# COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

## DUKE ENERGY KENTUCKY, INC. RELIABILITY REPORT AND VEGETATION MANAGEMENT PLAN UPDATE FOR CALENDAR YEAR 2022

May 1, 2023

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#### I. Introduction

On May 30, 2013, the Commission issued its Order requiring all jurisdictional utilities to file annual reliability reports and to develop vegetation management plans. Pursuant to the Order, jurisdictional utilities were required to report a 5 year average of reliability data. The reports are required to be based upon a calendar year (January to December) and filed by the first business day in May in the year immediately following the reporting year.

Duke Energy Kentucky, Inc. (Duke Energy Kentucky or the Company) submits its Reliability Report and Vegetation Management Plan update for Calendar year 2022 as required by the Commission's May 30, 2013 Order in Case No. 2011-00450.<sup>1</sup>

#### II. <u>Reliability Report Summary</u>

Consistent with the most recent edition of the standard number 1366 "Guide for Electric Power Distribution Reliability Indices," and the Commission's Order,<sup>2</sup> the following is included in Exhibit A of Duke Energy Kentucky's Reliability Report Summary:

1. Calculate the System Average Interruption Duration Index (SAIDI) system-wide indices including Major Event Days (MEDs) and calculate the SAIDI system-wide indices excluding MEDs;

2. Calculate the System Average Interruption Frequency Index (SAIFI) system-wide indices including MEDs and calculate the SAIFI system-wide indices excluding MEDs;

3. Develop a system-wide rolling five-year average SAIDI excluding MEDs;

4. Develop a system-wide rolling five-year average SAIFI excluding MEDs;

5. Calculate SAIDI excluding MEDs for every circuit within its system;

6. Develop a rolling five-year average SAIDI for each circuit within its system;

<sup>&</sup>lt;sup>1</sup> In the matter of An Investigation of the Reliability Measures of Kentucky's Jurisdictional Electric Distribution Utilities, Case No. 2011-00450, Order (May 30, 2013). <sup>2</sup> Id.

- 7. Compare each circuit to that circuit's rolling five-year average SAIDI;
- 8. Calculate SAIFI excluding MEDs for every circuit within its system;
- 9. Develop a rolling five-year average SAIFI for each circuit within its system;
- 10. Compare each circuit to that circuit's rolling five-year average SAIFI.

11. File a Reliability Report by May 1 of each year, containing the reliability information as outlined in the attached Appendix for the preceding calendar year from January 1 to December 31 that includes the SAIDI and SAIFI system-wide indices, both including and excluding MEDs.

12. For each circuit with either SAIDI or SAIFI value higher than that circuit's respective SAIDI or SAIFI rolling five-year average, excluding MEDs, include in the annual Reliability Report the following information:

- a. The circuit's SAIDI index for the year;
- b. The circuit's SAIFI index for the year;
- c. The circuit's rolling five-year average SAIDI;
- d. The circuit's rolling five-year average SAIFI;
- e. The substation name, number and location (i.e., County-Road-Town);
- f. The circuit name, number and location (Town-Road-General Area);
- g. The circuit's overall length in miles to the nearest tenth of a mile;
- h. The number of customers served on the circuit for the year;

i. The date of the last circuit trim performed by the utility as part of its vegetation management plan;

j. A list of outage causes for the circuit, along with the percentage of total outage numbers represented by each cause;

- k. Circuit five-year average SAIDI;
- 1. Reporting year SAIDI;
- m. Circuit five-year average SAIFI;
- n. Reporting year SAIFI;

o. A Corrective Action Plan which describes any measures the utility has completed or plans to complete to improve the circuit's performance; and

p. Any other information the utility believes will assist the Commission in understanding the circumstances surrounding the circuit's performance.

#### III. Vegetation Management Plan Update and Summary

Duke Energy Kentucky filed its initial Vegetation Management Plan with this Commission on December 18, 2007 in Case No. 2006-00494.<sup>3</sup> Duke Energy's Midwest Vegetation Management Group is responsible for controlling vegetation growth for approximately 1,550 miles of transmission and distribution primary overhead electric lines in Kentucky.

Exhibit B is a current copy of Duke Energy Kentucky's Vegetation Management Plan that has been reformatted to align with other regulatory pogram fiings.

As part of its 2023 plan, Duke Energy Kentucky plans to trim trees and maintain vegetation along 278 miles of its distribution system. The Company was able to get a good start on its Vegetation Plan for 2023. As of March 31, 2023 Duke Energy Kentucky has completed approximately 24% of its scheduled trimming, or approximately 66 miles of its distribution system. This leaves approximately 212 miles to be trimmed in 2023. The Company does not anticipate any difficulty in completing all planned trimming for 2023. The Company anticipates it will have sufficient crew coverage throughout the year.

Respectfully submitted,

## DUKE ENERGY KENTUCKY, INC.

/s/ Larisa M. Vaysman

Rocco O. D'Ascenzo (92796) Deputy General Counsel Larisa M. Vaysman (98944) Senior Counsel Duke Energy Business Services LLC 139 East Fourth Street, 1303-Main Cincinnati, Ohio 45202 Phone: (513) 287-4320 Fax: (513) 370-5720 Email: Rocco.D'Ascenzo@duke-energy.com

Counsel for Duke Energy Kentucky, Inc.

#### KENTUCKY PUBLIC SERVICE COMMISSION

#### **Electric Distribution Utility Annual Reliability Report**

#### **SECTION 1: CONTACT INFORMATION**

UTILITY NAME	DUKE ENERGY KENTUCKY
REPORT PREPARED BY	MATTHEW G. DOYLE
E-MAIL ADDRESS OF PREPARER	Matthew.Doyle2@duke-energy.com
PHONE NUMBER OF PREPARER	513-335-5829

#### **SECTION 2: REPORTING YEAR**

CALENDAR YEAR OF REPORT 2022

#### SECTION 3: MAJOR EVENT DAYS (MED)

Тмер	4.9232
FIRST DATE USED TO DETERMINE TMED	January 1, 2017
LAST DATE USED TO DETERMINE TMED	December 31, 2021
NUMBER OF MED IN REPORT YEAR	9

NOTE: Per IEEE 1366 TMED should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated

#### SECTION 4: SYSTEM RELIABILITY INFORMATION AND RESULTS

#### System-wide Information

TOTAL CUSTOMERS	147,010	TOTAL CIRCUITS	154

#### Excluding MED

5 YEAR A	VERAGE	REPORTING YEAR		
SAIDI	97.62	SAIDI	92.47	
SAIFI	0.81	SAIFI	0.57	

#### **Including MED**

5 YEAR A	VERAGE	REPORTI	NG YEAR
SAIDI	175.18	SAIDI	302.69
SAIFI	1.00	SAIFI	1.09

#### <u>Notes</u>

1) All duration indices (SAIDI) are to be reported in units of minutes.

2) Reports are due on the first business day of May of each year

3) Reports cover the calendar year ending in the December before the reports are due.

4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, and TMED

#### Duke Energy Kentucky Reliability Report and Vegetation Management For Calendar Year 2022 Exhibit A Page 2 of 7

#### **CONFIDENTIAL PROPRIETARY TRADE SECRET**

	SUBSTATION NAME	SUBSTATION NUMBER	SUBSTATION COUNTY	SUBSTATION ROAD	SUBSTATION TOWN	CIRCUIT NAME	CIRCUIT ID	CIRCUIT NUMBER	CIRCUIT TOWN
H9323060041	AERO	306	BOONE		FLORENCE	AERO 41	H9323060041	41	OAKBROOK
H9321700041	ATLAS	170	KENTON		ERLANGER	ATLAS 41	H9321700041	41	CRESCENT SPRINGS
H9320860041	BEAVER	86	BOONE		WALTON	BEAVER 41	H9320860041	41	WALTON
H9321310044	BELLEVUE	131	CAMPBELL		NEWPORT	BELLEVUE 44	H9321310044	44	BELLEVUE
H9320670043	BUFFINGTON	67	KENTON		FLORENCE	<b>BUFFINGTON 43</b>	H9320670043	43	FLORENCE
H9320670045	BUFFINGTON	67	KENTON		FLORENCE	BUFFINGTON 45	H9320670045	45	INDEPENDENCE
H9320670047	BUFFINGTON	67	KENTON		FLORENCE	BUFFINGTON 47	H9320670047	47	FLORENCE
H9321470043 H9320420041	CLARYVILLE CONSTANCE	147 42	CAMPBELL BOONE		CLARYVILLE ERLANGER	CLARYVILLE 43 CONSTANCE 41	H9321470043 H9320420041	43 41	CLARYVILLE TAYLORSPORT
H9320420041	CONSTANCE	42	BOONE		ERLANGER	CONSTANCE 41	H9320420041	41	ERLANGER
H9322170042	COVINGTON KY	217	KENTON		COVINGTON	COVINGTON 42	H9322170042	42	COVINGTON
H9320700041	CRESCENT	70	KENTON		FT. MITCHELL	CRESCENT 41	H9320700041	41	CRESCENT SPRINGS
H9320700043	CRESCENT	70	KENTON		FT. MITCHELL	CRESCENT 43	H9320700043	43	FT. MITCHELL
H9320700045	CRESCENT	70	KENTON		FT. MITCHELL	CRESCENT 45	H9320700045	45	FT. MITCHELL
H9320700046	CRESCENT	70	KENTON		FT. MITCHELL	CRESCENT 46	H9320700046	46	FT. MITCHELL
H9322990041	DECOURSEY	299	KENTON		TAYLOR MILL	DECORSEY 41	H9322990041	41	TAYLOR MILL
H9320890041	DIXIE	89	BOONE		FLORENCE	DIXIE 41	H9320890041	41	FLORENCE
H9320890042	DIXIE	89	BOONE		FLORENCE	DIXIE 42	H9320890042	42	FLORENCE
H9320890045	DIXIE	89	BOONE		FLORENCE	DIXIE 45	H9320890045	45	FLORENCE
H9320890046	DIXIE	89	BOONE		FLORENCE	DIXIE 46	H9320890046	46	FLORENCE
H9320550041	DONALDSON	55	KENTON		ERLANGER	DONALDSON 41	H9320550041	41	ERLANGER
H9320550043	DONALDSON	55	KENTON		ERLANGER	DONALDSON 43	H9320550043	43	ERLANGER
H9320550048	DONALDSON	55 55	KENTON KENTON		ERLANGER	DONALDSON 48 DONALDSON 46	H9320550048	48 46	ERLANGER ERLANGER
H9320550046 H9320550045	DONALDSON DONALDSON	55	KENTON		ERLANGER ERLANGER	DONALDSON 45	H9320550046 H9320550045	46	ERLANGER
H9320550045	DONALDSON	55	KENTON		ERLANGER	DONALDSON 45	H9320550045	43	ERLANGER
H9321090043	DRY RIDGE	109	GRANT		DRY RIDGE	DRY RIDGE 43	H9321090043	43	DRY RIDGE
H9322890041	EMPIRE	289	BOONE		FLORENCE	EMPIRE 41	H9322890041	41	FLORENCE
H9322410041	FLORENCE	241	BOONE		FLORENCE	FLORENCE 41	H9322410041	41	FLORENCE
H9322410044	FLORENCE	241	BOONE		FLORENCE	FLORENCE 44	H9322410044	44	FLORENCE
H9322410046	FLORENCE	241	BOONE		FLORENCE	FLORENCE 46	H9322410046	46	FLORENCE
H9322410047	FLORENCE	241	BOONE		FLORENCE	FLORENCE 47	H9322410047	47	FLORENCE
H9321280044	HANDS	128	KENTON		COVINGTON	HANDS 44	H9321280044	44	ERLANGER
H9321280045	HANDS	128	KENTON		COVINGTON	HANDS 45	H9321280045	45	TAYLOR MILL
H9321520042	HEBRON	152	BOONE		HEBRON	HEBRON 42	H9321520042	42	PETERSBURG
H9321520044	HEBRON	152	BOONE		HEBRON	HEBRON 44	H9321520044	44	HEBRON
H9320090041	KENTON	9 9	KENTON		LAKEVIEW	KENTON 41	H9320090041	41	FT. WRIGHT
H9320090044 H9320090046	KENTON KENTON	9	KENTON KENTON		LAKEVIEW	KENTON 44 KENTON 46	H9320090044 H9320090046	44 46	FT. WRIGHT LAKEVIEW
H9320090046 H9321890043	LIMABURG	189	BOONE		LIMABURG	LIMABURG 43	H9320090046 H9321890043	40	HEBRON
H9320980041	LONGBRANCH	98	BOONE		FLORENCE	LONGBRANCH 41	H9320980041	43	FLORENCE
H9320980042	LONGBRANCH	98	BOONE		FLORENCE	LONGBRANCH 42	H9320980042	42	US 42
H9320980044	LONGBRANCH	98	BOONE		FLORENCE	LONGBRANCH 44	H9320980044	44	UNION
H9323050042	MT ZION	305	BOONE		FLORENCE	MT ZION 42	H9323050042	42	FLORENCE
H9323050043	MT ZION	305	BOONE		FLORENCE	MT ZION 43	H9323050043	43	FLORENCE
H9323050044	MT ZION	305	BOONE		FLORENCE	MT ZION 44	H9323050044	44	FLORENCE
H9322100042	OAKBROOK	210	BOONE		FLORENCE	OAKBROOK 42	H9322100042	42	FLORENCE
H9321990041	RICHWOOD	199	BOONE		RICHWOOD	RICHWOOD 41	H9321990041	41	RICHWOOD
H9321990042	RICHWOOD	199	BOONE		RICHWOOD	RICHWOOD 42	H9321990042	42	RICHWOOD
H9320620042	SILVER GROVE	62	CAMPBELL		MELBOURNE	SILVER GROVE 42	H9320620042	42	SILVER GROVE
H9320620043	SILVER GROVE	62	CAMPBELL		MELBOURNE	SILVER GROVE 43	H9320620043	43	MELBOURNE
H9321250042	VERONA	125	KENTON		CRITTENDEN	VERONA 42	H9321250042	42	CRITTENDEN
H9321250043	VERONA	125	KENTON		CRITTENDEN	VERONA 43	H9321250043	43	WALTON
H9322430042		243	KENTON		EDGEWOOD	VILLA 42	H9322430042	42 41	CRESTVIEW HILLS
H40C0150041 H9320590044	WEST END WILDER	15 59	HAMILTON KENTON		CINCINNATI WILDER	WEST END 41 WILDER 44	H40C0150041 H9320590044	41 44	PARK HILLS WILDER
H9320590044 H9320590045	WILDER	59	KENTON		WILDER	WILDER 44 WILDER 45	H9320590044 H9320590045	44 45	WILDER
H9320590045	WILDER	59	KENTON		WILDER	WILDER 45 WILDER 46	H9320590045	45	FT. THOMAS
H9320590040	WILDER	59	KENTON		WILDER	WILDER 40	H9320590040	40	NEWPORT
.1002000047	TTEDET	00	RENTON						

#### **CONFIDENTIAL PROPRIETARY TRADE SECRET**

Duke Energy Kentucky Reliability Report and Vegetation Management For Calendar Year 2022 Exhibit A Page 3 of 7

