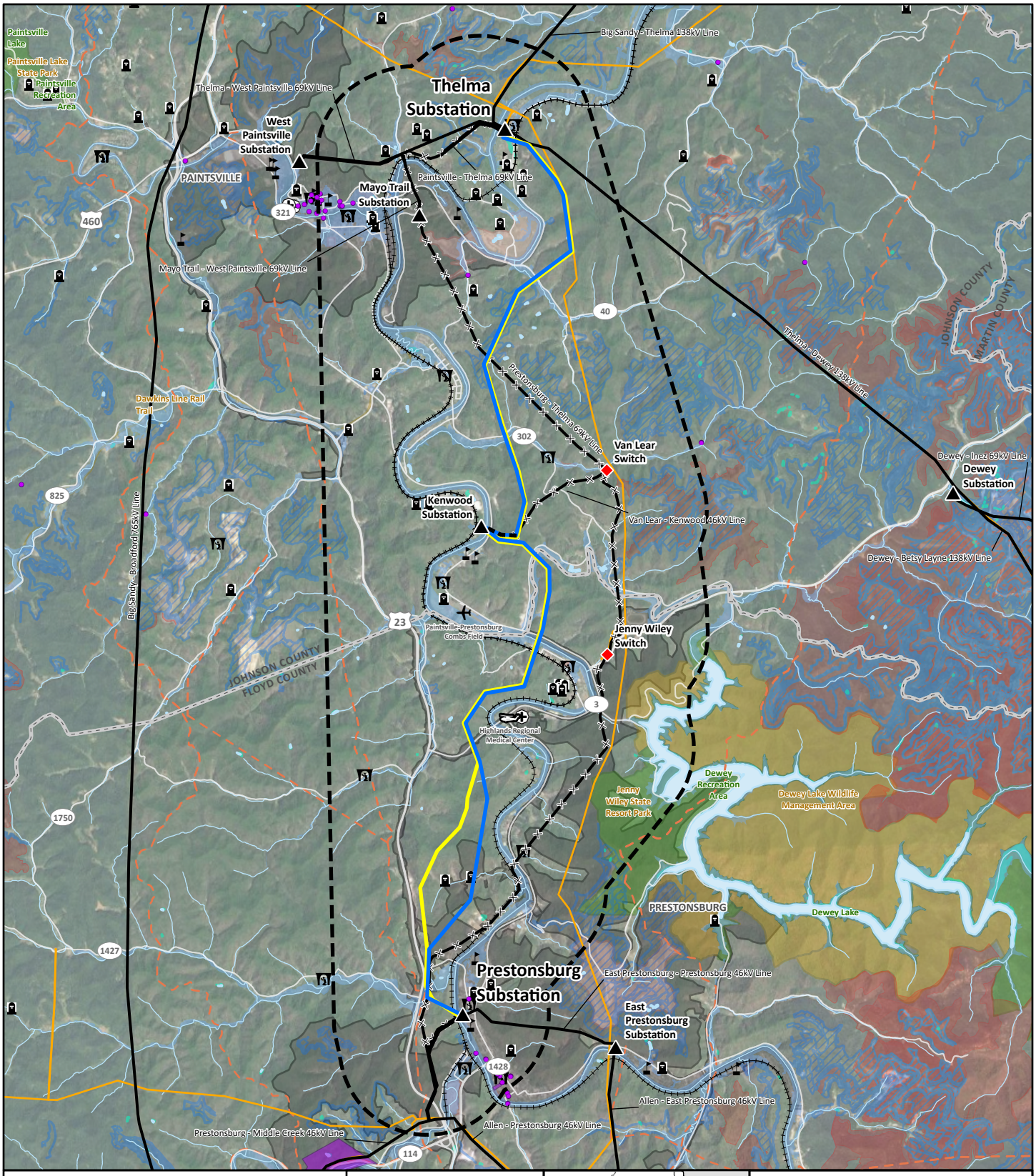
EXHIBIT 7

Part 3 of 3

Attachment H: March 2025 Siting Study Addendum Route Maps

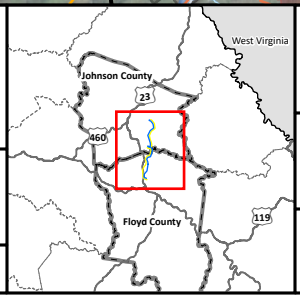


- Initial Route
- Western Alternative Route
- Study Area
- Existing Substation (AEP)
- Existing Switch Station (AEP)
- Existing Switch Station To Be Removed (AEP)
- Existing Transmission Line (AEP)
- Existing Transmission Line To Be Rebuilt (AEP)
- Existing Transmission Line To Be Removed (AEP)
- Non-AEP Transmission Line
- Pipeline
- Railroad
- Airport
- Heliport
- Historic Site (NRHP)
- Historic District (NRHP)
- Hospital
- Place of Worship
- Cemetery/Burial Ground
- School
- Highway
- Stream (NHD)
- 100-year Floodplain (FEMA)
- Wetland (NWI)
- Waterbody (NHD)
- Permitted Surface Mine Boundary
- Permitted Underground Mine Boundary
- Federal Conservation Land (PAD-US)
- Local Conservation Land (PAD-US)
- State Conservation Land (PAD-US)
- City/Municipal Limit
- County Boundary

City of Prestonsburg
Johnson and Floyd Counties, Kentucky

NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011

March 18, 2025

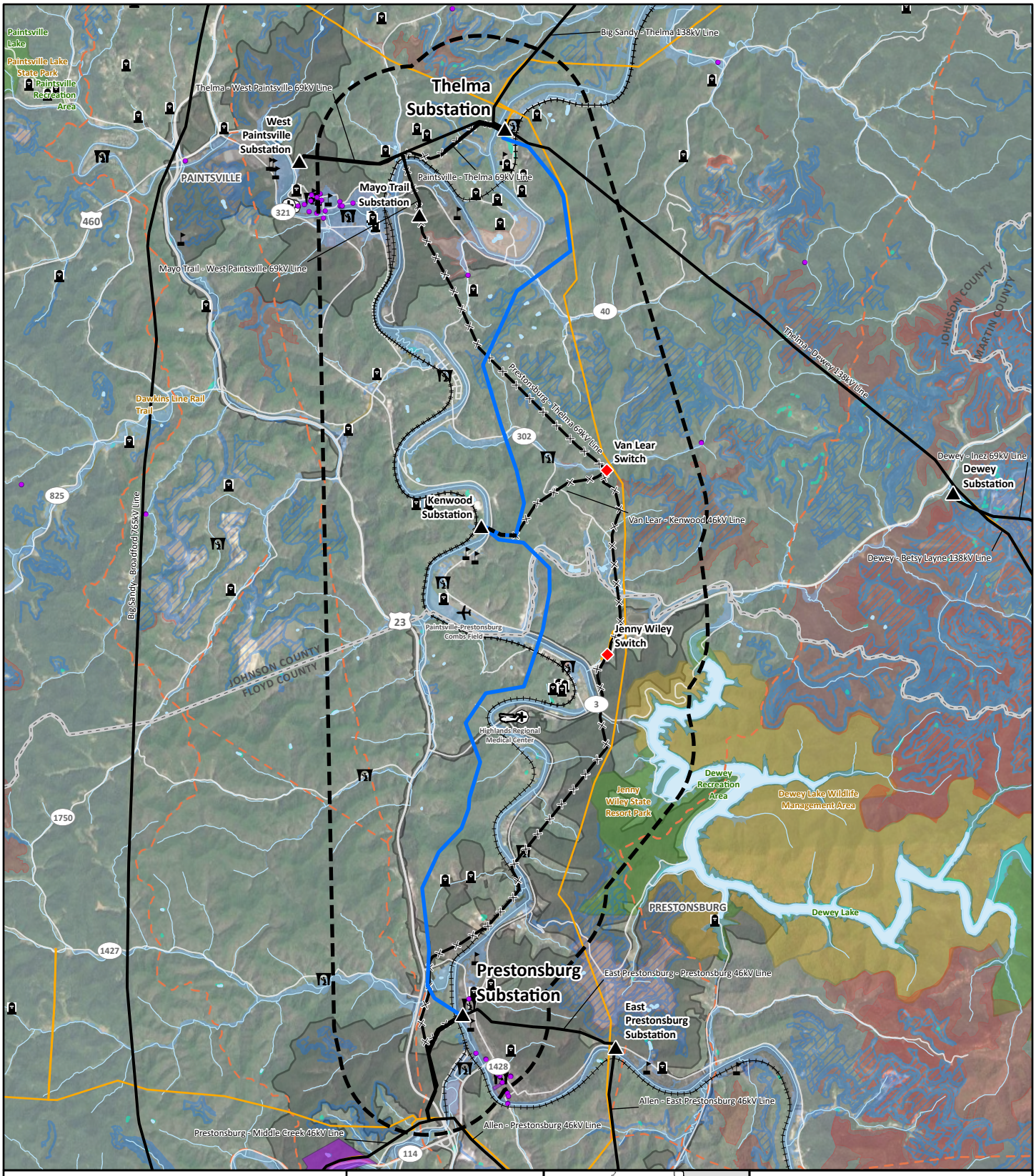


Map 1: Constraints and Routes

AMERICAN ELECTRIC POWER

Prestonsburg - Thelma Transmission Line Rebuild Project

0 0.5 1 1.5 2
Miles

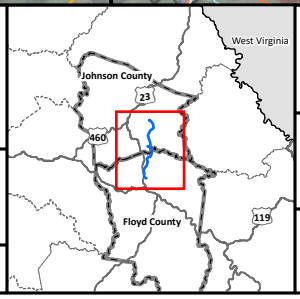


- Proposed Route (AEP)
- Study Area
- Existing Substation (AEP)
- Existing Switch Station (AEP)
- Existing Switch Station To Be Removed (AEP)
- Existing Transmission Line (AEP)
- Existing Transmission Line To Be Rebuilt (AEP)
- Existing Transmission Line To Be Removed (AEP)
- Non-AEP Transmission Line
- Pipeline
- Railroad
- Airport
- Heliport
- Historic Site (NRHP)
- Historic District (NRHP)
- Hospital
- Place of Worship
- Cemetery/Burial Ground
- School
- Highway
- Stream (NHD)
- 100-year Floodplain (FEMA)
- Wetland (NWI)
- Waterbody (NHD)
- Permitted Surface Mine Boundary
- Permitted Underground Mine Boundary
- Federal Conservation Land (PAD-US)
- Local Conservation Land (PAD-US)
- State Conservation Land (PAD-US)
- City/Municipal Limit
- County Boundary

City of Prestonsburg
Johnson and Floyd Counties, Kentucky

NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011

February 12, 2025



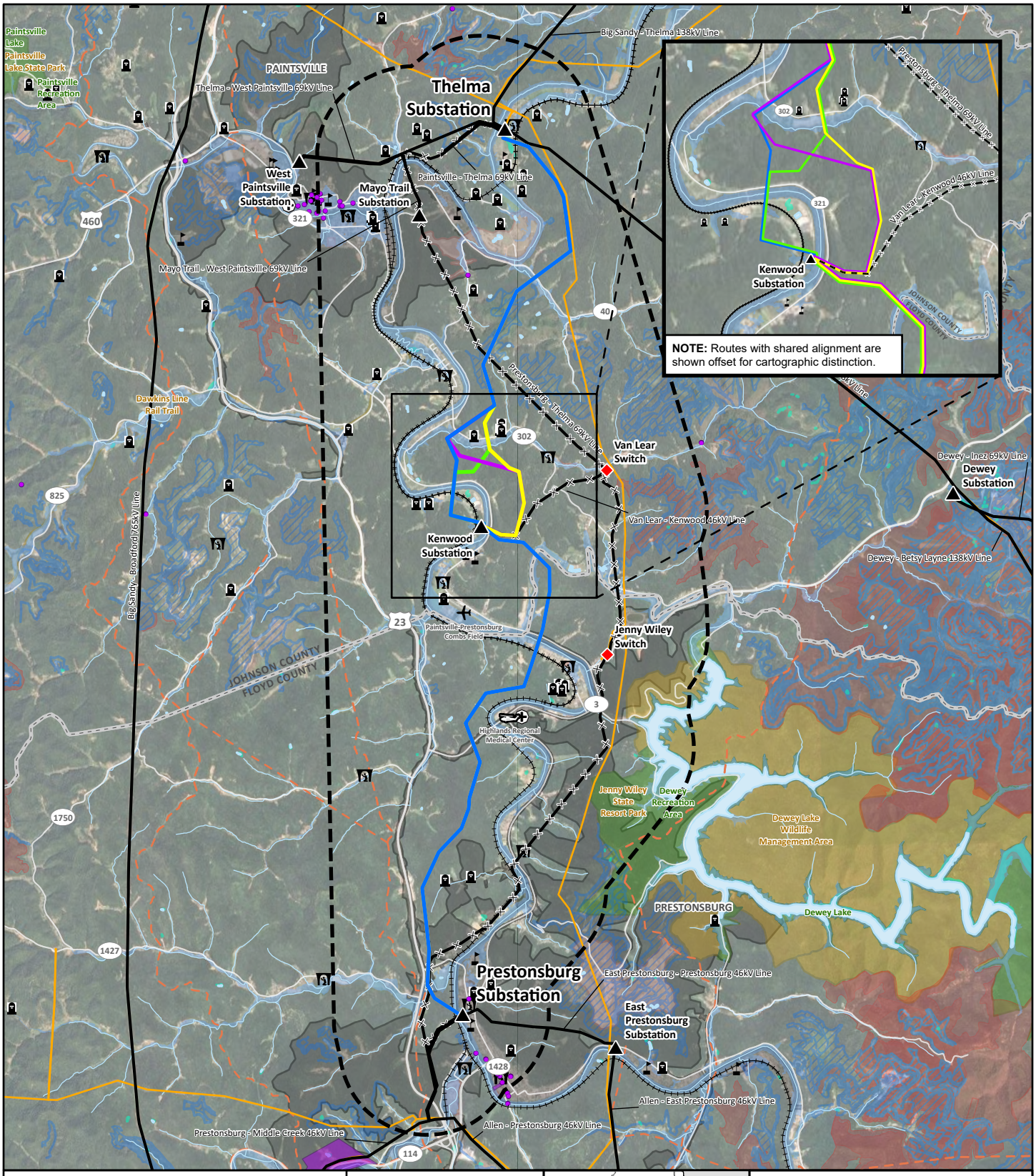
Map 2:
Proposed Route

AMERICAN ELECTRIC POWER

Prestonsburg - Thelma Transmission Line Rebuild Project

0 0.5 1 1.5 2
Miles

Attachment I: October 2025 Siting Study Addendum Route Maps

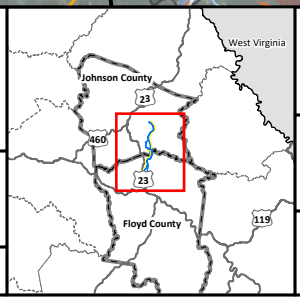


- Option 4
- Option 1
- Option 2
- Option 3
- Study Area
- Existing Substation (AEP)
- Existing Switch Station (AEP)
- Existing Switch Station To Be Removed (AEP)
- Existing Transmission Line (AEP)
- Existing Transmission Line To Be Rebuilt (AEP)
- Existing Transmission Line To Be Removed (AEP)
- Non-AEP Transmission Line
- Pipeline
- Railroad
- Airport
- Heliport
- Historic Site (NRHP)
- Historic District (NRHP)
- Hospital
- Place of Worship
- Cemetery/Burial Ground
- School
- Highway
- Stream (NHD)
- 100-year Floodplain (FEMA)
- Wetland (NWI)
- Waterbody (NHD)
- Permitted Surface Mine Boundary
- Permitted Underground Mine Boundary
- Federal Conservation Land (PAD-US)
- Local Conservation Land (PAD-US)
- State Conservation Land (PAD-US)
- City/Municipal Limit
- County Boundary

City of Prestonsburg
Johnson and Floyd Counties, Kentucky

NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011

November 18, 2025

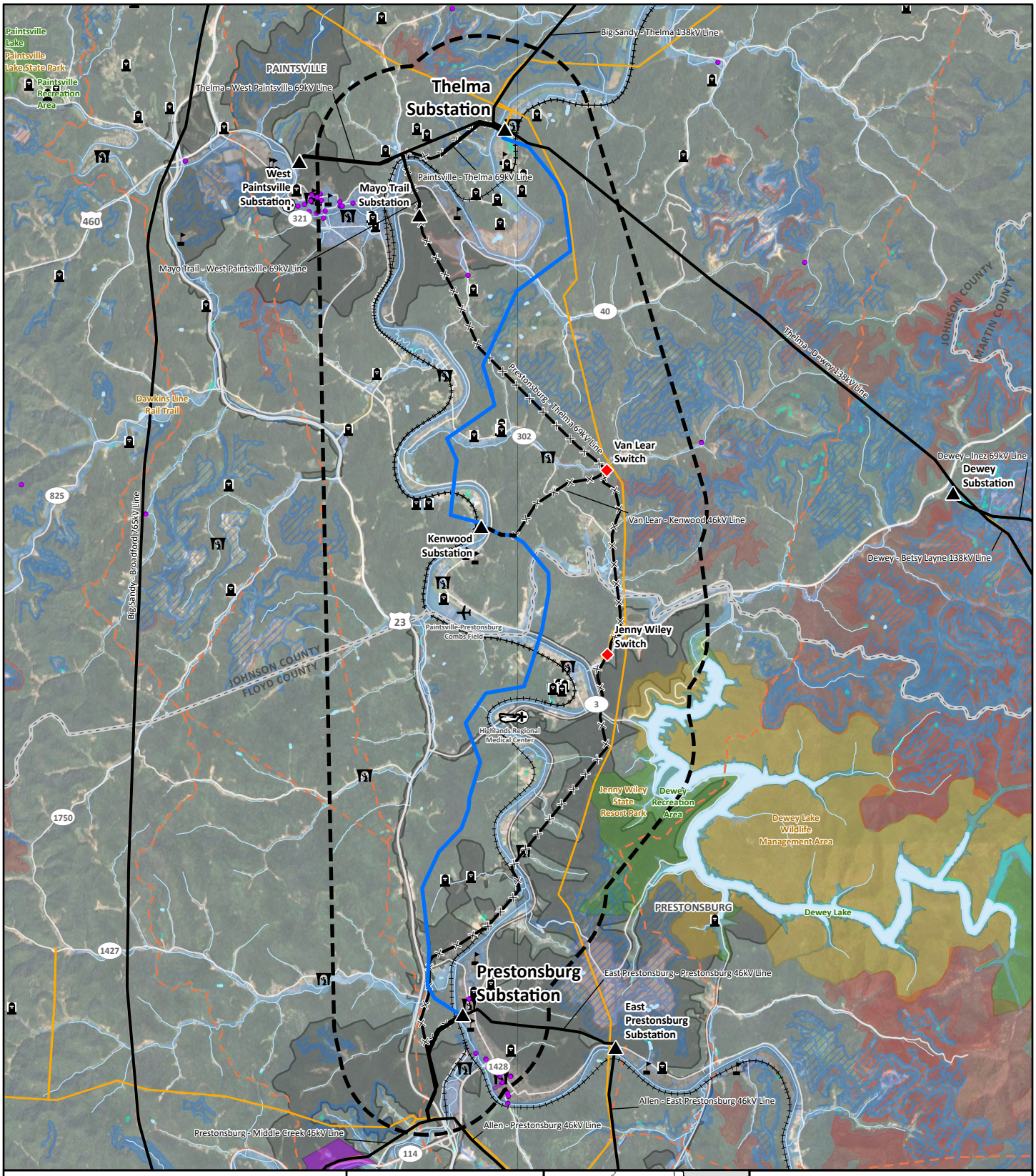


Map 1: Alternative Routes

AMERICAN ELECTRIC POWER

Prestonsburg - Thelma Transmission Line Rebuild Project

0 0.5 1 1.5 2
Miles

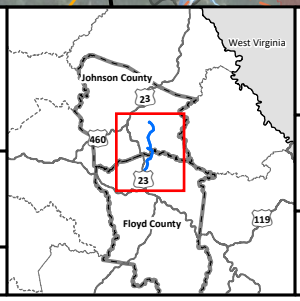


- Proposed Route (AEP)
- Study Area
- Existing Substation (AEP)
- Existing Switch Station (AEP)
- Existing Switch Station To Be Removed (AEP)
- Existing Transmission Line (AEP)
- Existing Transmission Line To Be Rebuilt (AEP)
- Existing Transmission Line To Be Removed (AEP)
- Non-AEP Transmission Line
- Pipeline
- Railroad
- Airport
- Heliport
- Historic Site (NRHP)
- Historic District (NRHP)
- Hospital
- Place of Worship
- Cemetery/Burial Ground
- School
- Highway
- Stream (NHD)
- 100-year Floodplain (FEMA)
- Wetland (NWI)
- Waterbody (NHD)
- Permitted Surface Mine Boundary
- Permitted Underground Mine Boundary
- Federal Conservation Land (PAD-US)
- Local Conservation Land (PAD-US)
- State Conservation Land (PAD-US)
- City/Municipal Limit
- County Boundary

City of Prestonsburg
Johnson and Floyd Counties, Kentucky

NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011

November 18, 2025



Map 2: Proposed Route

AMERICAN ELECTRIC POWER

Prestonsburg - Thelma Transmission Line Rebuild Project

0 0.5 1 1.5 2
Miles

EXHIBIT 8

PRESTONSBURG - THELMA TRANSMISSION LINE REBUILD PROJECT

Kentucky Power representatives plan to upgrade the electric transmission grid in Floyd and Johnson counties to enhance electric reliability for area customers. Crews plan to begin construction summer 2026 and conclude by spring 2028.

