creek, and four UNTs of County Line Branch are located in the McKee Run-Chillisquaque Creek Watershed (Hydrologic Unit Code [“HUC”] 020502061102). Two UNTs of Warrior Run are located in the Warrior Run Watershed (HUC 020502061203). Turkey Run and West Branch Susquehanna River are located in the Delaware Run-West Branch Susquehanna River Watershed (HUC 020502061202). All three watersheds are subwatersheds in the Lower West Branch Susquehanna Basin (HUC 02050206).

58. All 12 streams crossed by the Project have a PADEP Chapter 93 Designated Use Stream Classification of Warm Water Fishes (“WWF”), Migratory Fishes (“MF”). No direct impact to these stream features is anticipated by the Project activities.

59. Based on review of the U.S. Fish and Wildlife Service’s (“USFWS”) National Wetlands Inventory (“NWI”), the Project crosses one Palustrine Forested Broad-leaved Deciduous

Temporarily Flooded (PFO1A) wetland habitat, three Riverine Lower Perennial Unconsolidated Bottom (R2UBH) stream habitats, three Riverine Upper Perennial Unconsolidated Bottom (R3UBH) stream habitats, and five Riverine Intermittent Seasonally Flooded (R4SBC) stream habitats. No impacts to these NWI features are anticipated by the proposed Project activities.

60. For federal and state permitting purposes, the wetlands and waterways within the Project Area have been delineated, surveyed, and illustrated according to regulatory standards (see Attachment 3, **Figure 3-1**). This information is being used to minimize wetland and waterway impacts where feasible. Additionally, PPL Electric will avoid impacts to wetlands and waterways where possible by aerially spanning these features. PPL Electric will obtain all necessary permits from PADEP and the United States Army Corps of Engineers (“USACE”) and will comply with all the terms and conditions placed on those permits. PPL Electric also will consult with the applicable County Conservation Districts, prepare any required soil erosion and sedimentation control plans, and obtain NPDES permits and comply with any conditions placed on those permits.

61. An E&S control plan will be developed to address stormwater control in all watershed areas crossed by the Project. PPL Electric will obtain all approvals and permits necessary for the construction of the Project and will comply with any conditions placed on those permits.

62. The National Flood Hazard Layer for Lycoming, Montour, and Northumberland counties in Pennsylvania was obtained through the Federal Emergency Management Agency (“FEMA”) Flood Map Service Center website and analyzed for 100-year floodplains and regulatory floodway within the Project Area and surrounding landscape. Based on review of this data, the Project spans 100-year floodplain and regulatory floodway associated with Chillisquaque Creek, West Branch Chillisquaque Creek, McKee Run, County Line Branch, UNTs of Warrior

Run, and Turkey Run. Additionally, the Project crosses 100-year floodplain and regulatory floodway associated with the West Brach Susquehanna River. No impacts to these floodplain areas or floodways are anticipated by the proposed Project activities.

63. Minimal impacts to floodplain areas or floodways are anticipated by the proposed Project activities, since the proposed structures will be replaced in proximity to existing structures. Coordination with PADEP regarding this potential impact will be conducted during the permitting phase of the Project.

64. Vegetative cover in the Project Area consists almost entirely of agricultural fields or landscaped areas. The existing ROW areas for the transmission lines have previously been cleared of woody vegetation and no extensive tree clearing is anticipated as part of the Project. If vegetation management is required in this specific location, PPL Electric will apply its “Specifications for Transmission Vegetation Management LA-79827” to minimize potential impacts.

65. A Pennsylvania Natural Diversity Inventory was run for the Project on October 4, 2022, to assess the potential presence of threatened and endangered species and/or special concern species. Specific agencies reviewing the Project included the PGC, Pennsylvania Fish & Boat Commission (“PFBC”), DCNR, and USFWS.

66. The agencies reported no known impacts to threatened and endangered species and/or special concern species and resources within the Project Area. Therefore, no further consultation with PGC, DCNR, PFBC, or USFWS is required for this Project.

67. PPL Electric will continue to consult with the jurisdictional agencies regarding any potential future impacts to protected species, complete all required surveys, obtain all necessary

approvals and permits for Project construction, and comply with all conditions placed on those permits.

VI. NOTICE

68. PPL Electric has reached out to residents located immediately adjacent to PPL Electric's fee owned parcels and owners of properties that are crossed by the Montour-Saegers Transmission Lines. Copies of the Letter of Notification will be served upon landowners in accordance with 52 Pa. Code § 57.72(d)(3). A list of the landowners impacted by this project is provided in Attachment 5.

69. PPL Electric has provided information regarding the Project to representatives of Anthony, Clinton, Derry, Lewis, and Muncy Creek Townships, which are either in Lycoming, Montour, or Northumberland Counties, Pennsylvania, respectively. These entities have not objected to the proposed Project. Copies of this Letter of Notification will be served on the governmental agencies, municipalities, and other public entities and organizations in accordance with 52 Pa. Code § 57.72(d)(3). A list of these entities and organizations is also provided in Attachment 5.

VII. LETTER OF NOTIFICATION

70. PPL Electric is proceeding by means of a Letter of Notification, instead of a full Application, pursuant to the Commission's regulations at 52 Pa. Code § 57.72(d)(1)(i).

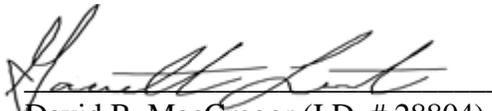
71. The proposed Project qualifies for use of a Letter of Notification because it will be located entirely on an existing transmission line right-of-way, and the size, character design or configuration of the proposed transmission line will not substantially alter the right-of-way.

72. This Letter of Notification is filed on the date set forth below. As provided in 52 Pa. Code § 57.72(d)(5), the Commission will review and, by order, approve or disapprove this Letter of Notification. If the Commission approves this Letter of Notification, the proposed Project will be constructed as proposed herein without the formal application process set forth at 52 Pa. Code §§ 57.71, *et seq.*

VIII. CONCLUSION

WHEREFORE, PPL Electric Utilities Corporation respectfully requests that the Pennsylvania Public Utility Commission approve the proposed Project located in Anthony, Clinton, Derry, Lewis, and Muncy Creek Townships, which are either in Lycoming, Montour, or Northumberland Counties, Pennsylvania, that is explained above and in the Attachments hereto, by no later than the public meeting currently scheduled for July 24, 2025.

Respectfully submitted,



Michael J. Shafer (ID # 205681)
PPL Services Corporation
645 Hamilton Street, Suite 700
Allentown, PA 18104
Phone: 610-774-2599
Fax: 610-774-4102
E-mail: mjshafer@pplweb.com

David B. MacGregor (I.D. # 28804)
Garrett P. Lent (I.D. # 321566)
Post & Schell, P.C.
17 North Second Street
12th Floor
Harrisburg, PA 17101-1601
Voice: 717-731-1970
Fax: 717-731-1985
E-mail: dmacgregor@postschell.com
E-mail: glent@postschell.com

Alice A. Wade (PA ID # 335228)
Post & Schell, P.C.
One Oxford Centre
301 Grant Street, Suite 3010
Pittsburgh, PA 15219
Phone: 717-612-6052
Fax: 717-731-1985
E-mail: alice.wade@postschell.com

Date: May 15, 2025

Attorneys for PPL Electric Utilities Corporation

**PPL ELECTRIC
ATTACHMENT 1**

MONTOUR-SAEGERS 230 kV COR-TEN® REBUILD PROJECT

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	BACKGROUND	2
3.0	TRANSMISSION SYSTEM PLANNING PROCESS	3
4.0	THE NEED FOR THE PROJECT	5
4.1	Existing System.....	5
4.2	Project Need.....	7
5.0	ALTERNATIVES	15
5.1	Alternative 1 – Structure Replacement.....	15
5.2	Alternative 2 – Structure Remediation	16
5.3	Alternative 3 – Full Rebuild	17
6.0	PROPOSED SOLUTION.....	19

List of Tables

Table 1-1: COR-TEN® Structure Rating Summary.....Error! Bookmark not defined.

Table 1-2: Montour-Saegers Structure Rating SummaryError! Bookmark not defined.**0**

Table 1-3: COR-TEN® Condition Rating Summary – Montour-SaegersError! Bookmark not defined.

Table 1-4: Cost of Service of Evaluated OptionsError! Bookmark not defined.

List of Figures

Figure 1-1: One-Line Drawing of Project..... 5

Figure 1-2: Existing System Configuration 22

Figure 1-3: Proposed System Configuration 23

1.0 INTRODUCTION

PPL Electric Utilities Corporation (“PPL Electric” or the “Company”) is requesting Pennsylvania Public Utility Commission (“PUC” or “the Commission”) approval to rebuild approximately 12.7 miles of the existing double-circuit Montour-Saegers 230 kilovolt (“kV”) Transmission Lines connecting the Montour 230-69 kV Substation (“Montour Substation”) located in Montour County and the Saegers 230-69 kV Substation (“Saegers Substation”) located in Lycoming County, Pennsylvania (“Montour-Saegers 230 kV Rebuild Project” or the “Project”).¹

This Project is required to address reliability concerns related to the deteriorated condition of the COR-TEN® lattice towers on the Montour-Saegers 230 kV Transmission Lines. In addition, the Project is also required to comply with:

- The Consolidated Transmission Owners Agreement (“TOA”) Rate Schedule - FERC No. 42 (FERC ER10-2713-000), which requires transmission systems to “[b]e kept in place and maintained in good operating condition in accordance with Good Utility Practice and principles, guidelines and standards of the applicable Regional Reliability Council and NERC.”

The Project is necessary for PPL Electric to avoid violating its obligations under the TOA to maintain its transmission facilities in good operating condition and avoid public safety concerns caused by failed assets. The Project is one of several essential PPL Electric projects designed to address a system-wide concern related to the structural reliability of COR-TEN® lattice towers on its bulk transmission system. As explained below, the existence of “pack-out rust”² in many of the joints of the subject lattice towers diminishes structural integrity and increases the risk of system failures that could negatively impact public safety, safety of PPL Electric employees, and affect approximately 28,000 PPL Electric customers. The Project is necessary to avoid these risks and

¹ For a complete list of municipalities and counties crossed by the Project, please refer to the Letter of Notification, Attachment 5.

² “Pack-out rust” is a form of localized corrosion typical of steel components that develop a crevice into an open atmospheric environment, which results in rust packing between conjoined steel components. As described in Attachment 1, pack-out rust accelerates the deterioration of asset health and can result in shearing off bolts, loss of structural integrity, members disconnecting from lattice towers, and tower failure.

provide the best solution to immediately address the identified asset health issues on a long-term basis.

Moreover, for PPL Electric’s transmission facilities to be considered in good operating condition, they must be maintained in a manner consistent with the standards of the North American Electric Reliability Corporation (“NERC”), Reliability First Corporation, and Good Utility Practice as defined by the TOA. Failure to comply with these standards, particularly NERC standards, can result in the imposition of significant fines, and other non-monetary penalties.

Subject to the Commission’s approval, construction will begin August 1, 2025, to support an in-service date of February 2027, and PPL Electric will continue to own, operate, and maintain the rebuilt 230 kV transmission lines. The total estimated cost of this Project, as described below, is approximately \$65 million, and the cost for the Project will be paid by PPL Electric.³

2.0 BACKGROUND

PPL Electric is responsible for providing transmission assets and maintaining them in an adequate, efficient, safe, reliable, and reasonable manner to meet the needs of the electric system and its customers' expectations. To achieve this, PPL Electric applies its Transmission Asset Management Procedure as part of its system performance and condition assessment process. These performance and condition assessments identify system needs and prioritize projects based on several variables such as equipment age, condition, maintenance schedule, and impact on system reliability and asset performance to ensure a reliable electric grid and service to its customers.

The transmission system is the backbone of the electric grid. Failure to maintain the system in accordance with Good Utility Practice and reliability practices and standards can decrease overall transmission system reliability and increase the risk of customer outages.

³ The estimated cost was developed based on preliminary engineering and by using averages of recent costs for similar project without an in-depth analysis of field investigation or completion of detailed engineering. The cost is subject to change as the constructability of the Project, sequence of construction, and other factors that may affect cost are identified and analyzed as the Project progresses.

3.0 TRANSMISSION SYSTEM PLANNING PROCESS

The nation’s interconnected transmission system (“Transmission Grid”) serves as the backbone for safe and reliable delivery of substantial amounts of electricity from generating stations over significant distances to customers served by transmission and local distribution systems. It is critical that the Transmission Grid be planned and designed to ensure reliable electric service is provided under all loading conditions or when certain elements of the Transmission Grid are out of service (system contingencies) due to planned or unplanned outages.

Robust transmission planning enables the transmission system to supply electricity to all customer loads in a reliable and economical manner. This system planning process ensures that both the Bulk Electric System (“BES”)⁴ and non-Bulk Electric System (“non-BES”)⁵ are planned and constructed so that:

- They can accommodate forecasted system flows during summer and winter peak load;
- They can adequately serve each customer’s need regarding capacity, voltage, and reliability for all load levels throughout the daily load cycle;
- They can sustain probable contingencies and disturbances with minimal customer service interruptions; and
- They are in conformance with NERC, PJM Interconnection, LLC (“PJM”), and the Transmission Owner’s reliability criteria for all normal and emergency operating conditions.

PJM is a Federal Energy Regulatory Commission (“FERC”)-approved Regional Transmission Organization (“RTO”) charged with ensuring the reliability of the electric transmission system under its functional control (100 kV and above) and coordinating the movement of electricity in all or parts of thirteen states and the District of Columbia, including Pennsylvania. To ensure reliable transmission service, PJM prepares an annual Regional Transmission Expansion Plan

⁴ Includes transmission facilities operated at voltages of 100 kV or higher.

⁵ Includes transmission facilities operated at voltages less than 100 kV.

(“RTEP”)⁶ to identify system reinforcements which are required to, among other things, meet the NERC Reliability Standards, PJM reliability planning criteria, and Transmission Owner reliability criteria. Prior to submitting the project to PJM, PPL Electric evaluated whether the line could be retired as one of the functional alternatives. Based on this analysis, it was determined that the line could not be retired without causing substantial issues on the system. As such, the existing double-circuit Transmission Lines remain in PJM’s planning studies and are assumed to remain in-service and fully operational. Therefore, PPL Electric focused its efforts on identifying the most appropriate way to address the structural deficiencies.

PPL Electric’s Transmission Asset Management Procedure involves identifying system needs and determining the best available solution to address those needs. This process includes asset evaluation, asset condition and system risk assessments, analysis of alternative solutions and project initiation and scheduling. System needs are identified based on the overarching goals of reducing outage frequency and duration, improving system reliability, decreasing system maintenance cost, and maintaining operational flexibility to ensure safe and reliable electric service of the transmission system and to our customers.

When transmission owning utilities (including PPL Electric) set up PJM as an RTO, they agreed to bind themselves to maintaining their existing transmission systems using Good Utility Practice. The TOA is an agreement among (1) individual Transmission Owners operating within the PJM Region and (2) between the Transmission Owners and PJM. The TOA facilitates the planning and operation of the Transmission Grid within the PJM region and establishes the rights and responsibilities of each party to the TOA. Section 4.6 of the TOA requires that transmission systems “[b]e kept in place and maintained in good operating condition in accordance with Good Utility Practice and principles, guidelines and standards of the applicable Regional Reliability Council and NERC.” This Project is required to fulfill PPL Electric’s obligations under the TOA.

⁶ PJM’s RTEP process is currently set forth in Schedule 6 of PJM’s Amended and Restated Operating Agreement (“Schedule 6”). 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.

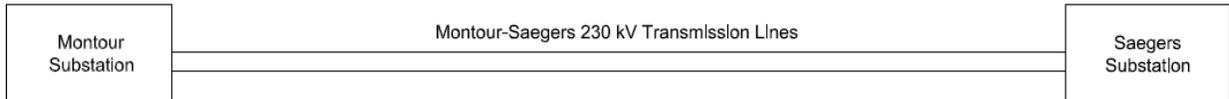
4.0 THE NEED FOR THE PROJECT

4.1 Existing System

The Montour and Saegers Substations are connected by the double-circuit Montour-Saegers 230 kV Transmission Lines. The Montour-Saegers 230 kV Transmission Lines is approximately 12.7 miles long and supported by 37 double-circuit COR-TEN® lattice towers, 67 double-circuit steel monopoles, seven single-circuit steel monopoles⁷ and two single-circuit H-frame structures. These structures are designed and being utilized for double-circuit 230 kV operation.

The one-line diagram of the existing system configuration is provided below.

Figure 1-1: One-Line Drawing of the Project



The double-circuit Montour-Saegers 230 kV Transmission Lines are in PPL Electric’s Susquehanna Region and part of a larger 230 kV transmission network that connects generation in this region to load throughout PPL Electric and the rest of PJM’s footprint.

The asset health concerns associated with the Montour-Saegers 230 kV Transmission Lines are important as they are a critical component of PPL Electric’s Bulk Transmission System and are required to serve local load to critical customer facilities. If these transmission lines were to fail due to COR-TEN® issues, the following reliability issues would occur:

A) Failure of Sunbury-Elimsport 230 kV Transmission Lines:

- The load at the Elimsport 230 kV substation is served by the Montour-Saegers 230 kV Transmission Lines. A failure of the Montour-Saegers 230 kV Transmission Lines will put Elimsport’s Substation load at risk for the next

⁷ Two existing single circuit structures (87C and 87D) will remain in place with no changes to their conductors or optical ground wire (“OPGW”); these two structures are not part of the Project. One existing single circuit structure (88B) will remain in place with OPGW upgrades and is part of the Project. Two existing single circuit structures (87A and 87B) will remain in place with new conductors; these structures are part of the Project. The final two existing single circuit structures will be replaced with one double-circuit steel monopole (proposed structure 5) and are part of the Project.

contingency. While the Montour-Saegers 230 kV Transmission Lines are out of service, if there was a fault on the Sunbury-Elimsport 230 kV Transmission Line there would be a collapse around the Elimsport 230 kV substation causing the loss of the Lycoming, Lock Haven, and Clinton 69 kV Substations and any attached customers. This collapse would travel through the Clinton and Lycoming 69 kV Substations, stopping at any connected normally open points on the system as well as opening the breakers at the Sunbury 69 kV Substation after it cascades through the Sunbury-Lock Haven 69 kV Line. This would result in approximately 109,000 customers losing service, including the following Critical and 69 kV Customers:

Critical Customers: Geisinger Jersey Shore Hospital, The Meadows Personal Care Community, Lycoming County Department of Public Safety, Rose View Nursing and Rehabilitation, Williamsport Hospital, Williamsport Home and Apartments, UPMC Lock Haven Outpatient Center, Lock Haven Rehabilitation and Senior Living, The Lycoming 911 Tower, and Divine Providence Hospital.