Generation         173         3         New Cinck 19/202         0.00         124.000         175         0.0467         1983           Galaxies         27.15         10/2020         202.01         22.641         40.00         1.72         21.08         1982           Belwone         2.07         15         6.074.01         20.00         12.00         1992           Florence         2.27         15         6.074.01         20.00         0.00         0.00         4.072         1978         6.074.01         0.00         0	CIRCUIT ROAD	CIRCUIT GENERAL AREA	TOTAL CIRCUIT LENGTH (miles)	CUSTOMER COUNT FOR THIS CIRCUIT	DATE OF LAST CIRCUIT TRIM (VEGETATION MANAGEMENT)	CIRCUIT 5-YEAR AVERAGE (SAIDI)	REPORTING YEAR (2022) SAIDI	DID SAIDI INCREASE IN 2022?	CIRCUIT 5-YEAR AVERAGE (SAIFI)	REPORTING YEAR (2022) SAIFI	DID SAIFI INCREASE IN 2022?
winds         60.912         1.531         60.71222         222.840         652.999         VFS         1.037         2.2.83         VFS           Belexee         8.04         1.597         2.009         8.950203         52.11         1.032         1.032         1.032         1.032         1.032         VFS           Reence         14.09         2.009         8.950203         52.11         1.162         VFS         1.141         0.727         VFS           Devence         1.318         9         1.122/2021         52.203         1.84.751         VFS         0.432         1.111         0.553         1.111         0.553         1.111         0.553         1.111         0.553         1.111         0.553         1.111         0.553         1.111         0.553         1.111         0.553         1.111         0.553         1.111         0.553         1.111         0.553         1.111         0.553         1.111         0.553         1.553         1.553         1.553         1.553         1.553         1.553         1.553         1.553         1.553         1.553         1.553         1.553         1.553         1.553         1.553         1.553         1.553         1.553         1.553 <td< td=""><td></td><td>Oakbrook</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>		Oakbrook									
Bellevane       0.04       1.387       31120200       10.247       10.84       NO       0.722       10.00       YES         Promono       2.677       15.6       3013201       30.427       10.8       0.015       YES       0.02       1.161       0.722       1.161       0.727       NO         Clarynike       1.318       0.172       1.167       0.402200       10.80       11.4621       YES       0.161       0.727       NO         Carsonice       1.2.611       1.2.61       1.2.61       1.2.62       52.220211       15.3.32       33.4.64       YES       0.518       0.518       YES         Consigner       1.2.61       1.2.61       1.2.62       YES       1.0.62       YES       1.0.62       YES         Consigner       1.646       1.0277018       1.0.62       YES       0.0.63       0.0.62       YES       1.0.62       YES         F. Modela       1.1.77       1.0.62       YES       0.0.60       1.0.62       YES       0.0.60       0.0.62       YES       0.0.60       0.											
Florence         2.27         16         8/31(2)19         9.48         90.015         YES         0.030         0.400         YES           Florence         11.318         1.79         40/32/021         82.32         11.97         12.275         YES         1.32         1.11         PC           Taylespect         12.81         12.9         40/32/021         85.332         31.4454         YES         0.318         0.221         NO           Convergent         10.47         2.85         77/20/21         40.074         YES         0.318         0.221         NO           Convergent         10.47         1.08         10.0221         40.074         YES         0.318         0.221         NO           Convergent         10.47         1.02         10.221         10.0244         YES         0.307         10.82         11.53         YES           FL <mitchell< td="">         16.477         11.0221         10.0244         YES         0.307         10.82         YES         0.307         0.638         11.63         YES           FL<mitchell< td="">         1.644         14         42.42021         10.524         YES         0.667         0.634         NO           FL<mitchel< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></mitchel<></mitchell<></mitchell<>											
Filterance       16.08       2.080       646/2020       90.080       11.42.21       VES       0.600       1.18       VES         Fibresce       1.271       1.7277       1.7277											
File         Heat         Heat <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>											
Charyolie         1.318         9         11.23/2021         15.353         169.759         YES         0.232         1.111         YES           Consequence         1.707         1.507         2.256/2018         0.463         0.7374         YES         0.548         1.058         YES         0.548         1.058         YES         0.568         1.059         YES         0.568         1.059         YES         0.568         1.059         YES         0.568         1.059         YES         YES         YES         0.568         1.059         YES         YES         0.568         1.059         YES											
Tayloringer         12.861         12.96         52.22/2021         15.32         33.4454         VES         0.018         3.116         VES           Generatinger         1.047         2.06         77.2021         33.08         0.2137         VES         0.0318         0.281         NO           Generatinger         1.047         2.08         1.056         VES           F. Matchel         1.167         1.708         1.057         VES         0.038         1.150         VES           F. Matchel         1.637         1.702         1.0201         0.0483         1.0304         VES         0.028         1.150         VES           F. Matchel         2.1678         1.9271         1.0528         2.0383         VES         0.000         0.632         VES           F. Matchel         3.167         1.9272         1.0538         2.2338         VES         0.000         0.632         VES           F. Matchel         3.167         1.9272         1.001         1.922211         1.9538         2.3335         VES         0.000         0.643         VES           F. Matchel         3.16         9.223201         1.178         7.016 <th1.119220< th="">         2.2314         7.01</th1.119220<>											
Efferinge         11.047         286         7/2/2021         33.03/0         62.103         VES         0.319         0.281         NO           Covingtion         3.077         1.308         112/27/218         40.6373         116.673         NO         0.638         1.1088         VES           F. Michail         12.476         1.92/72/318         12/27/218         116.973         NO         0.638         1.1088         VES           F. Michail         12.476         1.92/72/318         12/27/218         12/24         222.383         VES         0.000         0.638         1.108         VES           Thyor         118.205         1.682         New Cleant in 2021         0.000         1376         0.007         1.662         VES           Toyor         1.634         1.63         67/20/21         0.000         377.109         VES         0.000         0.641         VES           Florence         2.448         1.0         41/72/201         0.900         377.109         VES         0.004         0.333         VES           Florence         2.448         50/20/201         0.94/1         196/299         VES         0.803         0.94/2         VES         0.804         0.333 <td></td>											
Covingion         3.707         1.307         S282/018         140.401         163.678         VES           Cheesent Sympa         11.046         1.086         1227.2018         162.796         1154.401         NO         0.655         1.108         VES           F. Matchell         151.058         1.023         1.022.796         1154.401         NO         0.655         1.108         VES           Taylor Mult         35.454         2.049         1.2277.2018         1.77.442         2.82.303         VES         0.067         0.033         VES           Florence         4.901         4.1         4.244.0221         3.358         2.303         VES         0.047         No         0.533         NO           Florence         4.244         3.61         6.112270         2.22.11         1.969.298         VES         0.040         0.433         NO           Florence         1.2737         7.01         1.11227020         2.22.1         7.41         1.969.298         VES         0.040         0.433         NO           Florence, CVG         1.2737         7.01         1.11927020         2.22.21         7.41         1.961.298         VES         0.043         0.449         VES											
Chemeert Springs         10.48         10.08         11227/2018         1169.674         163.678         NO         0.588         1.100         YES           F. Mitchell         21.675         1.327         1172/2019         52.0408         1110.204         YES         0.222         1.123         YES           F. Mitchell         21.675         1.327         1172/2019         0.50.08         110.204         YES         0.202         1.123         YES           F. Mitchell         5.784         2019         67/20/201         13.588         22.435         NO         0.58         0.614         YES           Florence         3.418         38         67/20/201         13.424         37.129         YES         0.004         0.223         YES           Florence         3.418         38         67/20/201         13.418         37.109         YES         0.004         0.233         0.243         0.243         YES           Elineger, Florence, CVG         13.727         709         117.120/200         232.214         17.41         39.002         YES         0.243         0.443         YES           Elineger, Florence, CVG         5.637         49         122/202/201         0.400         22.82											
Pi. Michail       15.157       1.708       11/6/2019       54.068       110.24       YES       0.255       1.150       YES         Pi. Michail       112.257       10.2019       54.068       10.241       YES       0.262       1.150       YES         Pi. Michail       112.255       10.001       0.001       10.001       10.010       YES       0.000       0.522       YES         Pionence       5.744       401       42/20201       0.354       23.050       YES       0.060       0.221       YES         Pionence       4.901       41       42/20201       0.000       376.100       YES       0.040       0.033       YES         Fionence       2.447       10       41/17/0220       23.2424       YES       0.243       0.044       YES         Etingger, Fionence CVG       15.050       2.056       New Curail to 210       0.041       10.706       YES       0.243       0.449       YES         Etingger, Fionence CVG       6.050       2.058       New Curail to 210       0.061       10.747       YES       0.020       1.070       YES         Pionence TVB       6.050       2.058       New Curail to 211       0.051       10.253       <											
FI. Michell       21.878       1.927       11/2019       64.068       111.204       YES       0.282       1.125       YES         F. Michell       33.644       2.040       1227/2018       127.442       202.383       YES       1.207       1.682       YES         Finomon       4.611       4.61       64.02021       355.24       203.383       YES       0.107       1.682       YES         Finomon       4.611       4.91       64.01       64.02021       357.420       YES       0.040       0.621       YES         Finomon       2.349       10       44.770221       19.42       37.12       YES       0.64       0.53       YES         Eltinger, Forence, CVG       12.737       1.088       52020220       0.074.11       19.42.89       YES       0.263       0.262       YES         Eltinger, Forence, CVG       6.076       4.04       12.7280.02       0.000       22.5161       1102.765       YES       0.020       0.072       YES         Eltinger, Forence, CVG       6.076       4.01       12.62022       0.000       22.5161       YES       0.124       YES       0.022       0.070       YES         Eltinger, Forence, CVG       6.											
FL Minchell       11.082       1.082       New Circuit in 220       0.000       191.091       YES       0.000       0.932       YES         Taylov Mill       35.454       6.13       0.122021       13.554       33.568       YES       0.018       0.164       YES         Picencie       4.014       4.0442021       15.524       33.568       YES       0.003       0.164       YES         Picencie       2.349       10       4.172021       19.422       37.122       YES       0.043       0.333       YES         Elringer And Florence       12.737       7.016       11.1992020       97.471       166.293       YES       0.043       0.044       YES         Elringer And Florence       11.090       2.030       Mew Cincuit in 2020       6.003       0.070       YES         Elringer Homes, CVG       13.727       701       11.1192020       0.000       10.2165       YES       0.022       1.80       YES         Elringer Homes, CVG       5.503       39       New Cincuit in 2020       0.001       10.547       YES       0.022       1.80       YES         Elringer Homes, CVG       5.503       39       New Cincuit in 2020       0.000       10.547 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>											
Taylor Mill       35.454       2.049       12272018       123.685       224.35       NO       1.307       1.682       YES         Florence       4.901       4.1       4/24/2021       105.524       303.055       YES       0.697       0.634       NO         Florence       3.418       3       5.7/2021       1000       37.610       YES       0.604       0.321       YES         Elanger       7.801       127.77       1191       417/0220       224.1       74.188       YES       0.404       0.321       YES         Elanger       7.801       597       222.0231       11.718       30.032       YES       0.243       0.243       VES       127.27       119.9       YES       0.400       0.321       YES       0.443       VES       127.27       119.9       YES       0.403       0.243       0.443       VES       127.27       119.9       YES       0.403       0.243       0.443       VES       127.27       119.9       YES       0.403       0.243       0.443       VES       127.27       119.9       YES       0.404       YES       0.404       YES       127.27       119.9       YES       0.441       127.27       119.9											
Finance       5.744       613       64/24/221       15.524       33.565       YES       0.697       0.634       NO         Finance       3.418       39       57.1/2021       10.042       37.122       YES       0.000       0.821       YES         Finance       2.340       10       47.1/72021       10.422       37.122       YES       0.004       0.333       0.427       ND         Eftanger and Finance       12.377       1.586       57.2/2021       11.11       11.462       YES       0.004       0.333       0.427       ND         Eftanger Finance       16.655       2.039       New Circuit 1.021       10.442       37.65       YES       0.243       0.449       YES         Eftanger Finance       16.655       2.039       New Circuit 1.021       0.000       10.547       YES       0.000       1.233       0.070       YES         Dy Midge       7.451       544       New Circuit 1.021       10.460       9.238.59       YES       0.700       0.044       YES         Florence, Union       2.012       1.949       New Circuit 1.021       0.000       10.347       YES       0.700       0.944       YES         Florence, US <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>											
Florence       4,01       41       474/2021       155.524       303.505       YES       0.677       0.634       NO         Florence       2,349       10       4/17/2021       19.442       37.122       YES       0.044       0.333       YES         Etinager       12,737       16.86       5/20/2020       27.71       196.249       YES       0.044       0.333       YES         Etinager       16.650       5/27.2021       21.717       19.6249       YES       0.243       0.409       YES         Etinager       16.650       5/23.038       New Craulin 2019       235.829       YES       0.000       1.233       YES         Etinager       7.661       5.438       New Craulin 2020       0.000       10.347       YES       0.000       0.072       YES         Dy Kidge       7.461       5.44       New Craulin 2020       0.000       10.347       YES       0.000       0.072       YES         Dy Kidge       7.661       1.348       New Craulin 2020       0.683       3.231       YES       0.734       1.947       YES         Florence       1.532       0.657/2021       0.4070       20.2365       NO       0.468       0.664 </td <td></td>											
Florence       3.4.16       3.9       51/12021       0.000       377.109       YES       0.000       0.021       YES         Flanger and Florence       12.737       1.688       55/20/2020       97.471       196.249       YES       0.033       0.427       YES         Elanger, Fnorence, CVG       13.727       701       11.11/19/2020       232.214       741.18       YES       2.243       0.427       YES         Elanger, Fnorence, CVG       6.076       40       10.222.2111       1.11       30.025       YES       0.040       VES         Elanger, Fnorence, CVG       6.076       40       10.228.0202       0.000       235.625       YES       0.000       0.072       YES         Plorence, Union       2.9.012       1.9.49       11/26/2019       6.483       20.14       YES       0.032       0.041       NO         Florence, Union       2.9.012       1.9.49       11/26/2019       6.433       89.22       YES       0.032       0.043       YES         Florence, Union       2.9.012       1.9.49       11/26/201       14.343       19.5.31       YES       0.124       0.143       NO         Florence, Union       2.9.012       1.9.49       1/26/2											
Florence         2.349         10         41/7/2021         19.42         37.122         VES         0.044         0.333         VES           Etingger and Florence, CVG         13.727         701         11/19/2020         232.214         741.1188         VES         2.243         2.243         2.461         VES           Etingger, Florence, CVG         13.727         701         11/19/2020         232.214         741.1188         VES         2.243         2.461         VES           Etingger, Florence, CVG         0.070         2.050         VES         0.000         235.828         VES         0.000         1.030         VES           Etingger, Florence, VICG         0.070         4.44         VES         0.000         1.547         VES         0.000         0.072         VES           Dy Flögn         7.461         1.44         VI22/0221         0.000         1.547         VES         0.023         0.044         VES           Florence, Minia         1.959         7         Nothing to trim         3.511         35.231         VES         0.124         1.447         VES           Florence         1.582         1.065         61/3/2020         14.345         196.391         VES         <											
Elanger and Florence.       12.737       710       11/19/2020       97.471       196.299       YES       0.033       0.427       ND         Elanger       7.861       597       55/22021       11.178       30.032       YES       0.243       0.449       YES         Enlanger       16.505       2.036       New Circulin 2019       25.611       102.765       YES       0.243       0.449       YES         Enlanger, Florence, CVG       6.503       39       New Circulin 2021       0.000       10.547       YES       0.000       0.072       YES         Dry Ridge       7.451       5.44       New Circulin 2021       0.000       10.547       YES       0.000       0.072       YES         Promote       17.561       1.138       Mew Circulin 2020       10.456       NES       0.124       1.047       YES         Florence       17.561       1.138       41/8/2010       12.466       YES       0.124       1.045       YES         Florence       7.063       2.02       41/17/201       9.900       12.466       YES       0.424       0.457       YES         Florence       7.063       2.02       41/10/26/201       80.835       YES       0											
Eltinger       Florence, CVG       13,727       701       11/19/200       23.214       741.188       YES       2.43       2.621       YES         Eitanger       7.680       2.508       New Craulin 2019       25.161       102.765       YES       0.200       1.128       YES         Eitanger, Florence, CVG       6.076       49       12/29/202       0.000       23.6.29       YES       0.000       1.239       YES         Dr. Prote       2.01       1.414       102.000       6.883       20.184       YES       0.000       1.239       YES         Dr. Prote       2.01       1.414       10.200       6.883       2.0141       YES       0.012       0.070       YES         Florence Mall       1.958       7.49       11.680       84.253       105.231       YES       0.43       YES         Florence Mall       1.958       7.49       Notting trim       35.231       YES       0.233       0.445       YES         Florence Mall       1.958       6.47/2020       80.802       104.169       YES       0.0454       1.040       YES         Florence Mall       1.951       1.526       6.67/20201       80.802       365.378       YES											
Entanger         7.861         597         8/22/22021         11.716         30.032         YES         0.243         0.449         YES           Eitanger, Florence, CVG         5.05         2.036         New Circuit in 2021         0.000         235.829         YES         0.002         1.283         YES           Eitanger, Florence, CVG         5.053         39         New Circuit in 2021         0.000         10.647         YES         0.000         0.070         YES           Dry Ridge         7.451         5.44         New Circuit in 2021         0.000         10.647         YES         0.000         0.072         YES           Florence, Union         20.012         1.439         Not         1.436/01         165.361         YES         0.243         0.143         NO           Florence Mail         1.563         7         Noting to tim         33.511         35.31         YES         0.243         0.146         NO           Florence         7.063         1.202         41/12/0201         9.900         12.266         YES         0.244         0.045         YES           Florence         7.063         1.202         41/12/0201         8.900         12.266         YES         0.244											
Etinager         16.505         2.036         New Circuit in 2019         25.161         102.765         YES         0.202         1.80         YES           Etinager, Florence, CVG         5.03         39         New Circuit in 2020         6.803         20.164         YES         0.000         12.33         YES           Dry Ridge         7.451         544         New Circuit in 2020         6.803         20.164         YES         0.000         0.072         YES           Florence, Inlinin         2.9012         1.949         17.252(219)         84.235         89.282         YES         0.700         0.944         YES           Florence         15.352         1.065         616/2021         64.070         20.365         NO         0.458         0.654         YES           Florence         17.561         1.138         61/2021         64.070         20.465         NO         0.458         0.654         YES           Florence         17.561         1.138         61/2021         64.070         20.465         NO         0.448         0.654         YES           Florence         10.63         150/2021         64.070         20.465         NO         0.454         NO											
Ertunger, Florence, CVG         6.076											
Efangier, Florence, CVG       5.503       39       New Circuit in 2021       0.000       10.547       YES       0.000       0.070       YES         Pilorence, Union       29.012       1.949       11/26/2019       84.235       89.282       YES       0.790       0.984       YES         Filorence, Union       17.561       1.138       41/82/0201       14.345       195.391       YES       0.124       1.947       YES         Filorence       17.561       1.138       6/1/82/0201       14.345       195.391       YES       0.124       1.947       YES         Filorence       7.063       202       4/1/72/021       9.000       12.966       YES       0.249       0.045       NO         Filorence       7.063       202       4/17/2021       9.000       12.966       YES       0.621       1.420       YES         Filorence/Mili       18.151       8/77       YZ32019       55.578       YES       0.621       1.420       YES         Park West International       3.751       2.3       7/21/2019       94.975       156.836       YES       0.621       1.420       YES         Filorence       19.345       1.344       12/29/2022       59.323 <td></td>											
Dyr, Ridge         7.451         544         New Circuit in 2021         0.000         10.547         YES         0.000         0.072         YES           Florence, Union         20.12         1.484         1/262/019         84.255         89.282         YES         0.730         0.948         YES           Florence Mail         1.959         7         Nothing to trim         33.511         35.231         YES         0.233         0.143         NO           Florence         15.382         1.065         6/5/2021         64.070         22.365         NO         0.458         0.664         YES           Florence         7.63         2.02         4/17/2020         80.892         104.196         YES         0.624         1.14         NO           Florence         7.63         2.02         4/17/2020         80.892         104.196         YES         0.624         1.377         YES           Park West International         3.751         2.23         Nothing to trim         77.143         902.500         YES         0.624         1.377         YES           FL Wright, FL Mitchell         12.586         7.772/12/019         94.975         YES         0.406         1.026         YES											
Florence, Union       29.012       19.449       1/26/2019       84.255       82.282       YES       0.790       0.984       YES         Florence       17.561       1.138       4/16/2020       14.345       195.391       YES       0.124       1.947       YES         Florence       17.561       1.138       4/16/2020       14.345       195.391       YES       0.124       1.947       YES         Florence       7.063       20.2       4/17/2021       9.900       12.966       YES       0.249       0.045       NO         Florence       7.063       202       4/17/2021       9.900       12.966       YES       0.621       1.420       YES         Florence       7.068       9/2/2/2019       65.247       164.066       YES       0.621       1.420       YES         Park West International       3.751       23       Nothing to trim       77.133       902.500       YES       0.363       1.619       YES       0.421       1.24       YES       1.24       YES       0.433       1.377       YES         Park West International       3.751       2.38       7/2/2019       94.435       YES       0.433       1.437       YES       0.43											