WHAT

The project involves:
- Rebuilding approximately 14 miles of transmission line to 69-kilovolt (kV) standards between Prestonsburg and Thelma substations
- Retiring approximately 2 miles of 46-kV transmission line between Kenwood Substation and Van Lear Switch Station
- Retiring Jenny Wiley Switch Station
- Retiring Van Lear Switch Station

Kentucky Power officials announced this project and hosted an in-person open house in late 2022. The project team announced a proposed route in May 2023 before placing the project on hold. Following community feedback and additional reviews, the team developed an alternate route for a portion of the line rebuild. We re-announced the project in September 2024 with a virtual open house and public comment period.

The project team selected the proposed route after reviewing input submitted from landowners and community members as well as data from field studies.

This project involves filing an application for approval with the Kentucky Public Service Commission (PSC).

WHY

The existing transmission line has experienced multiple power outages in recent years due to lightning and other causes. Currently, the customers served from the Kenwood Substation may experience longer restoration time when the transmission line experiences an outage.

AEP and PJM, the regional transmission organization that monitors the electric transmission grid in our region, have identified additional needs for the upgrades. The proposed upgrades will mitigate identified reliability criteria violations and strengthen the transmission system to increase electric reliability for area customers.

The proposed upgrades allow crews to:
- Rebuild the power line in an area with increased accessibility which accommodates construction equipment and more efficiently address maintenance needs and emergency situations
- Replace aging wooden structures with modern steel structures
- Add modern equipment that protects the line from lightning strikes

WHERE

The project begins at the Prestonsburg Substation on Webb Lane in Prestonsburg and continues north to Thelma Substation in Thelma along Kentucky 1107.

2022

PROJECT ANNOUNCEMENT & IN-PERSON OPEN HOUSE
Late 2022

2023

INITIAL PROPOSED ROUTE
May 2023

2024

PROJECT RE-ANNOUNCEMENT & VIRTUAL OPEN HOUSE
September 2024

RIGHT-OF-WAY COMMUNICATIONS BEGIN
November 2024

2025

UPDATED PROPOSED ROUTE
November 2025

FILE APPLICATION WITH THE KENTUCKY PSC*
November 2025

2026

ANTICIPATED APPROVAL FROM THE KENTUCKY PSC
Summer 2026

CONSTRUCTION BEGINS
Summer 2026

2027

2028

PROJECT IN SERVICE
Spring 2028

*PSC: Public Service Commission
**Timeline subject to change.

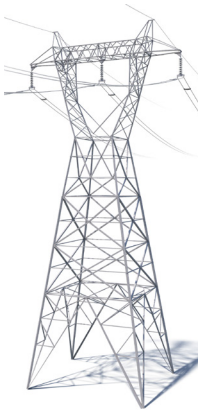
TYPICAL STRUCTURES

Crews plan to install steel H-frame, lattice tower and three-pole structures along the line route.

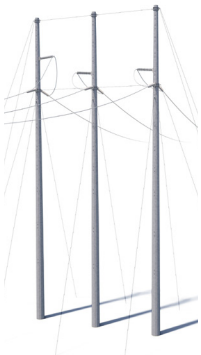
Typical Structure Height: Approximately 70-100 feet*
Typical Right-of-Way Width: Approximately 100 feet*

*PRIMARY STRUCTURE TO BE USED

H-FRAME*

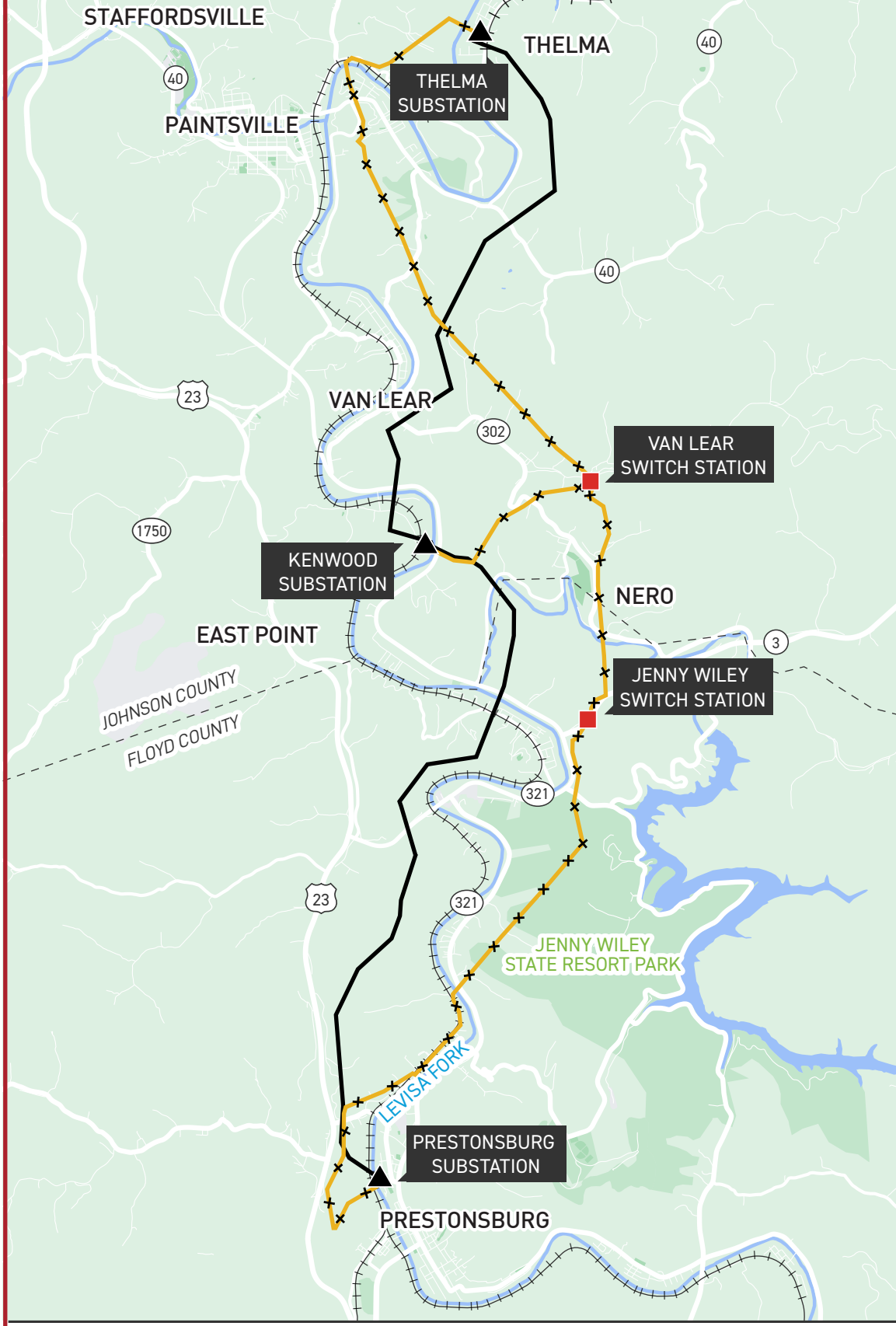


LATTICE TOWER



THREE POLE STRUCTURE

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



PRESTONSBURG - THELMA TRANSMISSION LINE REBUILD PROJECT

- EXISTING TRANSMISSION LINE TO BE RETIRED
- EXISTING SUBSTATION
- PROPOSED ROUTE FOR TRANSMISSION LINE REBUILD
- SWITCH STATION TO BE RETIRED

N

WE VALUE YOUR INPUT. PLEASE SEND COMMENTS AND QUESTIONS TO:

AMANDA DEHAVEN • OUTREACH SPECIALIST
KENTUCKYPOWEROUTREACH@AEP.COM • 833-760-0604
KENTUCKYPOWER.COM/THELMA

KENTUCKY POWER
An AEP Company

11/3/2025

November 17, 2025

IMPORTANT MESSAGE ABOUT YOUR PROPERTY
[First Name] [Last Name]
[Owner 2]
[Mailing Address]
[Mailing City], [Mailing State] [Zip Code]

RE: Prestonsburg-Thelma Transmission Line Rebuild – Updated Proposed Route and Notice of Filing

Dear Neighbor,

You are receiving this letter because public records show you own property or live in the area where Kentucky Power representatives plan the Prestonsburg-Thelma Transmission Line Rebuild Project. The project involves rebuilding about 14 miles of transmission line, retiring about 2 miles of transmission line and retiring two substations.

The project team announced a proposed power line route earlier this year. Field studies conducted over the past several months allowed crews to identify culturally sensitive areas in and directly adjacent to a portion of the proposed route, including several cemeteries. To avoid these culturally sensitive areas, the project team has adjusted a portion of the 14-mile route north of the Kenwood Substation. The proposed route is in new right-of-way, allowing crews to retire the existing 14 miles of transmission line.

Please review the updated route on the enclosed factsheet or visit **KentuckyPower.com/Thelma** to view an interactive map, enter our virtual open house and learn more about the project.

Kentucky Power representatives plan to submit an application to approve the Prestonsburg-Thelma Transmission Line Rebuild Project to the Kentucky Public Service Commission (PSC) later this month.

Below is information about the application and how to provide feedback to the PSC.

- The project has been assigned **PSC Case Number 2025-00346**. All comments should reference this number.
- The PSC Executive Director, Ms. Linda Bridwell may be contacted by mail at 211 Sower Boulevard, Post Office Box 615, Frankfort, KY 40602; by phone at (502) 564-3940; or by email at psced@ky.gov.
- Submit written comments on Kentucky Power's application through the Commission's website at http://psc.ky.gov or by mail to Public Service Commission, Post Office Box 615, Frankfort, KY 40602-0615.
- Submit timely written requests for intervention in **Case No. 2025-00346** to the Public Service Commission, Post Office Box 615, Frankfort, KY 40602-0615.
    - Requests for intervention should include grounds for the request, including the status and interest of the party making the request. If the PSC does not receive a timely written request for intervention, the commission may take final action on the application.

KENTUCKY POWER
An AEP Company

Emerald Energy is the right-of-way representative for Kentucky Power on this project and continues to work with impacted landowners. Landowners can contact Emerald Energy at (606) 637-1946.

If the project is approved by the PSC, construction begins summer 2026 and concludes spring 2028.

Sincerely,

Amanda S. DeHaven
Project Outreach Specialist
833-760-0604
KentuckyPowerOutreach@aep.com

Full Landowner List For Entire Route

Map Tile	LastName	FirstName	Owner 2	Mailing Address	City	State	Zip
5	ACORD	ERAN L		170 JOHN BAYS BRANCH	AUXIER	KY	41602
1	AKERS	SUSAN		34 DICKERSON STREET	PRESTONSBURG	KY	41653
8,9	ALLORD	ANDREW & TERESA A		26 CONLEY CIRCLE DRIVE	VAN LEAR	KY	41265
10,9		APPALACHAIN LAND COMPANY		PO BOX 279	PIKEVILLE	KY	41502
9	ARNETT	RANDY DOUGLAS		415 WEBB HOLLOW	VAN LEAR	KY	51265
9	ARNETT	TIFFANY		415 WEBB HOLLOW	VAN LEAR	KY	41265
6,7	AUXIER	HAROLD & TAYNA (LIFE ESTATE)		1330 KY RT 2381	VAN LEAR	KY	41265
6	AUXIER	HAROLD K & TANYA		1330 HIGHWAY 2381	VAN LEAR	KY	41265
4	BALDRIDGE	LIBBY ANN		54 DICKIETOWN	EAST POINT	KY	41216
12	BARNES	TAMMY		PO BOX 532	HAGER HILL	KY	41222
5	BAYES	JOHN JR & BETTY L	C/O JIM & MYRA GILLISPIE	4685 KY RT 302	VAN LEAR	KY	41625
4,5	BAYS	JAMES		101 JOHN BAYS BRANCH	AUXIER	KY	41602
10,11	BELHASEN	LORETTA		PO BOX 153	PAINTSVILLE	KY	41240
7,8		BEN TIRE DISTRIBUTORS LTD		203 EAST MADISON, P.O. BOX 158	TOLEDO	IL	62468
1	BENTLEY	DONALD RAY & LISA F		9 BURKE AVE	PRESTONSBURG	KY	41653
5	BEVERLY	MAX KEITH		PO BOX 146	AUXIER	KY	41602
5,6		BIZZACK CONSTRUCTION LLC		PO BOX 12530	LEXINGTON	KY	40583
7	BLEVINS	ALLISON R & ERNEST		822 INDUSTRIAL PARK	HAGER HILL	KY	41222
12	CASTLE	BOB		168 BUSKIRK DRIVE	THELMA	KY	41260
2,3	BRANHAM	DON CODY		109 ASH LANE	EAST POINT	KY	41216
8,9	BROTZMAN	EDWARD & WANETTA		55 CONLEY DRIVE	VAN LEAR	KY	41265
1	BROWN	MABLE		15 DICKERSON STREET	PRESTONSBURG	KY	41653
9	BURCHELL	PAUL L & MILISSA K		PO BOX 887	SALYERSVILLE	KY	41465
5	BURCHETT	BARBARA		276 RAILROAD ST	AUXIER	KY	41602
5	BURCHETT	FRANKLIN D JR & SARAH		PO BOX 97	AUXIER	KY	41602
4	BURCHETT	MYRTLE ESTATE C/O BERNADETTE CONN		279 EDGEWOOD LANE	PRESTONSBURG	KY	41653
4,5	BURKE	CHARLES STEPHEN & MICHELLE	C/O KIESHA MCKENZIE	299 HOPSON STREET	AUXIER	KY	41602
9	BURKE	ROB & RENEE		1863 KY RT 302	VAN LEAR	KY	41265
8,9	BUTCHER	LINDA G	C/O COMMUNITY TRUST BANK, INC	PO BOX 2947	PIKEVILLE	KY	41502
7	BUTCHER	ROBERTA		PO BOX 956	PAINTSVILLE	KY	41240
9	CAMPBELL	DAVID J & CARLETTA		75 WEBB HOLLOW	VAN LEAR	KY	41265
7,8,9		CARL & HESTER IRREVOCABLE TRUST	C/O DEBORAH J JACKSON	252 MILL BRANCH ROAD	PAINTSVILLE	KY	41240
9	ELKINS	CARROL J	JAMES M POWERS	1032 HIDDEN CREEK DRIVE	BEREA	KY	40403
9	CASTLE	AMANDA POWERS		712 WEBB HOLLOW RD	VAN LEAR	KY	41265
9	CASTLE	LON & BRENDA		1886 KY RT 302	VAN LEAR	KY	41265
12	CASTLE	ROBERT L	C/O CASCADE FINANCIAL SERVICES	3345 S VAL VISTA DRIVE STE 300	GILBERT	AZ	85297
11,12	CASTLE	WILLIAM J & JOHNDA L	LIFE EST	38 BUSKIRK DRIVE	THELMA	KY	41260
1	CAUDILL	BILLY JOE & SHARON		43 DOTSON LAYNE	PRESTONSBURG	KY	41653
7	CAUDILL	HERMAN & DAWN		7515 KY RT 321 SOUTH	HAGER HILL	KY	41222
7	CAUDILL	WOODY & ETHEL	HERMAN & DAWN CAUDILL	12 HEAD OF PICKLEFORK	STAFFORDSVILLE	KY	41256
9	CENTERS	CHARLES B		665 WEBB HOLLOW	VAN LEAR	KY	41265
1	CHAFFINS	DONALD L & ELIZABETH		151 SHORT BR	PRESTONSBURG	KY	41653
1	CHALOTHORN	WANTANEE		2272 GUILFORD LANE	LEXINGTON	KY	40513
12	CHRISTENSEN	KENNETH & DAWN		254 BUSKIRK DRIVE	THELMA	KY	41260
8	COBURN	DONAVAN		12 TRAVIS DRIVE	EAST POINT	KY	41216
10,12,6,7,8		COMMONWEALTH OF KENTUCKY	DEPARTMENT OF TRANSPORTATION	STATE OFFICE BUILDING	FRANKFORT	KY	40622
1,2		COMMONWEALTH OF KY		700 Capital Ave	FRANKFORT	KY	40601
12	COMPTON	JUSTIN MICHAEL	C/O CITIZENS BANK OF KY	PO BOX 1488	PAINTSVILLE	KY	41240
9	CONLEY	JOHN & ALLISON		645 WEBB HOLLOW	VAN LEAR	KY	41265
10	CONLEY	PATRICK ALLEN		PO BOX 175	STAFFORDSVILLE	KY	41256
5	CORDER	FRANCES		PO BOX 392	AUXIER	KY	41602
3,4	CRIDER	JACK BYRON		313 DICKIE TOWN RD	EAST POINT	KY	41216
12	CRISP	ERVIN		65 APPLE STREET	THELMA	KY	41260
4,5	CURRY	GLADAH JANE	DENA C SPARKMAN	PO BOX 222	EASTERN	KY	41622
5		CURTIS HALL RENTALS LLC		58 WADDLE LANE	PRESTONSBURG	KY	41653
9	DAVIS	JEFFERY		2002 KY RT 302	VAN LEAR	KY	41265
7	DELONG	PAUL R		80 CANNEL COAL GAP	HAGER HILL	KY	41222
1	DEROSSETT	CLYDE D & KAREN L		242 CARDINAL ESTATES	PRESTONSBURG	KY	41653
5	DIDDLE	TIMOTHY	A D K A Z R SPECIAL TRUST	PO BOX 330	PIKEVILLE	KY	41501
4		EAST KENTUCKY NETWORK LLC	D/B/A APPALACHIAN WIRELESS	101 TECHNOLOGY TRAIL	IVEL	KY	41642
12		EASTSIDE FREEWILL BAPTIST	CHURCH INC	PO BOX 277	THELMA	KY	41260
11,12	ENDICOTT	GARY		PO BOX 2303	PAINTSVILLE	KY	41240
9	ESTEPP	MARCIE & DAVID		47 WEBB HOLLOW	VAN LEAR	KY	41265
9	ESTEPP	MARCIE & DAVID	C/O GOLDIE W SPRADLIN	47 WEBB HOLLOW	VAN LEAR	KY	41265
9	FANNIN	BARRY		2471 KY RT 302	VAN LEAR	KY	41265
9	FANNIN	VANESSA		432 MAIN STREET	PAINTSVILLE	KY	41240
8	FERGUSON	GREGORY S & MARTHA		58 GOBLE LANE	VAN LEAR	KY	41265
10	FITCH	CHARLES & GARLAND	C/O GARLAND FITCH	PO BOX 445	PAINTSVILLE	KY	41240
10,9	FITCH	DANNY WAYNE & TERESA		684 BOAT GUNNEL ROAD	MEALLY	KY	41234
1		FLOYD COUNTY BOARD OF EDUCATION		442 KY RT 550	EASTERN	KY	41622
11,12		MACK FRANKLIN -ESTATE-	C/O WILBUR PRESTON	6522 KY RT 581	RIVER	KY	41254
9		FREELAN DANIELS CEMETERY	C/O CARL CASTLE	HC 70 BOX 1135	VAN LEAR	KY	41265
1,2		G-DOW ENTERPRISES LLC		PO BOX 31	ALLEN	KY	41601
5	GAMBILL	JESSICA MUSIC & FARON GREGORY		31 THOMAS STREET	AUXIER	KY	41602
5	GIBSON	GLENN		4571 STATE HWY 194 W	PIKEVILLE	KY	41501
12	GIBSON	SAMMIE		PO BOX 298	THELMA	KY	41260
9	GOBLE	KERBY & JOHANNA		645 WEBB HOLLOW	VAN LEAR	KY	41265
1		H D FITZPATRICK JR LLC		PO BOX 326	PRESTONSBURG	KY	41653
8,9	HACKWORTH	DEBRA JEAN		151 PEA VINE BR	VAN LEAR	KY	41265
1	HALL	GERALDINE		37 DICKERSON STREET	PRESTONSBURG	KY	41653
4	HAMILTON	STEPHEN BRAD & LEIGH		94 MOCKINGBIRD LANE	IVEL	KY	41642
5	HARLESS	MORRIS DEAN & MITZI		PO BOX 225	AUXIER	KY	41602
5		ONEIDA ONEIDA ESTATE		PO BOX 212	AUXIER	KY	41602
12	HAYDEN	DOUG & KIMBERLY		148 BUSKIRK DRIVE	THELMA	KY	41260
11,12	HILL	ROGER & LETITIA	C/O CITIZENS BANK OF KENTUCKY	PO BOX 1488	PAINTSVILLE	KY	41240
5	HOLBROOK	CORY & CASSIDY		PO BOX 168	AUXIER	KY	41602
10	HOLBROOK	JOHN KEVIN & TANIA	C/O CITIZENS BANK OF KENTUCKY	PO BOX 1488	PAINTSVILLE	KY	41240