69 kV Customers: Sunoco Pipeline LP, Allegheny Electric Mill Creek, Montour Pump, Mordan Industries Inc., First Quality Products, First Quality Lock Haven, Jersey Shore Steel Co., Boro of Mifflinburg, General Cable Industries Inc., Textron Lycoming, Williamsport CTG, and Wire rope Works.

B) Failure of Saegers-Elimsport 230 kV and Clinton-Elimsport 230 kV Transmission Lines:

- The load at the Clinton 230 kV Substation is served by the Montour-Saegers 230 kV Transmission Lines. A failure of the Montour-Saegers 230 kV Transmission Lines will put Clinton's Substation load at risk for the next contingency. While the Montour-Saegers 230 kV Transmission Lines are out of service, if there was a double circuit tower loss of the Saegers-Elimswood and Clinton-Elimswood 230 kV Transmission Lines there would be a collapse around the Clinton 230 kV substation due to all of the Patriot Generation attempting to flow through the two Clinton 230/69 kV transformers. This would result in the loss of the Clinton 69 kV

substation to any of the connected normally open points on the system and approximately 28,000 customers losing service, including the following Critical and 69 kV Customers:

Critical Customers: The Meadows Personal Care Community, Lycoming County Department of Public Safety, The Lycoming 911 Tower, and Divine Providence Hospital.

69 kV Customers: Sunoco Pipeline LP, Allegheny Electric Mill Creek, Montour Pump, and Mordan Industries Inc.

4.2 Project Need

This Project is needed to address asset health concerns that are being accelerated by increased incidences of pack-out rust associated with COR-TEN® lattice towers. The subject lattice towers had an expected life of 75 years and were installed in the early 1970s. The subsequent discovery of increased incidences of pack-out rust associated with COR-TEN® lattice towers has accelerated the rate at which these towers are expected to reach end-of-life, and, in some cases, the towers have deteriorated beyond the point of safe operation, which cannot be reasonably or cost-effectively remediated. Operating at 230 kV, the transmission lines are part of the Bulk Electric System and, as such, PPL Electric is required by the NERC to maintain the assets in a way that will ensure the reliability and stability of that system.

4.2.1 Asset Health

Prior to commencing work to address this issue, there were approximately 236 circuit miles containing COR-TEN® lattice structures or approximately 1,284 COR-TEN® lattice structures across PPL Electric's Transmission System that it anticipated will need to be addressed in order to resolve asset health concerns like those identified below.

Originally constructed in the early 1970s, the existing Montour-Saegers 230 kV Transmission Lines have 37 weathering-steel COR-TEN® lattice structures. COR-TEN® lattice towers were commonly installed by the industry during this time because it was believed that the corrosion-resistant properties of weathering-steel would reduce future maintenance needs/costs.

In 2013, PPL Electric utilized a third-party contractor to perform an assessment of the COR-TEN® lattice towers on its 230 kV transmission lines under a steel structure capital maintenance program.

The program evaluated the ground-line of the steel structures, performing minor excavation around the base of the structure and assessing the condition of the steel, and then applying a protective coating to the exposed steel. No joints or members above the base of the structure were included in this assessment. The assessment identified that 126 of 131 COR-TEN® structures (96%) had one or more structure legs rated Condition C (poor) or Condition D (very poor). Of those 126 structures, 25 had one or more structure legs that were identified as “priority”, requiring immediate attention. In order to extend the life of the asset and ensure no failures at the ground line, the 25 structures identified as “priority” received maintenance repairs in 2014, which included post leg, diagonal and base shoe repairs. Protective coating was applied to the remaining 101 COR-TEN® structures that rated Condition C or D but were not identified as “priority”. However, these remaining structures face constant asset health concerns due to the presence of pack-out rust. Ongoing inspections conducted since 2014 have confirmed that these structures are continuing to degrade.

These health concerns were further heightened by the discovery of pack-out rust in the section of joints of the COR-TEN® lattice towers. In particular, the protective surface coating of weathering steel that provides resistance to atmospheric corrosion, known as the patina, did not form properly on the structure joints and members due to trapped moisture. The trapped moisture prevents completion of the required wetting and drying cycle needed to form the patina. Over time, this leads to the formation of pack-out rust within the joints of connecting tower members and section-loss in the steel members and joints. When the pack-out rust becomes too severe, it can deform steel members and connecting hardware. It can shear off bolts, cause loss of structural integrity, cause members to disconnect from the tower, and even result in tower failure. PPL Electric is experiencing pack-out rust failures on its transmission line system, which are a leading indicator of ultimate structure failure as outlined above. Over the past few years, PPL Electric has encountered multiple instances of COR-TEN® tower members becoming detached, broken, and deformed/corroded due to severe pack-out rust. Failures of this nature on a transmission tower create emergent safety and reliability concerns which must be proactively addressed.

This now well-known inherent problem with COR-TEN® steel is also being seen in other infrastructure where two pieces of COR-TEN® steel overlap at joints, such as those present on

lattice towers⁸ and other steel structures such as bridges. The presence of pack-out rust on COR-TEN® structures and its negative impacts on asset health have diminished the expected service life of these structures from 75 to 50 years. As these structures were installed approximately 50 years ago, they have effectively reached end-of-life⁹. No manufacturer’s warranty currently exists for remediation of the COR-TEN® lattice towers. After a reasonable investigation, PPL Electric is not aware of whether a manufacturer’s warranty was in existence at the time the structures were installed.

To better understand the heightened asset health concerns associated with COR-TEN® steel, PPL Electric contracted with independent, non-affiliated inspection companies to conduct evaluations of COR-TEN® lattice towers to determine the overall condition of these towers on the PPL Electric Transmission System in 2019. The 2019 evaluations included inspection of 15 randomly selected COR-TEN® lattice towers across the PPL Electric Transmission System by three separate contractors.¹⁰ Review of the three contractor reports revealed that over 90% of the joints at each structure exhibited visible pack-out rust in the connections. In addition, the review revealed that pack-out rust and section-loss was most prominent on the lower portions of the towers where there was higher likelihood of moisture build up. The contractors’ estimates to remediate each tower ranged from \$140,000 to \$240,000 per tower depending on the contractor’s proposed remediation approach and extent of remediation recommended. For the sake of any analysis associated with the remediation option, a cost of \$183,891 per structure was utilized, which is the average of the 3 remediation costs received from contractors.

Based on the prevalence of observed deterioration on the COR-TEN® lattice towers across the PPL Electric Transmission System and the estimated per-tower cost to rehabilitate, PPL Electric

⁸ See, e.g., *Application of Virginia Electric and Power Company d/b/a Dominion Virginia Power For approval and certification of Carson-Rogers Road 500 kV Transmission Line Rebuild under Va. Code § 56-46.1 and the Utility Facilities Act, Va. Code § 56-265.1 et seq.*, Va. SCC Case No. PUE-2016-00078, at pp. 2-3, 9-10 (Hearing Examiner Report dated March 10, 2017) ; *Application of Virginia Electric and Power Company For approval and certification of Cunningham-Dooms 500kV Transmission Line Rebuild under Va. Code § 56-46.1 and the Utility Facilities Act, Va. Code § 56-265.1 et seq.*, Va. SCC Case No. PUE-2016-00020, at pp. 3-4 (Response of Dominion Virginia Power to Staff’s Supplemental Filing of March 30, 2017, filed April 13, 2017) (discussing the problems associated with “pack-out” rust on another utility’s COR-TEN® lattice tower structures).

⁹ New steel structures that will be installed under the Project have an anticipated service life of 75 years.

¹⁰ Each contractor was asked to inspect 5 structures and prepare an engineering analysis of their condition, proposed remediation approach and estimated costs to remediate the identified structural defects.

determined that a more thorough and strategic evaluation was needed to determine the full extent of the deterioration of COR-TEN® lattice towers across its system.

In early 2020, PPL Electric initiated a second, more robust evaluation of the COR-TEN® lattice towers to determine the full extent of the deterioration on the transmission system. PPL Electric’s Data Analytics Team developed a strategic approach that utilized advanced statistical analysis and modeling to comprehensively determine the overall condition of the COR-TEN® lattice towers in a cost-efficient manner. The statistical analysis determined that inspection of 192 randomly selected COR-TEN® towers would provide a statistically significant representation of all 1,284 COR-TEN® towers on the PPL Electric system with a 90% confidence level and 5% confidence interval. To assist with the analysis, PPL Electric contracted with AmpJack, an independent consultant, to complete an inspection of 192 randomly selected COR-TEN® towers and classify the observed condition.

The inspection of 192 randomly selected COR-TEN® towers performed by AmpJack included a field-based visual overhead inspection of each structure from the ground, taking measurements of pack-out at each joint and section-loss at each member on the lower section of each structure, visual observations of pack-out rust and section loss for the higher sections of the towers, and visual observations of the damage at attachment points. The measured values of each joint and member are rated according to guidelines provided by PPL Electric using both the measured and visual observations (A-Good, B-Fair, C-Poor, D-Severe and F-Priority). This approach is consistent with the method used by Osmose, an essential asset inspection service company, in grading steel structure corrosion in applications across the country. The results of the AmpJack overall structure ratings are summarized in **Table 1-1** below:

TABLE 1-1: Structure Rating Summary

Overall Structure Rating			
Class	Condition	Structure Count	Percent
A	Good	0	0.0%
B	Fair	0	0.0%
C	Poor	95	49.5%

D	Severe	88	45.8%
F	Priority	9	4.7%

Of the 192 COR-TEN® towers inspected by AmpJack as described above, 8 towers lie on the Montour-Saegers 230 kV Transmission Lines. Of the towers inspected, 45.8% were categorized under Class D. The Poor to Severe grading of the towers on the Montour-Saegers 230 kV Transmission Lines is due to an average of 16.5% section loss on the members and pack-out rust greater than 0.200 inches between the joints. The results of the AmpJack overall structure ratings on Montour-Saegers 230 kV Transmission Lines are summarized in **Table 1-2** below. The confirmed presence of significant section loss and pack-out rust in 2020 signifies the rapid deterioration since 2012/2013. The poor conditions exhibited by the towers of the Montour-Saegers 230 kV Transmission Lines further support the need for the Project.

TABLE 1-2: Montour-Saegers Structure Rating Summary

Overall Structure Rating			
Class	Condition	Structure Count	Percent
A	Good	0	0.0%
B	Fair	0	0.0%
C	Poor	6	75.0%
D	Severe	2	25.0%
F	Priority	0	0.0%

The results of the 2020 inspection program confirmed the severity of deterioration identified during the 2019 inspection program as follows:

- Over 90% of the joints showed visible pack-out rust in the connections, which is anticipated to worsen over time;

- The patina needed to protect the steel from corrosion did not properly develop in numerous members resulting in section-loss across the entire structure;
- Pack-out rust damage was typically more prevalent on lower sections of the tower except for some specific attachment points where severe pack-out rust was observed on higher sections; and
- Structural damage was found on several members from pack-out rust that ruptured bolts and split/deformed members.

The accelerated deterioration of the asset health of the COR-TEN® lattice towers that are the subject of the Project revealed by the 2019 and 2020 inspection programs has been further corroborated by a recent study performed by RTR Energy Solutions, Inc. (“RTR”) in April 2024. RTR was contracted to perform condition assessments on the Montour-Saegers Transmission Lines. The assessment consisted of all 37 COR-TEN® lattice towers on this line. The scope of the assessment included a visual inspection of each selected structure from the ground. Each joint of the structure was reviewed to determine if pack-out rust was present. The structure condition was noted as either Mild, Moderate or Severe using the following classification:

- **Mild** Condition Rating: <25% of total joints contain pack-out rust.
- **Moderate** Condition Rating: >25% & <50% of total joints contain pack-out rust.
- **Severe** Condition Rating: >50% of total joints contain pack-out rust.

Results showed that 78.4% of the COR-TEN® lattice towers on the Montour-Saegers 230 kV Transmission Lines were classified as severe. None of the COR-TEN® lattice towers were classified as mild. A summary of the results of the inspection are represented in **Table 1-3** below:

TABLE 1-3: Structure Condition Rating Summary

Condition	Structure Count
Mild	0
Moderate	8
Severe	29
Total	37

The majority of pack-out rust observed on each structure was found in the lower sections of the post leg where horizontal and diagonal members are bolted to the leg. However, pack-out rust was observed in joints all the way up some towers. Structures classified as Severe with significant amounts of pack-out rust present had visible bending on the flat edge of the joint that was originally bolted. The assessment revealed that 78% (29 of 37) of the COR-TEN® lattice towers on the Montour-Saegers 230 kV Transmission Lines section were classified as Severe. The assessment shows that the asset health conditions observed in the system-wide assessment are being exhibited on the specific structures targeted for replacement by the Project.

Based on the results of the inspection programs described above, the inferior performance of the protective patina on the COR-TEN® lattice towers have accelerated the deterioration of these structures and has brought the assets to the end of their service life much sooner than would have been anticipated. At roughly 50 years of age, the COR-TEN® lattice towers that comprise the Montour-Saegers 230 kV Transmission Lines have exceeded their useful life and can no longer be relied upon to safely operate as designed. The proposed rebuild addresses the safety issues resulting from the presence of pack-out rust (e.g., structures failing due to deteriorated joints at the arms or legs). Shearing of bolts, members disconnecting from lattice towers, or complete tower failure pose a major safety risk to both the public and PPL Electric employees. PPL Electric has determined it is appropriate to address these risks now, rather than later, to mitigate increasing asset health, system reliability and safety risks.

The current condition of the towers identified through the assessments identify a susceptibility to failure especially during extreme weather. As the topic of severe weather patterns becomes increasingly relevant, there is a need to take into consideration how changing weather patterns will impact the reliability of the existing COR-TEN® lattice structures. Over the last 20 years, PPL Electric has seen a trend of increasing storms per year within the PPL Electric service territory. With each storm comes more exposure to extreme precipitation and wind events. If a tower is structurally compromised due to COR-TEN® pack-out rust and section loss, that wind event creates an increased risk of structural failure. With projected increases of more frequent and intense heat waves over the next century in the Northeast, severe wind and precipitation events are

expected to rise too. This is evident in the storms associated with Hurricane Ida that hit the Northeast in 2021 and remnants of tropical cyclone Debby, which hit the Northeast in 2024, as storms of this strength would have been rare decades ago. Both storms resulted in widespread, sustained power outages throughout the region. Due to drastic weather pattern changes, it is imperative to address the COR-TEN® structures in the safest and most reliable way to protect against the pack-out rust issue in the joints of the structures and guard the transmission system from catastrophic failures of COR-TEN® towers.

Any failure due to the condition of these assets will lead to unexpected outages on the Bulk Electric System, risking violations of NERC Reliability Standards. Violations result in monetary penalties that are determined based on the degree to which the compliance was not achieved, the entity size, and the duration of the violation. The penalties range from as low as \$1,000 to over \$1 million. A NERC violation can also directly cause or contribute to the Bulk Electric System instability, separation, or cascading failures. The rolling blackouts would impact both PPL customers and customers outside of the PPL service territory.

At the October 2020 PJM TEAC meeting,¹¹ PPL Electric presented its plan to address COR-TEN® needs on the 230 kV system. As part of this plan, PPL Electric also shared the need with PJM stakeholders to address COR-TEN® towers on the Montour-Saegers 230 kV Transmission Lines (need # PPL-2020-0009). The need # PPL-2020-0009 will be addressed by the rebuild of the Montour-Saegers 230 kV Transmission Lines under supplemental project s2370, which will be completed at an estimated cost of \$65 million. As presented at the PJM TEAC meeting,¹² PPL Electric determined that remediation of the towers was not cost effective over the life of the asset and removal of the circuits was infeasible due to a 465 mega-watt (“MW”) load drop.

¹¹ Refer to slides 27 and 28 at <https://www.pjm.com/~media/committees-groups/committees/teac/2020/20201006/20201006-item-09-ppl-supplemental.ashx>

¹² Refer to slides 27 and 28 at <https://www.pjm.com/~media/committees-groups/committees/teac/2020/20201006/20201006-item-09-ppl-supplemental.ashx>

5.0 ALTERNATIVES

PPL Electric evaluated four potential solutions to address the degrading health of the Montour-Saegers 230 kV Transmission Lines. The following four alternatives were considered and compared based upon their ability to resolve the asset health conditions identified by PPL Electric and upon a 45-year and 75-year cost of service basis¹³:

- (1) Alternative 1 – Replace all COR-TEN® structures in 2025 and replace the double-circuit steel monopole structures in 2037 and reconductor the entire Montour-Saegers 230 kV Transmission Lines in 2037;
- (2) Alternative 2 – Remediate all COR-TEN® structures in 2025 and replace the COR-TEN® and the double-circuit steel monopole structures and reconductor the entire Montour-Saegers 230 kV Transmission Lines in 2037;
- (3) Alternative 3 – Partial Rebuild of the COR-TEN® section in 2025 (including conductor in the COR-TEN® section) and Partial Rebuild of the double-circuit structures in 2037 (including conductor in this section) on the Montour-Saegers 230 kV Transmission Lines; and
- (4) Alternative 4 – Full Rebuild of the Montour-Saegers 230 kV Transmission Lines (“Proposed Solution”).