Florence Mail       1959       7       Nohing to tim       33.511       35.231       YES       0.123       0.143       NO         Florence       15.382       1.065       6/5/2021       64.070       20.365       NO       0.454       0.654       YES         Florence       7.063       202       4/17/2021       9.900       12.966       YES       0.249       0.045       NO         Etangar       20.869       1.244       10/26/02/0       80.892       104.196       YES       0.621       1.420       YES         Patrix West International       3.751       223       223/2019       65.247       164.066       YES       0.621       1.377       YES         Patrix West International       3.751       2.32       Nohing to tim       77.143       902.500       YES       0.839       1.619       YES         Patrix West International       3.751       2.32       Nohing to tim       77.143       902.500       YES       0.849       1.619       YES         Patrix West International       1.958       77.17/2018       118.803       158.859       YES       0.808       1.087       YES         CVG (Apport)       4.326       2.2322/019       37.000											
Florence       17.561       1.138       4/18/2020       14.345       196.391       YES       0.124       1.947       YES         Florence       7.063       202       4/17/2021       9.900       12.966       YES       0.249       0.045       NO         Etanger       20.869       1.244       10/26/020       0.892       104.196       YES       0.621       1.420       YES         Petersburg       47.975       668       9/23/2019       59.540       355.378       YES       0.624       1.377       YES         Park West International       3.751       2.3       Nothing to trim       77.143       902.500       YES       0.863       1.128       YES         FL Wright, FL Mitchell       19.531       1.528       77.21/2019       94.975       156.836       YES       0.863       1.619       YES         Edgewood and Fort Wright       14.868       674       12/29/2022       76.985       94.935       YES       0.863       1.087       YES         Union, Beaveritick and Florence       19.331       2.282       8/28/2021       7.742       102.470       YES       0.401       2.009       YES         Union and Beaveritick and Florence       19.345											
Florence       15.382       1.06       6/5/2021       64.070       20.365       NO       0.458       0.654       YES         Florence       7.063       202       4/17/2021       9.900       12.966       YES       0.101       0.114       NO         Taylor Mill       18.151       877       2/23/2019       59.540       355.378       YES       0.624       1.377       YES         Petersburg       47.975       668       9/23/2019       65.247       164.086       YES       0.624       1.377       YES         Park West International       3.751       23       Nothing to trim       77.143       1902.500       YES       0.366       1.128       YES         FL Wright, FL Mitchell       19.851       1.526       7/21/2019       37.000       58.300       YES       0.868       1.087       YES         FL Wright, FL Mitchell       19.331       2.282       8/28/2021       7.742       102.470       YES       0.041       2.009       YES         FL Forence       19.331       2.282       8/28/2021       7.742       102.470       YES       0.041       2.009       YES         Union, Baswerlick and Forence       19.345       1.344       12/											
Florence       7.063       202       4/17/2021       9.900       12.966       YES       0.249       0.045       NO         Erlanger       20.869       1.244       10/26/2020       80.892       104.196       YES       0.621       1.420       YES         Patersburg       47.975       668       9/23/2019       55.247       164.086       YES       0.621       1.420       YES         Park West International       3.751       23       Nothing to trim       77.143       902.500       YES       0.359       1.619       YES         Park West International       3.751       23       Nothing to trim       77.143       902.500       YES       0.366       1.128       YES         Park West International       3.751       23       V/21/2019       94.975       156.836       YES       0.366       1.128       YES         Florence       19.341       1.229/2022       76.985       94.935       YES       0.600       YES       0.600       YES         CVG (Airport)       4.326       24       272/32019       37.000       58.300       YES       0.601       1.087       YES         Union, and Beaverick and Florence       19.345       1.344       <											
Effanger       20.869       1.24       10/26/2020       80.892       104.196       YES       1.019       0.114       NO         Taylor Milli       18.151       877       2/23/2019       55.5/47       164.066       YES       0.624       1.377       YES         Park West International       3.751       2.3       Nothing to tim       77.143       902.500       YES       0.869       1.128       YES         Ft. Wright, Ft. Mitchell       12.298       2.362       77/1/2018       18.803       159.679       YES       0.863       0.0624       1.087       YES         Edgewod and Fort Wright       14.836       2       2/223/2019       37.000       58.300       YES       0.400       0.500       YES         CVG (Airport)       4.326       2       2/223/2019       37.000       58.300       YES       0.400       0.500       YES         CVG (Airport)       4.326       2       2/223/2019       37.000       58.300       YES       0.401       2.009       YES         Union, Beaverlick and Florence       19.345       1.344       12/29/2022       59.323       348.800       YES       0.367       1.899       YES         Union and Bawerlick       0											
Taylor Mill       18.151       8.77       2/23/2019       59.540       355.378       YES       0.621       1.420       YES         Patr West International       3.751       2.3       Nothing to trim       77.143       190.200       YES       0.5624       1.377       YES         Park West International       3.751       2.3       Nothing to trim       77.143       190.200       YES       0.359       1.619       YES         FL Wright, FL Mitchell       19.581       1.523       77/1/2019       94.975       156.836       YES       0.486       1.238       NO         Edgewood and Fort Wright       14.886       6.74       12/29/2022       76.985       94.935       YES       0.400       0.500       YES         Edgewood and Fort Wright       14.886       6.74       12/29/2022       76.985       94.935       YES       0.401       2.009       YES         OVG (Airport)       4.326       2.2       2/23/2019       37.000       S8.300       YES       0.401       2.009       YES         Union, Beaverlick and Florence       19.331       2.282       8/28/2021       7.742       102.470       YES       0.367       1.809       YES         Union and Beaverlick <td></td>											
Pefersburg         47.975         668         9/23/2019         65.247         164.086         YES         0.624         1.377         YES           Park West International         3.751         2.3         Nothing to tim         77.143         902.500         YES         0.624         1.377         YES           Park West International         19.581         1.528         7/21/2019         94.975         156.836         YES         0.896         1.128         YES           FL Wright, FL Mitchell         22.298         2.262         7/7/2018         118.803         159.679         YES         0.683         1.087         YES           Edgewood and Fort Wright         4.836         674         12/29/2022         76.985         94.935         YES         0.683         1.087         YES           CVG (Airport)         4.326         2         2/23/2019         37.000         58.300         YES         0.400         0.500         YES           Union, Beaverlick and Florence         19.345         1.344         12/29/2022         59.33         348.800         YES         0.0367         1.899         YES           Union and Beaverlick         0         1.012         New Circuit in 2029         0.000         382.31 <td></td>											
Park West International       3.751       23       Nothing to trim       77.143       902.500       YES       0.359       1.619       YES         F1. Wright, F1. Mitchell       19.581       1.528       7/21/2019       94.975       156.836       YES       0.896       1.128       YES         F1. Wright, F1. Mitchell       22.98       2.362       7/7/2018       118.803       199.679       YES       0.683       1.087       YES         CGG (Alprot)       4.386       674       12/29/2022       76.985       94.935       YES       0.683       1.087       YES         CGG (Alprot)       4.386       674       12/29/2022       50.323       348.800       YES       0.400       0.500       YES         Union Baeverlick and Florence       19.331       2.282       8/28/2021       7.742       102.470       YES       0.041       2.09       YES         Union and Beaverlick       0       1.012       New Circuit in 2022       0.000       38.231       YES       0.601       1.18       YES         Linnaburg, Oaktrook and Burington       1.84       12       91/6/2021       31.171       47.6503       YES       0.659       0.670       YES         Linnaburg, Oaktrook and											
Ft. Wright, Ft. Mitchell       19.581       1,528       7/2/2019       94.975       156.836       YES       0.896       1.128       YES         Ft. Wright, Ft. Mitchell       22.298       2,362       7/7/2018       118.803       159.679       YES       1.23       0.395       NO         Edgewood and Fort Wright       14.866       674       12/29/2022       76.985       94.935       YES       0.683       1.087       YES         CVG (Airport)       4.326       2       2/23/2019       37.000       58.300       YES       0.400       0.500       YES         Union, Beaverlick and Florence       19.345       1,344       12/29/2022       59.323       348.880       YES       0.001       1.128       YES         Union and Beaverlick       0       1,012       New Circuit in 2022       0.000       338.231       YES       0.001       1.128       YES         Union and Beaverlick       0       1,012       New Circuit in 2019       0.285       17.946       YES       0.261       0.167       NO         Florence       1.653       861       12/4/2018       234.307       290.827       YES       0.726       1.101       NO       0.35       YES											
Ft. Wright, Ft. Mitchell       22.298       2.362       777/2018       118.803       159.679       YES       1.28       0.395       NO         Edgewood and Fort Wright       14.886       674       12/29/2022       76.985       94.935       YES       0.683       1.087       YES         CVG (Airport)       4.326       2       2/23/2019       37.000       58.300       YES       0.400       0.500       YES         Union, Beaverlick and Florence       19.331       2.282       8/28/2021       7.742       102.470       YES       0.401       2.009       YES         Union, Beaverlick and Florence       19.345       1.344       12/29/2022       59.323       348.808       YES       0.367       1.899       YES         Union and Beaverlick       0       1.012       New Circuit in 2022       0.000       338.231       YES       0.261       0.167       NO         Florence       10.653       861       12/4/2018       234.307       290.627       YES       0.261       0.167       NO         Florence       3.538       57       New Circuit in 2019       0.285       17.946       YES       0.659       0.677       YES         Richwood       11.51											
Edgewood and Fort Wright         14.886         674         1/2/29/2022         76.985         94.935         YES         0.683         1.087         YES           CVG (Airport)         4.326         2         2/23/2019         37.000         58.300         YES         0.401         0.000         YES           Florence         19.331         2,282         8/28/2021         7.742         102.470         YES         0.041         2.009         YES           Union, Beaverlick and Florence         19.341         12/29/2022         59.323         348.880         YES         0.367         1.899         YES           Union and Beaverlick         0         1,012         New Circuit in 2022         0.000         338.231         YES         0.261         0.167         NO           Florence         10.653         861         12/4/2018         234.307         290.827         YES         0.030         0.035         YES           Florence         10.653         861         12/4/2018         242.699         377.121         YES         0.659         0.670         YES           Limaburg, Oakbrook and Burlington         28.954         2.177         10/13/2018         61.071         153.941         YES         0.969 <td></td>											
CVG (Airport)4.32622/23/201937.00058.300YES0.4000.500YESFlorence19.3312.2828/28/20217.742102.470YES0.0412.009YESUnion, Baeverlick and Florence19.3451.34412/29/202259.323348.880YES0.3671.899YESUnion and Beaverlick01.012New Circuit in 20220.000338.231YES0.0001.128YESFlorence1.584129/16/202131.17147.503YES0.2610.167NOFlorence1.065386112/4/2018234.307290.827YES0.0030.035YESLimaburg, Oakbrook and Burlington28.9542.8164/18/2019106.080216.413YES0.6590.670YESRichwood33.0172.17710/13/2018224.269377.121YES1.0281.815YESMelbourne19.8965807/25/2019245.382689.179YES0.9970.874NOSilver Grove8.714415/14/2019245.382689.179YES0.9982.055YESMelbourne19.8965807/25/2019183.940157.418NO1.3091.449YESCrittenden, Walton30.04352312/29/202230.972513.010YES1.0042.869YESCrittenden, Walton20.44268812/29/202239.10813.6											
Florence         19.331         2,282         8/28/2021         7.742         102.470         YES         0.041         2.009         YES           Union, Beaverlick and Florence         19.345         1,344         12/29/2022         59.323         348.880         YES         0.367         1.899         YES           Union and Beaverlick         0         1,012         New Circuit in 2022         0.000         338.231         YES         0.261         0.167         NO           Florence         1.584         12         9/16/2021         31.171         47.503         YES         0.261         0.167         NO           Florence         10.653         861         12/4/2018         234.307         290.827         YES         0.765         1.101         NO           Florence         3.538         57         New Circuit in 2019         0.680         216.413         YES         0.0670         YES           Limaburg, Oakbrook and Burlington         28.954         2,816         4/18/2019         106.080         216.413         YES         0.0670         YES           Richwood         3.017         2,177         10/13/2018         61.071         153.941         YES         0.998         2.055 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>											
Union, Beaverlick and Florence19.3451,34412/29/202259.323348.880YES0.3671.899YESUnion and Beaverlick01,012New Circuit in 20220.000338.231YES0.0001.128YESFlorence1.584129/16/202131.17147.503YES0.2610.167NEWFlorence10.65386112/4/2018234.307290.827YES1.7261.101NOFlorence3.53857New Circuit in 20190.28517.946YES0.6590.670YESLimaburg, Oakbrook and Burlington28.9542,8164/18/2019106.080216.413YES0.6590.670YESRichwood11.5112410/1/2018224.269377.121YES0.0970.874NOSilver Grove8.714415/14/2019245.382689.179YES0.9982.055YESMelbourne19.8965807/25/2019183.940157.418NO1.3091.449YESWalton30.04352312/29/2022202.972513.010YES1.0042.869YESCrittenden, Walton22.44280812/29/202230.813.661NO0.3381.038YESCrittenden, Walton22.44280812/29/202230.86672.747YES0.4160.168NOCrittenden, Walton22.44280812/29/202230.8672											
Union and Beaverlick01,012New Circuit in 20220.000338.231YES0.0001.128YESFlorence10.654129/16/202131.17147.503YES0.2610.167NOFlorence10.65386112/4/2018234.307290.827YES0.0030.035YESFlorence3.53857New Circuit in 20190.28517.946YES0.0030.035YESLimaburg, Oakbrook and Burlington28.9542.8164/18/2019106.080216.413YES0.6590.670YESRichwood13.0172.17710/13/2018224.269377.121YES0.9970.874NOSilver Grove8.714415/14/2019245.382689.179YES0.9982.055YESMelbourne19.8965807/25/2019183.940157.418NO1.3091.449YESWalton30.04352312/29/2022202.972513.010YES1.0381.038YESCrittenden, Walton22.44280812/29/202239.10813.661NO0.3381.038YESCovington, Park Hills10.557787/6/2022325.888348.043YES1.3342.490YESWilder & Covington19.8861,22612/29/2022140.067234.100YES0.6370.755YESWilder & Covington19.8861,22612/29/2022140.667 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>											
Florence         1.584         12         9/16/2021         31.171         47.503         YES         0.261         0.167         NO           Florence         10.653         861         12/4/2018         234.307         290.827         YES         1.726         1.101         NO           Florence         3.538         57         New Circuit in 2019         0.285         17.946         YES         0.003         0.035         YES           Limaburg, Oakbrook and Burlington         28.954         2.816         4/18/2019         106.080         216.413         YES         0.659         0.670         YES           Richwood         11.51         124         10/1/2018         24.269         377.121         YES         1.028         1.815         YES           Richwood         33.017         2,177         10/13/2018         61.071         153.941         YES         0.997         0.874         NO           Silver Grove         8.71         441         5/4/2019         245.382         689.179         YES         0.998         2.055         YES           Melbourne         19.896         580         7/25/2019         183.940         157.418         NO         1.309         1.449         <											
Florence       10.653       861       12/4/2018       234.307       290.827       YES       1.726       1.101       NO         Florence       3.538       57       New Circuit in 2019       0.285       17.946       YES       0.033       0.035       YES         Limaburg, Oakbrook and Burlington       28.954       2.816       41/8/2019       106.080       216.413       YES       0.659       0.670       YES         Richwood       11.51       124       10/1/2018       224.269       377.121       YES       1.028       1.815       YES         Richwood       33.017       2,177       10/13/2018       61.071       153.941       YES       0.997       0.874       NO         Silver Grove       8.71       4/1       5/14/2019       245.382       689.179       YES       0.998       2.055       YES         Melbourne       19.896       580       7/25/2019       183.940       157.418       NO       1.309       1.449       YES         Waton       30.043       523       12/29/2022       39.108       13.661       NO       0.338       10.38       YES         Crittenden, Walton       22.475       892       11/11/2019       67.686											
Florence         3.538         57         New Circuit in 2019         0.285         17.946         YES         0.003         0.035         YES           Limaburg, Oakbrook and Burlington         28.954         2,816         4/18/2019         106.080         216.413         YES         0.659         0.670         YES           Richwood         13.017         2,17         10/1/2018         224.269         377.121         YES         0.997         0.874         NO           Silver Grove         8.71         441         5/14/2019         245.382         689.179         YES         0.998         2.055         YES           Melbourne         19.896         580         7/25/2019         183.940         157.418         NO         1.309         1.449         YES           Walton         30.043         523         12/29/2022         202.972         513.010         YES         1.004         2.869         YES           Crittenden, Walton         22.442         808         12/29/2022         39.108         13.661         NO         0.338         1.038         YES           Crittenden, Walton         12.875         892         11/11/2019         67.686         72.747         YES         0.416											
Limaburg, Oakbrook and Burlington28.9542,8164/18/2019106.080216.413YES0.6590.670YESRichwood11.5112410/1/2018224.269377.121YES1.0281.815YESRichwood33.0172,17710/13/201861.071153.941YES0.9970.874NOSilver Grove8.714415/14/2019245.382689.179YES0.9982.055YESMelbourne19.8965807/25/2019183.940157.418NO1.3091.449YESWalton30.04352312/29/2022202.972513.010YES1.0042.869YESCrittenden, Walton22.44280812/29/202239.10813.661NO0.3381.038YESCovington, Park Hills12.87589211/11/201967.68672.747YES0.4160.168NOCovington, Park Hills10.557787/6/2022325.888348.043YES1.3342.490YESWilder & Covington19.8861.22612/29/2022104.067234.100YES0.6370.755YESWilder, Southgate, Ft. Thomas13.6461.61312/29/2022104.46191.476NO0.6370.755YES											
Richwood         11.51         124         10/1/2018         224.269         377.121         YES         1.028         1.815         YES           Richwood         33.017         2,177         10/13/2018         61.071         153.941         YES         0.997         0.874         NO           Silver Grove         8.71         441         5/14/2019         245.382         689.179         YES         0.998         2.055         YES           Melbourne         19.896         580         7/25/2019         183.940         157.418         NO         1.309         1.449         YES           Walton         30.043         523         12/29/2022         202.972         513.010         YES         1.004         2.869         YES           Crititenden, Walton         22.442         808         12/29/2022         39.108         13.661         NO         0.338         1.038         YES           Crestview Hills         12.875         892         11/11/2019         67.686         72.747         YES         0.416         0.168         NO           Covington, Park Hills         10.55         778         7/6/2022         325.888         348.043         YES         1.334         2.490         <											
Richwood33.0172,17710/13/201861.071153.941YES0.9970.874NOSilver Grove8.714415/14/2019245.382689.179YES0.9982.055YESMelbourne19.8965807/25/2019183.940157.418NO1.3091.449YESWalton30.04352312/29/2022202.972513.010YES1.0042.869YESCrittenden, Walton22.44280812/29/202239.10813.661NO0.3381.038YESCrestview Hills12.87589211/11/201967.68672.747YES0.4160.168NOCovington, Park Hills10.557787/6/2022325.888348.043YES1.3342.490YESWilder & Covington19.8661,22612/29/2022140.06723.4100YES0.9560.632NOWilder, Southgate, Ft. Thomas13.6461,61312/29/2022104.46191.476NO0.6370.755YES											
Silver Grove         8.71         441         5/14/2019         245.382         689.179         YES         0.998         2.055         YES           Melbourne         19.896         580         7/25/2019         183.940         157.418         NO         1.309         1.449         YES           Walton         30.043         523         12/29/2022         202.972         513.010         YES         1.004         2.869         YES           Crittenden, Walton         22.442         808         12/29/2022         39.108         13.661         NO         0.338         1.038         YES           Crittenden, Walton         22.442         808         12/29/2022         39.108         13.661         NO         0.338         1.038         YES           Corington, Park Hills         12.875         892         11/11/2019         67.686         72.747         YES         0.416         0.168         NO           Covington, Park Hills         10.55         778         7/6/2022         325.888         348.043         YES         1.334         2.490         YES           Wilder & Covington         19.886         1,226         12/29/2022         104.467         91.476         NO         0.637											
Melbourne         19.896         580         7/25/2019         183.940         157.418         NO         1.309         1.449         YES           Walton         30.043         523         12/29/2022         202.972         513.010         YES         1.004         2.869         YES           Crittenden, Walton         22.442         808         12/29/2022         39.108         13.661         NO         0.338         1.038         YES           Crittenden, Walton         12.875         892         11/1/2019         67.686         72.747         YES         0.416         0.168         NO           Covington, Park Hills         10.55         778         7/6/2022         325.888         348.043         YES         1.334         2.490         YES           Wilder & Covington         19.866         1,226         12/29/2022         140.067         234.100         YES         0.956         0.632         NO           Wilder, Southgate, Ft. Thomas         13.646         1,613         12/29/2022         104.461         91.476         NO         0.637         0.755         YES											
Walton         30.043         523         12/29/2022         202.972         513.010         YES         1.004         2.869         YES           Crittenden, Walton         22.442         808         12/29/2022         39.108         13.661         NO         0.338         1.038         YES           Crestview Hills         12.875         892         11/11/2019         67.686         72.747         YES         0.416         0.168         NO           Covington, Park Hills         10.55         778         7/6/2022         325.888         348.043         YES         0.956         0.632         NO           Wilder & Covington         19.866         1,226         12/29/2022         140.067         234.100         YES         0.956         0.632         NO           Wilder, Southgate, Ft. Thomas         13.646         1,613         12/29/2022         104.461         91.476         NO         0.637         0.755         YES											
Crittenden, Walton22.44280812/29/202239.10813.661NO0.3381.038YESCrestview Hills12.87589211/1/1/201967.68672.747YES0.4160.168NOCovington, Park Hills10.557787/6/2022325.888348.043YES1.3342.490YESWilder & Covington19.8861,22612/29/2022140.067234.100YES0.9560.632NOWilder, Southgate, Ft. Thomas13.6461,61312/29/2022104.46191.476NO0.6370.755YES											
Crestview Hills         12.875         892         11/11/2019         67.686         72.747         YES         0.416         0.168         NO           Covington, Park Hills         10.55         778         7/6/2022         325.888         348.043         YES         1.334         2.490         YES           Wilder & Covington         19.886         1,226         12/29/2022         140.067         234.100         YES         0.956         0.632         NO           Wilder, Southgate, Ft. Thomas         13.846         1,613         12/29/2022         104.461         91.476         NO         0.637         0.755         YES											
Covington, Park Hills         10.55         778         7/6/2022         325.888         348.043         YES         1.334         2.490         YES           Wilder & Covington         19.886         1,226         12/29/2022         140.067         234.100         YES         0.956         0.632         NO           Wilder, Southgate, Ft. Thomas         13.646         1,613         12/29/2022         104.461         91.476         NO         0.637         0.755         YES											
Wilder & Covington         19.886         1,226         12/29/2022         140.067         234.100         YES         0.956         0.632         NO           Wilder, Southgate, Ft. Thomas         13.646         1,613         12/29/2022         104.461         91.476         NO         0.637         0.755         YES		-									
Wilder, Southgate, Ft. Thomas         13.646         1,613         12/29/2022         104.461         91.476         NO         0.637         0.755         YES											
Southgate 13.601 1,839 10/18/2022 56.263 83.399 YES 0.458 0.431 NO											