5	HOLBROOK	KATHY & MARK D		PO BOX 77	AUXIER	KY	41602
10,9	HOLBROOK	KENNY		74 HOLBROOK BRANCH	PAINTSVILLE	KY	41240
8,9	HOLBROOK	WINFIELD JR & STELLA		PO BOX 38	VAN LEAR	KY	41265
9	HORN	HARRISON W JR & GINA M		1857 KY RT 302	VAN LEAR	KY	41265
1		JANE D HOWARD ESTATE	C/O KAREN OUSLEY	PO BOX 1176	PRESTONSBURG	KY	41653
8,9	HUNTER	GREGORY TYLER		51 STAFFORD SPRINGS	STAFFORDSVILLE	KY	41256
5	JARRELL	CARL		PO BOX 213	AUXIER	KY	41602
4,5	JERVIS	KELLI & CLINTON		3878 SPURLOCK CREEK	PRESTONSBURG	KY	41653
12		JOHNSON CO HOUSING AUTHORITY		PO BOX 189	THELMA	KY	41260
7,8		JOHNSON COUNTY FISCAL COURT		230 COURT STREET SUITE 201	PAINTSVILLE	KY	41240
5	JOHNSON	LYNDON KEITH & JENNIFER LYNN		PO BOX 2	AUXIER	KY	41602
7,8		KENTUCKY COMMUNITY & TECHNICAL	COLLEGE SYSTEM	PO BOX 14092	LEXINGTON	KY	40512
5	KIDD	DONALD & JANICE		PO BOX 41	AUXIER	KY	41602
4	KING	STEPHANIE		47 BOB BURCHETT DRIVE	EAST POINT	KY	41216
2		KINZER BUSINESS REALTY LTD KF 146		1555 KY RT 80	PRESTONSBURG	KY	41653
2	KUMMANT	PETER K & EILEEN M		545 OLD ABBOTT MTN ROAD	PRESTONSBURG	KY	41653
8,9	LEWIS	CARL & MARLENE	C/O PEOPLES BANK	PO BOX 738	MARIETTA	OH	45750
1	MAGGARD	RICHARD		107 DINGUS BOTTOM RD	MARTIN	KY	41649
12	MALONE	DONALD M & KAITLYN R		2708 MABLE LANE	LEXINGTON	KY	40511
2,3	MANN	RONALD		PO BOX 1745	PRESTONSBURG	KY	41653
5	MARTIN	STEPHANIE		PO BOX 212	AUXIER	KY	41602
10		JEFFERY MCCARTY ESTATE		750 US 23 SOUTH	HAGER HILL	KY	41222
11	MCCARTY	MATTHEW		81 BLANTON DR	THELMA	KY	41260
5,6,7		MCDONALD REALTY LLC		PO BOX 999	PRESTONSBURG	KY	41653
7	MCKENZIE	SHIRLEY ANN		PO BOX 1524	PAINTSVILLE	KY	41240
5	MEADE	DWAYNE LEE		PO BOX 382	WAYLAND	KY	41666
12	MEEK	GERALD		25 APPLE STREET	THELMA	KY	41260
7	MELVIN	BRIAN	BETTY AUZIER LIFE ESTATE	556 KY RT 825	HAGER HILL	KY	41222
1	MOORE	ALAN KYLE		249 GREER BRANCH	EAST POINT	KY	41216
1		CORDON MOORE ESTATE / ALAN MOORE	EARL & KATHERINE MOORE LIVING TRUST	15945 COBBLE MILL DR	WIMAUMA	FL	33598
6,7	MOORE	MARK C & LISA		PO BOX 12517	TALLAHASSEE	FL	32317
5	MOSLEY	JUSTIN		117 LONG BRANCH	VAN LEAR	KY	41265
7	MURRAY	ROGER		PO BOX 70	THELMA	KY	41260
7	MURRAY	W ROGER & SCARLET R		PO BOX 70	THELMA	KY	41260
5		GEORGE W MUSIC -ESTATE-	C/O JACK MUSIC ADMINISTRATOR	31 THOMAS ST	AUXIER	KY	41602
8,9	MUSIC	JAMES ROBERT		109 MCKENZIE ADDITION	VAN LEAR	KY	41265
5	NELSON	DAVID W & LISA		PO BOX 310	AUXIER	KY	41602
1	NUNNERY	B DIXON & SONIA		35 COLLEGE LANE	PRESTONSBURG	KY	41653
5	OSBORN	DANIEL & DELORES		146 DEPOT HOLLOW	AUXIER	KY	41602
5	OSBORN	DANIELLE MARIE		146 DEPOT HOLLOW	AUXIER	KY	41602
7,8	PACK	EDWARD E		PO BOX 736	PAINTSVILLE	KY	41240
7		PAINTSVILLE UTILITIES COMMISSION		137 MAIN STREET	PAINTSVILLE	KY	41240
10	PAYNE	GENE & LORETTA		123 WOODLAND ESTATES	PAINTSVILLE	KY	41240
12		PELPHREY INVESTMENTS LLC		PO BOX 1250	PAINTSVILLE	KY	41240
2	PENNINGTON	JAMES W & HENRIETTA		PO BOX 957	PRESTONSBURG	KY	41653
2	PEPPIE	RONALD DAVID II & ALLISON		1162 OLD ABBOTT MT RD	PRESTONSBURG	KY	41653
8,9	PLUMLEY	LONNA		1864 KENTUCKY ROUTE 302	VAN LEAR	KY	41265
3	PORTER	TONYA M & SCOTT		1500 STEPHENS BR RD	PRESTONSBURG	KY	41653
9		POWERS FAMILY CEMETERY	C/O ANNA POWERS	GENERAL DELIVERY	VAN LEAR	KY	41265
4,5	POWERS	GLENN		20 JOHN BAYS BRANCH	AUXIER	KY	41602
5	POWERS	GLENN JR		3461 KY RT 321	PRESTONSBURG	KY	41653
10,9	POWERS	LARRY		PO BOX 617	VAN LEAR	KY	41265
5	POWERS	RICKY & DONNA GAIL		PO BOX 44	AUXIER	KY	41602
1,2		PRESTONSBURG INDUSTRIAL CORPORATION		382 MAPLE AVE	PRESTONSBURG	KY	41653
3		QUALITY NATURAL GAS PROPERTIES LTD KF-267		1555 KY RT 80	PRESTONSBURG	KY	41653
2		R & J DEVELOPMENT		81 ENTERPRISE DRIVE	DEBORD	KY	41214
11,12	RATLIFF	J L		PO BOX 275	THELMA	KY	41260
4	RICE	IVANELL ELKINS & BONITA		18 HUGHES BR RD	EAST POINT	KY	41216
12		RIVERVIEW VILLAGE INC		BOX 189	THELMA	KY	41260
8	ROBERTS	WILLIAM M & JENNIFER F		PO BOX 170	PRESTONSBURG	KY	41653
10,9	ROBINSON	JOHN CECIL		1782 KENTUCKY ROUTE 1107	PAINTSVILLE	KY	41240
2	ROBINSON	KENNETH & PEGGY		984 OLD ABBOTT MT RD	PRESTONSBURG	KY	41653
2		HAZEL RORRER EST.	C/O JUDITH RORRER	341 SOUTH ARNOLD AVE	PRESTONSBURG	KY	41653
7,8	ROUSE	THOMAS B & ANNETTE M		50 CANNEL COAL GAP	HAGER HILL	KY	41222
8,9	ROWLAND	RANDY & KATHY L		612 WALNUT AVE	PAINTSVILLE	KY	41240
10,11	SALYER	CALHOUN	JANIE KING	611 WALNUT AVENUE	PAINTSVILLE	KY	41240
9	SALYER	MELVIN		2046 KY RT 302	VAN LEAR	KY	41265
5	SALYERS	PATRICIA ANN LITZ & CHARLES		PO BOX 133	AUXIER	KY	41602
4,5	SHELTON	JERRY		PO BOX 284	AUXIER	KY	41602
10	SHORT	RONALD WAYNE & TAMMY GAY		3345 KY RT 40 E	MEALLY	KY	41234
10	SHORT	WAYNE & TAMMY		3345 KY RT 40 E	MEALLY	KY	41234
2	SIMPSON	ANNA LOIS	CHARLES ROY BURC	PO BOX 293	PRESTONSBURG	KY	41653
1	SKEANS	FLOYD ANTHONY		PO BOX 397	HAGERHILL	KY	41222
9	SLONE	JOHN W & DEBRA L		2065 KY RT 302	VAN LEAR	KY	41265
2	SLONE	KAREN K		38 S HALL ALLEY APT B	PRESTONSBURG	KY	41653
1	SNIPES	PHILIPPA WARREN		50 CLIFTON STREET	PRESTONSBURG	KY	41653
1	SPEARS	JAMES K & VIRGINIA A		27 DICKERSON STREET	PRESTONSBURG	KY	41653
7	SPEARS	THOMAS & TAYLOR		800 INDUSTRIAL PARK	HAGER HILL	KY	41222
1	SPRADLIN	EDNA J		189 CARDINAL ESTATES	PRESTONSBURG	KY	41653
8,9	STAMBAUGH	ANDREW		972 KY RT 1107	VAN LEAR	KY	41265
8	STEVENS	DIANNE		36 GOBLE LANE	VAN LEAR	KY	41265
4	STURGILL	JOLLY D & EDITH JERALENE		721 FORDS GAP	AUXIER	KY	41557
10,11	TERRY	SEAN M & AMBER		13 PRESTON ESTATES	PAINTSVILLE	KY	41240
10		THE BIRDIE DELL HALL REVOCABLE TRUST		401 BOLTON DRIVE	SOMERSET	KY	42503
2,3		THE BRIAN & MISTY PUGH LIVING TRUST		1288 S LAKE DRIVE	PRESTONSBURG	KY	41653
8		THE WORKFORCE DEVELOPMENT CAB	COMM OF KENTUCKY		FRANKFORT	KY	40601
3,4	TINCHER	JANIE		1228 LEFT FORK LITTLE PAINT	EAST POINT	KY	41216
9		TLS UNLIMITED INC		PO BOX 6845	LINCOLN	NE	68506

5	TOLLIVER	JAMES		176 LYNNWOOD DRIVE	MT WASINGTON	KY	40047
		TRIPLE J LAND MANAGEMENT LLC		1178 WEST MAIN ST	WEST LIBERTY	KY	41472
8		BONNIE& CHRISTOPHER		49 GOBLE LANE	VAN LEAR	KY	41265
1,2		TROUBLESOME CREEK GAS CORPORATION		PO BOX 934	PRESTONSBURG	KY	41653
2	TUSSEY	LORETTA CAROL		547 OLD ABBOTT MTN ROAD	PRESTONSBURG	KY	41653
8		VIRGINIA STABLES LLC		PO BOX 609	PRESTONSBURG	KY	41653
8,9	WAGES	JESSICA		25 ESTEP COURT	VAN LEAR	KY	41265
12	WARD	DANNY & WILMA		26 EMMA DRIVE	THELMA	KY	41260
10,11	WARD	PAMELA & GARY	C/O CITIZENS BANK OF KENTUCKY	PO BOX 1488	PAINTSVILLE	KY	41240
5	WARD	PHILIP & DEBORAH		PO BOX 134	AUXIER	KY	41602
5	WARD	PHILIP & DEBORAH FAYE		PO BOX 134	AUXIER	KY	41602
12	WARD	TODD & ROBIN		18 EMMA DRIVE	THELMA	KY	41260
5	WEDDINGTON	JOE L & BRITTANY N		159 HOPSON STREET	AUXIER	KY	41602
1		AUDREY ANN WELCH	TENNESSE LIMITED LIABILITY COMPANY	9821 COGDILL ROAD SUITE 2	KNOXVILLE	TN	37932
4,5	WELLS	BOBBY W & HERBIE J		110 BURKE AVENUE	PRESTONSBURG	KY	41653
9	WETZEL	CHARLES F		PO BOX 105	VAN LEAR	KY	41265
9	WETZEL	CHARLES F & SHIRLEY J		PO BOX 105	VAN LEAR	KY	41265
8	WHITT	MELANIE		12 GOBLE LANE	VAN LEAR	KY	41265
10	WICKER	RONALD & KATHY		376 ROBERTS BRANCH	PAINTSVILLE	KY	41240
5	WILLIAMS	NELLIE M & WENDELL E		351 JOHN BAYS BR	AUXIER	KY	41602
	WILLIAMS	RICKY		2045 KY RT 2381	HAGER HILL	KY	41265
3,4	WILLIAMS	SUSAN TURNER		34 VILLAGE GREEN DR	Paintsville	KY	41240
8,9	WILSON	EDWARD D	JENNIFER L MCCOART	PO BOX 262	VANLEAR	KY	41265
10,9	YATES	CECILY		PO BOX 64	VAN LEAR	KY	41265

November 17, 2025

IMPORTANT MESSAGE ABOUT YOUR PROPERTY
[First Name] [Last Name]
[Owner 2]
[Mailing Address]
[Mailing City], [Mailing State] [Zip Code]
LANDOWNER ID: [insert AEP #]
MAP ID: [insert MAP #]

RE: Prestonsburg-Thelma Transmission Line Rebuild Project

Dear Neighbor,

You are receiving this letter because you own property or live in the area where Kentucky Power representatives plan to upgrade the local power grid and we want your feedback on the Prestonsburg-Thelma Transmission Line Rebuild Project.

The project involves:

- Rebuilding approximately 14 miles of transmission line to 69-kilovolt (kV) standards between Prestonsburg and Thelma substations
- Retiring approximately 2 miles of 46-kV transmission line between Kenwood Substation and Van Lear Switch Station
- Retiring the Jenny Wiley and Van Lear switch stations

Kentucky Power officials announced this project and hosted an in-person open house in late 2022. The project team announced an initial proposed route in May 2023 before placing the project on hold. Following community feedback and additional reviews, the team developed an alternate route for the southern portion of the line rebuild in February 2025.

Field studies conducted over the past several months allowed crews to identify culturally sensitive areas in and directly adjacent to the proposed route, including several cemeteries. To avoid these culturally sensitive areas, the project team has adjusted a portion of the route north of the Kenwood Substation.

The updated route may affect property you own. We are hosting a virtual open house to make sure we have the latest community input on the updated route. We invite you to learn more and share your input in the ways listed below.

MATERIALS ENCLOSED WITH THIS LETTER:

- Review the enclosed fact sheet for additional project information.
- Complete the enclosed comment card and mail it back to us in the self-addressed, stamped envelope provided.

KENTUCKY POWER
An AEP Company

PROJECT WEBSITE WITH VIRTUAL OPEN HOUSE:

- Please visit **KentuckyPower.com/Thelma** to access project information, view an interactive map, enter our virtual open house and submit comments.

Please share your input on this project by Friday, December 19. We welcome and encourage your feedback.

Our team plans to use your input to determine a power line route that minimizes impact to the community and environment. When sharing your input please feel free to include information about your property, such as:

- Historically significant buildings or landmarks such as cemeteries
- Natural features such as wetlands or springs
- Future plans for your property

The project team plans to file an application with the Kentucky Public Service Commission later this month. You will receive an additional notification explaining how to participate in the project approval process. If approved, company representatives expect construction to begin summer 2026 and conclude spring 2028.

We look forward to receiving your feedback.

Sincerely,

Amanda S. DeHaven
Project Outreach Specialist
833-760-0604
KentuckyPowerOutreach@aep.com

PRESTONSBURG-THELMA
TRANSMISSION LINE REBUILD PROJECT

KENTUCKY POWER
An AEP Company

FOLLOW-UP QUESTIONS AND COMMENTS

Please fill out and mail this comment card using the enclosed self-addressed, stamped envelope by December 19, 2025. If you prefer to provide comments online, visit www.KentuckyPower.com/Thelma.

Please provide your name and contact information below to ensure we have the most up-to-date information for our records.

NAME: _____

ADDRESS: _____

EMAIL: _____ PHONE: _____

Please complete this questionnaire after you have reviewed the information provided about this project.

Did you find the content provided to be informative? ☐ Yes ☐ No

If no, please explain

_____

_____

Additional Comments

Providing specific locational information in regard to your concerns can assist our project team.

Example: "There is a family cemetery located along the rebuild section approximately 100 feet west of 345 Broad Street."