5.1 **Alternative 1 – Structure Replacement**

The first alternative considered by PPL Electric to address the poor health condition of the weathering steel COR-TEN® lattice towers on these lines was to replace each of the lattice towers. This alternative would include replacing the existing weathering-steel COR-TEN® lattice towers

¹³ PPL Electric is providing this comparison based upon a 45-year cost of service basis, due to the Commission’s routine data requests for a 45-year cost of service analysis in prior LON proceedings. PPL Electric notes that it does not utilize a stand-alone cost of service calculation for individual projects, and does not prepare a cost of service analysis for rebuild projects in its regular course of business. However, PPL Electric has prepared this line-specific calculation in anticipation of data requests from the Commission. PPL Electric used its current transmission rate for these calculations and notes that it cannot predict what its transmission rate will be in the future. The Company’s transmission rate, and the associated calculations, are subject to change. Furthermore, PPL Electric submits that it is reasonable and appropriate to consider the 75-year cost of service for this project, as the expected life of the steel structures at issue is 75 years.

with new standard monopole structures. The estimated replacement cost is approximately \$442,751/structure. This option would also require PPL Electric to replace the conductors with new conductors from end to end in 2037 when it has reached its end-of-life at an additional \$157,304/structure. The existing monopoles would also be replaced in 2037 at a cost of \$442,438/structure. In addition, there would be ongoing Operations and Maintenance (“O&M”) costs for the remainder of the service life of the transmission lines, including more frequent inspections. Inspections to identify issues on the line not addressed through a rebuild would use a cycle of comprehensive visual inspections every 8 years and a supplemental, aerial visual inspection every 4 years in between. As shown in **Table 1-4** below, this solution would be significantly more expensive from a total cost of service perspective than the proposed Full Rebuild.

For the reasons stated above, it is not reasonable or prudent to pursue Alternative 1. Replacing all COR-TEN® structures in 2025 and returning in 2037 to replace the double-circuit steel monopole structures and reconductor the entire Montour-Saegers 230 kV Transmission Lines would result in a multi-phase approach to complete the Project and is a less cost-efficient option.

5.2 Alternative 2 – Structure Remediation

The second alternative considered by PPL Electric to address the poor health condition of the weathering steel COR-TEN® lattice towers on these lines was to remediate the entire lattice tower sections, which would include replacing severely damaged members with galvanized steel members, installing new hardware and spacers, and cleaning pack-out rust from affected joints. The average estimated cost of remediation is approximately \$213,180/structure. This alternative would require the need to return in 2037 to replace all structures and reconductor the entirety of the line at a cost of approximately \$536,692/structure. This alternative was rejected by PPL Electric due to substantial uncertainties regarding its immediate and long-term effectiveness to address the COR-TEN® issue.¹⁴ Although remediation could extend the life of the structures, it

¹⁴ The contractors that provided the cost estimate have never performed a full weathering-steel COR-TEN® lattice tower remediation before. And, moreover, it is PPL Electric’s understanding that complete remediation of COR-TEN® lattice towers has never been undertaken by another electric utility. Given the lack of industry experience with remediation, PPL Electric cannot adequately benchmark the efficacy and costs of this alternative. Rebuilding the subject transmission lines, as proposed by the Project, would avoid these potential unknown risks and costs.

would, at a minimum, require re-evaluation and possible subsequent remediation every 10 years following the initial remediation. Moreover, the health and safety risks associated with the assets' advanced age and degree of deterioration are so great that remediation would fail to adequately address their poor health conditions.

Subsequent remediation work would be treated as an O&M expense. In addition, there would be ongoing O&M costs for the remainder of the service life of the transmission lines, including more frequent inspections. Inspections to identify issues on the line not addressed through a rebuild would use a cycle of comprehensive visual inspections every 6 years and a supplemental, aerial visual inspection every 3 years in between. After 30 years, the structures will have to be replaced with new structures. Further, remediation would not address all underlying issues, requiring additional, duplicative projects.

For the reasons stated above, it is not reasonable or prudent to pursue Alternative 2. Remediation would fail to address the underlying COR-TEN® asset health conditions on a long-term basis and is a less cost-efficient option.

5.3 Alternative 3 – Partial Rebuilds

The third alternative considered by PPL Electric is to fully rebuild the existing Montour-Saegers 230 kV Transmission Lines, in two separate projects. The first project would include replacing the existing COR-TEN® lattice towers with monopoles in 2025, which will improve performance by increasing clearances and improving lightning performance. The estimated rebuild cost for the first project is approximately \$611,282/structure. The second project would require us to return to replace the steel monopoles in 2037 at an additional cost of \$497,265/structure.

General maintenance work on the first project would not be needed until 30 years after the rebuild due to fully replacing the affected structures (as opposed to attempting to add more useful life to those structures via remediation). Additionally, less frequent inspections would be needed, lowering O&M costs for that portion of the line. Rebuilds are also less risky than remediation due to factors such as lack of remediation experience, lack of evidence for long-term remediation effectiveness, and risk of returning pack-out rust. The steel monopole structure replacement and

remediation options would continue to have ongoing O&M expenses until 2037 when they are replaced.

When compared to the remediation or replacement options, the partial rebuild option is lower risk, but has a much higher cost and would require multiple segments of work in the same area, duplicating costs and efforts.

For the reasons stated above, it is not reasonable or prudent to pursue Alternative 3. Partial Rebuild of the COR-TEN® section in 2025 (including conductor in the COR-TEN® section) and Partial Rebuild of the double-circuit structures in 2037 (including conductor in this section) on the Montour-Saegers 230 kV Transmission Lines would result in a multi-phase approach to complete the Project and is a less cost-efficient option.

5.4 Alternative 4 – Full Rebuild

The fourth alternative considered by PPL Electric is to fully rebuild the existing Montour-Saegers 230 kV Transmission Lines. Replacing both the existing lattice towers with monopoles and the steel monopoles will improve performance by increasing clearances and improving lightning performance. The estimated rebuild cost is approximately \$536,692/structure. General maintenance work would not be needed until 30 years after the rebuild due to fully replacing the affected structures (as opposed to attempting to add more useful life to those structures via remediation).

The revenue requirements for a rebuild over both a 45 and 75-year period¹⁵ are the lowest of the four alternatives (as shown in **Table 1-4**), making the full rebuild the most cost-effective solution. Rebuilds are also less risky than remediation due to factors such as lack of remediation experience, lack of evidence for long-term remediation effectiveness, and risk of returning pack-out rust. When compared to the remediation or replacement options, as well as the partial rebuild option, the full

¹⁵ To evaluate total cost-of-service, the calculation must factor in all lifecycle costs associated with that asset over the analysis window (i.e., 45 years). The Project lifecycle costs include 1) annual depreciation expense over the 45-year window, 2) annual Return on Capital over the 45-year window, and 3) O&M expense for minor repairs at year 45. Those costs will make up the total revenue requirement that is entered annually on the FERC Form 1 formula rate.

rebuild option is more cost-effective and lower risk, making the full system rebuild the best long-term solution.

TABLE 1-4: Cost of Service of Evaluated Options

Project Scope	45 Year Cost of Service (\$M)	75 Year Cost of Service (\$M)
Replace Structures on the Montour-Saegers 230 kV Transmission Lines	\$230.3	\$379.9
Remediate Structures on the Montour-Saegers 230 kV Transmission Lines	\$256.1	\$362.9
Partial Rebuild of the Montour-Saegers 230 kV Transmission Lines	\$181.6	\$288.7
Full Rebuild of the Montour-Saegers 230 kV Transmission Lines	\$180.8	\$223.1

6.0 PROPOSED SOLUTION

The full rebuild of the Montour-Saegers 230 kV Transmission Lines appropriately addresses the asset health conditions described above at the most reasonable cost and, therefore, is the proposed solution. Although PPL Electric evaluated partial replacement and remediation options, these alternatives present substantial uncertainties regarding their immediate and long-term effectiveness to address the COR-TEN® pack-out rust issue. As explained herein, the health and safety risks associated with the assets’ advanced age and degree of deterioration are so great that replacement and remediation would fail to adequately address the poor health conditions of all structures on the line. For these reasons, the replacement and remediation alternatives were rejected by PPL Electric as neither prudent nor reasonable under the circumstances.

If PPL Electric were to remediate the existing COR-TEN® lattice towers, further routine inspections would be required to identify any new pack-out rust growth requiring additional corrective action. The remediation effort could provide a short-term extension of life, but these towers will still need to be replaced to permanently address the issue of pack-out rust since structural integrity of the COR-TEN® steel will become too compromised to remediate. In this

regard, Alternative 2 does not represent an alternative that effectively addresses the structural issues associated with the COR-TEN® lattice towers.

Based on this evaluation, PPL Electric proposes to rebuild the existing Montour-Saegers 230 kV Transmission Lines to resolve the COR-TEN® lattice tower health condition. As part of the rebuild, all the COR-TEN® lattice structures as well as the conductors and associated hardware will be replaced, effectively addressing the asset health conditions described above.

The proposed Project will improve overall reliability, safety, and system resiliency by resolving the asset health concerns associated with COR-TEN® lattice towers. The transmission line rebuild solution was deemed the most cost-effective option to address these concerns.

The Proposed Solution is the most cost-effective. To estimate the total cost of each alternative over both a 45-year and 75-year period (the expected service life of a new steel structure), cost-of-service calculations for the revenue requirement were completed on a per-structure basis.¹⁶ A summary of this analysis is presented in **Table 1-4** above. On a total cost of service basis, the Proposed Solution is approximately 79% of the cost of Alternative 1 (replacing each of the existing structures) on a 45-year basis and 59% of the cost of Alternative 1 on a 75-year basis.

The Proposed Solution also avoids excess costs and uncertainties surrounding the remediation solution contemplated in Alternative 2. On a total cost of service basis, the Proposed Solution is approximately 71% of the cost of Alternative 2 (remediating the existing structures) on a 45-year basis and approximately 61% of the cost of Alternative 2 on a 75-year basis. Moreover, PPL Electric is unaware of another project that has undergone full weathering-steel COR-TEN® lattice tower remediation. As such, the recurring costs of remediation could be even greater than anticipated and are unlikely to successfully mitigate the risk. The Proposed Solution avoids these excess costs and uncertainties, efficiently rebuilds the transmission lines to ensure the continued

¹⁶ Because all COR-TEN® lattice structures on the system are of a similar design and vintage, doing the cost of service calculation on a per structure basis allows for a determination of the most cost effective option for any COR-TEN® structure on the system regardless of the total line length. It is assumed that the cost of service calculation could be extrapolated across the total number of structures on a given line with a similar result. The revenue requirement is the total cost that the customers would be charged based on calculations that include a combination of operations and maintenance (“O&M”) expense, depreciation, and return on capital.

provision of safe and reliable service and resolves the additional reliability concerns identified herein.

The approximate cost of the entire transmission line rebuild Project is \$65 Million.

As discussed in Section 4.2.1, above, the project scope (Supplemental Project Number s2370) to rebuild the Montour-Saegers Transmission Line was presented to PJM in the October 2020 TEAC meeting, to address the COR-TEN® asset health issues.

A map of the proposed system alignment is provided as **Figure 1-3**.

Figure 1-2: Existing System Configuration



- ▲ Substation or Switchyard
- Existing Structure
- Existing Transmission Line
- - Municipality Boundary

Roads, Railroads,
Municipalities (PASDA 2022)
Rivers, Forest Cover
(USGS 2022)

Coordinate System:
State Plane Pennsylvania North
Datum: North American 1983



Figure 1-2
Existing System Configuration
Montour - Saegers #1 & #2
230 kV Transmission Rebuild Project

0 0.5 1 Miles

Figure 1-3: Proposed System Configuration



Figure 1-2
Existing System Configuration

Montour - Saegers #1 & #2
230 kV Transmission Rebuild Project






0 0.5 1



Miles

- ▲ Substation or Switchyard
- Existing Structure
- Existing Transmission Line
- - Municipality Boundary

Roads, Railroads,
 Municipalities (PASDA 2022)
 Rivers, Forest Cover
 (USGS 2022)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983



**PPL ELECTRIC
ATTACHMENT 2**

MONTOUR-SAEGERS 230 KV COR-TEN® REBUILD PROJECT

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	DESCRIPTION OF PROPOSED LINE.....	1

List of Tables

Table 2-1.	Existing and New Transmission Line Structures.....	Error! Bookmark not defined.
Table 2-2.	Design for Minimum Conductor Clearances for Selected Conductor.....	5
Table 2-3.	Conductor Thermal Rating 1590 kcmil 54/19 Stranding Falcon ACSS.....	5
Table 2-4.	Conductor Thermal Rating 1590 kcmil 45/7 Stranding Lapwing ACSR.....	5

List of Figures

Figure 2-1.	Typical 230 kV Single-Circuit Steel H-Frame Structure	6
Figure 2-2.	Typical 230 kV Long Span Double-Circuit Steel Pole Structure	7
Figure 2-3.	Typical 230 kV Long Span Double-Circuit Steel Pole Structure	8
Figure 2-4.	Typical 230 kV Long Span Double-Circuit steel Pole Tension Structure.....	9

1.0 INTRODUCTION

PPL Electric Utilities Corporation (“PPL Electric” or the “Company”) is requesting Pennsylvania Public Utility Commission (“PUC” or “the Commission”) approval to rebuild approximately 12.7 miles of the existing double-circuit Montour-Saegers 230 kilovolt (“kV”) Transmission Lines connecting the Montour 230-69 kV Substation (“Montour Substation”) located in Montour County and the Saegers 230-69 kV Substation (“Saegers Substation”) located in Lycoming County, Pennsylvania (“Montour-Saegers 230 kV Rebuild Project” or the “Project”).¹

The proposed Project is part of PPL Electric’s COR-TEN® rebuild program in which all existing 230 kV transmission lines built with COR-TEN® lattice towers are being replaced due to structural concerns. Specifically, a 6.2-mile-long portion of the Montour-Saegers 230 kV Rebuild Project requires structure replacements for the COR-TEN® lattice towers. The Project crosses Anthony and Derry townships in Montour County, Lewis Township in Northumberland County, and Clinton and Muncy Creek townships in Lycoming County.

The proposed transmission line will be designed according to, and generally exceed, all National Electrical Safety Code (“NESC”) standards. Design specifications and safety rules adhered to by PPL Electric are included as **Attachment 4**.

2.0 DESCRIPTION OF THE EXISTING AND PROPOSED 230 kV LINE AND STRUCTURES

Connection between the Montour and Saegers substations includes approximately 12.7 miles of the double-circuit Montour-Saegers 230 kV Transmission Lines. The existing 230 kV transmission lines are composed of six 1590 kcmil², 45/7 stranding, “Lapwing” ACSR³ conductor wires. The arrangement also includes an overhead ground wire (“OHGW”), a 144 count optical ground wire (“OPGW”) and a 48 count OPGW. These conductor and ground wires are supported by a series of transmission line structures which include 37 COR-TEN® double-circuit steel lattice towers,

¹ For a complete list of municipalities and counties crossed by the Project, please refer to the Letter of Notification, Attachment 5.

² 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 mm².

³ ACSR stands for aluminum conductor steel reinforced.

67 double-circuit steel monopoles, seven single-circuit steel monopoles⁴ and two single-circuit H-frame structures.

A detailed map of the Project alignment is provided as **Figure 3-1 in Attachment 3**.

At the Montour Substation, two existing single-circuit H-frame structures (Structure 17/92 and 17/94 and Structure 16/86 and 16/87) will be replaced with two single-circuit H-frame structures (**Page 1 of Figure 3-1 in Attachment 3**). The next 1.5-mile stretch of the existing Montour-Saegers 230 kV Transmission Lines consists of 16 double-circuit steel monopoles and two single-circuit steel monopoles (Structures 84/98 through 43/76) between the Montour Power Plant and Arrowhead Road in Derry Township and Anthony Township, Montour County (**Pages 1-3 of Figure 3-1 in Attachment 3**). North of Arrowhead Road, the existing 230 kV transmission lines utilize 29 COR-TEN® double-circuit steel lattice towers (Structures 09/14 through 34/95) for 4.9 miles through Derry Township, Montour County and into Lewis Township, Northumberland County (**Pages 3-9 of Figure 3-1 in Attachment 3**). From here, the existing Montour-Saegers 230 kV Transmission Lines use 31 double-circuit steel monopoles (Structures 91/30 through 72/32) for the next 2.7 miles through Lewis Township, Northumberland County (**Pages 9-12 of Figure 3-1 in Attachment 3**). The next 1.4-mile stretch of transmission lines consist of 8 COR-TEN® double-circuit steel lattice towers (Structures 47/82 through 47/63) located east of Interstate 180 (I-180) in Lewis Township, Northumberland County and Muncy Creek Township, Lycoming County (**Page 12-14 of Figure 3-1 in Attachment 3**). The final 2.0 miles of the existing 230 kV transmission lines utilize 20 double-circuit steel monopoles. At Saegers Substation, the two existing 230 kV transmission lines are separated onto single-circuit steel monopoles (**Page 17 of Figure 3-1 in Attachment 3**). Two single-circuit steel monopoles are used to support the existing 230 kV transmission lines in this area and will remain in place, although new electrical conductors will be connected to them as part of the Project. The remaining three single-circuit steel monopole structures closest to Saegers Substation meet the current design and reliability standards and do not require replacement or reconductoring. A new OPGW shield wire will connect to one of these

⁴ Two existing single circuit structures (87C and 87D) will remain in place with no changes to their conductors or OPGW; these two structures are not part of the Project. One existing single circuit structure (88D) will remain in place with OPGW upgrades and is part of the Project. Two existing single circuit structures (87A and 87B) will remain in place with new conductors; these structures are part of the Project. The final two existing single circuit structures will be replaced with one double-circuit steel monopole (proposed structure 5) and are part of the Project.

structures as part of the Project. No additional work to structures, conductors, or OPGW is planned for the remaining two structures, which are not part of the Project (**Page 17 of Figure 3-1 in Attachment 3**).

Due to the corrosion and development of pack rust⁵ on the COR-TEN® lattice tower structures, PPL Electric proposes to replace them with steel monopole structures. The COR-TEN® lattice towers to be replaced are segmented into three distinct sections, as described in the paragraph above.

The existing COR-TEN® lattice tower structures range in height from between approximately 123 and 159 feet with an average structure height of approximately 132 feet. The existing double-circuit steel monopoles range from 100 to 175 feet with an average structure height of approximately 122 feet. The existing single-circuit H-frame structures are 80 feet tall. The proposed structures for the rebuilt Montour-Saegers 230 kV Transmission Lines will range in height from between approximately 95 and 180 feet with an average height of approximately 122 feet. **Table 2-1** provides a summary of the number and heights of the existing and proposed structures that are the subject of this Project filing.