#### Duke Energy Kentucky Reliability Report and Vegetation Management ADE SECRET Exhibit A

## CONFIDENTIAL PROPRIETARY TRADE SECRET

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SUBSTATION - CIRCUIT	<b>CI C C C C C C C C C C</b>			PERCENT OF TOTAL	
	CIRCUIT NAME	CIRCUIT ID	OUTAGE CAUSE	OUTAGE MINUTES	CORRECTIVE ACTION PLAN All of the Equipment Failure outage minutes are due to one event in which all three fuses failed on pole 21BN-252. The fuses were
AERO - H9323060041	AERO	H9320860041	20 Equipment failure	100.00%	replaced at the time of the event. No further action is required.
				100%	All of the Other Cause outage minutes were due to one event when the circuit breaker was delayed when closing in to pick up the
ATLAS - H9321700041	ATLAS	H9321700041	28 Other Cause	42.86%	In or the units characterized in matters were used to units event were in units users or was observed wires characterized in the phase outage minuters event when the fuse operated. All of the Vegetation outage minuters server, all of the Unknown Cause outage minuters event when the fuse operated. All of the Vegetation outage minuters were from one event due to a tree limb on the line. All equipment was repaired and/or replaced a the time of the restorations. No further action is required. This circuit was last trimmed in 2021.
			03 Vegetation	26.96%	
			EA Weather	0.07%	
			03 Vegetation 09 Public Accident/Damage	89.09%	The majority of the Vegetation outage minutes were from one event when a large oak trea limb, with internal stem decay, fell across all 3 phases at pole 508H-470 causing the circuit to lockout. All damaged equipment was replaced at the time of restoration. No further action is required. This circuit was last trimmed in 2022.
			19 Lightning strike	2.65% 2.58%	
BEAVER - H9320860041	BEAVER	H9320860041	20 Equipment failure 28 Other Cause	2.11% 1.35%	
			05 Planned (IEEE) 11 Unknown Cause	1.21%	
			04 Wildlife	0.11%	
			EA Weather	0.07%	
			03 Vegetation	94.14%	All of the Vegetation outage minutes were from two events that occurred on the same day due to a dead ash tree branch that fe across all three phases, at piece CA-5100, causing the circuit toreaker to lockout. All damaged equipment was replaced at the tim of restoration and any remaining haard tree limbs were removed following the event. No further action is required. This circuit was last trimmed in 2020.
BELLEVUE - H9321310044	BELLEVUE	H9321310044	EA Weather 28 Other Cause	2.57%	
			05 Planned (IEEE)	0.85%	
			09 Public Accident/Damage 04 Wildlife	0.21%	
			20 Equipment failure 19 Lightning strike	0.14%	
		I		100%	All of the Dispond outside migutes were from one quant to conjude a transformer. All of the Weather outside migutes organized du
BUFFINGTON - H9320670043	BUFFINGTON	H9320670043	05 Planned (IEEE) EA Weather	72.03%	All of the Planned outage minutes were from one event to replace a transformer. All of the Weather outage minutes occurred du to an unknown fault on an underground transformer. The equipment was investigated and no issues were found. No further act is required.
				100%	The majority of the Vegetation and Weather outage minutes were from multiple events that occurred on 6/8 and 6/9. The major
			03 Vegetation	75.24%	of these events involved trees on the lines. All damaged equipment was replaced at the time of restoration. No further action is
BUFFINGTON - H9320670045	BUFFINGTON	H9320670045	EA Weather	14.22%	required. This circuit was trimmed in 2020.
			20 Equipment failure 05 Planned (IEEE)	6.75% 2.79%	
		04 Wildlife 19 Lightning strike	0.94%		
		19 Lighthing strike	100%		
			20 Equipment failure	63.38%	The majority of the Equipment Failure minutes were from one event caused by a failed copper hand tie located on the top insular of ople K116-101. The Vegetation outgen invites were from multiple events that occurred due to tres on the lines. All of the damaged equipment was repaired or replaced at the time of the restoration. No further action is required. This circuit was trimmed in 2020.
			03 Vegetation 09 Public Accident/Damage	19.98% 5.80%	
BUFFINGTON - H9320670047	BUFFINGTON	H9320670047	28 Other Cause	5.30%	
			05 Planned (IEEE) 04 Wildlife	4.06%	
			EA Weather	0.35%	
			11 Unknown Cause 09 Public Accident/Damage	0.02%	
CLARYVILLE - H9321470043	CLARYVILLE	H9321470043	EA Weather	100% 100.00% 100%	All of the Weather outage minutes were from one event that occurred when a circuit breaker locked out due to an unknown fault The equipment was investigated and no issues were found. No further action is required.
			09 Public Accident/Damage	91.17%	All of the Public Accident/Damage outage minutes were from one event that required the replacement of pole 9BN-141. All
CONSTANCE - H9320420041	CONSTANCE	H9320420041	11 Unknown Cause	8.00%	damaged equipment was replaced at the time of restoration. No further action is required.
			20 Equipment failure	0.83%	
CONSTANCE - H9320420044	CONSTANCE	H9320420044	03 Vegetation	87.69%	All of the Vegetation outage minutes were from one event that occurred due to the neutral wire being knocked down by a tree, at pole 2184-98. All damaged equipment was replaced at the time of restoration and any remaining hazard tree limbs were removed following the event. The Planned outage minutes were from one event that occurred to change out a pad mount transformer from a live front to a dead front design. No further action is required. This circuit to was last trimmed in 2021.
1			05 Planned (IEEE)	10.011	
			05 Planned (IEEE) 04 Wildlife	10.91% 1.40%	
			04 Wildlife 09 Public Accident/Damage	1.40% 100% 66.81%	The majority of the Public Accident/Damage outage minutes were from one event when a vehicle hit and broke pole K31-1247. of the Planned outage minutes were due to scheduled conductor, pole & other equipment changeout. All equipment has been reglaced. No furth action is required.
COVINGTON - H9322170042	COVINGTON	H9322170042	04 Wildlife	1.40% 100%	of the Planned outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been
COVINGTON - H9322170042	COVINGTON	H9322170042	04 Wildlife 09 Public Accident/Damage 05 Planned (IEEE) 20 Equipment failure 04 Wildlife	1.40% 100% 66.81% 23.96% 5.88% 3.26%	of the Planned outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been
COVINGTON - 19322170042	COVINGTON	H9322170042	04 Wildlife 09 Public Accident/Damage 05 Planned (IEEE) 20 Equipment failure	1.40% 100% 66.81% 23.96% 5.88%	of the Planned outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.
COVINGTON - H9322170042 CRESCENT - H9320700041	COVINGTON	H9322170042 H9320700041	04 Wildlife 09 Public Accident/Damage 05 Planned (IEEE) 12 Squipment failure 12 Squipment failure 28 Other Cause 03 Vegetation	1.40% 100% 66.81% 23.96% 5.88% 3.26% 0.09% 100% 50.46%	of the Planned outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.
			04 Wildlife 09 Public Accident/Damage 09 Public Accident/Damage 05 Planned (IEEE) 12 Equipment Inlure 04 Wildlife 28 Other Cause 03 Vegetation EA Weather 20 Equipment failure	1.40% 100% 66.81% 23.95% 5.88% 3.26% 0.09% 100% 50.46% 22.99% 18.44%	of the Planned outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.
			04 Wildlife 09 Public Accident/Damage 09 Public Accident/Damage 05 Phaned (IEEE) 20 Equipment failure 04 Wildlife 28 Other Cause 03 Vegetation EA Weather 20 Suppment failure 04 Wildlife	1.40% 100% 66.81% 2.2.96% 5.88% 3.26% 0.09% 100% 50.46% 50.46% 22.99% 18.44% 7.30%	replaced. No further action is required.  All of the Vegetation outage minutes were from multiple events throughout the year. The majority of the Weather outage minutes were from multiple events throughout the year. The majority of the Weather outage minutes were from event that caused a reducer to lock out. The majority of the Equipment Failure outage minutes were from event due to also duerground calls. In all damaged equipment was replaced at the time of restoration. No further action is
			04 Wildlife 09 Public Accident/Damage 09 Public Accident/Damage 05 Planned (IEEE) 12 Equipment Inlure 04 Wildlife 28 Other Cause 03 Vegetation EA Weather 20 Equipment failure	1.40% 100% 66.81% 23.95% 5.88% 3.26% 0.09% 100% 50.46% 22.99% 18.44%	of the Planned outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.
			04 Wildlife       09 Public Accident/Damage       05 Public Accident/Damage       05 Pianned (EEE)       20 Equipment failure       04 Wildlife       28 Other Cause       03 Vegetation       12 Equipment failure       03 Vegetation	1.40% 1.00% 66.81% 23.96% 5.88% 3.26% 0.09% 100% 50.46% 22.99% 18.44% 7.30% 0.81% 42.46%	of the Planned outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.
			04 Wildlife 09 Public Accident/Damage 09 Public Accident/Damage 05 Planned (EEE) 120 Equipment failure 120 Suppresent failure 28 Other Cause 03 Vegetation EA Weather 128 Other Cause 03 Vegetation 04 Vegetation 05	1.40% 1.00% 66.81% 23.96% 5.88% 3.26% 0.09% 100% 50.46% 22.99% 18.44% 7.30% 0.81% 100% 42.46% 42.46%	of the Planned outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.  All of the Vegetation outage minutes were from multiple events throughout the year. The majority of the Weather outage minutes were from one event that caused a redoser to lock out. The majority of the Equipment Tailure outage minutes were from one event due to a bad underground calks. All damaged equipment was replaced at the time of restoration. No further action is required. This dircuit is scheduled to be trimmed in 2023.  The majority of the Vegetation outage minutes were from one event when a large maple tree uprooted and fell across all three phases, breaking one evend childing out accidentizer. All of the Public Accident/Damage outage minutes were from one event due to a bad scheduled to be trimmed in 2023.
CRESCENT - H9320700041	CRESCENT	H9320700041	04 Wridite       09 Public Accident/Damage       05 Planed (IEEE)       20 Equipment failure       04 Wridite       28 Other Cause	1.40% 100% 66.81% 2.3.96% 5.88% 3.26% 0.09% 100% 50.46% 22.99% 18.44% 0.81% 0.81% 100%	of the Planned outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.  All of the Vegetation outage minutes were from multiple events throughout the year. The majority of the Weather outage minutes were from one event that caused a redoser to lock out. The majority of the Equipment Failure outage minutes were from one event due to a bad underground calks. All damaged equipment was replaced at the time of restoration. No further action is required. This dircuit is scheduled to be trimmed in 2023.  The majority of the Vegetation outage minutes were from one event when a large maple tree uprooted and fell across all three phases, threaking one evend changed equipments are to the Public Accident/Damage outage minutes were from one event due to a bad before and locking out a sectionalizer. All of the Public Accident/Damage outage minutes were from one event due to a vehich hitting pole (X7-36 causing the cross min to break. All damaged equipment was replaced at the time of phases, threaking one event due to aveid on thit pole (X7-36 causing the cross and to break. This maged equipment was replaced at the time of phases. The schedule this pole (X7-36 causing the cross and to break. All damaged equipment was replaced at the time of phases. The schedule that pole (X7-36 causing the cross and to break. All damaged equipment was replaced at the time of phases. The schedule the pole (X7-36 causing the cross and to break. All damaged equipment was replaced at the time of phases. The schedule to phase the phase cross phase the time of phases. The schedule the phase changed equipment was replaced at the time of phases. The schedule the phase changed equipment was replaced at the time of phases. The schedule the phase changed equipment was replaced at the time of phases. The schedule the phase changed equipment was replaced at the time of phases. The schedule the phase changed equipment was replaced at the time of phas
CRESCENT - H9320700041	CRESCENT	H9320700041	04 Widlife     09 Public Accident/Damage     05 Public Accident/Damage     05 Planned (IEEE)     20 Equipment failure     20 Widlife     28 Other Cause     28 Other Cause     20 Equipment failure     20 Equipment failure     20 Style Cause     30 Vegetation     99 Public Accident/Damage     20 Equipment failure     20 Style Accident/Damage     20 Equipment failure     20 A Widlife     28 Other Cause	1.40% 100% 66.81% 23.96% 5.88% 3.76% 0.09% 50.46% 22.99% 18.44% 7.85% 42.46% 31.41% 9.14% 6.22% 4.98%	of the Planned outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.  All of the Vegetation outage minutes were from multiple events throughout the year. The majority of the Weather outage minutes were from one event that caused a redoser to lock out. The majority of the Equipment Failure outage minutes were from one event due to a bad underground calks. All damaged equipment was replaced at the time of restoration. No further action is required. This dircuit is scheduled to be trimmed in 2023.  The majority of the Vegetation outage minutes were from one event when a large maple tree uprooted and fell across all three phases, threaking one evend changed equipments are to the Public Accident/Damage outage minutes were from one event due to a bad before and locking out a sectionalizer. All of the Public Accident/Damage outage minutes were from one event due to a vehich hitting pole (X7-36 causing the cross min to break. All damaged equipment was replaced at the time of phases, threaking one event due to aveid on thit pole (X7-36 causing the cross and to break. This maged equipment was replaced at the time of phases. The schedule this pole (X7-36 causing the cross and to break. All damaged equipment was replaced at the time of phases. The schedule that pole (X7-36 causing the cross and to break. All damaged equipment was replaced at the time of phases. The schedule the pole (X7-36 causing the cross and to break. All damaged equipment was replaced at the time of phases. The schedule to phase the phase cross phase the time of phases. The schedule the phase changed equipment was replaced at the time of phases. The schedule the phase changed equipment was replaced at the time of phases. The schedule the phase changed equipment was replaced at the time of phases. The schedule the phase changed equipment was replaced at the time of phases. The schedule the phase changed equipment was replaced at the time of phas
CRESCENT - H9320700041	CRESCENT	H9320700041	04 Widlife       09 Public Accident/Damage       05 Public Accident/Damage       05 Planned (EEE)       20 Equipment failure       04 Widlife       28 Other Cause         03 Vegetation       EA Weather       20 Equipment failure       04 Widlife       28 Other Cause         03 Vegetation         04 Widlife       20 Equipment failure       04 Widlife       20 Separation       21 Equipment failure       04 Widlife       20 Separation	1.40% 1.40% 66.81% 23.96% 5.88% 3.26% 0.09% 50.46% 22.99% 18.44% 7.30% 0.61% 42.46% 31.41% 9.14% 6.22% 4.98% 1.62% 0.06%	of the Planned outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.  All of the Vegetation outage minutes were from multiple events throughout the year. The majority of the Weather outage minutes were from one event that caused a redoser to lock out. The majority of the Equipment railure outage minutes were from nee event due to a lad underground calks. All damaged equipment was replaced at the time of restoration. No further action is required. This circuit is scheduled to be trimmed in 2023.  The majority of the Vegetation outage minutes were from one event when a large maple tree uprooted and fell across all three phases, threaking one evend changed equipments was replaced at the time of restoration. No further action is required. This circuit is scheduled to be trimmed in 2023.  The majority of the Vegetation outage minutes were from one event when a large maple tree uprooted and fell across all three phases, threaking one calked for causing the cross and to break. All damaged equipment was replaced at the time of event due to a vehich httring pole (X7-36 causing the cross and to break. All damaged equipment was replaced at the time of the majority of the Vegetation outage minutes were from one event when a large maple tree uprooted and fell across all three phases. Intervalsing one context and locking out a sectionalizer. All of the Public Accident/Public Accident/Public Accident/Public Public Accident/Public Public Accident Public Public Accident Public Public Accident Public P
CRESCENT - H9320700041	CRESCENT	H9320700041	04 Wildlife       09 Public Accident/Damage       05 Public Accident/Damage       05 Pianned (EEE)       20 Equipment failure       04 Wildlife       28 Other Cause       03 Vegetation       20 Equipment failure       04 Wildlife       20 Equipment failure       03 Vegetation       03 Vegetation       05 Public Accident/Damage       20 Equipment failure       04 Wildlife       15 Komedher       20 Equipment failure       04 Wildlife       15 Wender Cause	1.40% 1.40% 66.81% 23.96% 5.88% 3.26% 0.09% 100% 50.46% 22.99% 18.44% 7.30% 0.81% 100% 42.46% 42.46% 43.14% 9.14% 6.22%	of the Planned outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.  All of the Vegetation outage minutes were from multiple events throughout the year. The majority of the Weather outage minutes were from one event that caused a redoser to lock out. The majority of the Equipment Tailure outage minutes were from one event due to a bad underground calks. All damaged equipment was replaced at the time of restoration. No further action is required. This dircuit is scheduled to be trimmed in 2023.  The majority of the Vegetation outage minutes were from one event when a large maple tree uprooted and fell across all three phases, breaking one evend childing out accidentizer. All of the Public Accident/Damage outage minutes were from one event due to a bad scheduled to be trimmed in 2023.
CRESCENT - H9320700041	CRESCENT	H9320700041	04 Widlife       09 Public Accident/Damage       05 Planned (EEE)       20 Equipment failure       24 Widlife       23 Other Cause         03 Vegetation       EA Weather       20 Equipment failure       04 Widlife       23 Other Cause         03 Vegetation       04 Widlife       28 Other Cause         03 Vegetation       04 Widlife       28 Other Cause         03 Vegetation       04 Widlife       28 Other Cause       20 Equipment failure       04 Widlife       28 Other Cause       29 Fublic Accident/Damage       20 Equipment failure       24 Widlife       28 Other Cause       39 Fublic Accident/Cause       39 Fublic Accident/Cause       30 Wegetation       20 Equipment failure       20 Equipment failure       20 Equipment failure	1.40% 1.40% 66.81% 66.81% 5.88% 3.26% 0.09% 100% 50.46% 22.99% 18.44% 7.30% 0.81% 100% 42.46% 42.46% 13.41% 9.14% 6.22% 4.95% 1.62% 0.06% 0.06% 0.02% 100%	of the Planed outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.
CRESCENT - H9320700041 CRESCENT - H9320700043	CRESCENT	H9320700041 H9320700043	04 Wildlife       09 Public Accident/Damage       05 Planned (IEEE)       20 Equipment failure       04 Wildlife       28 Other Cause         03 Vegetation       20 Equipment failure       04 Wildlife       28 Other Cause         03 Vegetation       04 Wildlife       20 Equipment failure       04 Wildlife       20 Equipment failure       04 Wildlife       28 Other Cause         03 Vegetation       09 Public Accident/Damage       20 Equipment failure       04 Wildlife       24 Wither Cause         03 Vegetation       09 Public Accident/Damage       20 Equipment failure       04 Wildlife       24 Wother Cause         05 Filanned (IEEE)       19 Lightmg strike       11 Unknown Cause	1.40% 1.40% 66.81% 66.81% 5.88% 0.09% 100% 50.46% 22.99% 18.44% 7.30% 0.81% 100% 42.46% 42.46% 31.41% 9.14% 6.22% 4.08% 4.08% 4.08% 1.02% 0.02% 100%	of the Planed outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.
CRESCENT - H9320700041 CRESCENT - H9320700043	CRESCENT	H9320700041 H9320700043	04 Widlife       09 Public Accident/Damage       05 Planned (IEEE)       20 Equipment failure       04 Widlife       28 Other Cause         03 Vegetation       04 Widlife       20 Other Cause         03 Vegetation       04 Widlife       20 Equipment failure       20 A Widlife       20 Supprent failure       20 A Widlife       20 Supprent failure       20 A Widlife       28 Other Cause       03 Vegetation       09 Fublic Accident/Damage       20 Supprent failure       20 A Widlife       20 Supprent failure       21 Untrown Cause       22 Equipment failure       20 Equipment failure       20 Equipment failure       21 Untrown Cause       22 Equipment failure       23 Vegetation       23 Public Accident/Damage	1.40% 10% 66.81% 23.96% 5.88% 3.26% 0.09% 50.46% 22.99% 18.44% 7.30% 0.81% 0.81% 42.46% 42.46% 31.41% 9.14% 6.22% 4.98% 100% 84.10% 10.78% 3.00%	of the Planed outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.
CRESCENT - H9320700041 CRESCENT - H9320700043	CRESCENT	H9320700041 H9320700043	04 Widlife       09 Public Accident/Damage       05 Planned (EEE)       20 Equipment failure       24 Widlife       28 Other Cause       03 Vegetation       24 Widlife       28 Other Cause       29 Equipment failure       20 Equipment failure       20 Equipment failure       20 Equipment failure       23 Other Cause       03 Vegetation       03 Vegetation       29 Fublic Accident/Damage       20 Equipment failure       24 Widlife       28 Other Cause       29 Fublic Accident/Comage       20 Segration       29 Fublic Accident/Comage       20 Sequence failure       24 Widlife       28 Other Cause       39 Fublic Accident/Comage       20 Equipment failure	1.40% 1.40% 66.81% 66.81% 2.3.96% 5.88% 0.09% 100% 50.46% 22.99% 18.44% 7.30% 0.61% 42.46% 42.46% 100% 42.46% 0.61% 0.02% 0.05% 0	of the Planed outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.
CRESCENT - H9320700041 CRESCENT - H9320700043	CRESCENT	H9320700041 H9320700043	04 Widlife       09 Public Accident/Damage       05 Planned (IEEE)       20 Equipment failure       04 Widlife       28 Other Cause         03 Vegetation       04 Widlife       28 Other Cause         03 Vegetation       04 Widlife       28 Other Cause       20 Equipment failure       10 Jupting tikke       11 Unknown Cause       20 Equipment failure       03 Vegetation       03 Vegetation       03 Vegetation       03 Vegetation       03 Vegetation	1.40% 1.40% 66.81% 66.81% 2.3.96% 5.88% 0.09% 100% 50.46% 22.99% 18.44% 7.30% 0.81% 100% 42.46% 42.46% 0.51% 0.95% 10.78% 1.07% 1	of the Planed outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.
CRESCENT - H9320700041 CRESCENT - H9320700043 CRESCENT - H9320700045	CRESCENT	H9320700041 H9320700043 H9320700045	04 Widlife       09 Public Accident/Damage       05 Planned (EEE)       20 Equipment failure       04 Widlife       28 Other Cause       03 Vegetation       28 Other Cause       29 Public Accident/Damage       20 Vegetation       28 Other Cause       28 Other Cause       29 Public Accident/Damage       20 Vegetation       29 Public Accident/Damage       20 Sequement failure	1.40% 100% 66.81% 23.96% 5.88% 3.26% 0.09% 100% 50.46% 22.99% 18.44% 18.44% 0.05% 0.81% 0.05% 42.46% 1.62% 4.08% 1.62% 0.06% 0.06% 0.06% 0.06% 1.62% 4.98% 1.62	of the Planed outage minutes were due to scheduled conductor, pole & other equipment changeouts. All equipment has been replaced. No further action is required.
CRESCENT - H9320700041 CRESCENT - H9320700043 CRESCENT - H9320700045	CRESCENT	H9320700041 H9320700043 H9320700045	04 Wildlife       09 Public Accident/Damage       05 Planned (IEEE)       20 Splanned (IEEE)       20 Suppresent Inlure       04 Wildlife       28 Other Cause         03 Vegetation       04 Wildlife       28 Other Cause         03 Vegetation       04 Wildlife       12 Other Cause       13 Unknown Cause       03 Vegetation       03 Vegetation       03 Vegetation       03 Vegetation       03 Vegetation       12 Other Cause	1.40% 1.40% 66.81% 66.81% 23.96% 5.88% 0.09% 100% 50.46% 22.99% 18.44% 7.30% 0.81% 100% 42.46% 42.46% 42.46% 0.81% 0.61% 0.65% 0.05% 0.05% 100% 100% 84.10% 1.44% 0.69% 1.00% 1.44% 0.69% 1.00% 1.00% 1.44% 1.00% 1.00% 1.44% 1.00% 1.00% 1.00% 1.44% 1.00% 1.00% 1.00% 1.44% 1.00% 1.00% 1.00% 1.00% 1.44% 1.00% 1.0	of the Planed outage minutes were flow on within the sevent when a large majority of the Vegetation outage minutes were from one event when a large majority of the Vegetation outage minutes were from one event were form the sevent were large majority of the Sevent was replaced at the time of restoration. No further action is required.  The majority of the Vegetation outage minutes were from one event when a large major two replaced at the time of restoration. No further action is required. The majority of the Vegetation outage minutes were from one event when a large major was replaced at the time of restoration. No further action is required. The majority of the Vegetation outage minutes were from one event when a large major two reups of the large majority of the Vegetation outage minutes were from one event when a large major two reups of the large major the time of restoration. No further action is required. The majority of the Vegetation outage minutes were from one event when a large major two reups of the large major the time of restoration. No further action is required. The majority of the Vegetation outage minutes were from one event when a large major the uproted and fell across all three plases, breading one conductor and locking out a sectionalizer. All of the rholic Accident/Damage outage minutes were from one event when a large major the uproted and fell across all three plases. No further action is required. The majority of the Vegetation outage minutes were from one event when a recloser failed due to a battery issue. All of the function is required in a cable tester. All damaged equipment was replaced at the time of extoration. No further action is required. The majority of the Equipment Failure outage minutes were from one event when a recloser failed due to a battery issue. All of the function is required what cable tester. All damaged equipment was replaced at the time of restoration. No further action is required. The majority of the Vegetation outage minutes occurred during high winds on