_____

_____

_____

_____

_____

_____

_____ _____

_____ _____

_____ _____

KENTUCKY POWER
An AEP Company
BOUNDLESS ENERGY

PO Box 2021, Roanoke, VA 24022-2121

List of Landowners Added Upon New Route Selection

Map Tile	LastName	FirstName	Owner 2	Mailing Address	City	State	Zip
7,8		BEN TIRE DISTRIBUTORS LTD		203 EAST MADISON, P.O. BOX 158	TOLEDO	IL	62468
7,8,9		CARL & HESTER IRREVOCABLE TRUST	C/O DEBORAH J JACKSON	252 MILL BRANCH ROAD	PAINTSVILLE	KY	41240
6,7,8,10,12		COMMONWEALTH OF KENTUCKY	DEPARTMENT OF TRANSPORTATION	STATE OFFICE BUILDING	FRANKFORT	KY	40622
7	DELONG	PAUL R		80 CANNEL COAL GAP	HAGER HILL	KY	41222
8,9	HOLBROOK	WINFIELD JR & STELLA		PO BOX 38	VAN LEAR	KY	41265
7,8		JOHNSON COUNTY FISCAL COURT		230 COURT STREET SUITE 201	PAINTSVILLE	KY	41240
7,8		KENTUCKY COMMUNITY & TECHNICAL	COLLEGE SYSTEM	PO BOX 14092	LEXINGTON	KY	40512
8,9	LEWIS	CARL & MARLENE	C/O PEOPLES BANK	PO BOX 738	MARIETTA	OH	45750
7	MURRAY	W ROGER & SCARLET R		PO BOX 70	THELMA	KY	41260
8,9	MUSIC	JAMES ROBERT		109 MCKENZIE ADDITION	VAN LEAR	KY	41265
7,8	PACK	EDWARD E		PO BOX 736	PAINTSVILLE	KY	41240
8,9	PLUMLEY	LONNA		1864 KENTUCKY ROUTE 302	VAN LEAR	KY	41265
8	ROBERTS	WILLIAM M & JENNIFER F		PO BOX 170	PRESTONSBURG	KY	41653
8,9	STAMBAUGH	ANDREW		972 KY RT 1107	VAN LEAR	KY	41265
8		VIRGINIA STABLES LLC		PO BOX 609	PRESTONSBURG	KY	41653

EXHIBIT 9

This Exhibit is a placeholder and is not required for this Application.

EXHIBIT 10

AEP Transmission Zone M-3 Process
Floyd, KY

Need Number: AEP-2018-AP022

Process Stage: Needs Meeting 11/29/18

Supplemental Project Driver:

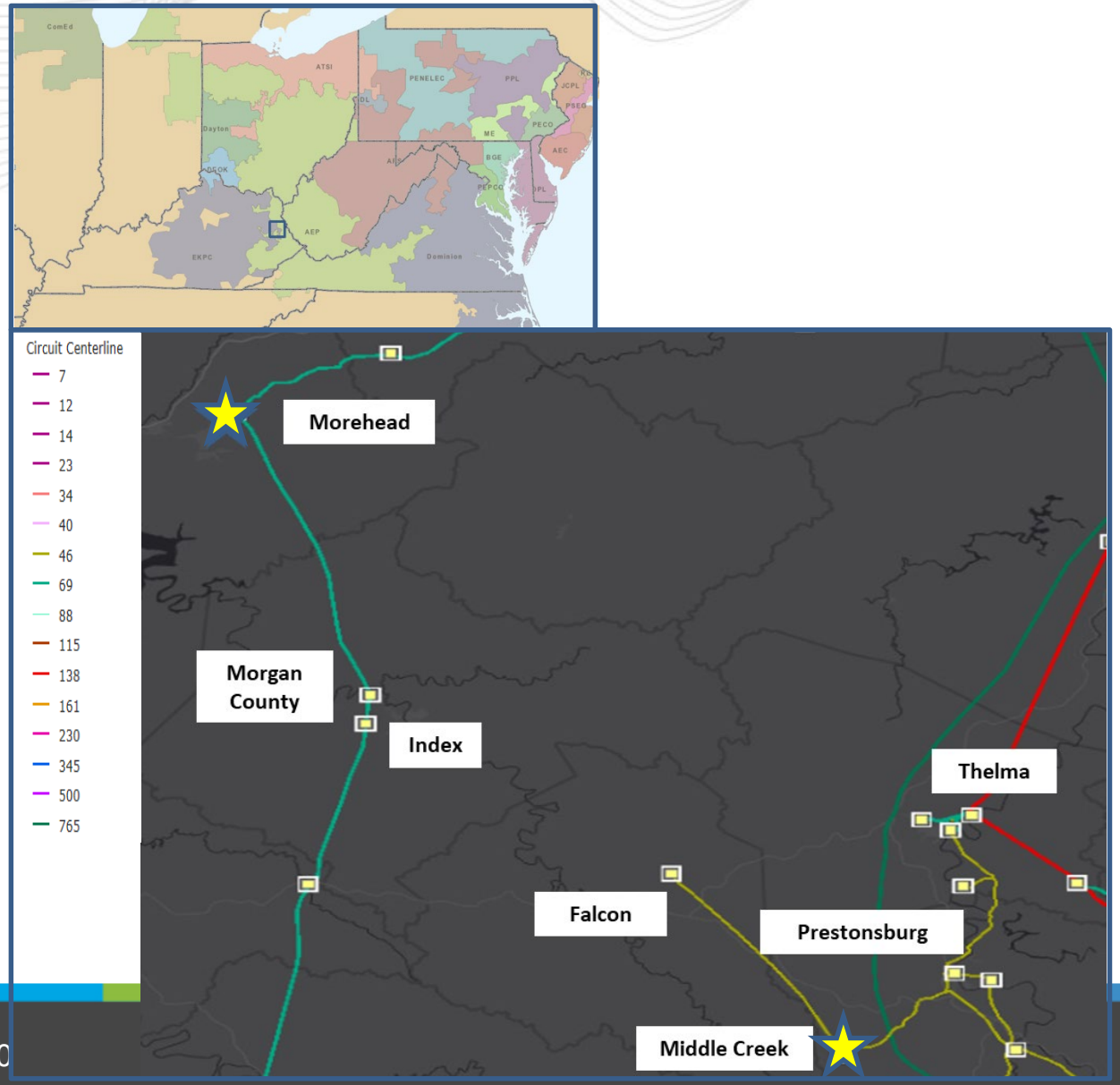
Equipment Condition/Performance/Risk

Specific Assumption References:

AEP Guidelines for Transmission Owner Identified Needs (AEP Assumptions Slide 8)

Problem Statement:

From 2013-2018 the Prestonsburg - Thelma 46 kV circuit (~ 16 miles) has experienced 22 momentary and permanent outages. The circuit has 34 category A open conditions associated with the structures that make up the line. These conditions include damaged/rotted poles and damaged guy wires, cross arms. The majority of this circuit utilizes 1960s wood structures and 336.4 ACSR conductor



AEP Transmission Zone M-3 Process
Johnson County, KY

Need Number: AEP-2020-AP029

Process Stage: Solutions Meeting 03/19/2021

Previously Presented: Needs Meeting 04/20/2020

Supplemental Project Driver: Equipment Condition/Performance/Risk

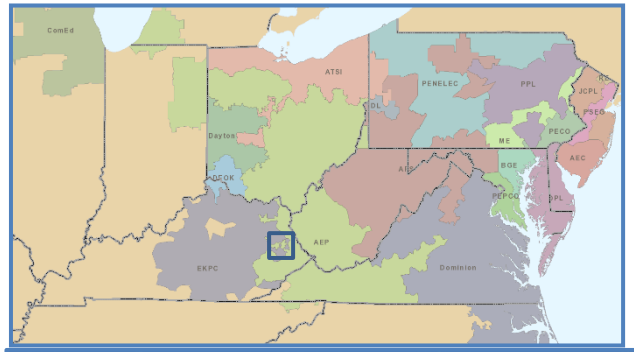
Specific Assumption Reference:
AEP Guidelines for Transmission Owner Identified Needs (AEP Assumptions Slide 8)

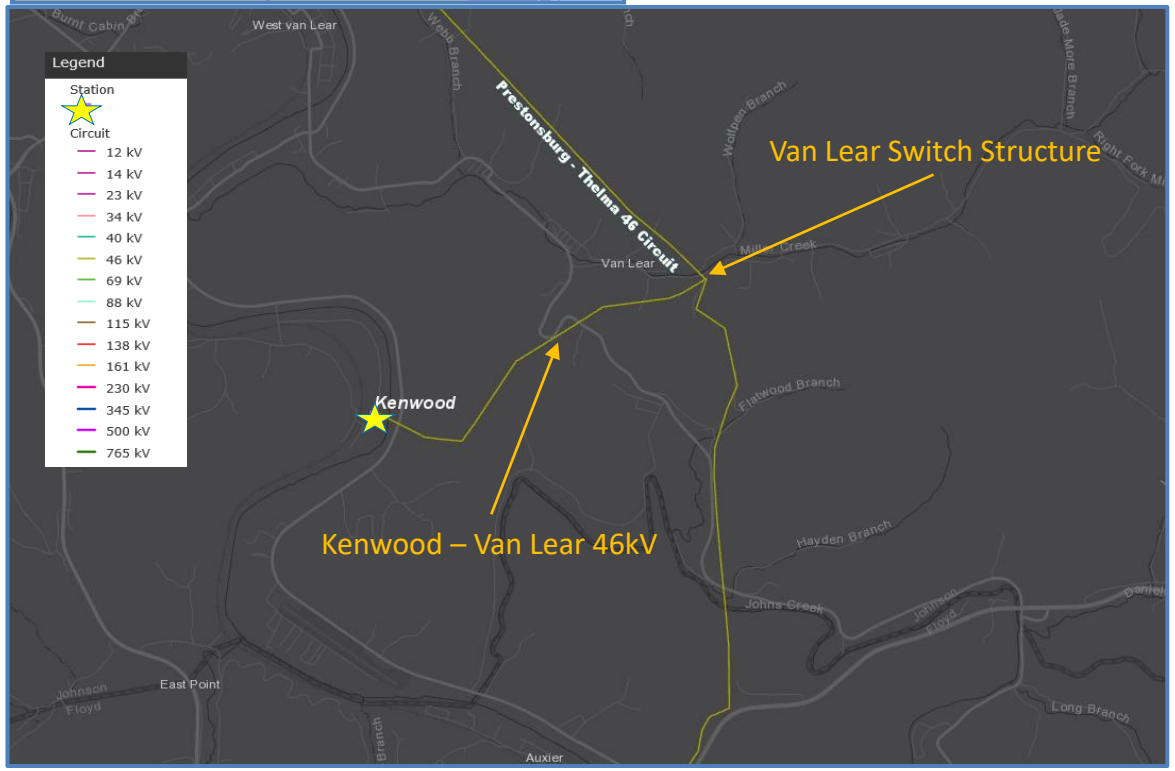
Problem Statement:
Line Name: Kenwood – Van Lear 46kV
Original Install Date (Age): 1969
Length of Line: 1.77 mi
Total structure count: 11
Original Line Construction Type: Wood
Conductor Type: 336,400 ACSR 26/7
Line conditions:

- 3 of the 11 structures have conditions that comprise 27% of the line section.
- Open conditions include: rot and woodpecker damage.
- Kenwood Station is currently radially fed with a peak load near 22 MVA.

Van Lear Switch:

- The switches at Van Lear have been tagged as inoperable and unsafe to operate. The old hydraulic type mechanism on these switches does not operate properly, arcing horns are burnt off, and operating rod supports are damaged.





AEP Transmission Zone: Baseline Thelma Transformer Replacement

Process Stage: Recommended Solution

Criteria: AEP 715 Criteria

Assumption Reference: 2026 RTEP assumption

Model Used for Analysis: 2026 RTEP cases

Proposal Window Exclusion: Below 200 kV Exclusion

Problem Statement:

FG: AEP-T70, AEP-T71, AEP-T72

In 2026 RTEP Winter case, the 46kV winding of the Thelma TR#1 is overload for multiple N-1-1 contingency pairs.

Existing Facility Rating:

Branch	SN/SE/WN/WE (MVA)
05THELMAEQ – 05THELMA 999/138KV	84/92/84/92
05THELMAEQ – 05THELM1 999/69KV	84/92/84/92
05THELMAEQ – 05THELMA 999/46KV	53/58/53/58

AEP Transmission Zone: Baseline Thelma Transformer Replacement

Recommended Solution:

Replace Thelma Transformer #1 with a 138/69/46kV 130/130/90 MVA transformer and replace 46kV risers and relaying towards Kenwood substation. Existing TR#1 to be used as spare. (**B3360**)

Transmission Estimated Cost: $3.54M

Preliminary Facility Rating:

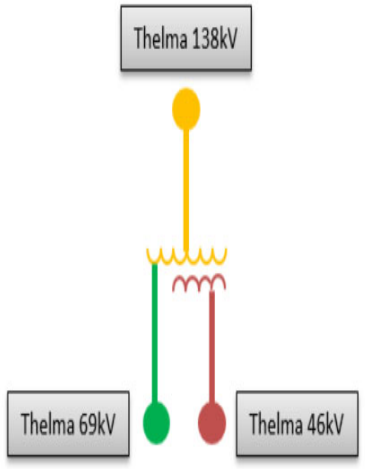
Branch	SN/SE/WN/WE (MVA)
05THELMAEQ – 05THELMA 999/138KV	130/130/130/130
05THELMAEQ – 05THELM1 999/69KV	130/130/130/130
05THELMAEQ – 05THELMA 999/46KV	90/90/90/90

Required IS date: 12/1/2026

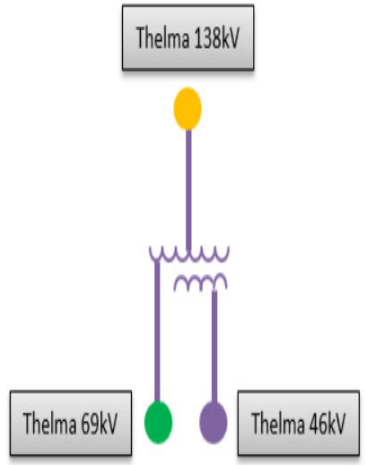
Projected IS date: 10/1/2025

Previously Presented: 10/15/2021

Project System Electrical Diagram (existing)



Project System Electrical Diagram (Proposed)



AEP Transmission Zone: Baseline Prestonsburg - Thelma 46kV Rebuild

Process Stage: Recommended Solution

Criteria: AEP 715 Criteria

Assumption Reference: 2026 RTEP assumption

Model Used for Analysis: 2026 RTEP cases

Proposal Window Exclusion: Below 200 kV Exclusion

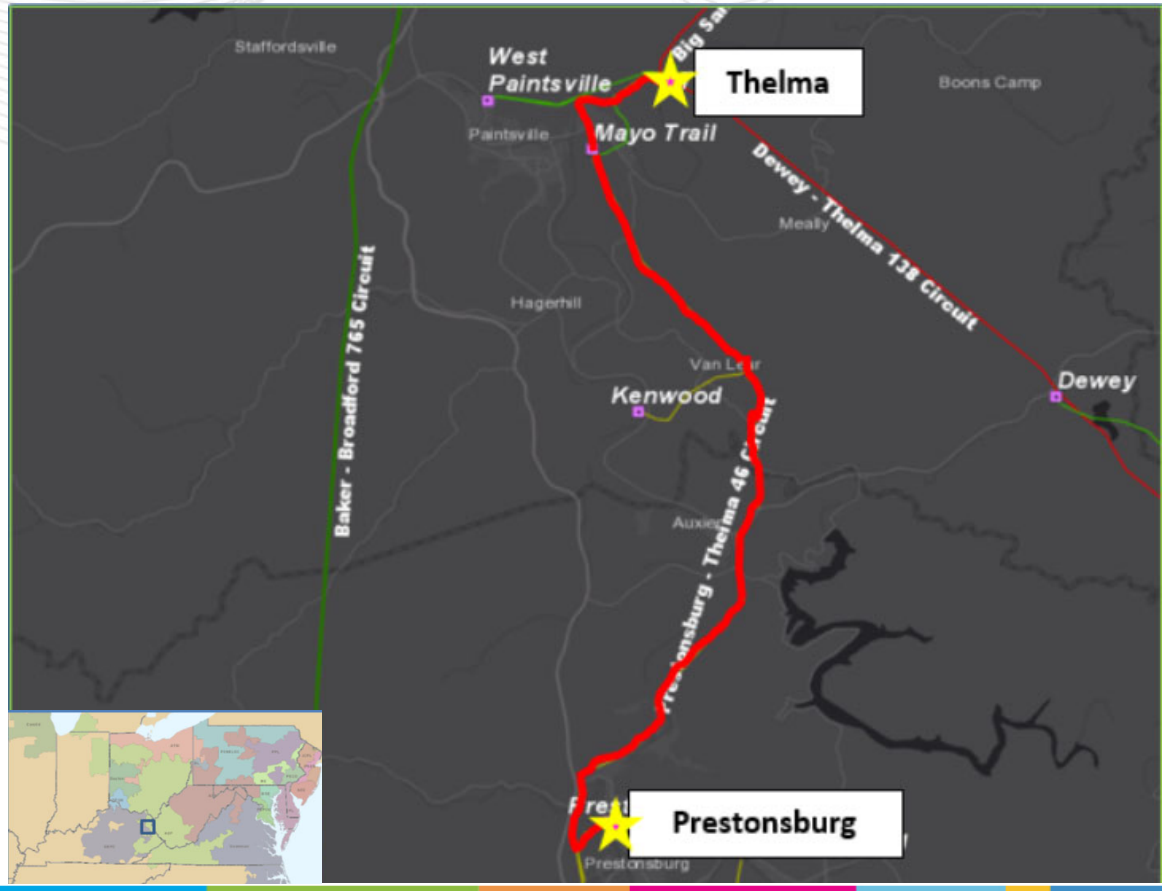
Problem Statement:

FG: AEP-VM10, AEP-VM11, AEP-VM12, AEP-VM13, AEP-VM14, AEP-VM15, AEP-VM16, AEP-VM17, AEP-VM18, AEP-VM19, AEP-VM20, AEP-VM21, AEP-VM22, AEP-VM23, AEP-VM24, AEP-VM25, AEP-VM26, AEP-VM27, AEP-VM28, AEP-VM29, AEP-VM30, AEP-VM31, AEP-VM32, AEP-VM33, AEP-VM34, AEP-VM35, AEP-VM36, AEP-VM37, AEP-VM38, AEP-VM39, AEP-VM40, AEP-VM41, AEP-VD15, AEP-VD16, AEP-VD17, AEP-VD18, AEP-VD19, AEP-VD20, AEP-VD21, AEP-VD22, AEP-VD23, AEP-VD24, AEP-VD25, AEP-VD26, AEP-VD27, AEP-VD28, AEP-VD29, AEP-VD30, AEP-VD31, AEP-VD32, AEP-VD33, AEP-VD34, AEP-VD35, AEP-VD36, AEP-VD37, AEP-VD38, AEP-VD39, AEP-VD40, AEP-VD41, AEP-VD42, AEP-VD43, AEP-VD44, AEP-VD45, AEP-VD46

In 2026 RTEP Winter case, voltage magnitude and voltage drop violations at Mckinney, Salsbury, Allen, East Prestonsburg, Prestonsburg, Middle Creek, Kenwood 46kV buses are identified for multiple N-1-1 contingency pairs.

Existing Facility Rating:

Branch	SN/SE/WN/WE (MVA)
05Thelma – 05KENWDTAP 46KV	50/50/63/63



AEP Transmission Zone: Baseline Prestonsburg - Thelma 46kV Rebuild

Recommended Solution:

Rebuild Prestonsburg - Thelma 46kV circuit, approximately 14 miles. Retire Jenny Wiley SS. (**B3361**)

Transmission Estimated Cost: $33.01M

Preliminary Facility Rating:

Branch	SN/SE/WN/WE (MVA)
05Thelma – 05KENWDTAP 46KV	68/85/86/101
05PRESTNSB– 05KENWDTAP 46KV	68/85/86/101

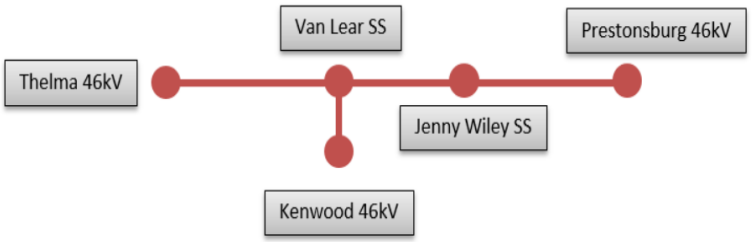
Ancillary Benefits: The proposed solution also completely addresses the identified needs in AEP-2018-AP022.