TABLE 2-1: Existing and New Transmission Line Structures

Transmission Line	No. of Existing Structures	Existing Structure Height Range (feet)	Proposed No. of New Structures*	Proposed Structure Height Range (feet)	Applicable Framing/ Specifications
Montour-Saegers #1 & #2 230 kV	111	80 to 175	107	95 to 180	7-009-043 7-009-061 7-009-062 7-009-064
Total	111		107		
*Proposed number of new structures based on preliminary engineering. The final number of new structures may vary and include structures to remain/be reused.					

⁵ “Pack-out rust” or “pack rust” is a form a localized corrosion typical of steel components that develop a crevice into an open atmospheric environment, which results in rust packing between conjoined steel components. As described in Attachment 1, pack-out rust accelerates the deterioration of asset health and can result in shearing off bolts, loss of structural integrity, members disconnecting from lattice towers, and tower failure.

Figures 2-1 through 2-4 depict typical structure types that will be used for the rebuilt Montour-Saegers 230 kV Transmission Lines, which include the following:

- Install approximately 2 new single-circuit tangent tension custom direct-embedded monopole structures (**Figure 2-1**).
- Install approximately 5 new double-circuit suspension custom direct embedded monopole structures (**Figure 2-2**).
- Install approximately 70 new double-circuit suspension custom monopole structures on foundation (**Figure 2-2**).
- Install approximately 6 new double-circuit angle suspension custom monopole structures on foundation (**Figure 2-3**).
- Install approximately 24 new double-circuit tension custom monopole structures on foundation (**Figure 2-4**).

The proposed monopole structures for the rebuilt Montour-Saegers 230 kV Transmission Lines will be constructed in generally the same location as the existing structures. The transmission lines cannot be fully deenergized during the construction process, thereby requiring the new monopoles to be offset typically 35 feet ahead or behind and horizontally offset approximately 10 to 15 feet from the COR-TEN® structure locations as a safety precaution. PPL Electric has designed the proposed transmission line system so that it fits entirely within the existing right-of-way (“ROW”).

The proposed Montour-Saegers 230 kV Transmission Lines consist of six 1590 kcmil, 54/19 stranding, “Falcon” ACSS⁶ conductors between the Montour Substation and existing Structure 87A/B. From existing Structure 87A/B to Saegers Substation, the proposed 230 kV transmission lines will utilize existing 1590 kcmil, 45/7 stranding, “Lapwing” ACSR. The OHGW and two OPGW will be removed and be replaced with dual 144 count fiber OPGW from the Montour Substation to the Saegers Substation. The minimum conductor-to-ground clearance will be 25.5 feet which occurs at the emergency maximum thermal conductor temperature of 250°C (482°F). The design minimum conductor clearances and conductor thermal ratings for the reconstructed lines are noted in **Tables 2-2 through 2-4**.

⁶ ACSS stands for aluminum conductor steel supported.

Table 2-1: Design for Minimum Conductor Clearances for Selected Conductor⁷

Condition	Transmission Double-Circuit Design Clearance-to-Ground
Heavy Ice (1” Ice at 0°C ambient temperature)	25.5 feet
Predicted extreme thermal load (125°C conductor temperature)	25.5 feet
Predicted blowout (6 psf, 16°C ambient temperature)	25.5 feet

Table 2-2: Conductor Thermal Rating - 1590 kcmil 54/19 Stranding Falcon ACSS – 250°C Normal Maximum Conductor

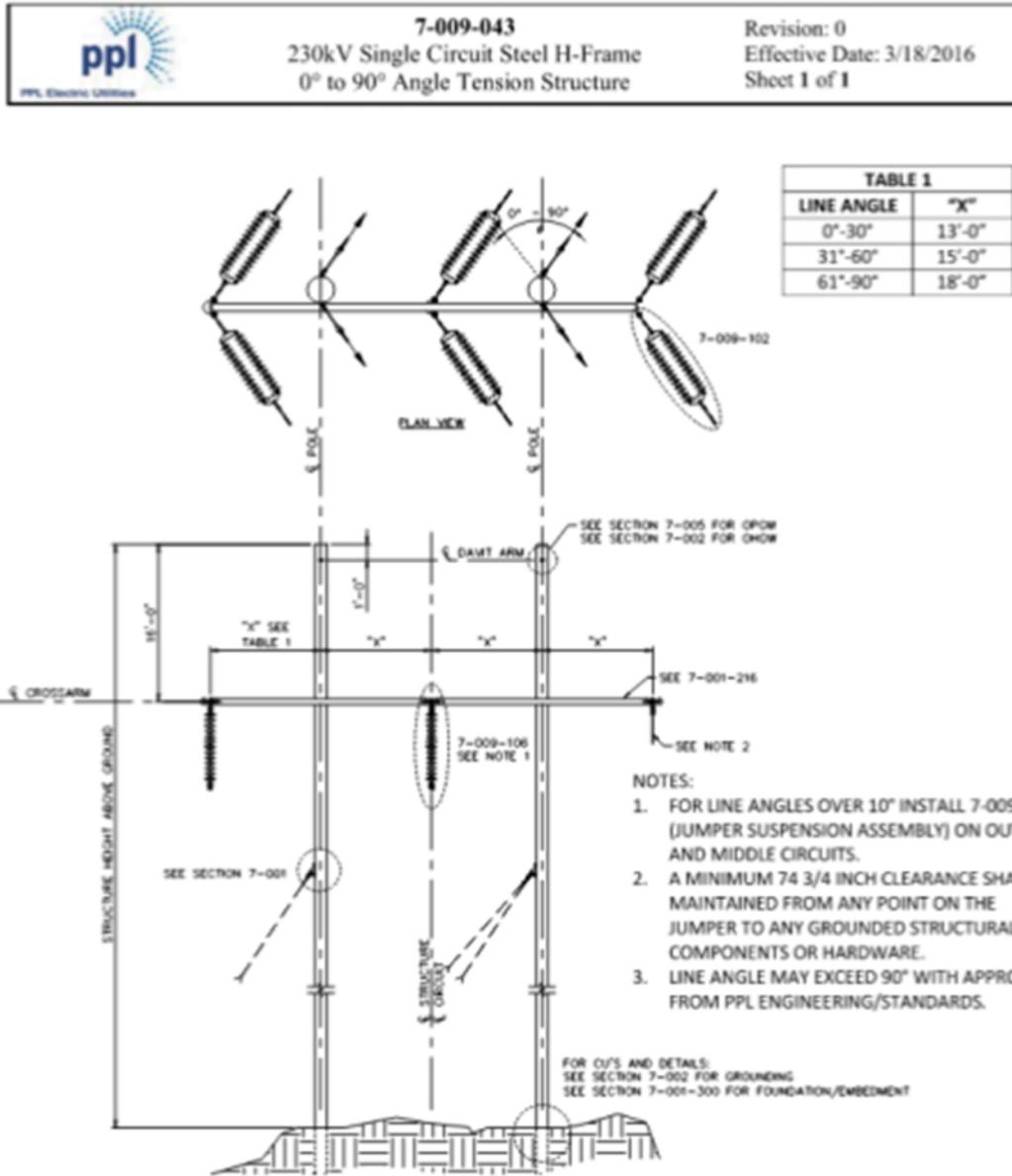
Condition	Ambient Temperature (°C)	Wind Speed (Ft./sec)	Ampacity (Amps)
Summer Normal	35	0	2,719
Winter Normal	10	0	2,848
Summer Emergency	35	2.533	3,066
Winter Emergency	10	2.533	3,200

Table 2-3. Conductor Thermal Rating 1590 kcmil 45/7 Stranding Lapwing ACSR – 125°C Normal Maximum Conductor

Table 2-4. Conductor Thermal Rating 1590 kcmil 45/7 Stranding Lapwing ACSR – 125°C Normal Maximum Conductor			
Condition	Ambient Temperature (°C)	Wind Speed (Ft./sec)	Ampacity (Amps)
Summer Normal	35	0	1,637
Winter Normal	10	0	1,885
Summer Emergency	35	2.533	2,025
Winter Emergency	10	2.533	2,280

⁷ Clearances based on an initial maximum tension of 6,000-10,000 pounds at 0.5 inch ice, 0°F, 4# wind and maximum ruling span of 200-1,250 feet.

Figure 2-1. Typical 230 kV Single-Circuit Steel H-Frame Structure

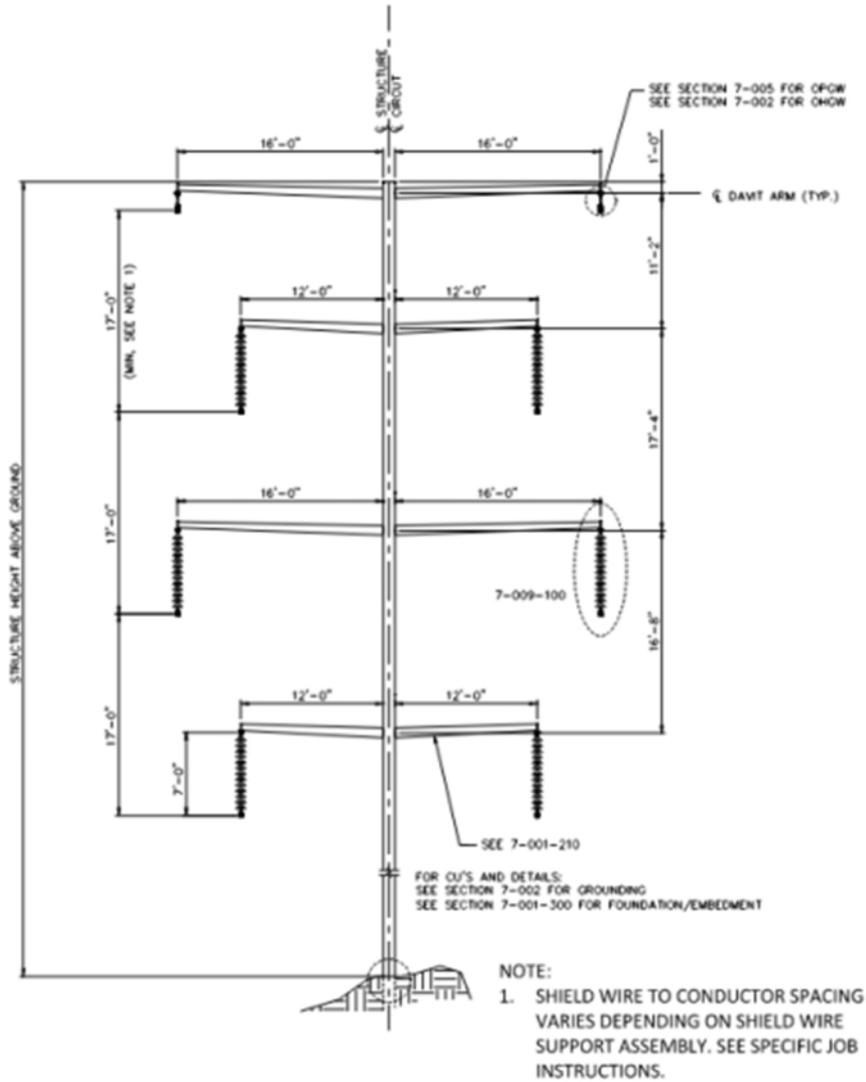


REV	Date	Sponsor	Reviewer	Transmission Construction Standards PPL Electric Utilities Corporation
0	3/18/16	MSD	SDS	Approved T. P. Hinson
				Manager Standards

Approved: E154693 Hinson, Todd P

Figure 2-2. Typical 230 kV Long Span Double-Circuit Steel Pole Structure

	7-009-061 230kV Long Span Double Circuit Steel Pole 0° to 1° Suspension Structure	Revision: 0 Effective Date: 3/18/2016 Sheet 1 of 1
---	--	--

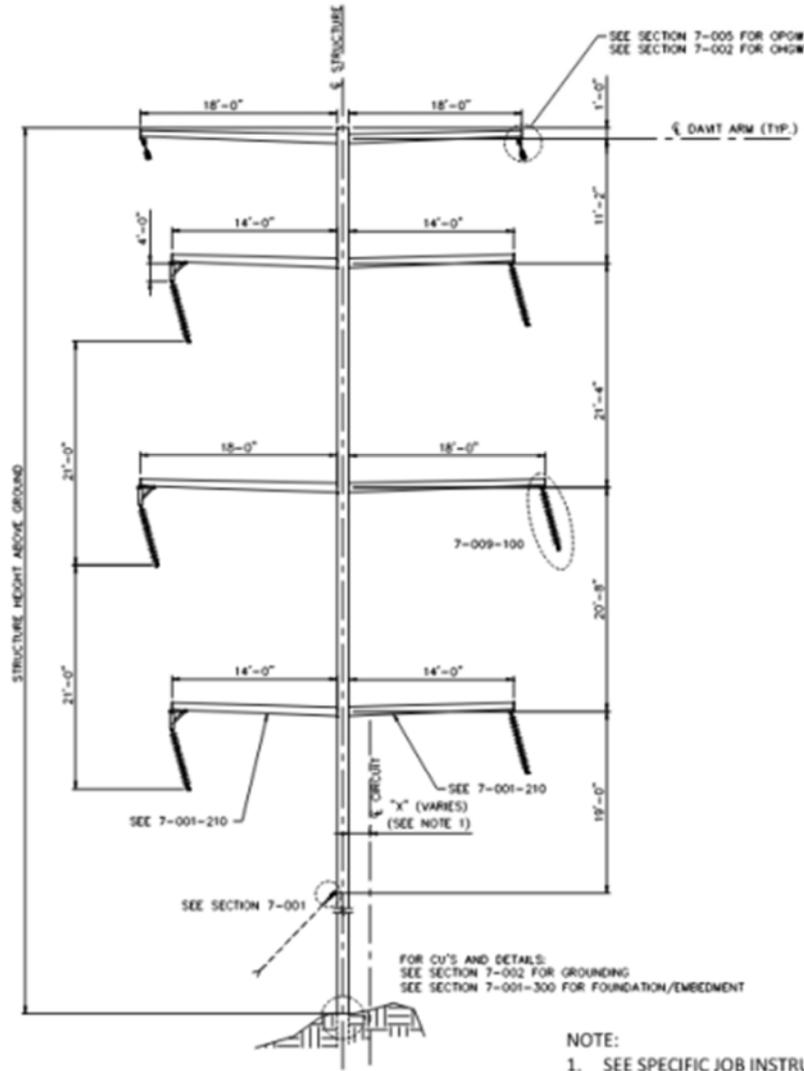


REV	Date	Sponsor	Reviewer	
0	3/18/16	MSD	SDS	Transmission Construction Standards PPL Electric Utilities Corporation
				Approved T. P. Hinson
				Manager Standards

Approved: E154693 Hinson, Todd P

Figure 2-3. Typical 230 kV Long Span Double-Circuit Steel Pole Structure

	7-009-062 230kV Long Span Double Circuit Steel Pole 1° to 10° Angle Suspension Structure	Revision: 0 Effective Date: 3/18/2016 Sheet 1 of 1
---	---	--

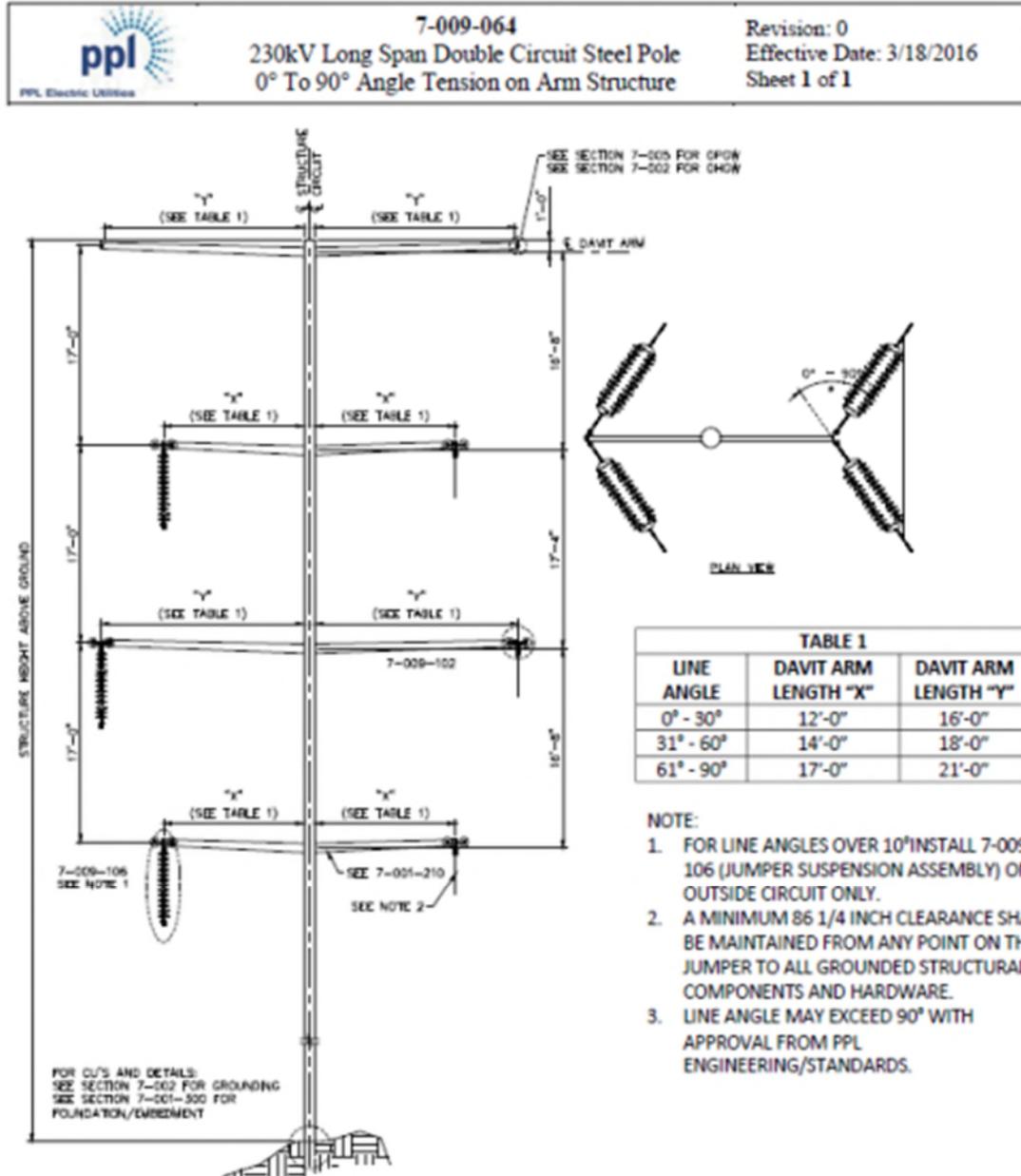


NOTE:
 1. SEE SPECIFIC JOB INSTRUCTIONS FOR STRUCTURE LAYOUT DIMENSIONS.