# Duke Energy Kentucky<br/>Reliability Report and Vegetation ManagementCONFIDENTIAL PROPRIETARY TRADE SECRETFor Calendar Year 2022<br/>Exhibit A<br/>Page 5 of 7

					1 "50
DECORSEY - H9322990041	DECORSEY	H9322990041	20 Equipment failure	55.85%	The majority of the Equipment Failure outage minutes were from one event that occurred due to a circuit breaker at the Wilder substation tripping offline due to a low 5F6 gar reading. All of the Public Accident/Danage outage minutes were from one event due to a vehicle hitting the guy wire on pole 11X-1229 that resulted in the phases slapping together and locking out two of the phases. All damaged equipment was replaced at the time of restoration. No further action is required.
	DECOIDE!	10041	09 Public Accident/Damage	36.28%	· · · · · · · · · · · · · · · · · · ·
			11 Unknown Cause	3.75%	
			03 Vegetation 04 Wildlife	2.41%	
		J	U4 Wildlife	1.71%	
			09 Public Accident/Damage	84.20%	The majority of the Public Accident/Damage outage minutes were from one event that occurred due to a dig-in that required a cable to be replaced. All damaged equipment was replaced at the time of restoration. No further action is required.
DIXIE - H9320890041	DIXIE	H9320890041	04 Wildlife	8.66%	
			20 Equipment failure 05 Planned (IEEE)	4.83%	
			28 Other Cause	0.89%	
	T	T		100%	
DIXIE - H9320890042	DIXIE	H9320890042	EA Weather	79.65%	All of the Weather outage minutes were from one event that occurred due to a tree on the line. The Planned outage minutes were from two events scheduled to register transformers that had reached the end of life. All damaged equipment was replaced at the time of restoration. No further action is required.
			05 Planned (IEEE) 09 Public Accident/Damage	14.62% 4.02%	
			11 Unknown Cause	1.72%	
			28 Other Cause	100% 80.85%	All of the Other Cause outage minutes were from one event with an unknown fault that caused a sectionalizer to lock out. All of th Equipment Failure outage minutes were from one event that occurred due to a cable down at pole 13K-157. All damaged
DIXIE - H9320890045	DIXIE	H9320890045			equipment was replaced at the time of restoration. No further action is required.
			20 Equipment failure 05 Planned (IEEE)	15.60% 2.10%	
			04 Wildlife	1.46%	
	T	T		100%	
			05 Planned (IEEE)	87.01%	All of the Planned outage minutes were from one event scheduled to replace a cross arm on pole 31BN-717. All of the Other Caus outage minutes were from one event when a recloser box was opened and operated by an unknown person. No further action is
DIXIE - H9320890046	DIXIE	H9320890046			required.
		L	28 Other Cause	12.99% 100%	
				100%	
			20 Equipment failure	97.37%	The majority of the Equipment Failure outage minutes were from two events that resulted from bad underground cables. All damaged equipment was replaced at the time of restoration. No further action is required.
DONALDSON - H9320550041	DONALDSON	H9320550041	05 Planned (IEEE)	1.82%	
			04 Wildlife	0.80%	
		L	28 Other Cause	0.02%	
	1			100%	
DONALDSON - H9320550043 DONALDSON	H9320550043	09 Public Accident/Damage	80.46%	All of the Public Accident/Damage outage minutes were from multiple events due to public vehicles hitting poles. All of the Vegetation outage minutes were from one event that occurred due to a treat limb on the primary cable at pole 22104 533. All damaged equipment was replaced at the time of restoration. No further action is required. This circuit was last trimmed in 2220.	
			20 Equipment failure	0.11%	
			28 Other Cause	0.01%	
		L	04 Wildlife	0.01%	
		T		100%	All of the Public Accident/Damage outage minutes were from one event that resulted in a blown fuse. All of the Wildlife outage
DONALDSON - H9320550045	DONALDSON	H9320550045	09 Public Accident/Damage	52.20%	minutes were from one event that resulted in a blown fuse. All fuses were replaced at the time of restoration. No further action is
bonaccion histossons	DONALDSDIN	115526556645	04 Wildlife	47.80%	required.
	1	04 Wildlife	47.80%		
		09 Public Accident/Damage	91.26%	The majority of the Public Accident/Damage outage minutes were from one event due to a vehicle hitting and breaking pole K105- 116 that caused the phases to slap together and the circuit breaker to lock out. All damaged equipment was replaced at the time- restoration. No further action is required.	
DONALDSON - H9320550046	DONALDSON	DONALDSON H9320550046	28 Other Cause	4.07%	
			04 Wildlife 05 Planned (IEEE)	3.39%	
			20 Equipment failure	0.31%	
		L	03 Vegetation	0.02%	
DONALDSON - H9320550047	DONALDSON	H9320550047	05 Planned (IEEE)	56.40%	All of the Planned outage minutes were from one event scheduled to replace four underground transformers. All of the Equipment Failure outage minutes were from one event due to defective potheads at pole BNK-6447. All damaged equipment was replaced a
			20 Equipment failure	43.60%	the time of restoration. No further action is required.
				100%	
DONALDSON - H9320550048	DONALDSON	H9320550048	03 Vegetation	53.04%	The majority of the Vegetation outage minutes were from one event due to a down wire. All of the Planned outage minutes were from two events. One event was a live front pad mount change out and the other event was for a load swap. The majority of the Wildlife outage minutes were from one event that resulted in fuse replacement. All damaged equipment was replaced at the time of restoration. No further action is required. This circuit was last trimmed in 2021.
			05 Planned (IEEE)	35.11%	
			04 Wildlife	10.36%	
		L	20 Equipment failure	1.49%	
		1			All of the Equipment Failure outage minutes were from two events. One of the events was due to a failed jumper and the other
DRY RIDGE - H9321090043	DRY RIDGE	H9321090043	20 Equipment failure	100.00%	event was due to defective overhead transformer. All damaged equipment was replaced at the time of restoration. No further
	I	L			
				100%	action is required.
			03 Vegetation	100%	action is required. The majority of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unfused top at pole 368N-390. All of the Other Clause outage minutes were from two events resulting in the same phase A recorder locking out. All of the Unknown Clause outage minutes were from one event due to a phase A recorder locking out.
EMPIRE - H9322890041	EMPIRE	H9322890041	28 Other Cause	52.41% 25.68%	action is required. The majority of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unfused tag at pole 56BN-300. All of the Other Cause outage minutes were from two events resulting in the sam phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of there unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out.
EMPIRE - H9322890041	EMPIRE	H9322890041	28 Other Cause 11 Unknown Cause	52.41% 25.68% 13.52%	action is required. The majority of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unfused tag at pole 568N-300. All of the Other Cause outage minutes were from two events resulting in the same phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of there unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out the site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of
EMPIRE - H9322890041	EMPIRE	H9322890041	28 Other Cause 11 Unknown Cause 20 Equipment fallure	52.41% 25.68%	action is required. The majority of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unfused tag at pole 56BN-300. All of the Other Cause outage minutes were from two events resulting in the sam phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of there unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out.
EMPIRE - H9322890041	EMPIRE	H9322890041	28 Other Cause 11 Unknown Cause 20 Equipment failure 05 Planned (IEEE) 19 Lightning strike	52.41% 25.68% 13.52% 7.10% 0.89% 0.22%	action is required. The majority of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unfused tag at pole 56BN-300. All of the Other Cause outage minutes were from two events resulting in the sam phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of there unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out.
EMPIRE - H9322890041	EMPIRE	H9322890041	28 Other Cause 11 Unknown Cause 20 Equipment failure 05 Planned (IEE) 19 Uightning strike 09 Public Accident/Damage	52.41% 25.68% 13.52% 7.10% 0.89% 0.22% 0.11%	action is required. The majority of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unfused tag at pole 568N-300. All of the Other Cause outage minutes were from two events resulting in the same phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of there unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out the site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of
EMPIRE - H9322890041	EMPIRE	H9322890041	28 Other Cause 11 Unknown Cause 20 Equipment failure 05 Planned (IEEE) 19 Lightning strike	52.41% 25.68% 13.52% 7.10% 0.89% 0.22% 0.11% 0.07%	action is required. The majority of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unfused tag at pole 568N-300. All of the Other Cause outage minutes were from two events resulting in the same phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of there unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out the site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of the phase A recloser is under further investigation as it is a site of
			28 Other Cause 11 Unknown Cause 20 Equipmen Talaure 05 Planned (IEEE) 19 Lightnig strike 09 Public Accident/Damage 04 Wildlife	52.41% 25.68% 13.52% 7.10% 0.89% 0.22% 0.07% 100%	action is required. The enginity of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on a unified tag at 2004 390, all of the Other Cause outage minutes were from two events resulting in the sam phase A recioser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recioser locking ou All damaged equipment was regioned, a new cut out was installed, and the phase A recioser is under further investigation as it is a repeat offender. This circuit is scheduled to be trimmed in 2023.
EMPIRE - H9322890041 FLORENCE - H9322410041	EMPIRE	H9322890041 H9322410041	28 Other Cause 11 Unknown Cause 20 Equipment failure 05 Planned (IEE) 19 Uightning strike 09 Public Accident/Damage	52.41% 25.68% 13.52% 7.10% 0.89% 0.22% 0.11% 0.07% 100%	action is required. The majority of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unfused page topic 360k-350k. All of the Other Clause outage minutes were from two events resulting in the same phase A recloser focking out. All of the Uninnov Clause outage minutes were from one event due to a phase A recloser locking out. All of angle events resulting in the same phase A recloser is under further investigation as its a repeat offender. This circuit is scheduled to be trimmed in 2023.
			28 Other Cause 11 Unknown Cause 20 Equipmen Talaure 05 Planned (IEEE) 19 Lightnig strike 09 Public Accident/Damage 04 Wildlife	52.41% 25.68% 13.52% 7.10% 0.89% 0.22% 0.07% 100%	action is required. The majority of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unfused tap at pole 368N-300. All of the Other Cause outage minutes were from two events resulting in the same phase A rector locking out. All of the Unionon Cause outage minutes were from one event due to a phase A rectorer locking out. All of the Unionon Cause outage minutes were from one event due to a phase A rectorer locking out. All of anged equipment was replaced, a new out out was installed, and the phase A rectorer is under further investigation as it is a repeat offender. This circuit is scheduled to be trimmed in 2023. All of the Equipment Fallure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.
FLORENCE - H9322410041	FLORENCE	H9322410041	28 Other Cause 11 Unknown Cause 20 Equipmen Talaure 05 Planned (IEEE) 19 Lightnig strike 09 Public Accident/Damage 04 Wildlife	52.41% 25.68% 13.52% 7.10% 0.89% 0.22% 0.11% 0.07% 100%	action is required. The majority of the Vagetation outage minutes were from one event due to a live tree link bortacting and braining a downstream plase A recloser locking out. All of the Utilson Cauce outage minutes were from one event due to a live tree link outacting and braining a downstream plase A recloser locking out. All of the Utilson Cauce outage minutes were from one event due to a plase A recloser locking out. All domaged equipment ser signable a new out out wais installed; and the phase A recloser is under further investigation as it is a repeat offender. This circuit is scheduled to be trimmed in 2023.  All of the Equipment Failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.  The majority of the Equipment Failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.
			28 Other Cause 11 Unknown Cause 13 Unknown Cause 26 Fquyament faller 26 Fquyament faller 20 Fquify Accident/Dumage 20 Equipment failure 20 Equipment failure 09 Public Accident/Dumage	52.41% 25.68% 13.52% 7.10% 0.22% 0.11% 0.07% 100% 100% 53.41% 20.06%	action is required. The majority of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unused tap at pole 368N-300. All of the Other Cause outage minutes were from two events resulting in the same phase A rectore locking out. All of the Unionon Cause outage minutes were from new event to a phase A rectorer locking out. All of the Unionon Cause outage minutes were from one event to a phase A rectorer locking out. All of the Unionon Cause outage minutes were from one event due to a phase A rectorer locking out. All of the Unionon Cause outage minutes were from one event due to a phase A rectorer locking out. All of the faulter outage minutes were from one event due to a base to a short A rectorer locking out. All of the faulterent Failure outage minutes were from one event due to a base which ing module. All damaged equipment was replaced at the time of restoration. No further action is required. The majority of the Equipment Failure outage minutes were from one event due to a base were from one event that resulted in a B phase to ground fault that caused a circuits treaker to lock out. All and peduated under greater of meters of mone event that resulted in a B phase to ground fault that caused a circuits treaker to lock out. All and for the restoration. No further action is required.
FLORENCE - 19322410041	FLORENCE	H9322410041	28 Other Cause     11 Unitrom Cause     20 Equipment Failure     09 Public Accident/Damage     04 Wildlife     20 Equipment failure     20 Equipment failure     09 Public Accident/Damage     03 Vegetation	52.41% 25.68% 13.52% 7.10% 0.22% 0.17% 0.07% 100% 100% 100% 100% 100% 100% 100% 14.65%	action is required. The majority of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unused tap at pole 368N-300. All of the Other Cause outage minutes were from two events resulting in the same phase A rectore locking out. All of the Unionon Cause outage minutes were from new event to a phase A rectorer locking out. All of the Unionon Cause outage minutes were from one event to a phase A rectorer locking out. All of the Unionon Cause outage minutes were from one event due to a phase A rectorer locking out. All of the Unionon Cause outage minutes were from one event due to a phase A rectorer locking out. All of the faulter outage minutes were from one event due to a base to a short A rectorer locking out. All of the faulterent Failure outage minutes were from one event due to a base which ing module. All damaged equipment was replaced at the time of restoration. No further action is required. The majority of the Equipment Failure outage minutes were from one event due to a base were from one event that resulted in a B phase to ground fault that caused a circuits treaker to lock out. All and peduated under greater of meters of mone event that resulted in a B phase to ground fault that caused a circuits treaker to lock out. All and for the restoration. No further action is required.
FLORENCE - H9322410041	FLORENCE	H9322410041	28 Other Cause 11 Unknown Cause 13 Unknown Cause 26 Fquyament faller 26 Fquyament faller 20 Fquify Accident/Dumage 20 Equipment failure 20 Equipment failure 09 Public Accident/Dumage	52.41% 25.68% 13.52% 7.10% 0.22% 0.11% 0.07% 100% 100% 53.41% 20.06%	action is required. The majority of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unused tap at pole 368N-300. All of the Other Cause outage minutes were from two events resulting in the same phase A rectore locking out. All of the Unionon Cause outage minutes were from new event to a phase A rectorer locking out. All of the Unionon Cause outage minutes were from one event to a phase A rectorer locking out. All of the Unionon Cause outage minutes were from one event due to a phase A rectorer locking out. All of the Unionon Cause outage minutes were from one event due to a phase A rectorer locking out. All of the faulter outage minutes were from one event due to a base to a short A rectorer locking out. All of the faulterent Failure outage minutes were from one event due to a base which ing module. All damaged equipment was replaced at the time of restoration. No further action is required. The majority of the Equipment Failure outage minutes were from one event due to a base were from one event that resulted in a B phase to ground fault that caused a circuits treaker to lock out. All and peduated under greater of meters of mone event that resulted in a B phase to ground fault that caused a circuits treaker to lock out. All and for the restoration. No further action is required.
FLORENCE - H9322410041	FLORENCE	H9322410041	28 Other Cause     11 Unknown Cause     12 Orkinown Cause     20 Equipment Galare     09 Fubined (EE1)     09 Fubined (EE1)     20 Equipment failure     20 Equipment failure     09 Fubin Accident/Damage	52.41% 25.68% 13.52% 7.10% 0.22% 0.11% 0.07% 100.00% 100.00% 100.00% 20.06% 14.60% 7.35% 2.16% 1.41%	action is required. The majority of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unfused tap at pole 360N-300. All of the Other Cause outage minutes were from two events resulting in the same phase A recloser locking out. All of the Unknown Cause outage minutes were from one event to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Equipment Failure outage minutes were from one event due to a base A recloser locking out. All of the Equipment Failure outage minutes were from one event due to a base A recloser on phase B at the phase A recloser. The majority of the Equipment Failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required. The majority of the Equipment Failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.