Required IS date: 12/1/2026

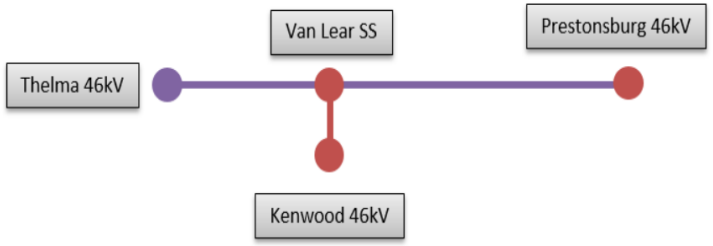
Projected IS date: 10/1/2025

Previously Presented: 10/15/2021

Project System Electrical Diagram (existing)



Project System Electrical Diagram (Proposed)



AEP Transmission Zone: Baseline B3361 Scope Change

B3361: Originally presented in 10/15/2021 and 11/19/2021 W-SRRTEP

Original Scope /Updated Scope (Redline):

Rebuild Prestonsburg - Thelma 46kV circuit connecting though Kenwood station, approximately ~~14~~ 12.7 miles. Retire Jenny Wiley SS and Van Lear SS. (**B3361**)

Transmission Estimated Cost: ~~$33.01M~~ $63.6M

Reason for the scope change: The project is using new right of way that is closer to Kenwood station and will provide looped Transmission service to customers served from Kenwood station.

Reason for the cost increase: Labor and material costs are increasing for Transmission line construction. The difficult terrain in eastern Kentucky requires approximately 2 miles of access road for every 1 mile of line being built.

Preliminary Facility Rating:

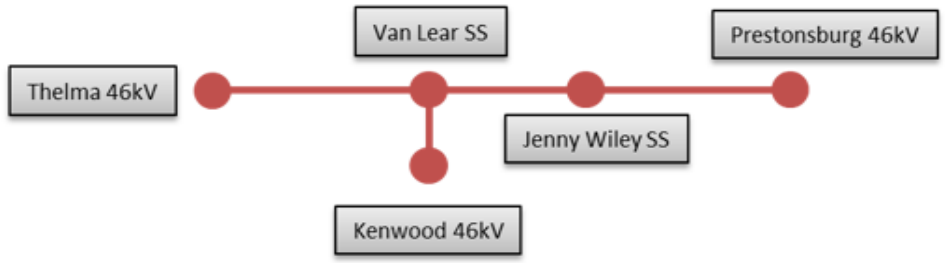
Branch	SN/SE/WN/WE (MVA)
05THELMA – 05KENWOOD 46KV	68/95/86/106
05PRESTNSB– 05KENWOOD 46KV	68/95/86/106

Ancillary Benefits: The proposed solution also completely addresses the identified needs in AEP-2018-AP022 and AEP-2020-AP029.

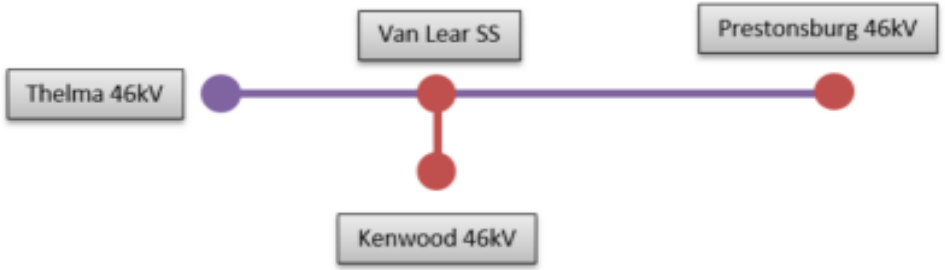
Required IS date: 12/1/2026

Projected IS date: ~~10/1/2025~~ 12/16/2027

Project System Electrical Diagram (existing)



Project System Electrical Diagram (original Scope)



Project System Electrical Diagram (New Scope)

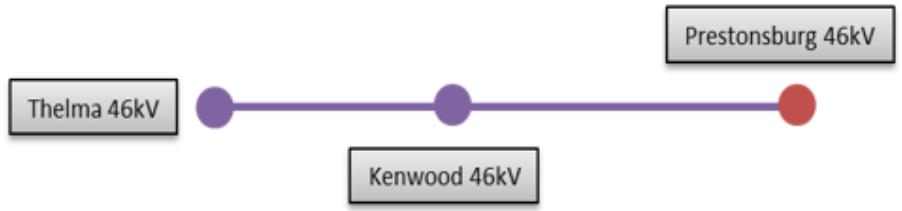


EXHIBIT 11

This Exhibit is a placeholder and is not required for this Application.

EXHIBIT 12

Part 1 of 3

DIGIOIAGRAY
CONSULTING ENGINEERS & SCIENTISTS

September 23, 2021

Project 2021-147

Mr. Eric H. Witt
Transmission Line Engineering
American Electric Power
40 Franklin Road SW
Roanoke, VA 24011

Desktop Study and Geologic Risk Assessment
AEP Prestonsburg - Thelma 46kV Rebuild Project
Floyd and Johnson Counties, Kentucky

Dear Mr. Witt,

DiGioia Gray & Associates (DiGioia Gray) is pleased to submit this report to American Electric Power (AEP) for the above referenced project. This document presents the results of our geologic and geohazard risk assessment in general accordance with our scope of services dated April 15, 2021. This report is organized to present an Executive Summary followed by the Project Background, Discussion of Near-Surface Geology, Geologic Hazards Evaluation, Considerations and Recommendations, Limitations, and a Closing statement. Attachments to this document include Appendix A Tables – Risk Assessment of Proposed Structures and Access Roads and Appendix B – Geologic Hazard Maps (Figures 1 through 7).

This letter report is not intended to represent or replace a comprehensive geotechnical investigation. Rather, this document is an aid to help evaluate (based only on desktop study) the potential geologic and slope stability risks associated with rebuilding the transmission-line along the preferred project corridor.

EXECUTIVE SUMMARY

AEP requested that DiGioia Gray perform a desktop study focused on geologic and geotechnical hazards, particularly related to slope stability risks, for the proposed Prestonsburg - Thelma 46 kV Rebuild alignment. DiGioia Gray performed a desktop-based geohazard assessment of the Project, including the proposed alignment and structure locations chosen for Functional Scoping. Access roads have not yet been formally delineated by AEP. Using historical aerial imagery and other data sources, DiGioia Gray has delineated possible access routes to the structure locations that follow, where possible, existing established roads and other dirt roads and paths of unknown condition. We have assessed these access routes for geohazards and constructability by calculating the grade, slope position, and proximity to known and historical landslides. Any assessment of access routes (e.g., presence, quality, continuity, constructability, etc.) has been based upon desktop identification only using topographic maps, aerial imagery, and LiDAR and must be field verified before mobilization of construction crews. In some cases, there are multiple access options to individual structures. AEP should choose the lowest overall risk options, where possible.

The project index map is presented on **Figure 1** and the project overview is presented on **Figure 2.** As part of the geohazard assessment, zones of relative risk of slope instability (Low, Moderate, and High) were developed to provide guidance for access road and transmission-line siting and construction.

	Low Risk:	Moderate Risk:	High Risk:
Proposed Structures	53%	47%	0%
Access Roads	9%	51%	41%

The project area is underlain by Pennsylvanian-aged coal-bearing rocks. Therefore, mining hazards, such as mine subsidence, are also considered as part of this assessment. A total of 12 structures and 18 access roads are undermined and / or immediately adjacent to mining activities. While undermining presents a hazard of mine subsidence and foundation construction challenges, structures and access roads located both above and below highwalls generated from strip mine or auger mining techniques should be evaluated for hazards such as landslide, rockfall, mine drainage, and mine spoils overlying the natural grade.

PROJECT BACKGROUND

AEP is planning to rebuild the Prestonsburg - Thelma 46kV Transmission-Line along a new 13-mile route in Floyd and Johnson Counties, Kentucky. The rebuild can be broken down to rebuilding approximately 7.1 miles between Prestonsburg and Kenwood Substations and approximately 5.9 miles between Kenwood and Thelma Substations. There are significant existing and potential slope stability risks on the existing Prestonsburg - Thelma transmission line. The proposed new route seeks to mitigate these risks by moving the transmission line corridor upslope where the risk of landslides is lower due to less colluvial soil cover. Utilizing a smaller number of structures, placed mostly on ridges and peaks, and longer spans across valleys, structure locations and ROW will experience a lower overall risk of slope stability challenges.

DISCUSSION OF NEAR-SURFACE GEOLOGY

The Project Area lies within the Appalachian Plateau Physiographic Province, which consists of relatively flat to gently folded Pennsylvanian- and Permian-aged sedimentary rocks. In Kentucky, this Province is known as the Eastern Kentucky Coal Field. The interior of the Eastern Kentucky Coal Field is dominated by forested hills and highly dissected V-shaped valleys (KGS, 2019). The western edge of the Eastern Kentucky Coal Field is called the Cumberland Escarpment, which is formed from resistant Pennsylvanian-aged sandstones and conglomerates.

Project Area Geology

The Project Area traverses Quaternary-aged Alluvium and, from youngest to oldest, the Lower-Middle Pennsylvania-aged Four Corners (Pfc), Hyden (Ph), and Pikeville (Ppk) Formations of the Breathitt Group (Pb) (KGS, 2019). The Breathitt Group can be more than 3,000 feet thick, generally consisting of siltstone, clay-rich shale, sandstone, and coal. According to Aitken, J.F., and Flint, S.S. (1994), in eastern Kentucky, Four Corners, Hyden, and Pikeville Formations of the

Breathitt Group represent three superimposed 3rd-order composite sequences with unconformable boundaries corresponding to flooding. There are 17 named coals beds in the Four Corners, Hyden, and Pikeville Formations, of which 12 have been mined, including the Peach Orchard, Hazard, Haddix, Taylor, Hamlin, Fire Clay Rider, Fire Clay, Whitesburg, Williamson, Upper Elkhorn 3/Van Lear, Upper Elkhorn 2, and Upper Elkhorn 1 Coals. It should be noted that without a detailed site reconnaissance, we have no means to confirm the geologic conditions along the existing and preferred alternative alignments and it is possible that actual geologic conditions may be different. No mapped faults are within the Project Area.

Project Area Soils

The soil overburden is expected to vary in both thickness and composition depending on topography and underlying bedrock. According to the USDA Soil Survey 2.0 website, the Project Area traverses twenty (20) general soil types. However, most of the soils mapped belong to the:

- Matewan-Gilpin-Marrowbone complex, 12 – 80 percent slopes, very rocky (uMgmF) (50% along proposed alignment),
- Handshoe-Fedscreek-Shelocta complex, 30 – 80 percent slopes, very stony (uHsfF) (21.5% along proposed alignment), and
- Hazleton-Fedscreek-Kimper complex, 30 – 80 percent slopes, very stony (HkF) (17% along proposed alignment),

These soil types make up approximately 88.5% along the proposed alignment, with diminishing amounts of the remaining soil types distributed along the alignments. **Table 1** summarizes the soil types mapped along Project Area alignments.

Table 1 - Summary of published USDA-NRCS soil types and critical properties along the Project Area alignment.

Mapping Unit	Soil Group	Slope (%)	Approximate Proposed Alignment ROW Coverage (%)	Hydrologic Soil Group	Hydric Soil Rating	Drainage	Published Depth to Water Table (inches)	Published Depth to Restrictive Bedrock Feature (inches)	Erosion Hazard Rating	Corrosion of Concrete	Corrosion of Steel
AbB	Allegheny loam, rarely flooded	2 - 6	1.6	B	No	Well drained	>80	>80	Slight	High	Low
AeB	Allegheny loam, occassionally flooded	2 - 6	0.1	B	No	Well drained	>80	>80	Slight	High	Low
AeC	Allegheny loam, occassionally flooded	6 - 15	1.7	B	No	Well drained	>80	>80	Severe	High	Low
ChB	Chavies fine sandy loam, rarely flooded	2 - 6	1.0	A	No	Well drained	>80	>80	Slight	High	Low
Co	Cotaco loam, rarely flooded	stream terraces	0.3	C	No	Somewhat poorly drained	18- 30	>80	Slight	High	High
FsF	Fedscreek-Shelocta complex	20 - 50	0.8	A/B	No	Well drained	>80	40 - 72	Severe	Moderate	Low
HkF	Hazleton-Fedscreek-Kimper complex, very stony	30 - 80	17.3	A	No	Well drained	>80	40 - 72	Very Severe	Moderate	Moderate
Kn	Knowlton silt loam, rarely flooded	stream terraces	1.1	B/D	Yes	Poorly drained	0 - 12	>80	Slight	Moderate	High
NeD	Nelse loam, frequently flooded	4 - 25	2.0	A	No	Well drained	48 - 72	>80	Severe	Low	Low
ShC	Shelocta-Grigsby-Stokly complex	2 - 15	1.9	A/B	No	Well drained	>80	40 - 72	Moderate	Moderate	Moderate
uAdoC	Anthroportic Udorthents-Urban land complex	0 - 15	0.1	C	No	Well drained	>80	45 - 60	Moderate	Low	Low
uHfsF	Handshoe-Fedscreek-Shelocta complex, very stony	30 - 80	21.5	A/B	No	Well drained	>80	48 - >80	Very Severe	High	Moderate
uMgmF	Matewan-Gilpin-Marrowbone complex, very rocky	12 - 80	49.8	A/C	No	Well drained	>80	24 - 40	Very Severe	High	Moderate
W	Water	Not Rated	0.8	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated

Colluvial soils are formed through an erosional process referred to as "creep". The weathering of bedrock and formation of soil is most active in the upper portions of the hillside where slopes are steep, and rock occurs near the surface or at shallow depths. The resulting soil particles are transported downhill through a process called creep. During this process, the transported soils begin to accumulate in colluvial masses. Generally, colluvial masses tend to be thinner in upper, steeper portions of the hillside and increase in thickness toward the base of the slope. If the base of the slope is not being actively eroded, the soil accumulation can be relatively thick, on the order of tens of feet or greater.

Depth to bedrock within the Project Area is expected to vary as a function of location and topography. The depth to bedrock in low lying areas, areas of thick colluvial accumulation (toes of slopes), or natural areas of relatively flat topography is expected to be relatively deep (greater than 20 feet) while the depth to bedrock on ridgetops and the upper reaches of steep slopes is expected to be relatively shallow (0-10 feet).

Soil Chemistry

Corrosion of foundation steel is a concern in acidic or low pH soils, as is the potential degradation of concrete in the presence of sulfate, chlorine, and low pH soils. The potential effects of acidic or low pH soils on steel can be addressed in several ways, such as the use of epoxy-coated reinforcement and positive cathodic protection. Sulfate exposure of concrete structures can be addressed with the use of Type V, sulfate resistant cement, and other admixtures. According to the USDA Soil Survey, corrosive soils exist within the Project Area. This is likely related to the abundance of sulfate-rich coal beds in the area. Therefore, corrosion is a concern to the proposed structure foundations and should be considered during the design and construction process.

GEOLOGIC HAZARDS EVALUATION

For the purpose of this report, a geologic hazard, or geohazard, is a geologic or environmental condition that may result in damage or risk to engineered structures or may be exacerbated by development such as ROW clearing, earthwork, and foundation construction. Geohazards considered in the preparation of this report include mining and slope instability. Based on a review of available information from various sources, including the United States Geological Survey (USGS), USDA, Kentucky Geological Survey (KGS), Kentucky Mine Reclamation and Enforcement (DMRE), Kentucky Mine Mapping Information System (MMIS), Kentucky Surface Mining Information System (SMIS), and United States Department of the Interior Office of Surface Mining Reclamation and Enforcement (OSM), these identified geohazards should be considered along this alignment.

Mining

Mining may create subsidence and slope stability hazards from unstable deep, near-surface, or surface mines. As discussed under *Project Area Geology*, the Project Area is underlain by the Four Corners, Hyden, and Pikeville Formations, which includes 17 named coals beds, of which 12 have been mined, including the Peach Orchard, Hazard, Haddix, Taylor, Hamlin, Fire Clay Rider, Fire Clay, Whitesburg, Williamson, Upper Elkhorn 3/Van Lear, Upper Elkhorn 2, and Upper Elkhorn

1 Coals. Publicly available data from the KGS Interactive Mapping website indicate the Project Area traverses several of these coal seams, including (from youngest to oldest) the Peach Orchard (po), Hazard (h), Fire Clay (fc), Whitesburg (w), Williamson (wm), and Upper Elkhorn 3 (3)/Van Lear (vl) seams.

The proposed alignment traverse surface mined lands that are generally inactive. **Table 2** identifies the alignment and access roads that are within an area of current and historic surface and deep mining and includes the minimum cover thickness of the mine (**Figure 3**). A minimum cover of zero (0) does not necessarily indicate a higher hazard from undermining but that the feature is at the same elevation as the mined seam. For example, an access road running parallel to the same elevation as the coal seam within the mined area boundary will indicate zero cover. Structures and access roads located both above and below highwalls generated from strip mine or auger mining techniques should be evaluated for hazards such as landslide, rockfall, acid mine drainage, and mine spoil fill overlying the natural grade.

The KY Surface Mining Information System and Mine Mapping Information System provides an "Active" or "Inactive" status for mapped surface and underground mines. An active mine is one in which mining activities are known to be ongoing. Inactive indicates the mine is known to not be active at the time the data was accessed.

Structures and access roads located both above and below highwalls generated from strip mine or auger mining techniques should be evaluated for hazards such as landslide, rockfall, acid mine drainage, and mine spoil fill overlying the natural grade. Many variables affect whether mining activity will pose an environmental geohazard to a structure, road, or ROW, such as cover thickness, seam thickness, structural dip of the seam and if a mine is flooded or not, the presence of spoils and waste, highwall instability, and other factors. Assets possibly impacted by mining require additional study involving subsurface exploration by traditional borings and/or geophysical surveys, guided by detailed mine maps. Caution should be exercised in the vicinity of these features and any other features that may be identified during construction, due to the possibility of uncontrolled fill/spoils in the area, collapsing slopes, or mine water drainage.

Table 2 - Current and historic surface and deep mines crossed by Project Area alignments and access roads
(continued Pages 6 and 7)

Company	Mine Name	Mine Type	Status	Mine ID (SFN)	Coal Seam	Coal Seam Elevation (ft)	Minimum Overburden Thickness (ft)	Structure / Access Road
Nelson & Craft Coal Co; Nelson & Wattles Co; Pike Island Coal Co	Mine #1/Mine #3	Deep	Inactive	2655	Upper Elkhorn No 3	680	Not crossed	1500 ft east Prestonsburg Station and AR-1

Company	Mine Name	Mine Type	Status	Mine ID (SFN)	Coal Seam	Coal Seam Elevation (ft)	Minimum Overburden Thickness (ft)	Structure / Access Road
Unknown	Unknown	Surface	Inactive	7928	Upper Elkhorn No 3	680	0	320 ft southeast Structure 2; crossed by AR-2
Unknown	Unknown	Deep	Inactive	None	Upper Elkhorn No 3	680	Not crossed	150 ft west AR-2
Unknown	Unknown	Deep	Inactive	None	Williamson Coal	720	Not crossed	800 - 1000 ft west of Structures 5, 6, & 7 and AR-5 to AR-7
Unknown	Unknown	Deep	Inactive	None	Upper Elkhorn No 3	620	25	860 ft south Structure 22
Stamburg Coal Co	Mine #5	Deep	Inactive	4101-4	Upper Elkhorn No 3	620	125 - 300	60 ft south Structure 22; crossed by AR-22.2
Jockey Hollow Coal Co	Mine #1	Deep	Inactive	09250	Van Lear Coal	640	30 - 300	620 ft east Structure 21; crossed by AR-21.1 and AR-21.2
Unknown	Unknown	Deep	Inactive	93027	Van Lear Coal	640	425	1300 ft northeast of Structure 31; crossed by AR-24
Unknown	Unknown	Deep	Inactive	None	Van Lear Coal	680	170	Adjacent to alignment between Structures 34 & 35; crossed by AR-34
Unknown	Unknown	Deep	Inactive	94908	Van Lear Coal	680	Not crossed	550 ft southeast Structure 41; 35 ft north AR-40.2
Unknown	Unknown	Deep	Inactive	93194	Van Lear Coal	680	Not crossed	450 ft south AR-40.2
Unknown	Unknown	Deep	Inactive	None	Van Lear Coal	680	Not crossed	190 ft north of Dicey Branch Road/Boat Gunnel Road
Sammons, Tom Coal Co.	Mine #3	Deep	Inactive	00538-2	Van Lear Coal	680	Not crossed	510 ft east AR-40.2

Company	Mine Name	Mine Type	Status	Mine ID (SFN)	Coal Seam	Coal Seam Elevation (ft)	Minimum Overburden Thickness (ft)	Structure / Access Road
Carbon Coal Co.	Mine #1	Deep	Inactive	17720 (Permit 858-5034)	Van Lear Coal	680	350	Structures 43 & 44; crossed by AR-44.1, -44.2, & -44.3 and AR-45.1

Slope Stability – Background

Slope stability presents a geohazard in the form of mass wasting events such as slope creep, landslides, flows, topples, and falls. Mass wasting is defined as the down slope movement of rock and soil near the earth's surface mainly due to the force of gravity. Knowledge about the relationships between local geology and mass movement processes can lead to better planning that can reduce vulnerability.