REV	Date	Sponsor	Reviewer	Transmission Construction Standards PPL Electric Utilities Corporation
0	3/18/16	MSD	SDS	Approved T. P. Hinson
				Manager Standards

Approved: E154693 Hinson, Todd P

Figure 2-4. Typical 230 kV Long Span Double-Circuit steel Pole Tension Structure



REV	Date	Sponsor	Reviewer	Transmission Construction Standards PPL Electric Utilities Corporation
0	3/18/16	MSD	SDS	
				Approved T. P. Hinson
				Manager Standards

Approved: E154693 Hinson, Todd P

**PPL ELECTRIC
ATTACHMENT 3**

MONTOUR-SAEGERS 230 KV COR-TEN® REBUILD PROJECT

TABLE OF CONTENTS

1.0 INTRODUCTION	1
2.0 LAND USE	3
3.0 CULTURAL RESOURCES	5
4.0 NATURAL FEATURES	6
5.0 THREATENED AND ENDANGERED SPECIES	9

List of Figures

Figure 3-1. Aerial Map of the Project	10
--	-----------

1.0 INTRODUCTION

PPL Electric Utilities Corporation (“PPL Electric” or the “Company”) is requesting Pennsylvania Public Utility Commission (“PUC” or “the Commission”) approval to rebuild approximately 12.7 miles of the existing double-circuit Montour-Saegers 230 kilovolt (“kV”) Transmission Lines connecting the Montour 230-69 kV Substation (“Montour Substation”) located in Montour County and the Saegers 230-69 kV Substation (“Saegers Substation”) located in Lycoming County, Pennsylvania (“Montour-Saegers 230 kV Rebuild Project” or the “Project”)¹.

The proposed Project is part of PPL Electric’s COR-TEN® rebuild program in which all existing 230 kV transmission lines built with COR-TEN® lattice towers are being replaced due to structural concerns. Specifically, a 6.2-mile-long portion of the Montour-Saegers 230 kV Rebuild Project requires structure replacements for the COR-TEN® lattice towers. PPL Electric has provided information about the proposed Project to representatives from Lycoming, Montour, and Northumberland counties, in addition to Anthony, Clinton, Derry, Lewis, and Muncy Creek townships.

The rebuilt Montour-Saegers 230 kV Transmission Lines will be slightly offset from the existing structure alignment and in the same right-of-way (“ROW”) as the existing transmission line. The Project will remain on the same PPL Electric fee-owned properties and existing ROW. The existing fee-owned properties and ROW vary in width from 100 to 150 feet wide. As part of the Project, 108 existing structures will be replaced with 107 new structures. As discussed in **Attachment 2**, three single-circuit steel monopole structures closest to Saegers Substation meet the current design and reliability standards and do not require replacement or reconductoring. Two of these structures are not part of the Project; the third will have a new shield wire installed and is part of the Project. A network of existing access roads or temporary roads will be utilized during construction of the rebuilt transmission lines. Detailed maps of the proposed rebuilt Montour-Saegers 230 kV Transmission Lines and associated structures are provided in **Figure 3-1**. The ROW for the Project is further described below:

¹ For a complete list of municipalities and counties crossed by the Project, please refer to the Letter of Notification, Attachment 5.

- From the existing Montour Substation, the Project heads in a northwesterly direction to exit the Montour Power Plant property and pass through additional industrial properties for approximately 1.1 miles, crossing a private railroad track, Chillisquaque Creek, McMichael Road, and PP and L Road/State Route 1003 (Pages 1-3 of 17, from the existing Montour Substation to Structure 18 in **Figure 3-1**). A few agricultural properties are crossed between Structures 13 and 18 after crossing PP and L Road/State Route 1003. These structures are located entirely on PPL Electric property or on ROW maintained by PPL Electric.
- From this point, the existing Montour-Saegers 230 kV Transmission Lines continue northwest, traversing mostly agricultural and residential properties and crossing occasional fragmented woodlots for approximately 5 miles (Page 3-9 of 17, Structure 18 to Structure 47 in **Figure 3-1**). Starting with Structure 19, the 29 COR-TEN® structures along this segment will be replaced with suspension custom monopole structures (7-009-061) and long span angle tension monopole structures (7-009-064). Hydrological features crossed within this portion include West Branch Chillisquaque Creek, McKee Run, and County Line Branch. Additionally, within this stretch, the Project crosses the Creekside Amish School property; however, the school facilities are located approximately 0.4 mile west of the existing and proposed structures. All of these structures are located entirely within ROW maintained by PPL Electric.
- Shortly after crossing State Route 1010 (Showers Run), the Montour-Saegers 230 kV Transmission Lines continue in a northwestern direction for approximately 2.6 miles (Pages 9-12 of 17, Structure 48 to Structure 78 in **Figure 3-1**) through a large, contiguous area of forested cover and a few interspersed agricultural properties, crossing unnamed tributaries (“UNTs”) of Warrior Run, North Bend Road, Hill Road, Dimm Road, and Murray Road. All of these structures are located entirely within ROW maintained by PPL Electric.
- Just before crossing Murray Road again, the Montour-Saegers 230 kV Transmission Lines continue northwest by traversing a few residential and agricultural properties with adjacent woodlots in proximity to the State Route 180 corridor (Pages 12-13 of 17, Structure 78 to Structure 82 in **Figure 3-1**) for 0.7 miles. Starting with Structure 79, the four COR-TEN®

structures along this segment will be replaced with suspension custom monopole structures (7-009-061) and long span angle tension monopole structures (7-009-064). All of these structures are located entirely within ROW maintained by PPL Electric.

- At this point, the Project turns northward for approximately 0.7 miles through another large, forested tract (Pages 13-14 of 17, Structure 82 to Structure 86 in **Figure 3-1**), crossing Murray Road. Just before crossing the State Route 180 corridor, the Montour-Saegers 230 kV Transmission Lines proceed northwest by traversing additional residential and agricultural properties (Pages 14-15 of 17, Structure 86 to Structure 94 in **Figure 3-1**) for approximately 0.8 mile. All of these structures are located entirely within ROW maintained by PPL Electric.
- After the Project crosses Mussers Lane, the Montour-Saegers 230 kV Transmission Lines turn to proceed westward and cross Pepper Street, the West Branch Susquehanna River, and the Norfolk Southern Buffalo Line by paralleling the Lycoming Valley Railroad corridor through agricultural tracts for approximately 1.3 miles between Structure 94 and existing Structures 87A and 87B (Pages 15-17 of 17 in **Figure 3-1**). A new OPGW shield wire will connect to one of these structures as part of the Project. No additional work to structures, conductors, or OPGW is planned for the remaining two structures, which are not part of the Project. All of these structures are located entirely within ROW maintained by PPL Electric.

2.0 LAND USE

PPL Electric evaluated the existing land uses on the PPL Electric owned properties, within the existing ROW, and within 0.25 miles (1,320 feet) of the rebuilt centerline (“Project Area”) to summarize the overall landscape in which the Project is located. Based on a review of the 2021 United States Geological Survey (“USGS”) National Land Cover Database (“NLCD”) and current aerial imagery, land use in the Project Area primarily consists of agricultural land (cultivated crops or pasture/hayfield) or undeveloped forest (deciduous and mixed). The remaining 21% of existing land uses within the Project Area consists of barren land, developed land (open space, low intensity, medium intensity, and high intensity), wetlands, open water, or evergreen forest, grassland, and scrub/shrub habitat.

No communication towers or antennae were identified within the Project Area. No cell tower attachments are located on the existing Montour-Saegers 230 kV Transmission Lines. The Project crosses two gas transmission pipelines: one operated by United States Gypsum Company, located between Structure 13 and Structure 14 and one operated by UGI Energy Services, located between Structure 19 and Structure 20. An additional UGI Energy Services gas pipeline crosses the Project Area along State Route 405 but is not crossed by the existing or proposed Montour-Saegers 230 kV Transmission Lines. Impact to the pipelines is not anticipated and PPL Electric will coordinate with the pipelines owners/operators prior to commencing the Project.

The Project crosses other PPL Electric utility ROWs near the existing Montour Substation. No additional pipelines, or other utilities will be affected by the proposed Project.

The closest active airport to the Project Area is the Williamsport Regional Airport, a publicly owned facility, located approximately 6 miles northwest of the existing Saegers Substation. Additionally, a private heliport (Muncy Valley Hospital) is located approximately 3 miles northeast of the existing Saegers Substation. PPL Electric does not anticipate any interference with airport or heliport operations since the Project consists of electrical facilities that are of a similar height as the existing electrical facilities and within existing ROW. However, PPL Electric will file any required documentation with the Federal Aviation Administration and the Pennsylvania Department of Transportation, Bureau of Aviation.

Several private railroad tracks service a coal power plant adjacent to the existing Montour Substation. As such, the Project requires two railroad crossings immediately after exiting the Montour Substation, specifically between Structures 3 and 6. Near the existing Saegers Substation, the Project requires one crossing of the Norfolk Southern Buffalo Line railroad corridor between Structures 106 and the Saegers Substation, and one crossing of the Lycoming Valley Railroad (“LVRR”), located between structures 96 and 97. PPL Electric is currently coordinating with the railroad companies and does not anticipate any impact to the railroads as part of the Project.

Conserved Lands

The proposed Project will not affect any national parks, state parks, local parks, recreational areas or natural landmarks. Two state recreational trails are located within the Project Area. The West

Branch Susquehanna River provides a water trail through central Pennsylvania from Clearfield County to Sunbury where it joins the North Branch. The existing Montour-Saegers 230 kV Transmission Lines span the West Branch Susquehanna River and the proposed rebuild is not anticipated to impact associated recreational activities. State Route 405 provides a bicycling corridor (Route J) for the greater statewide BicyclePA network; however, the recreational trail is located northwest and past the existing Saegers Substation and will not be impacted by the Project. The proposed Project is not anticipated to result in new impacts to any local or state parks or recreation areas, conservation areas, or protected lands. No national, state, or local parks or natural landmarks are located within the Project area.

Pennsylvania Game Commission (“PGC”) State Game Land #325 is located within Lewis Township approximately 0.8 mile southeast of the State Route 180 corridor. The existing Montour-Saegers 230 kV Transmission Lines ROW and existing access roads are located entirely outside of State Game Land #325. The next closest conserved property is the Logue/McMahon conservation easement, managed by a non-governmental organization (“NGO”) known as the Northcentral Pennsylvania Conservancy. The Logue/McMahon conservation easement is located adjacent to and east of the West Branch Susquehanna River. The existing Montour-Saegers 230 kV Transmission Lines ROW and existing access roads are located entirely outside of the Logue/McMahon conservation easement. Neither of these conserved properties will be affected by the Project.

No agricultural conservation easements are directly crossed by the Project nor located within the Project Area. The nearest agricultural easements are located at least 1.5 miles from the Project Area.

3.0 CULTURAL RESOURCES

An online review of the Project Area and surrounding landscape was conducted through the Pennsylvania Historical and Museum Commission (“PHMC”) State Historic and Archaeological Resource Exchange site. Based on State Historic Preservation Office (“SHPO”) data, one eligible historic district, the Philadelphia & Reading Railroad, is crossed by the Project. The Philadelphia & Reading Railroad is located in the current Lycoming Valley Railroad corridor (See Page 15-17

of 17 in **Figure 3-1**). No other eligible or listed architectural resources are crossed by the Project or located in proximity to the Project Area.

PPL Electric is in the initial stage of coordination with the SHPO for the modifications being made to the transmission lines. This coordination will be required to receive permits to construct the Project and will be conducted in the near future. PPL Electric does not anticipate any impacts to the SHPO eligible district. PPL Electric will perform any reviews and field survey/sampling work required by the PHMC to avoid, minimize, and mitigate impacts to archaeological or historic architectural resources that may be located within the Project Area.

4.0 NATURAL FEATURES

Unique Natural Features

No unique geological, scenic, or natural areas are located within the Project Area, according to the Pennsylvania DCNR (“DCNR”).

Soils

The Project Area is gently undulating, crossing a mixed landscape of farmland and developed areas primarily consisting of mixed-use commercial/industrial and residential land. Topography varies from approximately 465 feet to approximately 1,165 feet above mean sea level (“msl”). Soils present within the Project Area predominantly consist of silt loams, ranging between 0 and 80 percent slopes.

Erosion and Sedimentation (“E&S”) control plans will be developed and implemented for the Project to minimize the displacement of soils. These plans will require prior approval from the applicable counties’ conservation districts. National Pollutant Discharge Elimination System (“NPDES”) permits will also be required from the Pennsylvania Department of Environmental Protection (“PADEP”) as needed. During construction, PPL Electric will adhere to all conditions specified in the NPDES permit. Impacts to local soil resources are anticipated to be minimal.

Waterways and Wetlands

The existing transmission line spans approximately 12 National Hydrography Dataset waterways that will remain in place after the Project construction activities have occurred. The waterways crossed by the Project include Chillisquaque Creek, County Line Branch, McKee Run, Turkey Run, West Branch Chillisquaque Creek, and West Branch Susquehanna River, as well as four UNTs of County Line Branch and two UNTs of Warrior Run. Chillisquaque Creek, County Line Branch, McKee Run, West Branch Chillisquaque Creek, and four UNTs of County Line Branch are located in the McKee Run-Chillisquaque Creek Watershed (Hydrologic Unit Code [“HUC”] 020502061102). Two UNTs of Warrior Run are located in the Warrior Run Watershed (HUC 020502061203). Turkey Run and West Branch Susquehanna River are located in the Delaware Run-West Branch Susquehanna River Watershed (HUC 020502061202). All three watersheds are subwatersheds in the Lower West Branch Susquehanna Basin (HUC 02050206).

All 12 streams crossed by the Project have a PADEP Chapter 93 Designated Use Stream Classification of Warm Water Fishes (“WWF”), Migratory Fishes (“MF”). No direct impact to these stream features is anticipated by the Project activities.

Based on review of the U.S. Fish and Wildlife Service’s (“USFWS”) National Wetlands Inventory (“NWI”), the Project crosses one Palustrine Forested Broad-leaved Deciduous Temporarily Flooded (PFO1A) wetland habitat, three Riverine Lower Perennial Unconsolidated Bottom (R2UBH) stream habitats, three Riverine Upper Perennial Unconsolidated Bottom (R3UBH) stream habitats, and five Riverine Intermittent Seasonally Flooded (R4SBC) stream habitats. No impacts to these NWI features are anticipated by the proposed Project activities.

For federal and state permitting purposes, the wetlands and waterways within the Project Area have been delineated, surveyed, and illustrated according to regulatory standards (see **Figure 3-1**). This information is being used to minimize wetland and waterway impacts where feasible. Additionally, PPL Electric will avoid impacts to wetlands and waterways where possible by aerially spanning these features. PPL Electric will obtain all necessary permits from PADEP and the United States Army Corps of Engineers (“USACE”) and will comply with all the terms and conditions placed on those permits. PPL Electric also will consult with the applicable County

Conservation Districts, prepare any required soil erosion and sedimentation control plans, and obtain NPDES permits and comply with any conditions placed on those permits.

An E&S control plan will be developed to address stormwater control in all watershed areas crossed by the Project. PPL Electric will obtain all approvals and permits necessary for the construction of the Project and will comply with any conditions placed on those permits.

100-Year Floodplains and Regulatory Floodway

The National Flood Hazard Layer for Lycoming, Montour, and Northumberland counties in Pennsylvania was obtained through the Federal Emergency Management Agency (“FEMA”) Flood Map Service Center website and analyzed for 100-year floodplains and regulatory floodway within the Project Area and surrounding landscape. Based on review of this data, the Project spans 100-year floodplain and regulatory floodway associated with Chillisquaque Creek, West Branch Chillisquaque Creek, McKee Run, County Line Branch, UNTs of Warrior Run, and Turkey Run. Additionally, the Project crosses 100-year floodplain and regulatory floodway associated with the West Brach Susquehanna River. No impacts to these floodplain areas or floodways are anticipated by the proposed Project activities.

Minimal impacts to floodplain areas or floodways are anticipated by the proposed Project activities, since the proposed structures will be replaced in proximity to existing structures. Coordination with PADEP regarding this potential impact will be conducted during the permitting phase of the Project.

Vegetation

Vegetative cover in the Project Area consists almost entirely of agricultural fields or landscaped areas. The existing ROW areas for the transmission lines have previously been cleared of woody vegetation and no extensive tree clearing is anticipated as part of the Project. If vegetation management is required in this specific location, PPL Electric will apply its “Specifications for Transmission Vegetation Management LA-79827” to minimize potential impacts.

5.0 THREATENED AND ENDANGERED SPECIES

A Pennsylvania Natural Diversity Inventory (“”) was run for the Project on October 4, 2022, to assess the potential presence of threatened and endangered species and/or special concern species. Specific agencies reviewing the Project included the PGC, Pennsylvania Fish & Boat Commission (“PFBC”), DCNR, and USFWS.

The agencies reported no known impacts to threatened and endangered species and/or special concern species and resources within the Project Area. Therefore, no further consultation with PGC, DCNR, PFBC, or USFWS is required for this Project.