FLORENCE - H9322410041	FLORENCE	H9322410041	28 Other Cause 28 Other Cause 20 Equipment failure 09 Public Accident/Damage 04 Widfie 20 Equipment failure 20 Equipment failure 09 Public Accident/Damage 03 Vegetation EX Weather 64 Weither 64 Weither 64 Weither	52.41% 25.68% 13.52% 7.10% 0.2% 0.1% 0.0% 100% 100% 100% 100% 100% 100% 100% 100% 10.0% 1.1% 1.46% 1.43% 1.0%	action is required. The majority of the Vegetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unused tap at pole 360N-300. All of the Other Clause outage minutes were from two events resulting in the same phase A rectore from one event due to a live tree limb contacting and breaking a downstream conductor on an unused tap at pole 360N-300. All of the Other Clause outage minutes were from new event due to a phase A rectorer locking out. All other Unknown Clause outage minutes were from one event due to a phase A rectorer locking out. All other Unknown Clause outage minutes were from one event due to a phase A rectorer locking out. All other due to a brance A rectorer locking out. All other action as it is a repeat offender. This circuit is scheduled to be trimmed in 2023. All of the Equipment Failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required. The majority of the Equipment Failure outage minutes were from none event due to a bant bolted wedge connector on phase B at pole 268N-122. In emajority of the Public Accident/Damage outage minutes were from one event that resulted in a B phase to ground fault that caused a circuit to back out. All of the Vegetation outage minutes were from one event that resulted in a B phase to ground fault that caused a circuit to back out. All of the Vegetation outage minutes were from one event that resulted in a B phase to ground fault that caused a circuit to back out.
FLORENCE - H9322410041 FLORENCE - H9322410044	FLORENCE	H9322410041 H9322410044	28 Other Cause     11 Unknown Cause     12 Orkinown Cause     20 Equipment Galare     09 Fubined (EE1)     09 Fubined (EE1)     20 Equipment failure     20 Equipment failure     09 Fubin Accident/Damage	52.41% 25.68% 13.52% 7.10% 0.22% 0.11% 0.07% 100.00% 100.00% 100.00% 20.06% 14.60% 7.35% 2.16% 1.41%	action is required. The majority of the Vagetation outage minutes were from one event due to a live tree limb contacting and breaking a downstream conductor on an unfused pair pole 360N-390. All of the Other Cause outage minutes were from neo events resulting in the same phase A recloser locking out. All of the Unknown Cause outage minutes were from one event to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event to a phase A recloser locking out. All of the Unknown Cause outage minutes were from one event to a phase A recloser locking out. All of the Equipment failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required. The majority of the Equipment failure outage minutes were from one event due to a bur to be the set of the soft of the Soft out and a phase A recloser form one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required. The majority of the Equipment failure outage minutes were from one event due to a burn tobled wedge connector on phase B at pole 368N-1222. The majority of the Public Accident/Damage outage minutes were from one event that resulted in a B phase to lock out. All damaged equipment was replaced at the time of restoration. No further action is required. This circuit was last trimmed in 2020. The majority of the Linknown Cause outage minutes were from one event that resulted in a recloser locking out at pole 318N-334. The majority of the Linknown Cause outage minutes were from one event that resulted in a recloser locking out at pole 318N-334. The majority of the Linknown Cause outage minutes were from one event that resulted in a recloser locking out at pole 318N-334. The majority of the Linknown Cause outage minutes were from one event that resulted in a recloser locking out
FLORENCE - 19322410041	FLORENCE	H9322410041	38 Offer Cause     311 Unknown Cause     312 Qujment failure     313 Qujment failure     314 Qujment failure     314 Quiprinit strike     315 Quiprinit strike     314 Quiprinit failure     312 Equipment failure     312 Equipment failure     315 Quiprinit failure     315 Qu	52.41% 25.68% 13.52% 7.10% 0.89% 0.22% 0.11% 0.07% 100% 100% 100% 53.41% 20.05% 14.60% 14.60% 1.45% 1.41% 1.00% 100%	action is required.           The majority of the Vegetation outage minutes were from one event due to a live tree link contacting and brasking a downstream conductor on a windrad toga 1 action 18/14/30. All of the Clause outage minutes were from two events requiring in the sam phase A recloser locking out. All of the Ushnown Cause outage minutes were from event due to a phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.           All of the Equipment Failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.           The majority of the Equipment failure outage minutes were from one event due to a burnt bolted wedge connector on phase B at piez B&H=1222. The majority of the Public Accident/Damage outage minutes were from one event that resulted in a B phase to go and to further action is required.           In the majority of the Lock accident dates to be development was replaced at the time of restoration. No further action is required.           In the acused accident bolt out. All damaged equipment was replaced at the time of restoration. No further action is required.           In the acused accident bolt out. All damaged equipment was replaced at the time of restoration. No further action is required.           In the acused acide the bolt out.
FLORENCE - H9322410041 FLORENCE - H9322410044	FLORENCE	H9322410041 H9322410044	B Other Cause     B Other Cause     11 Unknown Cause     Of Flammed (EEE)     Of Public Accident/Damage     Of Vidinfe     D0 Equipment failure     Of Public Accident/Damage     Of Public Accident/Damage     Of Public Accident/Damage     I Unknown Cause     11 Unknown Cause     EA Weather     11 Unknown Cause     EA Weather	52.41% 25.68% 13.52% 7.10% 0.89% 0.22% 0.11% 0.07% 100% 100% 100% 53.41% 53.41% 20.06% 14.60% 14.60% 14.60% 14.65% 33.86% 25.94% 16.95%	action is required.           The majority of the Vegetation outage minutes were from one event due to a live tree link contacting and braking a downstream phase A recloser locking out. All of the Ushnown Cause outage minutes were from new event freeding in the sam phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a live transmitter to the total show the transmitter outage minutes were from the event recling in the sam repeat offender. This circuit is scheduled to be trimmed in 2023.           All of the Equipment Failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.           All of the Equipment Failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.           The majority of the Equipment failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.           The majority of the Equipment failure outage minutes were from one event due to a burnt bolted wedge connector on phase B at grade fault that caused a recloser to lock out. All damaged equipment was replaced at the time of restoration. No further action is required.           The majority of the Linknown Cause outage minutes were from one event that resulted in a B phase to lock out. All damaged equipment was replaced at the time of restoration. No further action is required.           The majority of the Unknown Cause outage minutes were from one event that the caused a recloser locking out at pole 318N-134 while a hottime tag was begin treasmit mere to bot out. All damaged equip
FLORENCE - H9322410041 FLORENCE - H9322410044	FLORENCE	H9322410041 H9322410044	28 Other Cause     11 Unknown Cause     12 Other Cause     10 Public Accident/Damage     10 Widdle     20 Equipment failure     20 Equipment failure     09 Public Accident/Damage     03 Vegetation     E4 Weather     11 Unknown Cause     11 Unknown Cause     EA Weather     20 Equipment failure     65 Flamed [EE]     11 Unknown Cause	52.41% 25.68% 13.52% 7.10% 0.65% 0.05% 10.07% 100% 100.0% 100% 20.06% 14.60% 7.35% 1.41% 100% 14.60% 7.35% 1.41% 10% 1.05% 1.45% 1.55%	action is required.           The majority of the Vegetation outage minutes were from one event due to a live tree link contacting and breaking a downstream conductor on a surflawd tag at tools 360×320. All of the Other Cause outage minutes were from two event receiving in the sam phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a live tree link contacting and breaking a downstream conductor on a surflaw of any other cause outage minutes were from one event due to a base A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a base A recloser is under further investigation as it is a repeat offender. This circuit is scheduled to be trimmed in 2023.           All of the Equipment Failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.           The majority of the Equipment failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.           The majority of the Equipment failure outage minutes were from one event due to a burn bolted wedge connector on phase B at piez 880×1222. The majority of the Public Acident/Damage outage minutes were from one event that resulted in a B phase to ge out. All damaged equipment was replaced at the time of restoration. No further action is required.           The majority of the Linknown Cause outage minutes were from one event that resulted in a phase bat to its out. All damaged equipment was replaced at the time of restoration. No further action is required. This circuit was last trimmmer to bolt. All damaged equipment was replaced at the time of restoration. No further action is required. This circuit was last trimmmere outage
FLORENCE - H9322410041 FLORENCE - H9322410044	FLORENCE	H9322410041 H9322410044	B Other Cause     B Other Cause     11 Unknown Cause     Of Flammed (EEE)     Of Public Accident/Damage     Of Vidinfe     D0 Equipment failure     Of Public Accident/Damage     Of Public Accident/Damage     Of Public Accident/Damage     I Unknown Cause     11 Unknown Cause     EA Weather     11 Unknown Cause     EA Weather	52.41% 25.68% 13.52% 7.10% 0.89% 0.22% 0.11% 0.07% 100% 100% 100% 53.41% 53.41% 20.06% 14.60% 14.60% 14.60% 14.65% 33.86% 25.94% 16.95%	action is required.           The majority of the Vegetation outage minutes were from one event due to a live tree link contacting and braking a downstream phase A recloser locking out. All of the Ushnown Cause outage minutes were from new event freeding in the sam phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a live transmitter to the total show the transmitter outage minutes were from the event recling in the sam repeat offender. This circuit is scheduled to be trimmed in 2023.           All of the Equipment Failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.           All of the Equipment Failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.           The majority of the Equipment failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.           The majority of the Equipment failure outage minutes were from one event due to a burnt bolted wedge connector on phase B at grade fault that caused a recloser to lock out. All damaged equipment was replaced at the time of restoration. No further action is required.           The majority of the Linknown Cause outage minutes were from one event that resulted in a B phase to lock out. All damaged equipment was replaced at the time of restoration. No further action is required.           The majority of the Unknown Cause outage minutes were from one event that the caused a recloser locking out at pole 318N-134 while a hottime tag was begin treasmit mere to bot out. All damaged equip
FLORENCE - H9322410041 FLORENCE - H9322410044	FLORENCE	H9322410041 H9322410044	B Other Cause     B Other Cause     11 Unknown Cause     Of Paula Cauden/Damage     Of Paula Cauden/Damage     Of Vidifie     20 Equipment failure     Of Public Accident/Damage     Of Public Accident/Damage     Of Public Accident/Damage     I Unknown Cause     11 Unknown Cause     EA Weather     11 Unknown Cause     EA Weather     So Equipment failure     Of Public Accident/Damage     So Famed (EEE)     Of Vidifie     Of Vidifie	52.41% 25.68% 13.52% 7.10% 0.89% 0.22% 0.11% 0.07% 100% 100% 100% 53.41% 53.41% 20.06% 14.60% 14.60% 14.60% 14.65% 14.65% 14.65% 16.95% 16.95% 15.27% 15.55% 0.66%	action is required.           The majority of the Vegetation outage minutes were from one event due to a live tree link contacting and brasking a downstream conductor on a windrad toga 1 action 18/14/30. All of the Clause outage minutes were from two events requiring in the sam phase A recloser locking out. All of the Ushnown Cause outage minutes were from event due to a phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.           All of the Equipment Failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.           The majority of the Equipment failure outage minutes were from one event due to a burnt bolted wedge connector on phase B at piez B&H=1222. The majority of the Public Accident/Damage outage minutes were from one event that resulted in a B phase to go and to further action is required.           In the majority of the Lock accident dates to be development was replaced at the time of restoration. No further action is required.           In the acused accident bolt out. All damaged equipment was replaced at the time of restoration. No further action is required.           In the acused accident bolt out. All damaged equipment was replaced at the time of restoration. No further action is required.           In the acused acide the bolt out.
FLORENCE - H9322410041 FLORENCE - H9322410044	FLORENCE	H9322410041 H9322410044	28 Other Cause     11 Unknown Cause     215 Equipment Galare     35 Equipment Galare     36 Fanned (IEE)     30 Lghning and Unbannege     30 Equipment failure     30 Equipment failure     30 Equipment failure     30 Public Accident/Damage     30 Equipment failure     31 Unknown Cause     11 Unknown Cause     11 Unknown Cause     EA Westher     30 Equipment failure     56 Flamed (IEE)     11 Unknown Cause     EA Westher     30 Equipment failure     56 Flamed (IEE)     10 Unknown Cause	52.41% 25.68% 13.52% 7.10% 0.65% 0.07% 0.07% 100% 100% 100% 20.06% 14.60% 7.35% 1.41% 1.06% 33.86% 2.16% 1.43% 33.86% 25.94% 16.95% 15.57%	action is required.         The majority of the Vegetation outage minutes were from one event due to a live tree link contacting and breaking a downstream phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a live tree link contacting and breaking a downstream phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a phase A recloser locking out. All of the Ushnown Cause outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.         All of the Equipment Failure outage minutes were from one event due to a bad switching module. All damaged equipment was replaced at the time of restoration. No further action is required.         The majority of the Equipment Failure outage minutes were from one event due to a burd switching module. All damaged equipment was replaced at the time of restoration. No further action is required.         The majority of the Equipment Failure outage minutes were from one event that resulted in a B phase to a bord out. All of the Vegetation outage minutes were from one event that resulted in a phase at the time of restoration. No further action is required.         The majority of the Unknown Cause outage minutes were from one event that resulted in a recloser locking out at pole 318N-134 while a hotline tag was but trimmed in 2020.         The majority of the Unknown Cause outage minutes were from one event that the took at the time of restoration. No further action is required.         The majori
FLORENCE - H9322410041 FLORENCE - H9322410044	FLORENCE	H9322410041 H9322410044 H9322410044	28 Other Cause       11 Unknown Cause       12 Unknown Cause       13 Unknown Cause       14 Unknown Cause       15 Ferned (EE)       10 Equipment failure       20 Equipment failure       09 Public Accident/Damage       00 Public Accident/Damage       01 Equipment failure       09 Public Accident/Damage       09 Public Accident/Damage       09 Public Accident/Damage       09 Public Accident/Damage       11 Unknown Cause       11 Unknown Cause       11 Unknown Cause       12 D Equipment failure       09 Hording       20 Equipment failure       20 Equipment failure       20 Equipment failure       21 Equipment failure       23 Equipment failure       24 Equipment failure       25 Equipment failure       26 Hordinger failure       27 Equipment failure       28 Other Cause       29 Equipment failure       20 Equipment failure	52.41% 25.68% 13.52% 7.10% 0.89% 0.22% 0.11% 0.07% 100% 100% 100% 20.06% 100% 33.86% 25.94% 16.95% 15.27% 15.57% 1.55% 15.57% 15.55% 0.66% 100%	action is required.         The majority of the Vegetation outage minutes were from one event due to a live the link contacting and breaking a downstream phase A rectore locking out. All of the Ukhaom Cause outage minutes were from new event free from two events resulting in the sam phase A rectore locking out. All of the Ukhaom Cause outage minutes were from one event due to a phase A rectorer locking out. All of the Ukhaom Cause outage minutes were from one event due to a phase A rectorer locking out. All of the Ukhaom Cause outage minutes were from one event due to a phase A rectorer locking out. All of the Ukhaom Cause outage minutes were from one event due to a bars of the fraction of the same phase A rectorer is under further investigation as it is a repeat offender. This circuit is scheduled to be trimmed in 2023.         All of the Equipment Failure outage minutes were from one event due to a bard switching module. All damaged equipment was replaced at the time of restoration. No further action is required.         The majority of the Equipment Failure outage minutes were from one event due to a burnt bolted wedge connector on phase B at pole 268+1223. The majority of the Poblic Accident/Damage outage minutes were from one event that resulted in a B phase to grand failt thre caused a rectore to lock out. All damaged equipment was replaced at the time of restoration. No further action is required.         The majority of the Linknown Cause outage minutes were from one event that resulted in a recloser locking out at pole 118N-1347 while a hotime ta sub at trimmed in 2020.         The majority of the Linknown Cause outage minutes were from one event that resulted in a recloser locking out at pole 118N-1347 while a hotime ta work hot the Plane Accident Damage outgement was replaced at the time of restoration. No further action is required.