Additionally, the entire Project Area is within a zone of high landslide incidence according to the USGS. Landslide incidence is defined as the number of landslides that have occurred in each geographic area. High incidence means greater than 15 percent of a given area has experienced landslides; medium incidence means that 1.5 to 15 percent; and low incidence means that less than 1.5 percent of an area has been involved in a landslide.

The large number of landslides in this area is related to the steep topography and the occurrence of thick colluvial soils. As explained in the ***Project Area Soils*** section, colluvial soils are derived from the weathering of the underlying rock strata and move down the hillslopes by creep and sliding processes which create a series of shear surfaces within the soil mass and at the soil-rock interface. Therefore, the shear strength parameters (angle of internal friction and cohesion) of the soil mass is dictated by the residual strengths along these pre-existing shear surfaces rather than the strength between soil particles.

Generally, these landslides are small, localized land movements. Rainfall is a contributing factor to destabilizing slopes. Therefore, slope stability impacts often occur following storms that also produce flooding.

Due to differences in geology, slope, and soil properties, some areas are more prone to slope instability than others. Areas more susceptible to slope failure are:

- Near existing old landslides,
- On or at the base of slopes,
- In or at the base of minor drainage hollows,
- At the base or top of an old fill slope, and
- At the base or top of a steep cut slope.

Slope instability can also be directly observed. The USGS Landslide Handbook Circular 1325 provides a list of features that might indicate landslide movement, including:

- Springs, seeps, and wet or saturated ground in previously dry areas on or below slopes,
- Ground cracks—cracks in snow, ice, soil, or rock on or at the head of slopes,
- Unusual bulges or elevation changes in the ground, pavements, paths, or sidewalks,
- Tilting telephone poles, trees, retaining walls, fences,
- Rapid increase or decrease in stream-water levels, possibly accompanied by increased turbidity (soil content clouding the water), and
- Sunken or down-dropped roads or paths.

Slope Stability – Assessment

According to the Kentucky Landslide Information Map, which shows the locations of documented landslides (based on research by state and local government agencies, and the public), and landslides derived from LiDAR and photography, and areas susceptible to debris flow, there are 45 landslides including 43 areas susceptible to debris flow, generally within 1,000 feet of the proposed alignment (**Figure 4**). Other landslides documented by the Kentucky Landslide Information Map do not directly affect the ROW or structure locations but may impact access routes and benches on surrounding slopes.

DiGioia Gray provided geotechnical engineering services for a slip feature at Structure K345-39 along the Allen - Prestonsburg Transmission Line, approximately 1500 feet south of proposed Structure 2. A report outlining the findings and preliminary recommendations was sent to AEP on March 15, 2019.

Based on our desktop research and evaluation of regional and local geologic information, we have categorized the Project Area by the level of relative concern for potential slope instability and challenging site working conditions: Low, Moderate, and High.

The classification is based on the ground slope angle or percent grade traversed by the proposed alignment or access road, respectively, the approximate distance to the nearest landslide feature (documented from any source), and the position of the structure or access road on the slope (flat, valley bottom, ridge top, or side slope, generally). Factors such as the dominant rock type and soil type and their susceptibility to landslides, though fundamentally important to slope stability assessment, were not considered in this risk classification due to the homogeneity of these characteristics across the Project Area. In other words, minimal additional insight is gained by including these factors.

The criteria for ranking the relative risk is based on weighted scoring. The angle (°) of the slope at the structure location or the average grade (%) of the access road and the distance to the nearest documented landslide can each contribute between 1 and 4 points to the total score, where 1 indicates the lowest relative risk and 4 the greatest. The position of the structure or access road on

the slope can contribute between 1 and 3 points to the total score, where 1 indicates the lowest relative risk and 3 the highest. The summed total possible points for ranking relative risk is 11. The criteria for ranking of relative risk is listed in **Table 3**.

Table 3 - Criteria for Ranking of Relative Risk

Points	**Slope Angle (°) at Structure**	**Slope Grade (%) Along Access Roads**
	Slope Angle	Slope Grade
1	< 18° (3H:1V)	<6% (<16H:1V)
2	18°-26.5° (3H:1V-2H:1V)	6% to 12% (16H:1V to 8H:1V)
3	26.5°-45° (2H:1V-1H:1V)	12% to 18% (8H:1V to 5.5H:1V
4	> 45° (1H:1V)	>18% (>5.5H:1V)
Points	**Distance to Landslide**	
	Distance to Landslide (ft)	
1	750 - 1000	
2	500 - 750	
3	250 - 500	
4	0 - 250	
Points	**Position of Structure or Access Road on the Slope**	
	Slope Position	
1	Flat	
2	Valley Bottom	
2	Ridge Top	
3	Side Slope	
Summed Total for Ranking of Relative Risk		
11	Maximum Number of Points	

ArcGIS Pro version 2.8 was used to create slope (degree) raster maps (**Figure 5**) based on the LiDAR point cloud obtained from the *KyFromAbove* web access server (https://kyfromabove.ky.gov/) website, and for distance to landslide (**Figure 4**) and slope position (**Figure 6**). The raster maps were then reclassified using the above criteria and the final slope stability risk raster was calculated by adding the point schemes associated with the slope angle, slope position, and landslide rasters.

As shown in **Table 3**, in addition to proximity to landslides and slope position, access roads were evaluated by percent grade of the road itself rather than the overall degree slope of the surrounding ground surface. We evaluated existing roadbeds, trails, and paths of unknown conditions that will require varying degrees of improvement (to be determined) to be utilized. We also evaluated a small number of routes and paths that will require new construction to the proposed structure locations. One of the main factors that will determine a road's ability to be used for construction is the existing grade of the access road. At the more advanced stage of Detailed Scoping, a reconnaissance of access roads requiring improvements and new construction should be completed to identify site-specific geohazards such as landslides, rockfalls, subsidence, and seeps that cannot be captured within this desktop study.

The evaluation of the percent grade of access roads was completed in ArcGIS, based upon LiDAR and the best approximation of access road centerlines. Though the quality of the LiDAR dataset from the Commonwealth of Kentucky is very high, there are always artifacts in LiDAR related to small, but abrupt changes in elevation, tree and vegetation cover processing, data gaps, and other digital anomalies that can lead to overestimations of grade and skewed statistics. The very short, but steep segments of road alignments, which can likely be dealt with in the field with best grading practices, were minimized in the presentation of the percent grade data as shown in the risk assessment tables provided in **Appendix A**. This was accomplished by evaluating the grade along the road in small intervals and presenting the 98th Percentile Grade, 90th Percentile Grade, and Average Grade. The percentile statistic serves to trim off both the erroneously elevated grade values and the very short, steep sections which can be softened in the field, during construction. We feel that the data as it is presented provides AEP and the construction contractor with an impression of the dominant topographic conditions along the road alignment and highlights roads with potentially challenging sections.

The summed total points from the above ranking produces an overall relative risk at each structure and access road. The total relative risk categories, based on the weighted criteria described above, are listed in **Table 4**.

Table 4 – Definition of Risk Categories from Ranking

Risk Category	Total Relative Risk Ranking
Low	3 – 5
Moderate	> 5 – 8
High	> 8 – 11

The approximate percentage of structures along the proposed alignment as well as access roads falling within each risk category are detailed in **Table 5** and **Table 6,** respectively. A visual representation of the spatial distribution of slope stability risk for each structure and access road within the Project Area is provided on **Figure 7**.

Table 5 - Summary of Relative Risk at Structures

Relative Risk Category	Number of Structures	Percentage of Structures	Structure Designations
Low	28	53%	Prestonsburg Station, 1, 2, 3, 11, 20, 22, 24, 25, 27, Kenwood Station, 29, 31, 33, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 49, 50, Thelma Station
Moderate	25	47%	4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 21, 23, 26, 28, 30, 32, 34, 35, 36, 47
High	0	0%	
Totals:	**54**	**100%**	

Though site-specific reconnaissance should occur at most structure and access road locations, particular attention should be paid to structure locations located on steep side slopes and/or close to slide prone areas in order to assess the feasibility of construction in their current locations or if adjustments are required that still allow the structures to serve their intended purpose while being subject to lower risk overall.

As shown in **Table 5** and **Appendix A**, the proposed structure locations are determined to be Low to Moderate Risk by this assessment. The structures are generally located on or near primary ridgelines, where soil cover is likely to be thin and foundations elements will likely be embedded in rock. Additionally, access to these structures by proposed access roads may be challenging due to the oblique side slope construction.

As shown in **Table 6**, below, and **Appendix A**, there are 28 relatively High-Risk access options, 19 of which have a documented landslide within 250 feet of the route at some point. If any of these High-Risk access options are utilized for construction, some level of landslide mitigation or slope stability improvements should be expected prior to use.

Table 6 - Summary of Relative Risk at Access Roads

Relative Risk Category	Number of Roads	Percentage of Roads	Percentage of Total Road Length	Access Road Designations
Low	7	9%	4%	AR-1, AR-12.1, AR-26, AR-27, AR-47.1, AR-49, AR-50
Moderate	33	51%	59%	AR-2, AR-3, AR-4.1, AR-4.2, AR-5, AR-14, AR-15.2, AR-17, AR-22.1, AR-22.2, AR-23, AR-24, AR-29, AR-32.2, AR-33, AR-34, AR-36, AR-38, AR-39, AR-40.1, AR-40.2, AR-40.3, AR-41, AR-43, AR-44.1, AR-44.2, AR-44.3, AR-45.2, AR-46, AR-47.2, AR-47.3, AR-48.1(A), AR-48.2(A)
High	28	41%	37%	AR-6, AR-7, AR-8.1, AR-8.2, AR-9, AR-10(A) PREFERRED, AR-10(B), AR-11, AR-12.2, AR-13, AR-15.1, AR-16, AR-18, AR-19, AR-20, AR-21.1, AR-21.2, AR-25, AR-28, AR-30, AR-31, AR-32.1, AR-35, AR-37.1, AR-37.2, AR-42, AR-45.1, AR-48(B)
Totals:	**68**	**100%**	**100%**	

The detailed rankings for each risk category at each proposed structure and access road can be found in **Appendix A** tables**.**

CONSIDERATIONS AND RECOMMENDATIONS

Based upon the desktop study and risk assessment performed for to this project, and limited observations within the Project Area, we offer the following recommendations to consider during planning and execution of construction of the proposed Prestonsburg - Thelma 46kV transmission-line rebuild. The recommendations presented herein are intended to highlight issues that may impact design and construction.

1. Subsurface exploration is recommended at new structures, roads, and areas of intense rehabilitation, particularly if there are possible mining-related impacts.
2. Reconnaissance of existing access roads that will be rehabilitated for use during construction, proposed access roads to be constructed, and structures located in potentially high-risk terrain should be completed during Detailed Scoping to identify site-specific geohazards such as landslides, rockfalls, subsidence, and seeps that cannot be captured with a desktop-level study.

3. Settlement and subsidence are a risk in areas of historical and current mining activity and should be considered in the choice and design of structure foundations.
4. Structures and access roads located both above and below highwalls generated from strip mine or auger mining techniques should be evaluated for hazards such as landslide, rockfall, acid mine drainage, and mine spoil fill overlying the natural grade.
5. The severity of the hazard presented by deep mining is largely controlled by the thickness of the soil and rock section above the mined-out seam. However, surface fissures related to deep mine subsidence have been known to occur even in locations with hundreds of feet of cover between the mined seam and the surface. Field reconnaissance should occur at all structure and access road locations that may be undermined to verify the presence or absence of subsidence features or other mine-related hazards. **Table 2** highlights the proposed alignment and access road locations that may be at risk for deep-mining related issues.
6. Access to structure locations by construction equipment for foundation installation and structure erection will require clearing, grading and possible pad construction in rugged terrain.
7. Construction of access roads or improvements to existing roads should follow existing benches, where possible. Cut material from side-slope construction should be placed on level ground or hauled offsite, as placement of fill on a steep slope will result in an increased risk of sliding.
8. Actual slope at structure locations should be verified in the field. In general, foundations installed on steep slopes require increased embedment to account for reduced lateral capacity.
9. Access roads constructed or improved on side slopes are highly susceptible to slope instability. Temporary access roads should be reclaimed and graded back to pre-existing contours. Permanent access roads should implement robust drainage improvements and best practices to reduce the risk of landslides.
10. In some cases, there are multiple access options to individual structures. AEP should choose the lowest overall risk options, where practical and possible.
11. Slips, trips, and falls on steep terrain are a significant safety concern during construction of the new transmission line and the decommissioning of the existing line. AEP safety professionals should view the project area and develop appropriate safe work plans.
12. Given the high number of documented landslides and landslide-susceptible areas on the existing Prestonsburg - Thelma transmission line, we recommend at the conclusion of this project that AEP restore the decommissioned ROW to a robustly vegetated state, to the extent practical, by planting native trees and other vegetation to support short- and long-term stability improvements.
13. Avoid unnecessary interaction with documented or suspected unstable areas (landslides, hummocky ground, slumped ground, subsidence features, seeps, etc.)

LIMITATIONS

This report is for the sole use of AEP and their representatives. The scope of services performed during this desktop geohazard assessment may not be appropriate to satisfy the needs of other users, and any use or re-use of this document or the findings, conclusions, or recommendations presented herein is at the sole risk of said user.

Our work was performed in a manner consistent with the level of care which is typical of other members of our profession in the same conditions, location, and date our services were provided.

Observations and findings presented herein are based upon our project understanding and the availability and quality of data used at the time the desktop study and geohazard risk assessment were conducted. It should be recognized that this desktop review cannot identify every problematic location or eliminate the risk of landslides occurring during or after construction activities as a result of a geohazard. This document is based on published data and other information that is generally applicable as of September 23, 2021. The conclusions and recommendations herein are therefore applicable only to that time frame.

Background information, design bases, and other data such as drawings, GIS files, and previous reports have been furnished to DiGioia Gray by AEP and/or third parties, which DiGioia Gray has used in preparing this report. DiGioia Gray has relied on this information as furnished and is neither responsible for nor has confirmed the overall accuracy of this information.

The work completed for this desktop geohazard assessment report is strictly limited to our defined Scope of Services and does not include environmental characterization, wetland delineations, permitting, erosion and sedimentation analysis, or surveying.

CLOSING

We thank you for the opportunity to provide AEP with the risk assessment on this challenging and unique project, and we look forward to continuing our services on other challenging projects. Please do not hesitate to contact Erich Zorn at (724) 216-6471 (office) or (412) 860-5297 (mobile) if you have any questions or wish to discuss this document in greater detail.

Sincerely,
DiGioia Gray & Associates

Mandy L. Searle, PG
Geologist II / GIS Specialist

Erich V. Zorn, PhD, PG
Senior Geologist

Attachments

Appendix A: Tables
- Risk Assessment of Proposed Structures
- Risk Assessment of Access Roads

Appendix B: Maps
- Figure 1 – Index Map
- Figure 2 – Overview Map
- Figure 3 – Mine Map
- Figure 4 – Landslide Map
- Figure 5 – Slope Map
- Figure 6 – Slope Position
- Figure 7 – Relative Risk

APPENDIX A
TABLES

Risk Assessment of Proposed Structures
Risk Assessment of Access Roads

PRESTONSBURG - THELMA 46KV TRANSMISSION LINE REBUILD PROJECT
RISK ASSESSMENT OF STRUCTURES

Structure	Elevation (ft)	Slope at Structure (degree)	Rank - Slope Structure (<18° [3H:1V] = 1) (18°-26.5° [3H:1V-2H:1V] = 2) (26.5°-45° [2H:1V-1H:1V] = 3) (> 45° [1H:1V] = 4)	Approximate Distance to Closest Landslide (ft)	Rank - Distance (ft) to Landslide (750-1000 = 1) (500-750 = 2) (250-500 = 3) (0-250 = 4)	Slope Postion at Structure	Rank - Structure Position (Flat = 1) (Valley = 2) (Ridge= 2) (Side Slope = 3)	Total Rank (Score/11)	Risk Category
Prestonsburg Station	633.67	20	2	1220	1	Valley	2	5	Low
1	610.47	2	1	1290	1	Side Slope	3	5	Low
2	870.50	5	1	1541	1	Ridge	2	4	Low
3	906.26	5	1	682	2	Ridge	2	5	Low
4	643.83	3	1	604	2	Side Slope	3	6	Moderate
5	607.62	9	1	715	2	Side Slope	3	6	Moderate
6	909.83	16	1	88	4	Ridge	2	7	Moderate
7	980.83	10	1	500	3	Ridge	2	6	Moderate
8	1028.82	15	1	230	4	Ridge	2	7	Moderate
9	1083.36	27	1	140	4	Ridge	2	7	Moderate
10	1064.86	23	2	510	2	Ridge	2	6	Moderate
11	903.66	16	1	1310	1	Ridge	2	4	Low
12	1159.70	16	2	684	2	Ridge	2	6	Moderate
13	1243.49	25	2	546	2	Ridge	2	6	Moderate
14	1162.99	33	3	574	2	Ridge	2	7	Moderate
15	1058.47	2	1	419	3	Ridge	2	6	Moderate
16	1080.15	22	2	451	3	Side Slope	3	8	Moderate
17	1188.32	17	1	496	3	Ridge	2	6	Moderate
18	974.74	14	1	167	4	Ridge	2	7	Moderate
19	996.41	26	2	479	3	Side Slope	3	8	Moderate
20	872.94	6	1	1661	1	Ridge	2	4	Low
21	894.87	23	2	1391	1	Side Slope	3	6	Moderate
22	934.51	4	1	1746	1	Ridge	2	4	Low
23	721.78	22	2	1427	1	Side Slope	3	6	Moderate
24	1084.50	10	1	1157	1	Ridge	2	4	Low
25	1036.73	12	1	578	2	Ridge	2	5	Low
26	622.64	2	1	624	2	Side Slope	3	6	Moderate
27	622.45	2	1	607	2	Ridge	2	5	Low