Figure 3-1. Aerial Map of the Project



- ▲ Substation or Switchyard
- Proposed Structure
- ⊠ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- Existing ROW
- Parcel Boundary
- Railroad
- County Boundary
- Delineated Stream
- Delineated Wetland
- 100-Year Floodplain

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

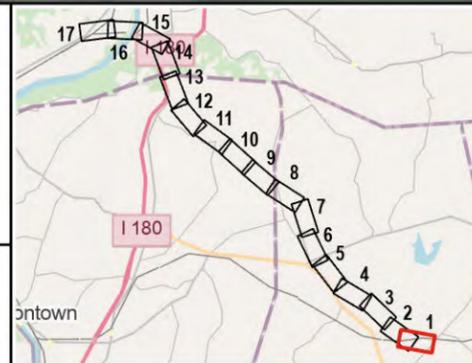
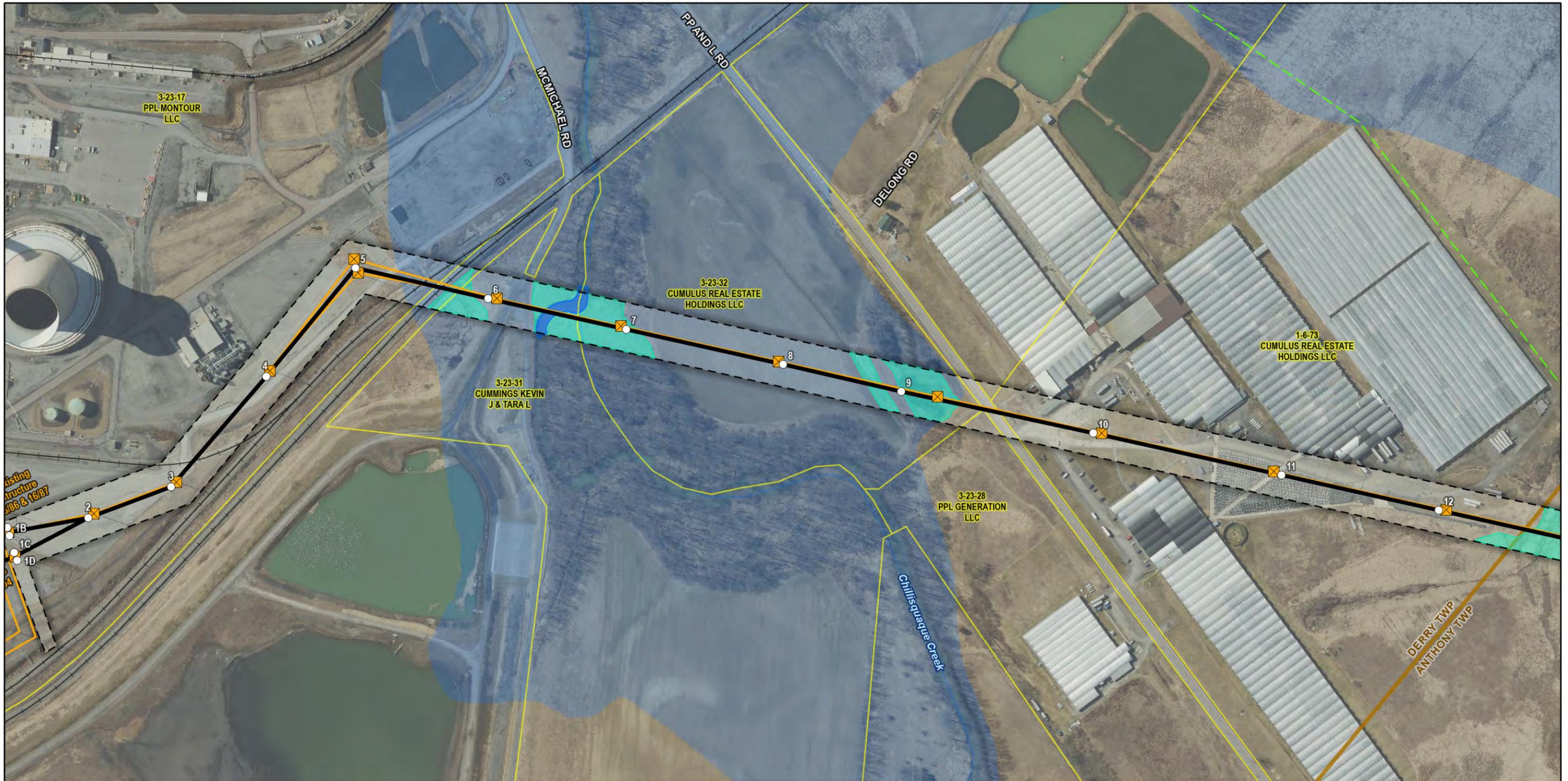


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ✕ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- Railroad
- Natural Gas Pipeline
- Existing ROW
- Municipality Boundary
- Parcel Boundary
- County Boundary
- Delineated Stream
- Delineated Wetland
- 100-Year Floodplain

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

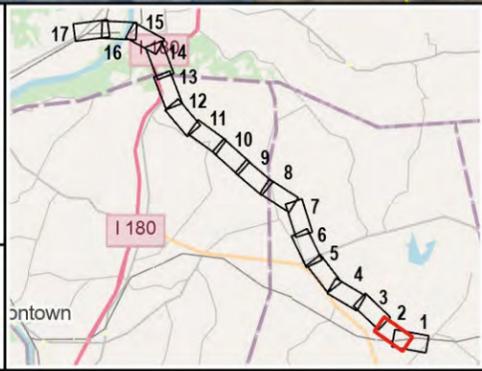


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ⊠ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- Natural Gas Pipeline
- Existing ROW
- Municipality Boundary
- Parcel Boundary
- County Boundary
- Delineated Stream
- Delineated Wetland
- 100-Year Floodplain

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

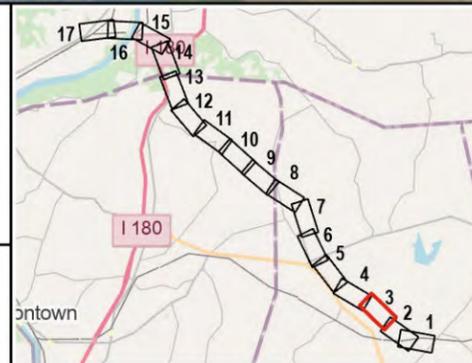
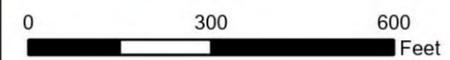


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ⊠ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- Natural Gas Pipeline
- County Boundary
- Existing ROW
- Parcel Boundary
- Delineated Stream
- Delineated Wetland
- 100-Year Floodplain

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

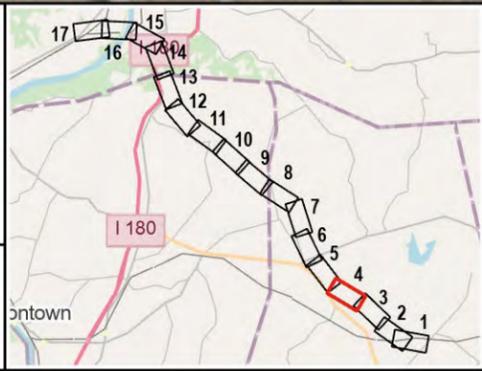
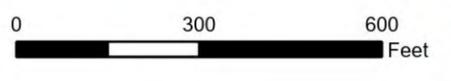
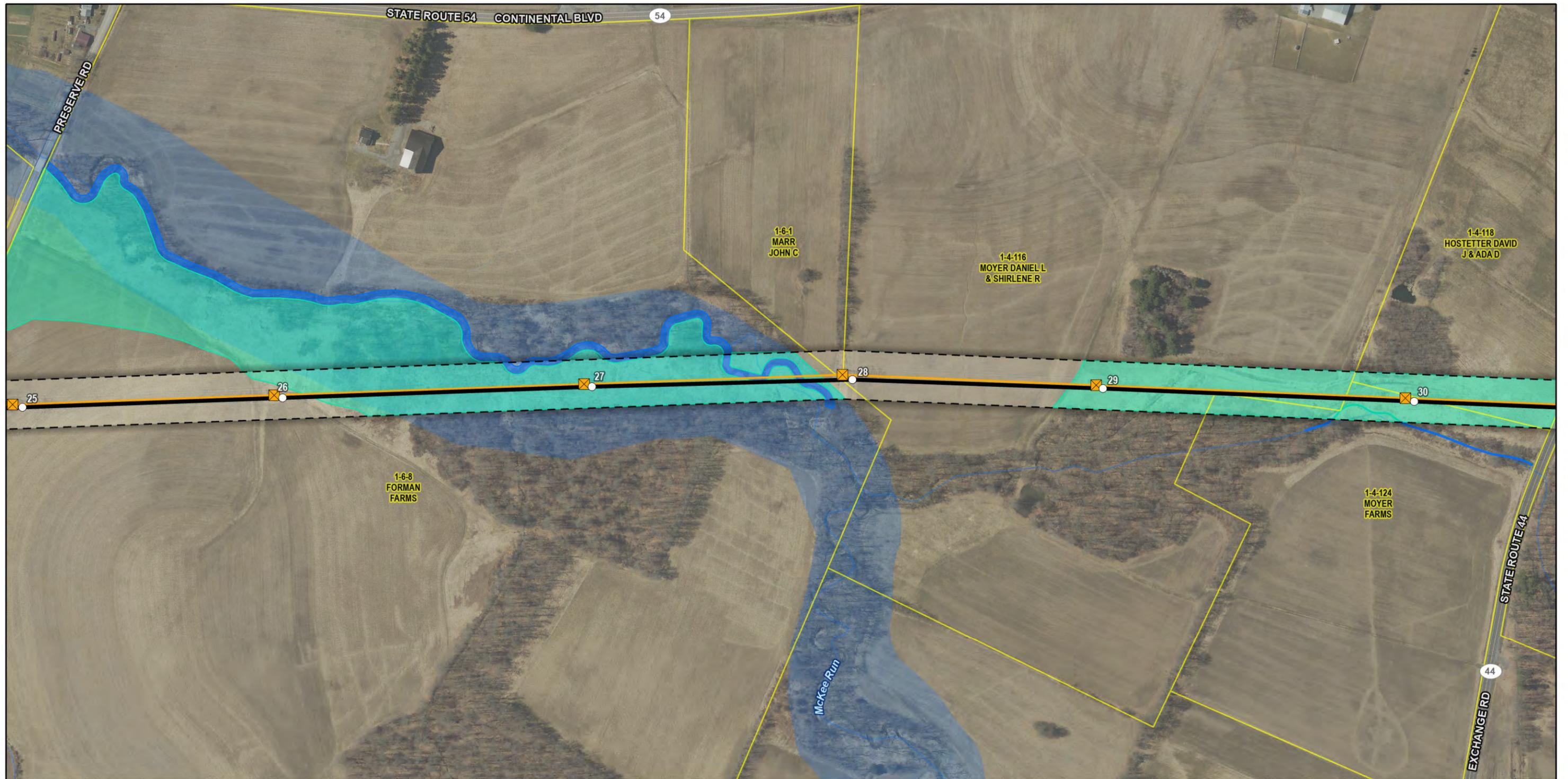


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ⊠ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- ▭ Existing ROW
- ▭ Parcel Boundary
- ▭ County Boundary
- ▭ Delineated Stream
- ▭ Delineated Wetland
- ▭ 100-Year Floodplain

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

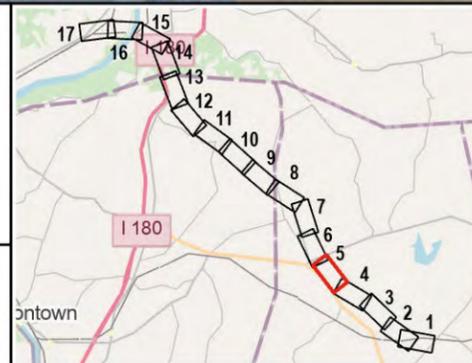
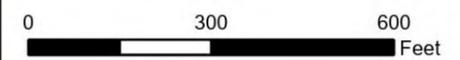


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ⊠ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- ▭ County Boundary
- ▭ Delineated Stream
- ▭ Delineated Wetland
- ▭ 100-Year Floodplain
- ▭ Existing ROW
- ▭ Parcel Boundary

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

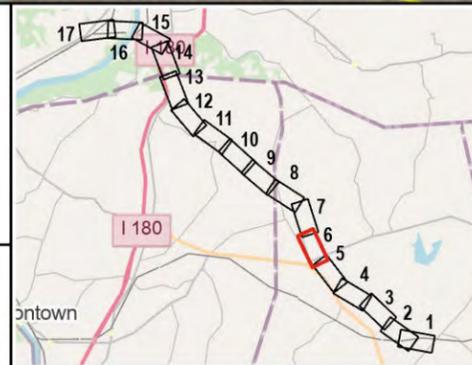


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ⊠ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- ⊠ County Boundary
- Delineated Stream
- - - Existing ROW
- ▭ Parcel Boundary

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

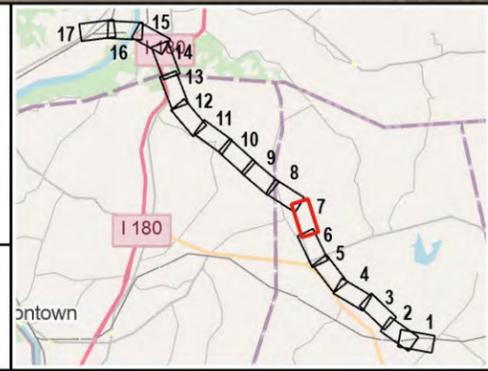
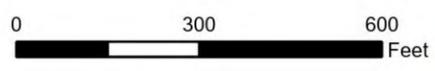


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ◻ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- Municipality Boundary
- Existing ROW
- Parcel Boundary
- County Boundary
- Delineated Stream
- 100-Year Floodplain

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

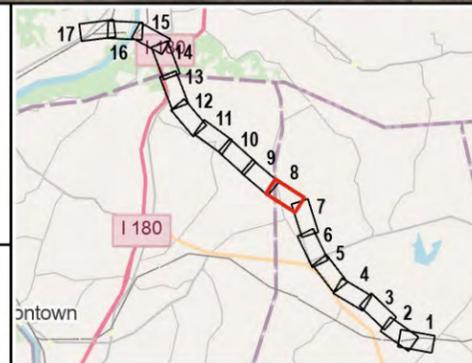
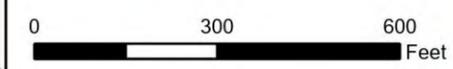


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ⊠ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- Municipality Boundary
- ▭ County Boundary
- ▭ Existing ROW
- ▭ Parcel Boundary
- ▭ Delineated Stream
- ▭ Delineated Wetland
- ▭ 100-Year Floodplain

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

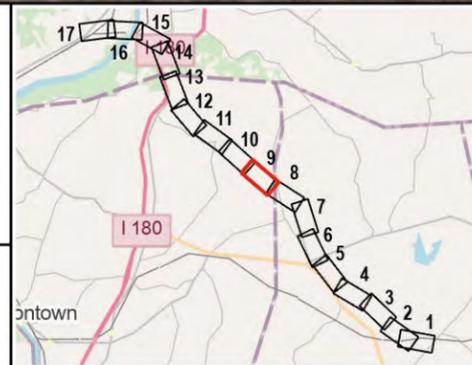


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ⊠ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- ⌚ Existing ROW
- ▭ Parcel Boundary
- ▭ County Boundary
- ▭ Delineated Stream
- ▭ Delineated Wetland
- ▭ 100-Year Floodplain

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

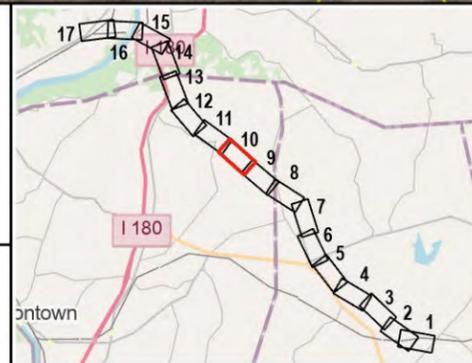


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ◻ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- ▭ County Boundary
- ▭ Delineated Stream
- ▭ Delineated Wetland
- ▭ 100-Year Floodplain
- ▭ Existing ROW
- ▭ Parcel Boundary

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

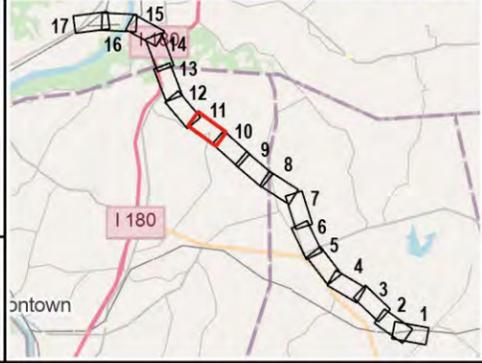
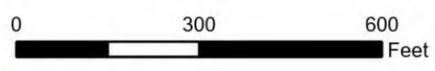


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ◻ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- Existing ROW
- Parcel Boundary
- ▬ County Boundary
- Delineated Stream
- Delineated Wetland
- 100-Year Floodplain

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

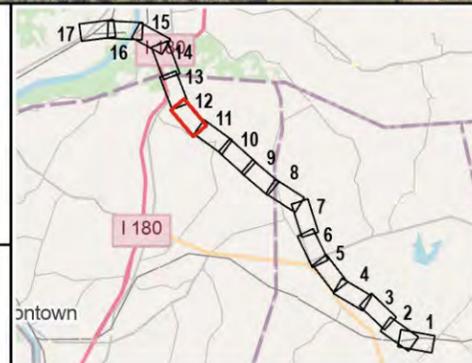


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ⊠ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- Municipality Boundary
- County Boundary
- Existing ROW
- Parcel Boundary
- Delineated Stream