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					The majority of the Vegetation outage minutes were from one event due to a tree knocking down pole K97-148 on a rear proper location. All damaged equipment was replaced at the time of restoration. No further action is required. This circuit was list
	HANDS	1000000000	03 Vegetation	98.96%	location. All damaged equipment was replaced at the time of restoration. No further action is required. This circuit was last trimmed in 2020.
HANDS - H9321280044	HANDS	H9321280044	05 Planned (IEEE) 20 Equipment failure	0.61%	
			04 Wildlife	0.12%	
			03 Vegetation	92.52%	The majority of the Vegetation outage minutes were from one event due to an uprooted large locust tree fall across all phases in between poles KNK-8804 and 10K-204. There was no damage to the conductor or equipment and the tree was removed. No further action is required. This circuit is scheduled to be trimmed in 2023.
HANDS - H9321280045	HANDS	H9321280045	20 Equipment failure 28 Other Cause	4.38%	Terene secondor equires - ma chear ta seconde a to se unimed in 2013.
			05 Planned (IEEE)	0.21%	
				100%	All of the Weather outage minutes were from one event that resulted in a recloser locking out. The majority of the Public
			EA Weather	48.78%	And on the weather outage minutes were from one event that resulted in a recluser locking out. The majority of the result Accident/Damage outage minutes were from one event when a vehicle hit and broke the neutral guy wire on pole 78N-62 causi the circuit breaker to lock out. All damaged equipment was replaced at the time of restoration. No further action is required.
HEBRON - H9321520042	HEBRON	H9321520042	09 Public Accident/Damage 20 Equipment failure	44.42% 4.85%	
			05 Planned (IEEE) 19 Lightning strike	0.74%	
			04 Wildlife	0.40%	
			11 Unknown Cause 03 Vegetation	0.13%	
HEBRON - H9321520044	HEBRON	H9321520044	20 Equipment failure	99.54%	The majority of the Equipment Failure outage minutes were from one event due to a large oil leak on pad mount transformer 7 290 that resulted in a blown fuse. All damaged equipment was repaired at the time of restoration. No further action is require
			19 Lightning strike 11 Unknown Cause	0.34%	
			11 Onknown cause	100%	
			03 Vegetation	51.91%	The majority of the Vegetation outage minutes were from one event due to a tree on the line at pole KB4-199. There was no damage to the conductor or equipment and the tree was removed. The majority of the hultic Academ/Damage acutage minute were from one event due to a vehicle hitting pole NIK-5327. All damaged equipment was replaced at the time of restoration. I further action the required. This discuss its schedule to be timmed in 2023.
KENTON - H9320090041 KENTON	H9320090041	09 Public Accident/Damage	43.12%		
		05 Planned (IEEE) 20 Equipment failure	3.15% 1.50%		
			28 Other Cause 19 Lightning strike	0.22%	
			11 Unknown Cause	0.04%	
KENTON - H9320090044		H9320090044	03 Vegetation	83.26%	The majority of the Vegetation outage minutes were from one event due to trees on the lines at poles K63-28 and K63-595. Th majority of the Equipment Falure outage minutes were from two events. One event was due to a faulty trip saver and the othe event was due to a failed cross arm at pole K74-214. All damaged equipment was repaired or replaced at the time of restoratic No further action is required. This dircuit is scheduled to be trimmed in 2023.
KENTON - H9320090044 KENTON	H9320090044	20 Equipment failure 04 Wildlife	12.30% 1.94%		
			28 Other Cause 05 Planned (IEEE)	1.29%	
			EA Weather	0.18%	
				100%	The majority of the Vegetation outage minutes were from one event due to an oak tree falling across all three phases causing p
KENTON - H9320090046	KENTON	H9320090046	03 Vegetation	94.22%	K75-205 and multiple cross arms to break. All damaged equipment was repaired or replaced at the time of restoration. No fur action is required. This circuit was last trimmed in 2022.
			20 Equipment failure	5.78% 100%	
LIMABURG - H9321890043	LIMABURG	H9321890043	11 Unknown Cause	100%	All of the Unknown Cause outage minutes were from one event that resulted in a blown fuse. The fuse was replaced at the tim
				100%	restoration. No further action is required.
LONGBRANCH - H9320980041	LONGBRANCH	H9320980041	20 Equipment failure	50.78%	The majority of the Equipment Failure outage minutes were from one event due to a faulty voltage regulator at the Longhrand substation. The majority of the Unknown Cause outage minutes were from one event that resulted in a circuit breaker locking, while a hotline tag was in place, so there was no fault data. All damaged equipment was replaced at the time of restoration. N further action is required.
			11 Unknown Cause 28 Other Cause	49.17% 0.05%	
			03 Vegetation	78.96%	The majority of the Vegetation outage minutes were from one event due to an uprooted large dead ash tree failing across the la at a double circuit pole BNK-2785. The majority of the Equipment Failure outage minutes were from one event due to a faulty voltage regulator at the torgbrands substation. All damaged equipment use replaced at the time of restration. No further ac
			20 Equipment failure	18.02%	is required. This circuit was last trimmed in 2022.
LONGBRANCH - H9320980042	LONGBRANCH	H9320980042	05 Planned (IEEE) 11 Unknown Cause	1.16%	
			09 Public Accident/Damage	0.33%	
			19 Lightning strike 28 Other Cause	0.20%	
			04 Wildlife	0.02%	
LONGBRANCH - H9320980044	LONGBRANCH	H9320980044	03 Vegetation	99.93%	The majority of the Vegetation outage minutes were from one event due to an uprooted large dead ash tree falling across the at a double circuit pole BNK-2785. All damaged equipment was replaced at the time of restoration. No further action is require This circuit was last trimmed in 2022.
			05 Planned (IEEE)	0.07%	
MT ZION - H9323050042	MT ZION	H9323050042	05 Planned (IEEE)	50.10%	All of the Planned outage minutes were from one event scheduled to change out a live front to a dead front pad mount transformer. All of the Wildlife outage minutes were from one event due to an open tap fuse at pole 360x145 caused by a squirret. All damaged equipment was replaced at the time of restoration. No further action to required.
			04 Wildlife	49.90% 100%	
			03 Vegetation	84.47%	The majority of the Vegetation outage minutes were from one event due to a large locust tree failing across all three phases at 3181-1396 causing the circuit breaker to lock out. The majority of the Equipment Failure outage minutes were from one event to a bad -fajevice tap damount transformer 3681+F21.1 Ald manged equipment was replaced at the time of restoration. No further action is required. This circuit is scheduled to be trimmed in 2023.
MT ZION - H9323050043	MT ZION	H9323050043	20 Equipment failure 11 Unknown Cause	10.90% 3.16%	
			04 Wildlife 05 Planned (IEEE)	0.75%	
			09 Public Accident/Damage 28 Other Cause	0.29%	
MT ZION - H9323050044	MT ZION	H9323050044	11 Unknown Cause	100% 79.89%	All of the Unknown Cause outage minutes were from one event that resulted in two blown fuses on terminal pole 368N-410. // damaged equipment was replaced at the time of restoration. No further action is required.
			19 Lightning strike 20 Equipment failure	20.11% 100% 92.58%	The majority of the Equipment Falure outage minutes were from one event due to a rear property, burnt pole 2084-732 that resulted in conductors on the ground. All damaged equipment was replaced at the time of restoration. No further action is
OAKBROOK STA - H9322100042	OAKBROOK STA	H9322100042	05 Planned (IEEE) 04 Wildlife	3.40%	resulted in conductors on the ground. An damaged equipment was replaced at the time of resonation. No further action is required.
			09 Public Accident/Damage 28 Other Cause	2.15% 1.70% 0.16%	
			11 Unknown Cause	0.16% 100% 84.05%	All of the Unknown Cause outage minutes were from two events that both resulted in blown fuzes. The majority of the Equipm Failure outage minutes were from one event due to a brûken cross arm on pole 410×157. All damaged equipment was replac
	RICHWOOD	H9321990041	20 Equipment failure	10.79%	at the time of restoration. No further action is required.
RICHWOOD - H9321990041			04 Wildlife 05 Planned (IEEE)	3.33% 1.83%	
RICHWOOD - H9321990041				100%	
RICHWOOD - H9321990041			09 Public Accident/Damage	73.65%	329, which is a transmission pole with distribution underbuild. The majority of the Vegetation outage minutes were from two events. One event was due to trees on the line that caused a fuse to blow and the other event also resulted in a blown fuse. A damaged equipment was replaced at the time of restoration. No further action is required. This circuit is scheduled to be trim
RICHWOOD - H9321990041 RICHWOOD - H9321990042	RICHWOOD	H9321990042	03 Vegetation	14.28%	329, which is a transmission pole with distribution underbuild. The majority of the Vegetation outage minutes were from two events. One event was due to trees on the line that caused a fuse to blow and the other event also resulted in a blown fuse. Al
	RICHWOOD	H9321990042	03 Vegetation 05 Planned (IEEE) 20 Equipment failure	14.28% 4.81% 3.79%	events. One event was due to trees on the line that caused a fuse to blow and the other event also resulted in a blown fuse. Al damaged equipment was replaced at the time of restoration. No further action is required. This circuit is scheduled to be trimmed at the time of the trimmed at the trim
	RICHWOOD	H9321990042	03 Vegetation 05 Planned (IEEE)	14.28% 4.81%	329, which is a transmission pole with distribution underbuild. The majority of the Vegetation outage minutes were from two events. One event was due to trees on the line that caused a fuse to blown ad the other event also resulted in a blown fue. Al damaged equipment was replaced at the time or restoration. No further action is required. This circuit is scheduled to be trill admaged equipment was replaced at the time or restoration. No further action is required. This circuit is scheduled to be trill admaged equipment was replaced at the time or restoration.