PRESTONSBURG - THELMA 46KV TRANSMISSION LINE REBUILD PROJECT
RISK ASSESSMENT OF STRUCTURES

Structure	Elevation (ft)	Slope at Structure (degree)	Rank - Slope Structure (<18° [3H:1V] = 1) (18°-26.5° [3H:1V-2H:1V] = 2) (26.5°-45° [2H:1V-1H:1V] = 3) (> 45° [1H:1V] = 4)	Approximate Distance to Closest Landslide (ft)	Rank - Distance (ft) to Landslide (750-1000 = 1) (500-750 = 2) (250-500 = 3) (0-250 = 4)	Slope Postion at Structure	Rank - Structure Position (Flat = 1) (Valley = 2) (Ridge= 2) (Side Slope = 3)	Total Rank (Score/11)	Risk Category
Kenwood Station	624.43	1	1	737	2	Flat	1	4	Low
28	1112.50	18	2	563	2	Ridge	2	6	Moderate
29	1232.80	9	1	1280	1	Ridge	2	4	Low
30	1214.26	30	3	774	1	Ridge	2	6	Moderate
31	1293.44	6	1	1480	1	Ridge	2	4	Low
32	1137.53	32	3	1404	1	Ridge	2	6	Moderate
33	966.44	23	2	1862	1	Ridge	2	5	Low
34	823.25	22	2	420	3	Ridge	2	7	Moderate
35	962.18	2	1	394	3	Ridge	2	6	Moderate
36	1024.07	4	1	391	3	Ridge	2	6	Moderate
37	1055.05	8	1	1178	1	Ridge	2	4	Low
38	1132.47	25	2	2245	1	Ridge	2	5	Low
39	1072.34	21	2	2033	1	Ridge	2	5	Low
40	1111.09	21	2	2119	1	Ridge	2	5	Low
41	1057.50	23	2	1771,85	1	Ridge	2	5	Low
42	991.30	15	1	1048	1	Ridge	2	4	Low
43	1029.50	17	1	758	1	Ridge	2	4	Low
44	1048.93	11	1	1144	1	Ridge	2	4	Low
45	1090.75	13	1	1193	1	Ridge	2	4	Low
46	1175.45	4	1	1749	1	Ridge	2	4	Low
47	898.58	31	3	1025	1	Side Slope	3	7	Moderate
48	936.31	10	1	660	2	Ridge	2	5	Low
49	614.91	4	1	973	1	Side Slope	3	5	Low
50	617.95	1	1	1126	1	Flat	1	3	Low
Thelma Station	618.25	0	1	1159	1	Flat	1	3	Low

PRESTONSBURG - THELMA 46KV TRANSMISSION LINE REBUILD PROJECT
RISK ASSESSMENT OF ACCESS ROADS

Access Road	Existing or Proposed	Approximate Map Length (feet)	Approximate Distance to Closest Landslide (feet)	Feature Slope Position	98th Percentile Grade (%)	90th Percentile Grade (%)	Average Grade (%)	Average Grade of Access Road: <6% (<16H:1V) = 1 6% to 12% (16H:1V to 8H:1V) = 2 12% to 18% (8H:1V to 5.5H:1V) = 3 >18% (>5.5H:1V) = 4	Distance (ft) to Landslide (750->1000 = 1) (500-750 = 2) (250-500 = 3) (0-250 = 4)	Position of Access Road on Slope (Flat = 1) (Valley = 2) (Ridge= 2) (Side Slope = 3)	Total Rank (Score/11)	Relative Risk Category
AR-1	Proposed	630	1028	Valley	17.2	11.0	3.8	1	1	2	4	LOW
AR-2	Proposed	3078	801	Valley/Side Slope	45.0	30.6	12.0	2	1	2.5	5.5	MODERATE
AR-3	Proposed	1301	638	Ridge/Side Slope	30.2	20.7	9.8	2	2	2.5	6.5	MODERATE
AR-4.1	Existing Road (to be improved)	1440	99	Side Slope	3.8	1.9	0.9	1	4	3	8	MODERATE
AR-4.2	Proposed	647	54	Ridge/Side Slope	11.5	3.3	1.7	1	4	2.5	7.5	MODERATE
AR-5	Proposed	896	597	Ridge/Side Slope	40.1	26.8	10.0	2	2	2.5	6.5	MODERATE
AR-6	Proposed	761	14	Ridge/Side Slope	27.1	23.9	10.0	2	4	2.5	8.5	HIGH
AR-7	Proposed	609	320	Side Slope	52.5	38.4	16.3	3	3	3	9	HIGH
AR-8.1	Existing Road (to be improved)	2244	0	Side Slope	38.3	26.8	11.5	2	4	3	9	HIGH
AR-8.2	Proposed	433	211	Side Slope	66.9	51.4	27.7	4	4	3	11	HIGH
AR-9	Proposed	1152	54	Side Slope	68.2	48.1	25.0	4	4	3	11	HIGH
AR-10(A)	Proposed	1940	0	Side Slope	41.3	33.5	14.9	3	4	3	10	HIGH
AR-10(B)	Proposed	3122	342	Side Slope	66.4	47.9	22.4	4	3	3	10	HIGH
AR-11	Proposed	962	493	Side Slope	48.2	38.6	19.5	4	3	3	10	HIGH
AR-12.1	Existing Road (to be improved)	899	1142	Flat/Side Slope	21.2	14.0	6.4	2	1	1.5	4.5	LOW
AR-12.2	Proposed	3554	120	Side Slope	31.9	26.1	12.5	3	4	3	10	HIGH
AR-13	Proposed	3364	35	Ridge/Side Slope	47.8	38.1	20.8	4	4	2.5	10.5	HIGH
AR-14	Proposed	3952	571	Ridge/Side Slope	53.0	30.7	13.4	3	2	2.5	7.5	MODERATE
AR-15.1	Existing Road (to be improved)	2170	75	Flat/Side Slope	33.7	28.1	18.6	4	4	1.5	9.5	HIGH
AR-15.2	Proposed	1631	512	Side Slope	48.1	28.8	13.5	3	2	3	8	MODERATE
AR-16	Proposed	306	48	Side Slope	73.6	65.4	31.9	4	4	3	11	HIGH
AR-17	Proposed	4154	48	Flst/Side Slope	45.7	26.1	10.7	2	4	1.5	7.5	MODERATE
AR-18	Proposed	1491	29	Ridge/Side Slope	64.0	49.6	23.2	4	4	2.5	10.5	HIGH
AR-19	Proposed	968	97	Ridge/Side Slope	51.9	38.5	20.3	4	4	2.5	10.5	HIGH
AR-20	Proposed	2153	411	Ridge/Side Slope	42.6	36.3	20.6	4	3	2.5	9.5	HIGH
AR-21.1	Existing Road (to be improved)	839	163	Valley/Side Slope	22.8	18.1	8.6	2	4	2.5	8.5	HIGH

PRESTONSBURG - THELMA 46KV TRANSMISSION LINE REBUILD PROJECT
RISK ASSESSMENT OF ACCESS ROADS

Access Road	Existing or Proposed	Approximate Map Length (feet)	Approximate Distance to Closest Landslide (feet)	Feature Slope Position	98th Percentile Grade (%)	90th Percentile Grade (%)	Average Grade (%)	Average Grade of Access Road: <6% (<16H:1V) = 1 6% to 12% (16H:1V to 8H:1V) = 2 12% to 18% (8H:1V to 5.5H:1V) = 3 >18% (>5.5H:1V) = 4	Distance (ft) to Landslide (750->1000 = 1) (500-750 = 2) (250-500 = 3) (0-250 = 4)	Position of Access Road on Slope (Flat = 1) (Valley = 2) (Ridge= 2) (Side Slope = 3)	Total Rank (Score/11)	Relative Risk Category
AR-21.2	Proposed	2527	357	Side Slope	50.2	29.6	15.8	3	3	3	9	HIGH
AR-22.1	Existing Road (to be improved)	1198	316	Flat/Side Slope	9.6	5.0	2.4	1	3	1.5	5.5	MODERATE
AR-22.2	Proposed	1826	984	Ridge	70.0	31.3	18.2	4	1	2	7	MODERATE
AR-23	Proposed	2471	1275	Ridge/Side Slope	54.0	38.7	17.7	3	1	2.5	6.5	MODERATE
AR-24	Proposed	6685	1119	Ridge	71.0	40.9	18.1	4	1	2	7	MODERATE
AR-25	Proposed	833	597	Ridge/Side Slope	41.9	31.5	13.0	3	2	2.5	7.5	MODERATE
AR-26	Proposed	62	622	Flat	21.0	17.6	12.0	2	2	1	5	LOW
AR-27	Proposed	88	606	Flat	9.6	9.5	3.6	1	2	1	4	LOW
AR-28	Proposed	965	532	Ridge/Side Slope	57.9	34.9	21.6	4	2	2.5	8.5	HIGH
AR-29	Proposed	177	996	Side Slope	78.2	61.1	42.7	4	1	2.5	7.5	MODERATE
AR-30	Proposed	608	683	Ridge/Side Slope	114.0	34.0	20.3	4	2	2.5	8.5	HIGH
AR-31	Proposed	1141	712	Side Slope	63.4	38.9	21.4	4	2	3	9	HIGH
AR-32.1	Existing Road (to be improved)	3209	0	Side Slope	59.8	37.6	16.3	3	4	3	10	HIGH
AR-32.2	Proposed	2360	1050	Ridge/Side Slope	65.9	42.2	19.8	4	1	2.5	7.5	MODERATE
AR-33	Proposed	1006	1365	Side Slope	67.5	48.1	20.5	4	1	3	8	MODERATE
AR-34	Proposed	1282	281	Ridge	33.2	28.4	15.9	3	3	2	8	MODERATE
AR-35	Proposed	1263	345	Ridge/Side Slope	32.9	26.1	13.5	3	3	2.5	8.5	HIGH
AR-36	Proposed	1799	390	Ridge	25.1	23.3	11.2	2	3	2	7	MODERATE
AR-37.1	Existing Road (to be improved)	1201	245	Side Slope	28.3	21.2	9.8	2	4	3	9	HIGH
AR-37.2	Proposed	3266	432	Ridge/Side Slope	43.9	28.6	13.7	3	3	2.5	8.5	HIGH
AR-38	Proposed	2970	653	Ridge/Side Slope	58.0	35.0	16.6	3	2	2.5	7.5	MODERATE
AR-39	Proposed	972	1841	Side Slope	48.8	30.5	11.1	2	1	3	6	MODERATE
AR-40.1	Existing Road (to be improved)	340	274	Side Slope	70.7	16.4	8.2	2	3	3	8	MODERATE
AR-40.2	Proposed	3800	374	Side Slope	16.4	13.3	9.5	2	3	3	8	MODERATE
AR-40.3	Proposed	4296	879	Side Slope	29.4	22.9	8.8	2	1	3	6	MODERATE
AR-41	Proposed	1728	1722	Ridge/Side Slope	48.5	29.9	12.8	3	1	2.5	6.5	MODERATE

PRESTONSBURG - THELMA 46KV TRANSMISSION LINE REBUILD PROJECT
RISK ASSESSMENT OF ACCESS ROADS

Access Road	Existing or Proposed	Approximate Map Length (feet)	Approximate Distance to Closest Landslide (feet)	Feature Slope Position	98th Percentile Grade (%)	90th Percentile Grade (%)	Average Grade (%)	Average Grade of Access Road: <6% (<16H:1V) = 1 6% to 12% (16H:1V to 8H:1V) = 2 12% to 18% (8H:1V to 5.5H:1V) = 3 >18% (>5.5H:1V) = 4	Distance (ft) to Landslide (750->1000 = 1) (500-750 = 2) (250-500 = 3) (0-250 = 4)	Position of Access Road on Slope (Flat = 1) (Valley = 2) (Ridge= 2) (Side Slope = 3)	Total Rank (Score/11)	Relative Risk Category
AR-42	Proposed	1982	37	Side Slope	39.9	31.3	19.3	4	4	3	11	HIGH
AR-43	Proposed	1628	583	Ridge	37.3	27.9	12.8	3	2	2	7	MODERATE
AR-44.1	Existing Road (to be improved)	3988	700	Side Slope	32.9	25.4	15.1	3	2	3	8	MODERATE
AR-44.2	Proposed	190	1931	Side Slope	62,31	43.8	22.2	4	1	3	8	MODERATE
AR-44.3	Proposed	5092	552	Side Slope	46.7	34.4	14.9	3	2	3	8	MODERATE
AR-45.1	Proposed	3160	264	Side Slope	47.1	28.1	13.0	3	3	3	9	HIGH
AR-45.2	Proposed	2242	1053	Ridge/Side Slope	71.9	45.4	20.7	4	1	2.5	7.5	MODERATE
AR-46	Proposed	2701	805	Ridge/Side Slope	72.0	46.4	13.9	3	1	2.5	6.5	MODERATE
AR-47.1	Existing Road (to be improved)	2590	1351	Flat/Side Slope	20.0	15.3	6.6	2	1	1.5	4.5	LOW
AR-47.2	Proposed	3976	668	Side Slope	51.5	24.8	10.0	2	2	3	7	MODERATE
AR-47.3	Proposed	1619	648	Ridge/Side Slope	32.2	26.0	13.8	3	2	2.5	7.5	MODERATE
AR-48.1(A)	Existing Road (to be improved)	159	1748	Side Slope	19.6	19.2	9.4	2	1	3	6	MODERATE
AR-48.2(A)	Proposed	2884	196	Ridge/Side Slope	48.3	32.3	14.4	3	4	1	8	MODERATE
AR-48(B)	Proposed	1059	159	Flat/Side Slope	39.8	31.4	16.2	3	4	1.5	8.5	HIGH
AR-49	Proposed	460	921	Side Slope	8.5	1.5	2.4	1	1	3	5	LOW
AR-50	Existing Road (to be improved)	455	1034	Side Slope	13.5	8.2	2.9	1	1	3	5	LOW

APPENDIX B
MAPS

Name: 2021-147_AEP_PrestonsburgThelma46kV

Sheet 01
Sheet 02
Sheet 03
Sheet 04
Sheet 05
Sheet 06
Sheet 07
Sheet 08
Sheet 09
Sheet 10
Sheet 11
Sheet 12

Prestonsburg Station
Kenwood Station
Mayo Trail Station
Thelma Station

Proposed Kenwood - Prestonsburg 46kV Line
Proposed Thelma - Kenwood 46kV Line
Existing Prestonsburg - Thelma 46kV Line

0 2,000 4,000 8,000 Feet

Legend
- Index Structures
  - Proposed Structure
  - Substation
- Proposed Transmission Line
- Existing Prestonsburg - Thelma 46kV Line

REFERENCES:
- Centerline data sent by AEP Siting via e-mail on August 3, 2021; Structures preliminary spotted by DiGioia Gray.
- Access roads and associated features preliminary spotted by DiGioia Gray, September 2021.
- USGS Basemap- ESRI Topographic Image Service
- Coordinate System: NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US

DIGIOIAGRAY
570 BEATTY RD
MONROEVILLE, PA 15146
412-372-4500
www.digioiagray.com

AEP AMERICAN ELECTRIC POWER

Prestonsburg - Thelma 46kV Rebuild
Geohazard Risk Assessment

Index Map

PROJECT NO.	2021-147
DRAWN BY	MLS
CHECKED BY	EVZ
DATE	9/22/2021

Figure 1

NO.	DATE	REVISION

Name: 2021-147_AEP_PrestonsburgThelma46kV

Legend

- Proposed Structure
- Substation
- Proposed Transmission Line
- Existing Prestonsburg - Thelma 46kV Line
- Possible Culvert
- Verify Bridge Capacity
- New Access Road
- Existing Road (to be improved)
- Existing Road (no improvement)
- Road

REFERENCES:
- Centerline data sent by AEP Siting via e-mail on August 3, 2021; Structures preliminary spotted by DiGioia Gray.
- Access roads and associated features preliminary spotted by DiGioia Gray, September 2021.
- Aerial Basemap - Ky_KYAPED_2019_Imagery_6inch Image Service
- Coordinate System: NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US

DIGIOIAGRAY
570 BEATTY RD
MONROEVILLE, PA 15146
412-372-4500
www.digioiagray.com

AEP AMERICAN ELECTRIC POWER

Prestonsburg - Thelma 46kV Rebuild
Geohazard Risk Assessment

Overview Map

PROJECT NO.	2021-147
DRAWN BY	MLS
CHECKED BY	EVZ
DATE	9/22/2021

Figure 2 Sheet 01

NO.	DATE	REVISION

Name: 2021-147_AEP_PrestonsburgThelma46kV

Legend

- Proposed Structure
- Proposed Transmission Line
- Existing Prestonsburg - Thelma 46kV Line
- Possible Culvert
- New Access Road
- Existing Road (to be improved)
- Existing Road (no improvement)
- Road

REFERENCES:
- Centerline data sent by AEP Siting via e-mail on August 3, 2021; Structures preliminary spotted by DiGioia Gray.
- Access roads and associated features preliminary spotted by DiGioia Gray, September 2021.
- Aerial Basemap - Ky_KYAPED_2019_Imagery_6inch Image Service
- Coordinate System: NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US

DIGIOIAGRAY
570 BEATTY RD
MONROEVILLE, PA 15146
412-372-4500
www.digioiagray.com

AEP AMERICAN ELECTRIC POWER

Prestonsburg - Thelma 46kV Rebuild
Geohazard Risk Assessment

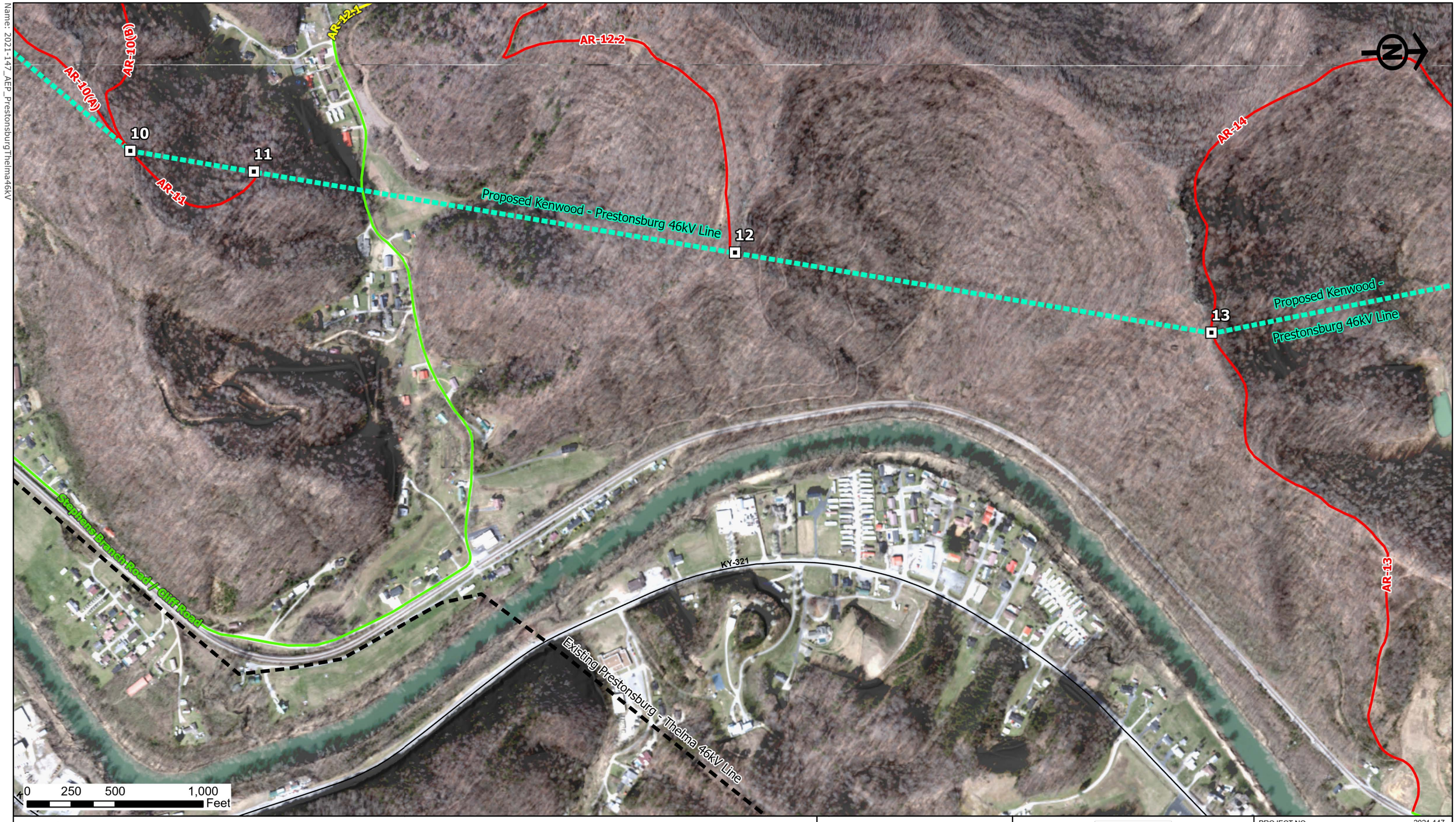
Overview Map

PROJECT NO.	2021-147
DRAWN BY	MLS
CHECKED BY	EVZ
DATE	9/22/2021

Figure 2 Sheet 02

NO.	DATE	REVISION

Name: 2021-147_AEP_PrestonsburgThelma46kV



Legend

- Proposed Structure
- Proposed Transmission Line
- Existing Prestonsburg - Thelma 46kV Line
- New Access Road
- Existing Road (to be improved)
- Existing Road (no improvement)
- Road