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

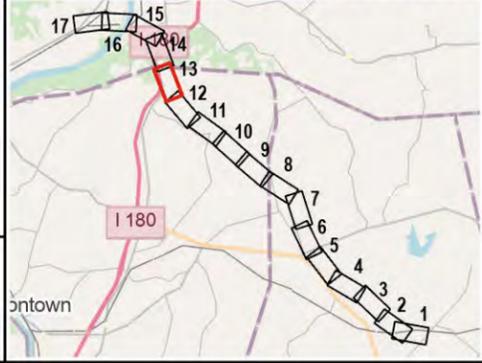


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ◻ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- Municipality Boundary
- County Boundary
- Existing ROW
- Parcel Boundary
- Delineated Stream

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

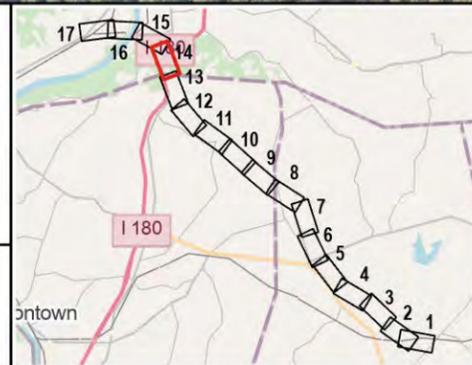
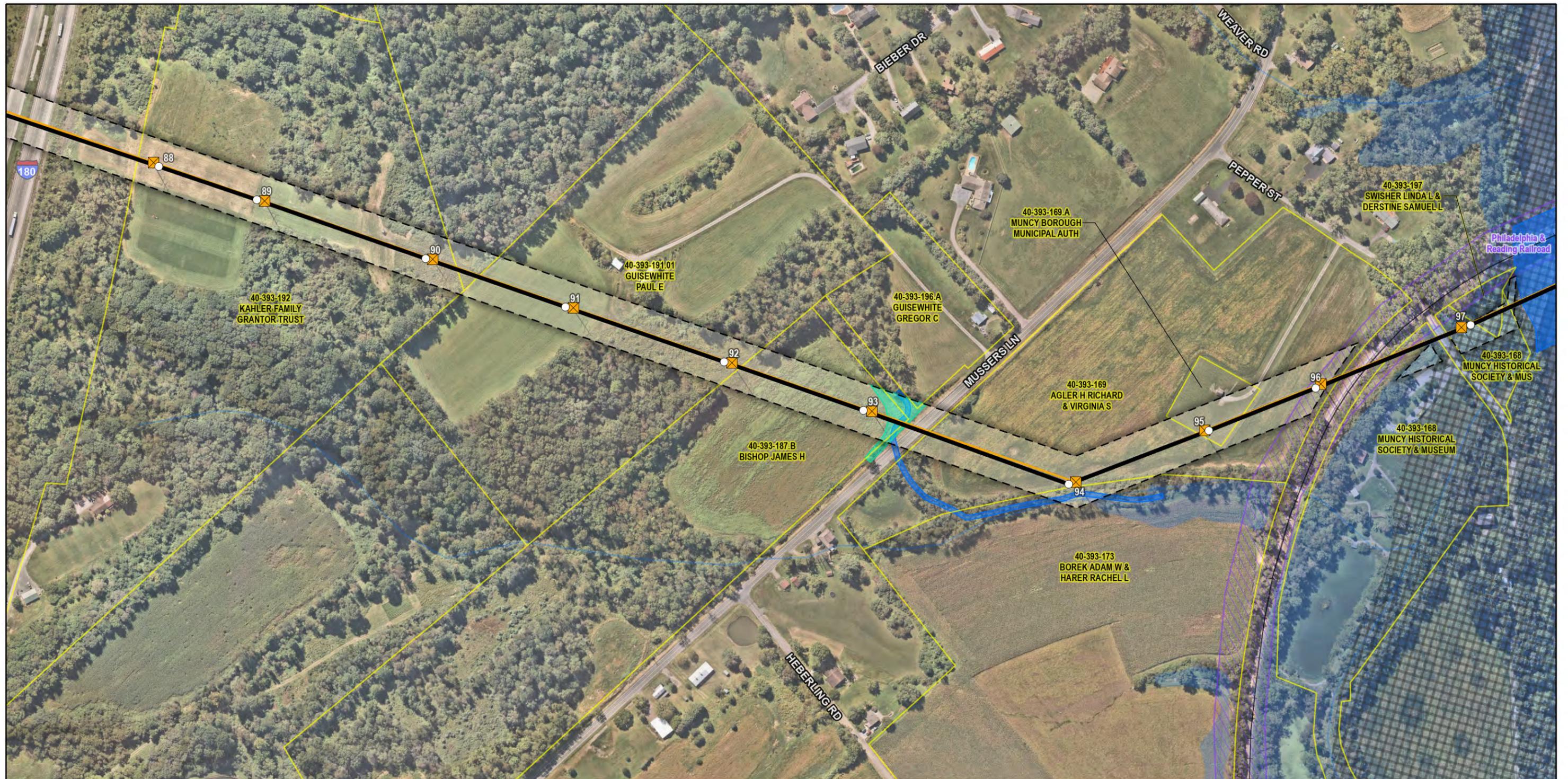


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ◻ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- Railroad
- County Boundary
- Existing ROW
- Parcel Boundary
- Historic District
- Delineated Stream
- Delineated Wetland
- Floodway
- 100-Year Floodplain

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

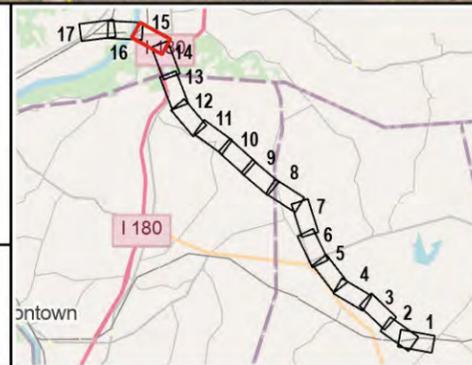
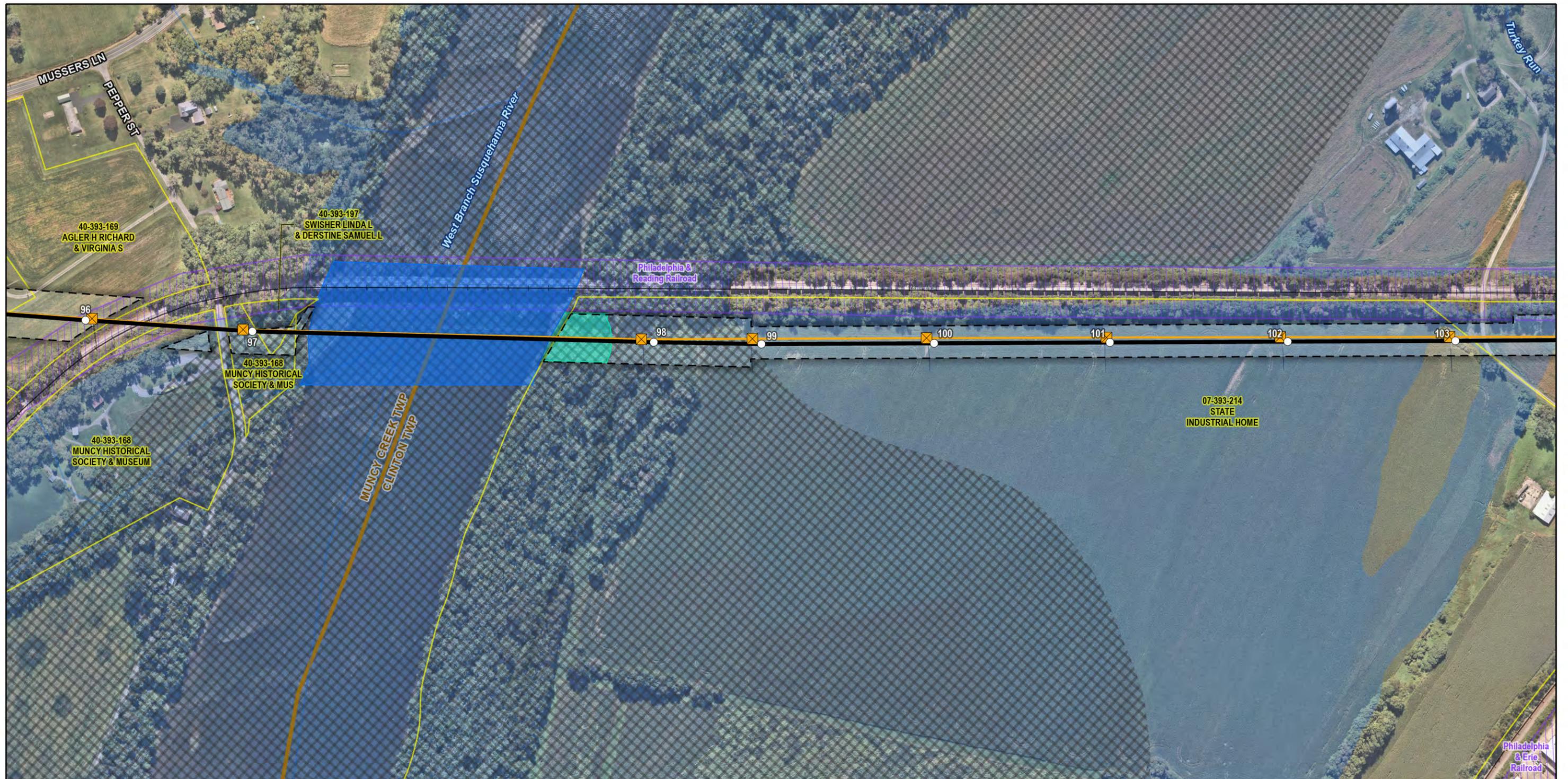


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- Proposed Structure
- ◻ Existing Structure to be Removed
- Proposed Rebuild Centerline
- Existing Transmission Line
- Existing ROW
- ▭ Parcel Boundary
- Railroad
- Municipality Boundary
- ▭ County Boundary
- ▭ Historic District
- ▭ Delineated Stream
- ▭ Delineated Wetland
- ▭ Floodway
- ▭ 100-Year Floodplain

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

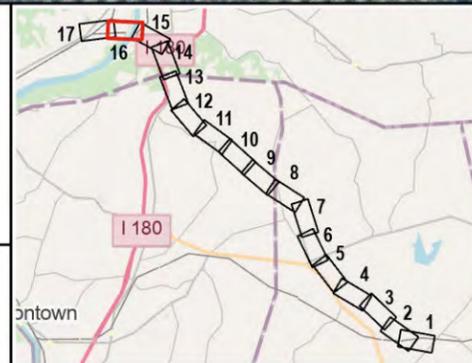
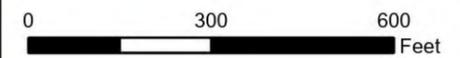
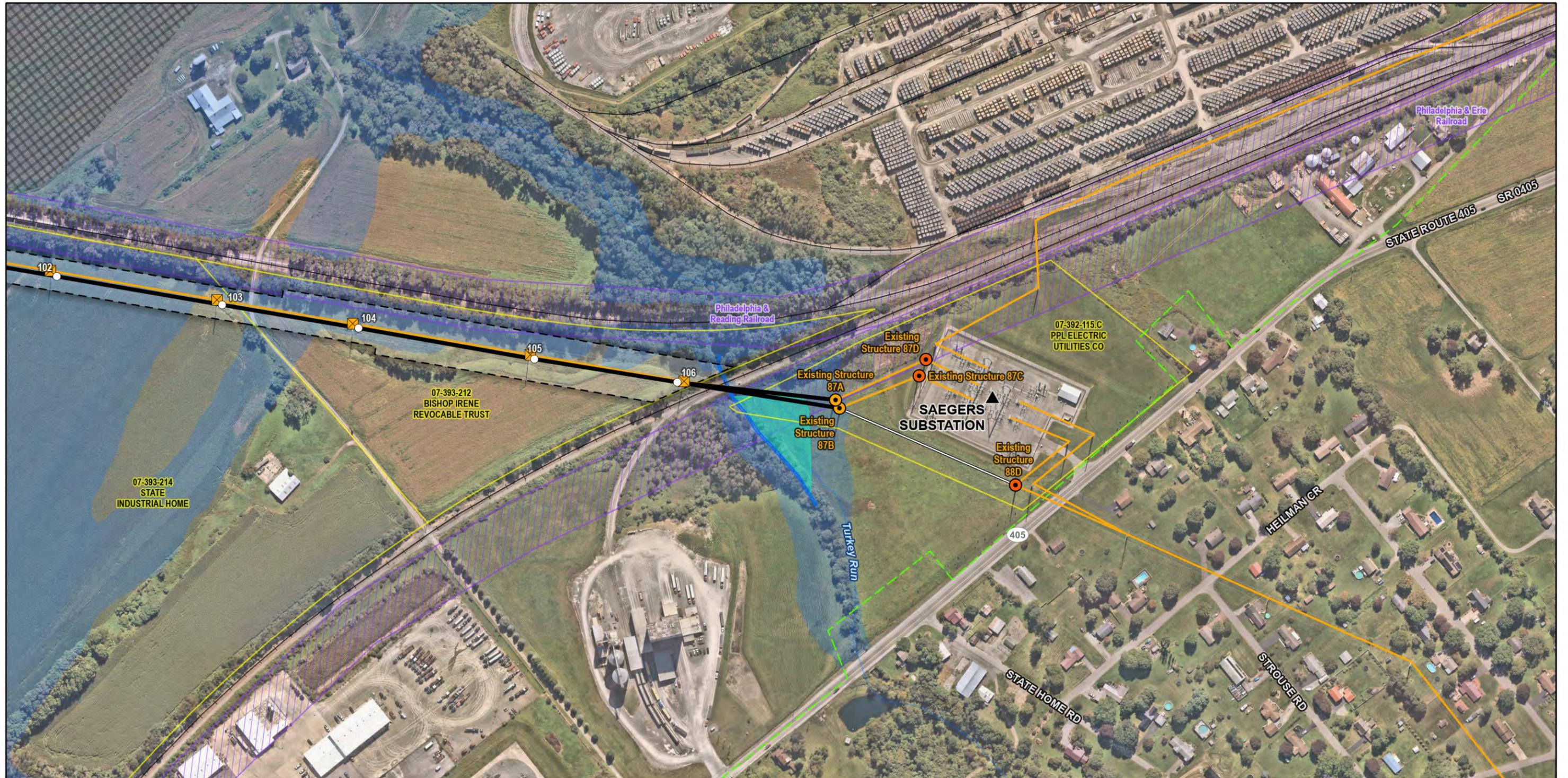


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project





- ▲ Substation or Switchyard
- Proposed Structure
- ⊙ Existing Structure to Remain
- ⊠ Existing Structure to be Removed
- ⊙ Existing Structure to Remain - Replace OPGW Only
- Proposed Rebuild Centerline
- Replace OPGW Only
- Existing Transmission Line
- Existing ROW
- Parcel Boundary
- Railroad
- Natural Gas Pipeline
- County Boundary
- Historic District
- Delineated Stream
- Delineated Wetland
- Floodway
- 100-Year Floodplain

Imagery (PEMA 2021, Nearmap 2023)
 Parcels (Corelogic 2024)
 Floodplains (FEMA 2022)
 Delineated Features (Woodland Design 2022)
 Roads/Railroads/Parks (PASDA 2022)
 Historic Resources (PHMC 2024)

Coordinate System:
 State Plane Pennsylvania North
 Datum: North American 1983

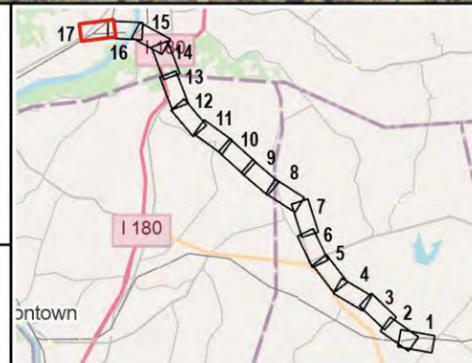


Figure 3-1
Aerial Map
 Montour - Saegers #1 & #2
 230 kV Transmission Rebuild Project



**PPL ELECTRIC
ATTACHMENT 4**

MONTOUR-SAEGERS 230 kV COR-TEN® REBUILD PROJECT

TABLE OF CONTENTS

1.0. DESIGN CONSIDERATIONS.....	4-1
2.0. PERIODIC MAINTENANCE PROGRAM ON ALL TRANSMISSION LINES....	4-4
3.0. PERSONNEL SAFETY RULES	4-4
4.0. MAGNETIC FIELD MANAGEMENT PLAN.....	4-5

List of Tables

Table 4-1. 69 kV Vertical Clearance to Ground	4-2
Table 4-2. 138 kV Vertical Clearance to Ground	4-3
Table 4-3. 230 kV Vertical Clearance to Ground	4-3
Table 4-4. 500 kV Vertical Clearance to Ground	4-3

1.0. DESIGN CONSIDERATIONS

PPL Electric Utilities Corporation’s (“PPL Electric”) new and rebuilt transmission lines are designed according to, and generally exceed, all National Electric Safety Code (“NESC”) minimum standards. The NESC is a set of rules guiding safety standards 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. PPL Electric has developed design specifications and safety rules which meet or surpass all requirements specified by the NESC.

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 always contain “safety factors” to allow for unknown or unanticipated contingencies. The clearances and loading requirements contained in the NESC are designed to maintain public safety.

The NESC specifies strength and loading rules based on three different “grades of construction” for conductors and supporting structures:

- Grade B – This grade of construction provides the highest margin of safety and is required when the pole supports spans that cross limited access highways, railroads, and waterways.
- Grade C – This grade of construction is most common and provides a basic margin of safety. It is often utilized for the typical power and joint-use distribution pole.
- Grade N – This is the lowest grade of construction and is most often used for emergency and temporary construction.

PPL Electric designs all its transmission lines for Grade B construction. The use of Grade B design and construction translates to higher levels of structural reliability and safety to withstand the environmental conditions of ice and/or wind loading.

PPL Electric’s rigorous design standards are further incorporated into the parameters utilized to account for ice and wind loadings on the wires and structure. Structure loading and line designs must accommodate a variety of operating conditions as different ice and wind combinations can impact the conductor sags and tensions of the line. PPL Electric’s transmission lines are designed to exceed NESC requirements by accounting for additional load cases due to various ice and wind loading conditions beyond what is required by NESC. This means that PPL Electric lines are designed to operate safely and reliably during extreme inclement weather. In addition, PPL Electric design standards include a clearance to ground buffer in excess of NESC required clearances to account for construction and design tolerances and the filling or grading of land within the right-of-way by property owners. This buffer also significantly reduces the risk of a property owner inadvertently contacting a transmission line. This has occurred on PPL Electric’s system in the past and higher clearances minimize the likelihood of future occurrences.

Table 4-1. 69 kV Vertical Clearance to Ground		
Surface Underneath Conductors	NESC Standard Clearance	PPL Electric Clearances
Roads, streets, and other areas subject to truck traffic	19.2 Ft.	22.2 Ft.
Other land traversed by vehicles such as cultivated grazing, forest, orchards, etc.	19.2 Ft.	22.2 Ft.
Spaces and ways subject to pedestrians or restricted traffic only	15.2 Ft.	22.2 Ft.
Track rails of railroads (except electrified railroads using overhead trolley conductors)	27.2 Ft.	30.2 Ft.

Table 4-2. 138 kV Vertical Clearance to Ground		
Surface Underneath Conductors	NESC Standard Clearance	PPL Electric Clearances
Roads, streets, and other areas subject to truck traffic	20.6 Ft.	23.6 Ft.
Other land traversed by vehicles such as cultivated grazing, forest, orchards, etc.	20.6 Ft.	23.6 Ft.
Spaces and ways subject to pedestrians or restricted traffic only	16.6 Ft.	23.6 Ft.
Track rails of railroads (except electrified railroads using overhead trolley conductors)	28.6 Ft.	31.6 Ft.

Table 4-3. 230 kV Vertical Clearance to Ground		
Surface Underneath Conductors	NESC Standard Clearance	PPL Electric Clearances
Roads, streets, and other areas subject to truck traffic	22.5 Ft.	25.5 Ft.
Other land traversed by vehicles such as cultivated grazing, forest, orchards, etc.	22.5 Ft.	25.5 Ft.
Spaces and ways subject to pedestrians or restricted traffic only	18.5 Ft.	25.5 Ft.
Track rails of railroads (except electrified railroads using overhead trolley conductors)	30.5 Ft.	33.5 Ft.

Table 4-4. 500 kV Vertical Clearance to Ground		
Surface Underneath Conductors	NESC Standard Clearance	PPL Electric Clearances
Roads, streets, and other areas subject to truck traffic	28.4 Ft.	31.4 Ft.
Other land traversed by vehicles such as cultivated grazing, forest, orchards, etc.	28.4 Ft.	31.4 Ft.
Spaces and ways subject to pedestrians or restricted traffic only	24.4 Ft.	31.4 Ft.
Track rails of railroads (except electrified railroads using overhead trolley conductors)	36.4 Ft.	39.4 Ft.

A relay protection system is also used on PPL Electric’s transmission lines to protect public safety, as well as the equipment on the transmission system. The purpose of relay protection is to automatically de-energize the line in the unlikely event that the line or supporting structure fails and the line contacts the ground.

2.0. PERIODIC MAINTENANCE PROGRAM ON ALL TRANSMISSION LINES

To ensure continued public safety and integrity of service, a periodic maintenance and inspection program is implemented for every transmission line. The program is administered using helicopter patrols, with supplemental foot patrols as needed. Helicopter patrols are performed on all lines on a predetermined frequency, depending on voltage level. The two-man helicopter crew flies parallel to 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.

3.0. PERSONNEL SAFETY RULES

Overall, PPL Electric designs and constructs projects with high regard to both public and employee safety and follows or exceeds all codes and requirements. The following are a few examples of PPL Electric’s safety rules that demonstrate its dedication to employee and contractor safety:

- Procedures have been developed to allow work to be performed on energized facilities in a safe manner. When lines or apparatus are removed from service to be worked on, the Energy Control Process system is applied. This system provides that a red tag must be physically placed on the control handle of the de-energized equipment.
- The red tag may be removed only after proper authorization to energize the equipment has been received.
- Various other tags are used for limited operations and informational purposes.
- Employees or contractors will not apply or remove a tag or change the status of tagged equipment unless authorized.

- Temporary safety grounds are used on de-energized facilities for employee lineman safety during maintenance, construction, or reconstruction work. Safety grounds are wires connecting the de-energized facility to an electrical ground. If the facility should be energized, the safety grounds will divert the current directly to ground and reduce the likelihood of personal injury.
- Before applying grounds, a test is done to confirm that the line is de-energized. The voltage test device is checked before and after use to assure reliability.
- Poles or structures are inspected and examined for structural integrity before climbing. If there is any reason to believe that a pole is unsafe, it is stabilized before work is performed. Appropriate safety gear in the form of body belts, safety straps, hard hats, gloves, etc., is worn by linemen during line work activity.

4.0 MAGNETIC FIELD MANAGEMENT PLAN

PPL Electric’s Magnetic Field Management Program is applied to new and reconstructed transmission line projects. Although there is no current scientific evidence demonstrating that magnetic fields cause any adverse health effects or pose a health or safety threat to the public, PPL Electric has established a policy to design its new and rebuilt transmission lines to reduce magnetic fields. To lower magnetic field exposures, the program generally prescribes the use of a line design that provides ground clearances higher than the required minimum NESC ground clearance and reverse phasing of new double circuit lines where it is feasible to do so at low or no cost. The implementation of additional modifications to reduce magnetic field levels is considered, provided those modifications can be made at low or no cost and will not interfere with the operation of the line. The program will be applied to this Project and the Project is designed with clearances that are at least 3 feet higher than NESC standards.

**PPL ELECTRIC
ATTACHMENT 5**

MONTOUR-SAEGERS 230 kV COR-TEN® REBUILD PROJECT

State Agencies

Pennsylvania Bureau of Investigation and Enforcement
Pennsylvania Public Utility Commission
Commonwealth Keystone Building 400 North Street
2nd Floor, Room-N201
Harrisburg, Pennsylvania 17120
Attn: Alison Kaster

Pennsylvania Department of Environmental Protection
400 Market Street
10th Floor Rachel Carson State Office Building
Harrisburg, Pennsylvania 17101
Attn: Regional Permit Coordination Office

Pennsylvania Department of Transportation
Commonwealth Keystone Building
400 North Street, Fifth Floor
Harrisburg, Pennsylvania 17120
Attn: Jeffrey Spotts, Chief Counsel

Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, Second Floor 400
North Street Harrisburg, Pennsylvania 17120-0053
Attn: Ms. Emma Diehl, Division Manager

Pennsylvania Department of Conservation and Natural Resources
Rachel Carson State Office Building
400 Market Street Harrisburg, Pennsylvania 17105-8767
Attn: Rebecca Bowen, Ecological Services Section Chief

Pennsylvania Game Commission
2001 Elmerton Avenue
Harrisburg, Pennsylvania 17110-9797
Attn: David J. Gustafson, Director, Bureau of Wildlife Habitat Management

Pennsylvania Fish and Boat Commission
Center Region Office
595 East Rolling Ridge Drive
Bellefonte, Pennsylvania 16823-9620
Attn: Christopher A. Urban, Chief, Natural Diversity Section

Pennsylvania Office of Consumer Advocate
555 Walnut Street 5th Floor Forum Place
Harrisburg, Pennsylvania 17101-1923
Attn: Darryl Lawrence, Acting Consumer Advocate

Pennsylvania Office of Small Business Advocate
555 Walnut Street
1st Floor Forum Place
Harrisburg, Pennsylvania 17101
Attn: NazAarah Sabree, Small Business Advocate

Federal Agencies

U.S. Army Corps of Engineers
Baltimore District Corporate Communication Office
2 Hopkins Plaza
Baltimore, Maryland 21201
Attn: Planning Division

U.S. Fish and Wildlife Service
Pennsylvania Field Office
110 Radnor Road, Suite 101
State College, Pennsylvania 16801
Attn: Lesa Lindsay

County Agencies

Lycoming County Conservation District
542 County Farm Road, Suite 202
Montoursville, PA 17754
Attn: Matt Long, District Manager

Lycoming County Planning & Community Development
48 West Third Street
Williamsport, PA 17701
Attn: Shannon L. Rossman, Director

Lycoming County Commissioners
48 West Third Street
Williamsport, PA 17701
Attn: Scott L. Metzger, Chairman

Montour County Conservation District
1210 Bloom Road
Danville, PA 17821
Attn: Sean Levan, District Manager

Montour County Planning Commission
435 East Front Street
Danville, PA 17821
Attn: Gregory Molter, Director

Montour County Commissioners
435 East Front Street
Danville, PA 17821
Attn: Rebecca Dressler, Chair

Northumberland County Conservation District
228 Houser Road
Sunbury, PA 17801
Attn: Nathan Brophy, District Manager

Northumberland County Planning
399 Stadium Drive
Sunbury, PA 17801
Attn: Justin Skavery, Planning Coordinator

Northumberland County Commissioners
399 Stadium Drive
Sunbury, PA 17801
Attn: Samuel J. Schiccatano

Municipalities

Anthony Township Supervisors
1361 White Hall Road
Turbotville, PA 17772
Attn: Dennis C. Sheatler, Chair Supervisor

Clinton Township Supervisors
2106 Rt. 54 Hwy
Montgomery, PA 17752

Attn: Lanny Wertz, Chair Supervisor

Clinton Township Planning Commission
2106 Rt. 54 Hwy
Montgomery, PA 17752
Attn: Chip Frazier, Secretary

Derry Township
21 Shed Road
Danville, PA 17821
Attn: Natalie Nutt, Chair

Lewis Township Supervisors
1428 Rovendale Drive
Watsonstown, PA 17777
Attn: Ricky Dyer, Chairman

Lewis Township Planning Commission
1428 Rovendale Drive
Watsonstown, PA 17777
Attn: Charles Axtman, Chairman

Muncy Creek Township Supervisors
575 PA-442
Muncy, PA 17756
Attn: Gary Phillips, Chairman

Muncy Creek Planning Commission
575 PA-442
Muncy, PA 17756
Attn: Mark Kreisher, Chairman

Landowners

AGLER H RICHARD & VIRGINIA S
10727 FOOTPRINT LN
PORT RICHEY, FL 34668

BEILER JOHN S & MALINDA
150 ARROWHEAD RD
DANVILLE, PA 17821

BISHOP IRENE REVOCABLE TRUST
PO BOX 38
MUNCY, PA 17756

BISHOP JAMES H
1283 REYNOLDS HILL RD
MUNCY, PA 17756

BISHOP JAMES H & GAIL L
1283 REYNOLDS HILL RD
MUNCY, PA 17756

BLAKENEY JUSTIN D & BRENDA K
1140 WERTMAN SCHOOL RD
MUNCY, PA 17756

BLASER FREDDIE L & DONNA M
1610 SHOWERS RD
MUNCY, PA 17756

BOREK ADAM W & HARER RACHEL L
186 FISHER LN
MUNCY, PA 17756

BRUCKHART LOREN R & DANA M
19 HICKORY RD
TURBOTVILLE, PA 17772

CERO MICHAEL A & LORIE M
PO BOX 81
WASHINGTONVILLE, PA 17884

CHAMBERLAIN IRMA & EISENHAUER
JAMES
1151 SHOWERS RD
MUNCY, PA 17756

COTNER FRANKLIN E
252 STRICK RD
MILTON, PA 17847

CUMMINGS KEVIN J & TARA L
30 DIEFFENBACH RD
DANVILLE, PA 17821

CUMULUS REAL ESTATE HOLDINGS LLC
C/O TALEN ENERGY SUPPLY LLC
2929 ALLEN PKWY 22ND FLOOR
HOUSTON, TX 77019

CURRENT OWNER
233 GEARHART RD
TURBOTVILLE, PA 17772

DUNLAP KEITH E & LUANN W
11 CHERRY TREE LN
MIFFLINBURG, PA 17844

EISENHAUER JAMES
1151 SHOWERS RD
MUNCY, PA 17756

EVERITT BRANDON M & HOFFMAN
JEFFREY D
1011 MONTOUR RD
MONTOURSVILLE, PA 17754

Landowners

EVERITT MICHAEL D & TERESA M
255 PROKOP LN
MUNCY, PA 17756

FORMAN FARMS
2837 WHITMOYER RD
WATSONTOWN, PA 17777

FRAHN DIANE M
242 HILL RD
MUNCY, PA 17756

GUISEWHITE GREGOR C
709 MUSSER LN
MUNCY, PA 17756

GUISEWHITE PAUL E
691 MUSSER LN
MUNCY, PA 17756

HAGERMAN WILLIAM J
31 GEARHART RD
TURBOTVILLE, PA 17772

HALL RHONDA
PO BOX 223
WASHINGTONVILLE, PA 17884

HALL WALTER W
71 HONEY LN
DANVILLE, PA 17821

HALL WALTER W & SUZANN M
56 CLOVER LN
DANVILLE, PA 17821

HARRISON RICK D & TRACI J
256 NORTHBEND RD
MUNCY, PA 17756

HAUCK LESLIE W & MCCARTY JANET M
9520 SUSQUEHANNA TRL
MUNCY, PA 17756

HERTZLER AMOS R & EMMA E
79 ARROWHEAD RD
DANVILLE, PA 17821

HILLER TODD S & PEGGY S
86 HILLER LN
ALLENWOOD, PA 17810

HOSTETLER BEN L & RACHEL B
184 HICKORY RD
TURBOTVILLE, PA 17772

HOSTETLER JOHN H & MARY D
405 HUFFMAN LN
MUNCY, PA 17756

HOSTETTER DAVID J & ADA D
1623 WHITE HALL RD
TURBOTVILLE, PA 17772

JARRETT ROGER D & DENISE L
415 STERLING DR
MUNCY, PA 17756

JONES CURTIS N & EBERLE KARA D
23 CLOVER LN
DANVILLE, PA 17821

KAHLER FAMILY GRANTOR TRUST
800 SUSQUEHANNA TRAIL RD
MUNCY, PA 17756

KILGUS ROBERT L & SUSAN M
421 MURRAY RD
MUNCY, PA 17756

Landowners

LAPP FREDERICK C & VIVIANNE T
10 MURRAY RD
MUNCY, PA 17756

MARR JOHN C
2663 CONTINENTAL BLVD
TURBOTVILLE, PA 17772

MCCARTY IRR RES INC
9520 SUSQUEHANNA TRL
MUNCY, PA 17756

MCCARTY MAX M
1890 MURRAY RD
MUNCY, PA 17756

MERRILL MICHAEL R & SHIRLEY
455 HILL RD
MUNCY, PA 17756

MOUNTS TIMOTHY W & KASIE L
126 HUFFMAN LN
MUNCY, PA 17756

MOYER DANIEL L & SHIRLENE R
2706 CONTINENTAL BLVD
TURBOTVILLE, PA 17772

MOYER FARMS
21 MOYER RD
TURBOTVILLE, PA 17772

MOYER PHILIP TIMOTHY & DANIEL
242 WALTIMYER RD
TURBOTVILLE, PA 17772

MUNCY BOROUGH MUNICIPAL AUTH
14 N WASHINGTON ST
MUNCY, PA 17756

MUNCY HISTORICAL SOCIETY & MUSEUM
40 N MAIN ST
MUNCY, PA 17756

PEACHEY BEN E & SADIE R
138 GEARHART RD
TURBOTVILLE, PA 17772

POWerview FARMS INC
368 FAIRVIEW RD
DANVILLE, PA 17821

PPL GENERATION LLC
600 HAMILTON ST, UNIT 600
ALLENTOWN, PA 18101

PPL MONTOUR LLC
C/O TALEN ENERGY SUPPLY LLC
2929 ALLEN PKWY, 22ND FLOOR
HOUSTON, TX 77019

RISHEL BRADLEY D & MELINDA A
633 WHITE HALL RD
DANVILLE, PA 17821

RISHEL WILLIAM E
124 HUFFMAN LN
MUNCY, PA 17756

ROVENOLT FARM RENTAL PROPERTY LLC
4810 STATE ROUTE 642
MILTON, PA 17847

Landowners

ROVENOLT VIRGINIA E
800 HARRISON RD
MUNCY, PA 17756

ROWE JUDITH
845 SUSQUEHANNA TRAIL RD
MUNCY, PA 17756

SHRAWDER NATHANIEL C & BRUBAKER
ELISE C
204 N FRONT ST
SUNBURY, PA 17801

SNYDER LUKE C & BRIDGETTE R
3270 HOCKLEY HILL RD
MUNCY, PA 17756

STATE INDUSTRIAL HOME
RR 1
MONTGOMERY, PA 17752

STOLTZFUS ABNER S & KATIE S
140 GEARHART RD
TURBOTVILLE, PA 17772

STOLTZFUS DAN Z & NANNIE M
239 GEARHART RD
TURBOTVILLE, PA 17772

STOLTZFUS REUBEN S & SARAH B
22 BETZ RD
TURBOTVILLE, PA 17772

SWISHER LINDA L & DERSTINE SAMUEL L
620 PEPPER ST
MUNCY, PA 17756

TAYLOR RYAN M & LENIG JOY L
PO BOX 426
TURBOTVILLE, PA 17772

VARGO TROY J & KORENA K
224 GEARHART RD
TURBOTVILLE, PA 17772

WATSON LYNN E & SUSANNE J
2720 WHITMOYER RD
WATSONTOWN, PA 17777

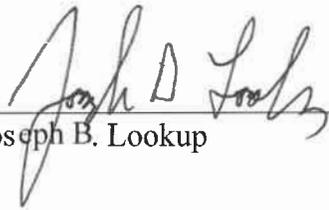
WATTS RANDALL & ELIZABETH
192 GEARHART RD
TURBOTVILLE, PA 17772

WHITE JESSIE
114 GEARHART RD
TURBOTVILLE, PA 17772

VERIFICATION

I, JOSEPH B. LOOKUP, being the Vice President – Transmission & Distribution Planning and Asset Management at PPL Services Corporation, hereby state that the facts above set forth are true and correct to the best of my knowledge, information and belief and that I expect PPL Electric Utilities Corporation to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 relating to unsworn falsification to authorities.

Date: May 12, 2025



Joseph B. Lookup