REFERENCES:
- Centerline data sent by AEP Siting via e-mail on August 3, 2021; Structures preliminary spotted by DiGioia Gray.
- Access roads and associated features preliminary spotted by DiGioia Gray, September 2021.
- Aerial Basemap - Ky_KYAPED_2019_Imagery_6inch Image Service
- Coordinate System: NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US

DIGIOIAGRAY
570 BEATTY RD
MONROEVILLE, PA 15146
412-372-4500
www.digioiagray.com

AEP AMERICAN ELECTRIC POWER

Prestonsburg - Thelma 46kV Rebuild
Geohazard Risk Assessment

Overview Map

PROJECT NO.	2021-147
DRAWN BY	MLS
CHECKED BY	EVZ
DATE	9/22/2021

Figure 2 Sheet 03

NO.	DATE	REVISION

Name: 2021-147_AEP_PrestonsburgThelma46kV

Legend

- Proposed Structure
- Proposed Transmission Line
- RR Crossing
- New Access Road
- Existing Road (to be improved)
- Existing Road (no improvement)
- Road

REFERENCES:
- Centerline data sent by AEP Siting via e-mail on August 3, 2021; Structures preliminary spotted by DiGioia Gray.
- Access roads and associated features preliminary spotted by DiGioia Gray, September 2021.
- Aerial Basemap - Ky_KYAPED_2019_Imagery_6inch Image Service
- Coordinate System: NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US

DIGIOIAGRAY
570 BEATTY RD
MONROEVILLE, PA 15146
412-372-4500
www.digioiagray.com

AEP AMERICAN ELECTRIC POWER

Prestonsburg - Thelma 46kV Rebuild
Geohazard Risk Assessment

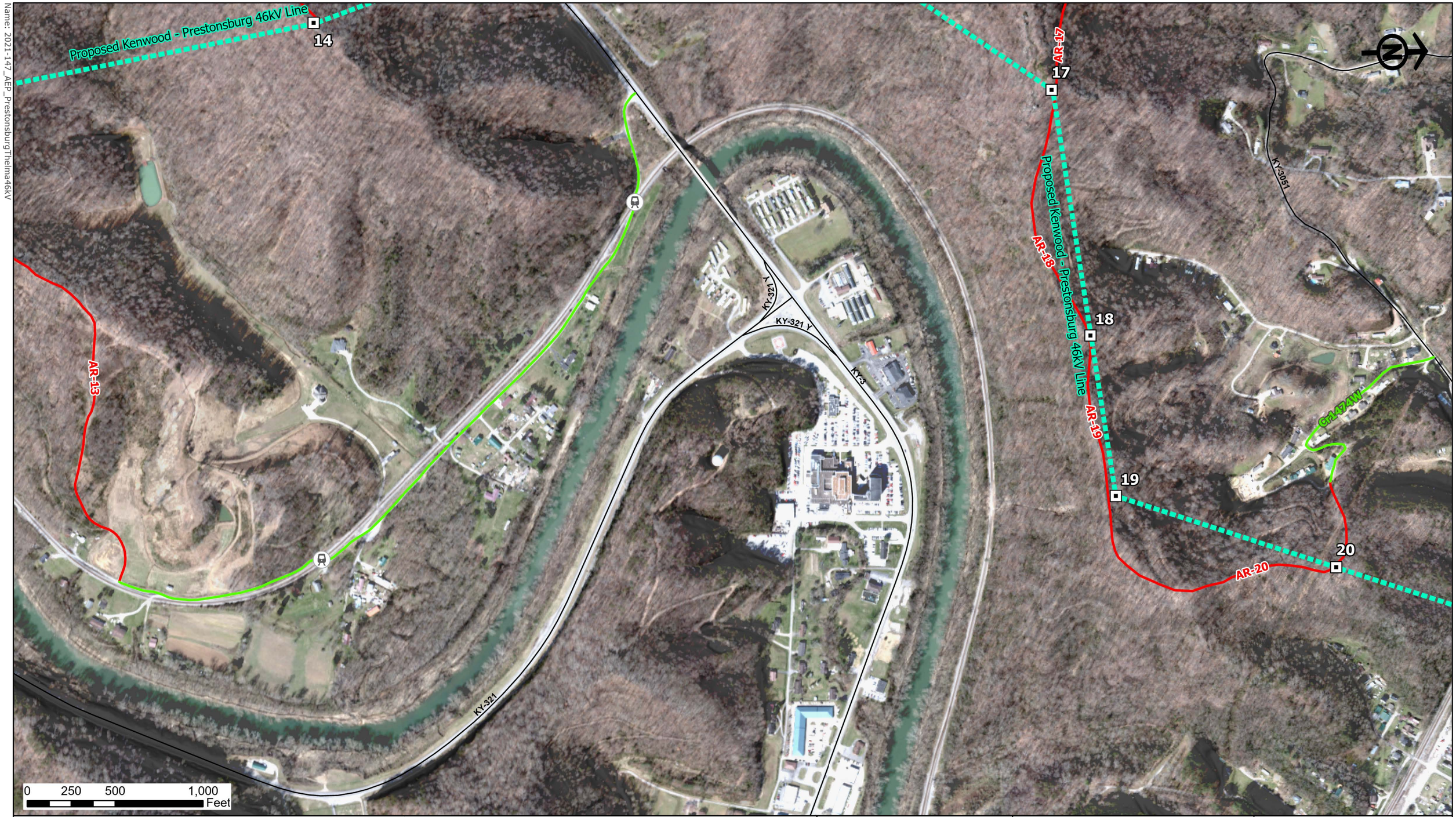
Overview Map

PROJECT NO.	2021-147
DRAWN BY	MLS
CHECKED BY	EVZ
DATE	9/22/2021

Figure 2 Sheet 04

NO.	DATE	REVISION

Name: 2021-147_AEP_PrestonsburgThelma46kV



Legend

- Proposed Structure
- Proposed Transmission Line
- RR Crossing
- New Access Road
- Existing Road (no improvement)
- Road

REFERENCES:
- Centerline data sent by AEP Siting via e-mail on August 3, 2021; Structures preliminary spotted by DiGioia Gray.
- Access roads and associated features preliminary spotted by DiGioia Gray, September 2021.
- Aerial Basemap - Ky_KYAPED_2019_Imagery_6inch Image Service
- Coordinate System: NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US

DIGIOIAGRAY
570 BEATTY RD
MONROEVILLE, PA 15146
412-372-4500
www.digioiagray.com

AEP AMERICAN ELECTRIC POWER

Prestonsburg - Thelma 46kV Rebuild
Geohazard Risk Assessment

Overview Map

PROJECT NO.	2021-147
DRAWN BY	MLS
CHECKED BY	EVZ
DATE	9/22/2021

Figure 2 Sheet 05

NO.	DATE	REVISION

Name: 2021-147_AEP_PrestonsburgThelma46kV

Legend

- Proposed Structure
- Proposed Transmission Line
- Possible Culvert
- New Access Road
- Existing Road (to be improved)
- Existing Road (no improvement)
- Road

REFERENCES:
- Centerline data sent by AEP Siting via e-mail on August 3, 2021; Structures preliminary spotted by DiGioia Gray.
- Access roads and associated features preliminary spotted by DiGioia Gray, September 2021.
- Aerial Basemap - Ky_KYAPED_2019_Imagery_6inch Image Service
- Coordinate System: NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US

DIGIOIAGRAY
570 BEATTY RD
MONROEVILLE, PA 15146
412-372-4500
www.digioiagray.com

AEP AMERICAN ELECTRIC POWER

Prestonsburg - Thelma 46kV Rebuild
Geohazard Risk Assessment

Overview Map

PROJECT NO.	2021-147
DRAWN BY	MLS
CHECKED BY	EVZ
DATE	9/22/2021

Figure 2 Sheet 06

NO.	DATE	REVISION

Name: 2021-147_AEP_PrestonsburgThelma46kV

Kenwood Station
26
AR-27
27
KY-321
AR-32.1
25
28
Proposed Kenwood - Prestonsburg 46kV Line
AR-25
AR-28
29
AR-29
30
AR-30
AR-31
31
AR-32.2
32
AR-33
Proposed Thelma - Kenwood 46kV Line
24
AR-24
KY-2381
0 250 500 1,000 Feet

Legend

- Proposed Structure
- Substation
- Proposed Transmission Line
- New Access Road
- Existing Road (to be improved)
- Road

REFERENCES:
- Centerline data sent by AEP Siting via e-mail on August 3, 2021; Structures preliminary spotted by DiGioia Gray.
- Access roads and associated features preliminary spotted by DiGioia Gray, September 2021.
- Aerial Basemap - Ky_KYAPED_2019_Imagery_6inch Image Service
- Coordinate System: NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US

DIGIOIAGRAY
570 BEATTY RD
MONROEVILLE, PA 15146
412-372-4500
www.digioiagray.com

AEP AMERICAN ELECTRIC POWER

Prestonsburg - Thelma 46kV Rebuild
Geohazard Risk Assessment

Overview Map

PROJECT NO.	2021-147
DRAWN BY	MLS
CHECKED BY	EVZ
DATE	9/22/2021
Figure 2 Sheet 07	

NO.	DATE	REVISION

Name: 2021-147_AEP_PrestonsburgThelma46kV

Legend

- Proposed Structure
- Proposed Transmission Line
- Existing Prestonsburg - Thelma 46kV Line
- New Access Road
- Existing Road (to be improved)
- Road

REFERENCES:
- Centerline data sent by AEP Siting via e-mail on August 3, 2021; Structures preliminary spotted by DiGioia Gray.
- Access roads and associated features preliminary spotted by DiGioia Gray, September 2021.
- Aerial Basemap - Ky_KYAPED_2019_Imagery_6inch Image Service
- Coordinate System: NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US

DIGIOIAGRAY
570 BEATTY RD
MONROEVILLE, PA 15146
412-372-4500
www.digioiagray.com

AEP AMERICAN ELECTRIC POWER

Prestonsburg - Thelma 46kV Rebuild
Geohazard Risk Assessment

Overview Map

PROJECT NO.	2021-147
DRAWN BY	MLS
CHECKED BY	EVZ
DATE	9/22/2021

Figure 2 Sheet 08

NO.	DATE	REVISION

Name: 2021-147_AEP_PrestonsburgThelma46kV

WEST CLAY AVE
KY-302
HALL ST
BOYD ST
MEEK ST
RICHMOND ST
McCLURE ST
SOUTH BUCKINGHAM AVE
KY-1107
AR-37-1
AR-37-2
AR-36
AR-35
AR-38
AR-39
AR-40-3
AR-40-2
AR-41
Existing Prestonsburg - Thelma 46kV Line
Proposed Thelma - Kenwood 46kV Line
36
37
38
39
40
41
0 250 500 1,000 Feet

Legend

- Proposed Structure
- Proposed Transmission Line
- Existing Prestonsburg - Thelma 46kV Line
- Gate
- New Access Road
- Existing Road (to be improved)
- Existing Road (no improvement)
- Road

REFERENCES:
- Centerline data sent by AEP Siting via e-mail on August 3, 2021; Structures preliminary spotted by DiGioia Gray.
- Access roads and associated features preliminary spotted by DiGioia Gray, September 2021.
- Aerial Basemap - Ky_KYAPED_2019_Imagery_6inch Image Service
- Coordinate System: NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US

DIGIOIAGRAY
570 BEATTY RD
MONROEVILLE, PA 15146
412-372-4500
www.digioiagray.com

AEP AMERICAN ELECTRIC POWER

Prestonsburg - Thelma 46kV Rebuild
Geohazard Risk Assessment

Overview Map

PROJECT NO.	2021-147
DRAWN BY	MLS
CHECKED BY	EVZ
DATE	9/22/2021

Figure 2 Sheet 09

NO.	DATE	REVISION

Name: 2021-147_AEP_PrestonsburgThelma46kV

Legend

- Proposed Structure
- Proposed Transmission Line
- Verify Existing Bridge
- New Access Road
- Existing Road (to be improved)
- Existing Road (no improvement)
- Road

REFERENCES:
- Centerline data sent by AEP Siting via e-mail on August 3, 2021; Structures preliminary spotted by DiGioia Gray.
- Access roads and associated features preliminary spotted by DiGioia Gray, September 2021.
- Aerial Basemap - Ky_KYAPED_2019_Imagery_6inch Image Service
- Coordinate System: NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US

DIGIOIAGRAY
570 BEATTY RD
MONROEVILLE, PA 15146
412-372-4500
www.digioiagray.com

AEP AMERICAN ELECTRIC POWER

Prestonsburg - Thelma 46kV Rebuild
Geohazard Risk Assessment

Overview Map

PROJECT NO.	2021-147
DRAWN BY	MLS
CHECKED BY	EVZ
DATE	9/22/2021

Figure 2 Sheet 10

NO.	DATE	REVISION

Name: 2021-147_AEP_PrestonsburgThelma46kV

Legend

- Proposed Structure
- Proposed Transmission Line
- Verify Culvert Capacity
- New Access Road
- Existing Road (to be improved)
- Existing Road (no improvement)
- Road

REFERENCES:
- Centerline data sent by AEP Siting via e-mail on August 3, 2021; Structures preliminary spotted by DiGioia Gray.
- Access roads and associated features preliminary spotted by DiGioia Gray, September 2021.
- Aerial Basemap - Ky_KYAPED_2019_Imagery_6inch Image Service
- Coordinate System: NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US

DIGIOIAGRAY
570 BEATTY RD
MONROEVILLE, PA 15146
412-372-4500
www.digioiagray.com

AEP AMERICAN ELECTRIC POWER

Prestonsburg - Thelma 46kV Rebuild
Geohazard Risk Assessment

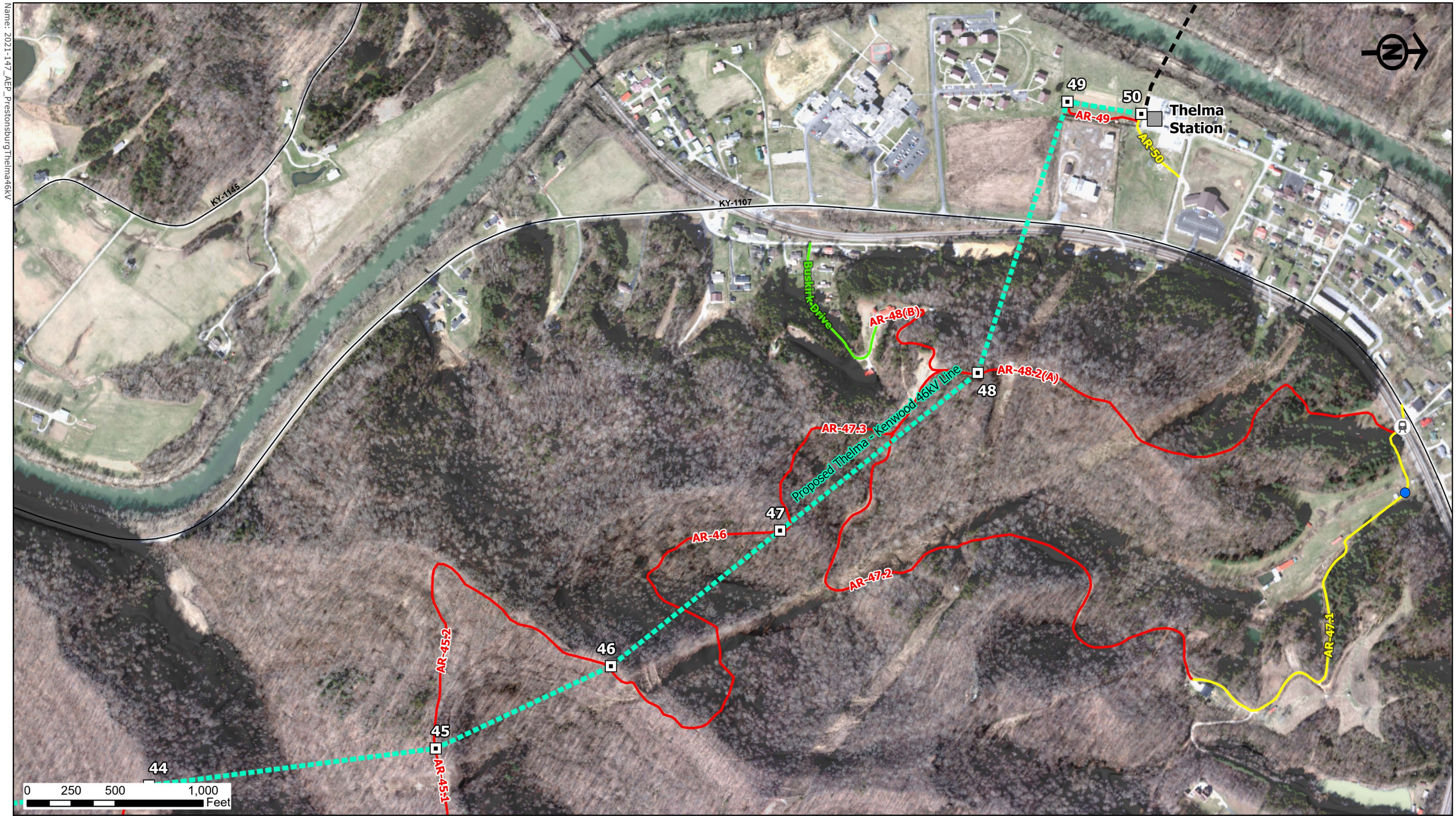
Overview Map

PROJECT NO.	2021-147
DRAWN BY	MLS
CHECKED BY	EVZ
DATE	9/22/2021

Figure 2 Sheet 11

NO.	DATE	REVISION

Name: 2021-147_AEP_PrestonsburgThelma46kV



Legend

- Proposed Structure
- Substation
- Proposed Transmission Line
- Existing Prestonsburg - Thelma 46kV Line
- Possible Culvert
- RR Crossing
- New Access Road
- Existing Road (to be improved)
- Existing Road (no improvement)
- Road

REFERENCES:
- Centerline data sent by AEP Siting via e-mail on August 3, 2021; Structures preliminary spotted by DiGioia Gray.
- Access roads and associated features preliminary spotted by DiGioia Gray, September 2021.
- Aerial Basemap - Ky_KYAPED_2019_Imagery_6inch Image Service
- Coordinate System: NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US

DIGIOIAGRAY
570 BEATTY RD
MONROEVILLE, PA 15146
412-372-4500
www.digioiagray.com

AEP AMERICAN ELECTRIC POWER

Prestonsburg - Thelma 46kV Rebuild
Geohazard Risk Assessment

Overview Map

PROJECT NO.	2021-147
DRAWN BY	MLS
CHECKED BY	EVZ
DATE	9/22/2021

Figure 2 Sheet 12

NO.	DATE	REVISION