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			09 Public Accident/Damage	88.85%	All of the Public Accident/Damage outgae minutes were from one event due to a vehicle hitting and breaking pole 372.43.1 majority of the vegetation outgae munutes are the result of large causing the phases to salp together at pole CA (34), resulting in a circuit bodout. All damaged equipment was replaced at the time of restoration. No further action required, This circuit was satt trimmed in 2019.
SILVER GROVE - H9320620042	SILVER GROVE	H9320620042	03 Vegetation	10.52%	This circuit was last a mining in 2019.
			EA Weather	0.25%	
			05 Planned (IEEE)	0.23%	
			28 Other Cause	0.12%	
			20 Equipment failure	0.03%	
				100%	
SILVER GROVE - H9320620043			03 Vegetation	52.98%	The majority of the Vegetation outage minutes were from one event due to a limb on the lines at pole 41cA-38 that resulted in a circuit breaker locking out. The majority of the lighting Strike outage minutes were from one event that resulted in a blown fur The majority of the Weather outage minutes were from one event that resulted in damage cutout and a overhead transformer. damaged equipment was replaced at the time of restoration. No further action required. This is circuit was last transmed in 2019.
	SILVER GROVE	H9320620043	19 Lightning strike	23.48%	
			EA Weather	12.75%	
			20 Equipment failure	4.77%	
			28 Other Cause	2.42%	
			04 Wildlife	2.23%	
			05 Planned (IEEE)	1.37%	
		1		100%	
		H9321250042	EA Weather	70.77%	The majority of the Weather outage minutes were from the same day, resulting in a wire down and several rectorers locating on All of the Unknown Cause outage minutes were from one event due to wires down that resulted in a rectorer locating out on pha B and C. All damaged equipment was repaired or replaced at the time of restoration. No further action is required.
VERONA - H9321250042	VERONA		11 Unknown Cause	23.91%	
JENGINA 115321230042	VERUNA		03 Vegetation	4.35%	
			05 Planned (IEEE)	0.70%	
			20 Equipment failure	0.12%	
			19 Lightning strike	0.11%	
			04 Wildlife	0.03%	
				100%	
		H932125004	09 Public Accident/Damage	51.37%	All of the Public Accident/Damage outage minutes were from one event due to a vehicle hitting and breaking pole 33K-66 that caused the transformer to fall off the pole. All of the Vegetation outage minutes were from one event the resulted in a blown transformer fue. All of the Vestmer outage minutes were from one event uso to limbs on the line that resulted in a fire. All damaged equipment was replaced at the time of restoration. No further action is required. This circuit was last trimmed in 200.
VERONA - H9321250043	VERONA		03 Vegetation	15.85%	
VEROIM - 115321230043	VERONA		EA Weather	11.45%	
			20 Equipment failure	9.29%	
			05 Planned (IEEE)	7.87%	
			04 Wildlife	2.07%	
			19 Lightning strike	1.11%	
			28 Other Cause	1.00%	
		3		100%	
VILLA - H9322430042	VILLA	H9322430042	20 Equipment failure	72.91%	The majority of the Equipment Failure outage minutes were from one event due to a bad underground cable. All of the Unknov Cause outage minutes were from one event due to a bad cable in between terminal pole K95-661 and pad mount transformer I
VILLA - H9322430042	VILLA	H9322430042			B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.
VILLA - H9322430042	VILLA	H9322430042	11 Unknown Cause	20.78%	
VILLA - H9322430042	VILLA	H9322430042	04 Wildlife	3.64%	
VILLA - H9322430042	VILLA	H9322430042	11 Unknown Cause 04 Wildlife 05 Planned (IEEE)	3.64% 2.66%	
VILLA - H9322430042	VILLA	H9322430042	04 Wildlife	3.64%	
VILLA - H9322430042 WEST END STA - H40CD150041	VILLA	H9322430042 H40C0150041	04 Wildlife 05 Planned (IEEE) 20 Equipment failure	3.64% 2.66% 100% 39.38%	
			04 Wildlife 05 Planned (IEEE) 20 Equipment failure	3.64% 2.66% 100% 39.38%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Failure outage minutes were from one event due to a broken porcelain dead end insulator at port of the Star 2000 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to a were the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to a were the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to a were the failing outage pole. The majority of the Public Accident/Damage outage minutes were from one event due to a were the failing outage pole. The majority of the Public Accident/Damage outage minutes were from one event due to a were the failing outage pole. The majority of the Public Accident/Damage outage minutes were from one event due to a were the failing outage pole. The majority of the Public Accident/Damage outage minutes were from one event due to a were the failing outage pole. The majority of the Public Accident/Damage outage minutes were from one event due to a were the failing outage field were failing outage fie
			04 Wildlife 05 Planned (IEEE) 20 Equipment failure 03 Vegetation	3.64% 2.66% 100%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Failure outage minutes were from one event due to a broken porcelain dead end insulator at pr K81-700 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident for the majority of the Public Accident for the majority of the failing outage fuel outa
			04 Wildlife 05 Planned (IEEE) 20 Equipment failure 03 Vegetation 09 Public Accident/Damage	3.64% 2.66% 100% 39.38% 38.42%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Failure outage minutes were from one event due to a broken porcelain dead end insulator at p K81-700 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one even due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the failing outage minutes were form one event due to the failing outage to the failing outage failing outage minutes were form one event due to the failing outage failing o
			04 Wildlife 05 Planned (IEEE) 20 Equipment failure 03 Vegetation	3.64% 2.66% 100% 39.38% 38.42% 15.08%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Failure outage minutes were from one event due to a broken porcelain dead end insulator at pr K81-700 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a
			04 Wildlife 05 Planned (IEE) 20 Equipment failure 03 Vegetation 09 Public Accident/Damage 05 Planned (IEE)	3.64% 2.66% 100% 39.38% 38.42% 15.08% 6.56%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Failure outage minutes were from one event due to a broken porcelain dead end insulator at p K81-700 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one even due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the failing onto a pole. The majority of the failing outage minutes were form one event due to the failing outage to the failing outage failing outage minutes were form one event due to the failing outage failing o
			04 Wridlife 05 Planned (IEE) 20 Equipment failure 03 Vegetation 09 Public Accident/Damage 05 Planned (IEE) E4 Weather	3.64% 2.66% 100% 39.38% <u>38.42%</u> 15.08% 6.56% 0.41%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Falure outage minutes were from one event due to a broken porcelain dead end insulator at post Si-17-00 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event due to a broken porcelain dead end insulator at post to the realing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to a whitting terminal pole K3-12-28 and tamaging the U-thane(inderground attende causing the control tock out. All damaged equipment was replaced at the time of restoration. No further action is required. This dircuit was last trimmed in 2022.
			04 Wildlife 05 Planned (IEE) 20 Equipment failure 03 Vegetation 09 Public Accident/Damage 05 Planned (IEE) EA Weather 04 Wildlife EA Weather	3.64% 2.66% 100% 39.38% 38.42% 15.08% 0.656% 0.41% 0.16% 100% 77.67%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Failure outage minutes were from one event due to a broken porcelain dead end insulator at pr K81-700 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to tree failing onto a pole. The majority of the Public Accident for the majority of the Public Accident for the majority of the failing outage fuel outa
WEST END STA - H40C0150041	WEST END STA	H40C0150041	0 4 Wridlife 05 Planned (IEE) 20 Equipment failure 03 Vagetation 9 Pouls Accident/Damage 9 Planned (IEE) 24 Wridlife E4 Wridlife E4 Wridlife E4 Wridlife 28 Other Cause	3.64% 2.66% 100% 39.38% 38.42% 5.66% 6.56% 0.41% 0.16% 77.67% 21.55%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Falure outage minutes were from one event due to a broken porcelain dead end insulator at port of the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event due to a broken porcelain dead end insulator at port of the 2000 that caused the conductor to drop to the pround. The majority of the Vegetation outage minutes were from one event due to a broken porcelain dead end insulator at port to the falling onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to a were that to present due to a set of the source of the public Accident/Damage outage minutes were from one event due to a were the time of restoration. No further action is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes from one event that lator resulted in a blown fuse. All of the Other Cause outage minutes
			0 4 Wildlife 05 Planned (IEE) 20 Equipment failure 03 Vegetation 09 Public Accident/Damage 05 Planned (IEE) EA Weather EA Weather 28 Other Cause 03 Vegetation	1.64% 2.66% 100% 39.38% 39.38% 38.42% 15.08% 0.38% 0.16% 100% 77.67% 21.5% 0.39%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Falure outage minutes were from one event due to a broken porcelain dead end insulator at port of the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event due to a broken porcelain dead end insulator at port of the 2000 that caused the conductor to drop to the pround. The majority of the Vegetation outage minutes were from one event due to a broken porcelain dead end insulator at port to the falling onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to a were that to present due to a set of the source of the public Accident/Damage outage minutes were from one event due to a were the time of restoration. No further action is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes from one event that lator resulted in a blown fuse. All of the Other Cause outage minutes
WEST END STA - H40C0150041	WEST END STA	H40C0150041	0 4 Wridlife 0 5 Planned (IEEE) 20 Equipment failure 20 1 Vigitation 20 Public Accident/Damage 20 5 Planned (IEEE) 25 Planned (IEEE) 26 Wridlife 26 Wridlife 26 Wridlife 28 Other Cause 29 Other Cause 39 Vigetation 39 Lightning strike	3.64% 2.66% 100% 39.38% 39.38% 39.42% 5.66% 6.56% 7.76.7% 77.67% 0.35% 0.35%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Falure outage minutes were from one event due to a broken porcelain dead end insulator at gravity of the tree falling onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to a broken porcelain dead end insulator at gravity of the tree falling onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to a broken porcelain dead end insulator at gravity of the tree falling onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to the real falling outage apole. The majority of the Public Accident/Damage outage minutes were from one event due to a broken server to be to a tree falling outage apole. The majority of the Public Accident/Damage outage minutes were from one event due to accide the time of restoration. No further action is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that tapor resulted in a blown fuse. All of the Other Cause outage minutes from one event that lator resulted in a blown fuse. All of the Other Cause outage minutes
WEST END STA - H40C0150041	WEST END STA	H40C0150041	0 4 Wildlife 05 Planned (IEE) 20 Equipment failure 23 Vegetation 09 Public Accident/Damage 05 Planned (IEE) EA Weather EA Weather EA Weather 28 Other Cause 03 Vegetation 19 Lightning strike 20 Equipment failure	1.64% 2.66% 100% 39.38% 39.38% 38.42% 15.08% 0.35% 0.15% 77.67% 21.55% 0.55% 0.35% 0.35% 0.35%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Falure outage minutes were from one event due to a broken porcelain dead end insulator at port of the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event due to a broken porcelain dead end insulator at port of the 2000 that caused the conductor to drop to the pround. The majority of the Vegetation outage minutes were from one event due to a broken porcelain dead end insulator at port to the falling onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to a were that to present due to a set of the source of the public Accident/Damage outage minutes were from one event due to a were the time of restoration. No further action is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes from one event that lator resulted in a blown fuse. All of the Other Cause outage minutes
WEST END STA - H40C0150041	WEST END STA	H40C0150041	0 4 Wridlife 0 5 Planned (IEE) 20 Equipment failure 20 Equipment failure 20 Fundic Accident/Damage 20 Public Accident/Damage 20 Public Accident/Damage 20 Monthle EA Weather EA Weather 28 Other Cause 03 Vagetation 13 Vaghtning strike 20 Equipment failure 11 Unknown Cause	3.64% 2.66% 100% 39.38% 39.38% 36.42% 5.69% 6.60% 100% 100% 77.67% 77.67% 0.15% 0.35% 0.35% 0.02%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Falure outage minutes were from one event due to a broken porcelain dead end insulator at port of the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event due to a broken porcelain dead end insulator at port of the 2000 that caused the conductor to drop to the pround. The majority of the Vegetation outage minutes were from one event due to a broken porcelain dead end insulator at port to the falling onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to a were that to present due to a set of the source of the public Accident/Damage outage minutes were from one event due to a were the time of restoration. No further action is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes from one event that lator resulted in a blown fuse. All of the Other Cause outage minutes
WEST END STA - H40C0150041	WEST END STA	H40C0150041	0 4 Wildlife 05 Planned (IEE) 20 Equipment failure 23 Vegetation 09 Public Accident/Damage 05 Planned (IEE) EA Weather EA Weather EA Weather 28 Other Cause 03 Vegetation 19 Lightning strike 20 Equipment failure	1.54% 2.6% 100% 39.38% 39.38% 38.42% 15.58% 0.41% 0.5% 0.16% 100% 77.67% 21.55% 0.5% 0.5% 0.5% 0.0%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Falure outage minutes were from one event due to a broken porcelain dead end insulator at port of the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event due to a broken porcelain dead end insulator at port of the 2000 that caused the conductor to drop to the pround. The majority of the Vegetation outage minutes were from one event due to a broken porcelain dead end insulator at port to the falling onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to a were that to present due to a set of the source of the public Accident/Damage outage minutes were from one event due to a were the time of restoration. No further action is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes from one event that lator resulted in a blown fuse. All of the Other Cause outage minutes
WEST END STA - H40C0150041 WILDER - H9320590044	WEST END STA	H40C0150041 H9320590044	G & Wildlife G5 Planned (IEE) 20 Equipment failure 03 Vegetation 09 Public Accident/Damage G5 Planned (IEE) EA Weather EA Weather EA Weather 23 Other Cause 03 Vegetation 13 Uightning strike 13 Unknown Cause 03 Public Accident/Damage 09 Public Accident/Damage	1.64% 2.66% 100% 39.38% 39.38% 38.42% 15.08% 0.38% 0.35% 0.16% 77.67% 21.55% 0.35% 0.35% 0.35% 0.05% 0.02% 0.02% 0.02% 0.02%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Failure outage minutes were from one event due to a broken porcelain dead end insulator at p     Ks1-700 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event     due to tree failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event     due to tree failed out the time of restoration. No further action is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes     from one event that also resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further     action is required.     All of the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes     from one event that also resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further     action is required.     How the outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes     from one event that also resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further     action is required.     How the outage minutes were from one event due to a vehicle hitting pole CA11-550, bree
WEST END STA - H40CD150041	WEST END STA	H40C0150041	G4 Wildlife     G5 Planned (IEEE)     S2 Equipment failure     G3 Vegetation     G9 Public Accident/Damage     G9 Public Accident (Damage     G4 Wildlife     EA Weather     G4 Wildlife     G4 Wildlife     G9 Public Accident/Damage     G9 Public Accident/Damage     G9 Public Accident/Damage     G9 Public Accident/Damage	3.64% 2.66% 2.66% 2.66% 39.38% 39.38% 39.38% 38.42% 15.08% 0.65% 0.16% 100% 77.67% 77.67% 72.15% 0.02%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment failure outage minutes were from one event due to a broken porcelain dead end insulator at p     Kal-700 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event     de to there failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event     de to there failed out the time of restoration. No further action is required.     All of the Weather outage minutes were from one event     that a server that also resulted in a blown fuse. All of the Other Cause outage minutes     from one event     that also resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further     action is required.     All of the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes     from one event     that also resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further     action is required.     The majority of the Public Accident/Damage outage minutes     were from one event that a to resulted in a blown fuse. All of the Other Cause outage minutes     from one event that also resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further     action is required.     The majority of the Public Accident/Damage outage minutes were from one event due to a vehicle hitting good CA11:550, brev     the cross arm brace, causing the phases to make contact and a recisore to lock out. All damaged equipment was
WEST END STA - H40C0150041 WILDER - H9320590044	WEST END STA	H40C0150041 H9320590044	G & Wildlife G5 Planned (IEE) 20 Equipment failure 23 Vegetation G9 Public Accident/Damage G4 Wildlife EA Weather EA Weather EA Weather 23 Other Cause 33 Vegetation 13 Lightning strike 20 Qarget failure 11 Unknown Cause 03 Public Accident/Damage 04 Wildlife 04 Wildlife 05 Planned failure 05 Public Accident/Damage 04 Wildlife 05 Public Accident/Damage 04 Wildlife 05 Public Accident/Damage 04 Wildlife 05 Public Accident/Damage 05 Pu	1.64% 2.66% 100% 39.38% 39.38% 38.42% 15.08% 0.38% 0.38% 0.16% 100% 77.67% 21.55% 0.35% 0.35% 0.05% 0.02% 100%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment failure outage minutes were from one event due to a broken porcelain dead end insulator at p     Kal-700 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event     de to there failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event     de to the failing onto a pole. The majority of the Public Accident/Damage outage minutes     very of the Sta-228 and other ground. The majority of the Vegetation outage minutes were from one event     de to there failing onto a pole. The majority of the Public Accident/Damage outage minutes     very of the Sta-28 and other singlight the U-handling-diverged out due causing the circulance     explorment was replaced at the time of restoration. No further action is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes     from one event that also resulted in a blown fuse. All of the Other Cause outage minutes     from one event that also resulted in a blown fuse. All of the Other Cause outage minutes     from one event that also resulted in a blown fuse. All of the Other Cause outage minutes     from one event that also resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further     action is required.     The majority of the Public Accident/Damage outage minutes were from one event due to a vehicle htting pole CA11-550, bree     The majority of the Public Accident/Damage outage minutes were from one event due to a vehicle htting pole CA11-550, bree
WEST END STA - 140C0150041 WILDER - 149320590044	WEST END STA	H40C0150041 H9320590044	G4 Wildlife     G5 Planned (IEEE)     S2 Equipment failure     G3 Vegetation     G9 Public Accident/Damage     G9 Public Accident/Damage     G4 Wildlife     G9 Public Accident/Damage     G4 Wildlife     Z2 Equipment failure     Z2 Equipment failure     G4 Wildlife     Z2 Equipment failure     G4 Wildlife     Z2 Equipment failure     Z2 Equipment failure     Z4 State State     G4 Wildlife     Z2 Equipment failure     Z4 State State     G4 Wildlife     G4 Wildlife     G4 Wildlife     G4 State State     G4 Wildlife     G4 State State State     G4 Wildlife     G4 State State State     G4 State State State State State     G4 State	3.64% 2.66% 2.66% 2.66% 39.38% 39.38% 39.38% 39.38% 38.42% 15.08% 15.08% 0.41% 0.04% 0.04% 0.05% 0.06% 0.02% 0.02% 0.02% 0.02% 0.02% 0.02% 0.02% 100% 85.06% 9.51% 3.75% 1.39%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment failure outage minutes were from one event due to a broken porcelain dead end insulator at p     Kal-700 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event     de to there failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event     de to there failed out the time of restoration. No further action is required.     All of the Weather outage minutes were from one event     that a server that also resulted in a blown fuse. All of the Other Cause outage minutes     from one event     that also resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further     action is required.     All of the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes     from one event     that also resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further     action is required.     The majority of the Public Accident/Damage outage minutes     were from one event that a to resulted in a blown fuse. All of the Other Cause outage minutes     from one event that also resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further     action is required.     The majority of the Public Accident/Damage outage minutes were from one event due to a vehicle hitting good CA11:550, brev     the cross arm brace, causing the phases to make contact and a recisore to lock out. All damaged equipment was
WEST END 5TA - 140C0150041 WILDER - 149320590044	WEST END STA	H40C0150041 H9320590044	G & Wildlife G5 Planned (IEE) 20 Equipment failure 23 Vegetation G9 Public Accident/Damage G4 Wildlife EA Weather EA Weather EA Weather 23 Other Cause 33 Vegetation 13 Lightning strike 20 Other failure 11 Unknown Cause 03 Public Accident/Damage 04 Wildlife 04 Wildlife 05 Planned failure 05 Public Accident/Damage 04 Wildlife 05 Public Accident/Damage 04 Wildlife 05 Public Accident/Damage 04 Wildlife 05 Public Accident/Damage 05 Pub	1.64% 2.66% 100% 39.38% 39.38% 38.42% 15.08% 0.38% 0.38% 0.16% 100% 77.67% 21.55% 0.35% 0.35% 0.05% 0.02% 100%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Failure outage minutes were from one event due to a broken porcelain dead end insulator at provide the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event due to a broken porcelain dead end insulator at provide the time of restoration. No further action is required.     All of the Weather outage minutes were from one event that a solution is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that a solution is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that a solution is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that a solution is required. This circuit was last trimmed in 2022.     The majority of the Public Accident/Damage outage minutes were from one event that a low fuse. All of the Other Cause outage minutes from one event that also required in a blown fuse. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Public Accident/Damage outage minutes were from one event due to a whick hitting pole CA11-550, br
WEST END STA - H40C0150041 WILDER - H9320590044	WEST END STA	H40C0150041 H9320590044	G4 Wildlife     G5 Planned (IEEE)     S2 Equipment failure     G3 Vegetation     G9 Public Accident/Damage     G9 Public Accident/Damage     G4 Wildlife     G9 Public Accident/Damage     G4 Wildlife     Z2 Equipment failure     Z2 Equipment failure     G4 Wildlife     Z2 Equipment failure     G4 Wildlife     Z2 Equipment failure     Z2 Equipment failure     Z4 State State     G4 Wildlife     Z2 Equipment failure     Z4 State State     G4 Wildlife     G4 Wildlife     G4 Wildlife     G4 State State     G4 Wildlife     G4 State State State     G4 Wildlife     G4 State State State     G4 State State State State State     G4 State	1.64% 2.66% 100% 39.38% 39.38% 38.42% 15.08% 0.41% 0.16% 100% 77.67% 0.16% 0.35% 0.35% 0.35% 0.05% 0.02% 100%	B-1.1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment failure outage minutes were from one event due to a broken porcelain dead end insulator at p     Kal-700 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event     deto there failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event     deto there failing onto a pole. The majority of the Public Accident/Damage outage minutes     were from one event     deto there failing onto a pole. The majority of the Public Accident/Damage outage minutes     were from one event     deto a broken porcelain dead end     insulator at p     deto there failing onto a pole. The majority of the Public Accident/Damage outage     epipment was replaced at the time of restoration. No further action is required. This directly was last trimmed in 2022.     All of the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes     from one event that also required.     The majority of the Public Accident/Damage outage minutes     were from one event due to a whicle hitting pole CA11-550, bre     the cross arm brace, causing the phases to make contact and a redoser to lock out. All damaged equipment was replaced. N     further action is required.
WEST END STA - 144000350041 WILDER - 149320590044 WILDER - 149320590045	WEST END STA WILDER WILDER	H40C0150041 H9320590044 H9320590045	G4 Wildlife     G5 Planned (IEE)     C0 Equipment failure     O1 Vagetation     O1 Vagetation     O1 Vagetation     O2 Planned (IEE)     C4 Wildlife     E4 Wildlife     E4 Wildlife     C3 Stagetation     O2 Other Cause     O3 Vagetation     O3 Vagetation     O3 Public Accident/Damage     O9 Public Accident/Damage     I1 Unknown Cause     I1 Unknown Cause     I1 Unknown Cause	3.64% 2.66% 2.66% 2.66% 39.38% 39.38% 39.38% 38.42% 35.06% 6.43% 0.16% 0.15% 0.16% 0.15% 0.10% 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% 0.02% 0.03% 0.02% 0.03% 0.02% 0.03% 0.02% 0.02% 0.00% 0.02% 0.02% 0.00% 0.02% 0.02% 0.00% 0.02% 0.02% 0.02% 0.00% 0.02% 0	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     In emajority of the Equipment Falure outage minutes were from one event due to a broken porcelain dead end insulator at port of the Public Accident/Damage outage minutes were from one event due to a broken porcelain dead end insulator at port of the Public Accident/Damage outage minutes were from one event due to a broken porcelain dead end insulator at port of the Public Accident/Damage outage minutes were from one event due to a broken porcelain dead end insulator at port of the Public Accident/Damage outage minutes were from one event due to a broken porcelain dead end insulator at port of the Public Accident/Damage outage minutes were from one event due to a broken porcelain dead end insulator at port of the Public Accident/Damage outage minutes were from one event that also resulted in a blown fuse. All of the Other Cause outage minutes from one event that also resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Public Accident/Damage outage minutes were from one event due to a vehicle hitting pole CA11-550, brok the transmitted in a blown fuse. All damaged equipment was replaced. No further action is required.     The majority of the Public Accident/Damage outage minutes were from one event due to a vehicle hitting pole CA11-550, brok the transmitted in a blown fuse. All damaged equipment was replaced. No further action is required.     The majority of the Public Accident/Damage outage minutes were from one event due to a vehicle hitting pole CA11-550, brok the transmitter action is required.     Descent material action is required.
WEST END STA - 140C0150041 WILDER - 149320590044	WEST END STA	H40C0150041 H9320590044	G4 Wildlife     G5 Planned (IEEE)     C0 Equipment failure     D1 Vagistation     P Public Accident/Damage     P Planned (IEEE)     Seather     S	3.64% 2.66% 2.66% 2.66% 39.38% 39.38% 39.38% 39.42% 39.42% 5.66% 5.66% 0.16% 0.05% 0	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     In emajority of the Equipment Faluer outage minutes were from one event due to a broken porcelain dead end insulator at porcelain dead end insubinter dead end insulator at porcelain dead end insulator at porce
WEST END STA - 144000350041 WILDER - 149320590044 WILDER - 149320590045	WEST END STA WILDER WILDER	H40C0150041 H9320590044 H9320590045	G4 Wildlife     G5 Planned (EEE)     20 Equipment failure     20 Equipment failure     G3 Vegetation     G9 Public Accident/Damage     G9 Public Accident/Damage     G9 Public Accident/Damage     G4 Wildlife     G3 Vegetation     G1 Uptroing strike     G2 Other Cause     G9 Public Accident/Damage     G9 Public Accident/Damage     G9 Public Accident/Damage     G9 Public Accident/Damage     G1 Unknown Cause     11 Unknown Cause	3.64% 2.66% 2.66% 2.66% 2.66% 2.66% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 30.65% 0.16% 100% 77.67% 77.67% 77.67% 77.67% 0.16% 0.02% 0.02% 85.06% 9.51% 2.72% 0.28% 0.02%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     In emajority of the Equipment Faluer outage minutes were from one event due to a broken porcelain dead end insulator at porcelain dead end insubinter dead end insulator at porcelain dead end insulator at porce
WEST END 5TA - 1440C0150041 WILDER - 149320590044 WILDER - 149320590045	WEST END STA WILDER WILDER	H40C0150041 H9320590044 H9320590045	G4 Wildlife     G5 Planned (IEEE)     C0 Equipment failure     G1 Vagetation     G1 Vagetation     G2 Vagetation     G2 Planned (IEEE)     G2 Vagetation	3.64% 2.66% 2.66% 2.66% 39.38% 39.38% 39.38% 39.38% 39.42% 5.66% 5.66% 100% 77.67% 0.15% 0.10% 0.03%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Faluer outage minutes were from one event due to a broken porcelain dead end insulator at g     Ks1-700 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event     due to ther falling otto a pole. The majority of the Public Accident/Damage outage minutes were from one event     due to ther falleng otto a pole. The majority of the Public Accident/Damage outage minutes     were from one event     due to there falleng otto a pole. The majority of the Public Accident/Damage outage minutes     were from one event     due to the falleng otto a pole. The majority of the Public Accident/Damage outage     equipment was replaced at the time of restoration. No further action is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes     from one event that also resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further     action is required.     The majority of the Public Accident/Damage outage minutes     were from one event due to a vehicle hitting pole CA11-550, bre     the cross arm brace, causing the phases to make contact and a redoser to lock out. All damaged equipment was replaced. N     intrine action is required.     All of the Unknown Cause and Other Cause outage minutes were from one event due to the phases slapping together at pale     All of the Unknown Cause and Other Cause outage minutes were from one event due to the phases slapping together at pale
WEST END 5TA - 1440C0150041 WILDER - 149320590044 WILDER - 149320590045	WEST END STA WILDER WILDER	H40C0150041 H9320590044 H9320590045	G4 Wildlife     G5 Planned (EEE)     20 Equipment failure     20 Equipment failure     G3 Vegetation     G9 Public Accident/Damage     G9 Public Accident/Damage     G9 Public Accident/Damage     G4 Wildlife     G3 Vegetation     G1 Uptroing strike     G2 Other Cause     G9 Public Accident/Damage     G9 Public Accident/Damage     G9 Public Accident/Damage     G9 Public Accident/Damage     G1 Unknown Cause     11 Unknown Cause	3.64% 2.66% 2.66% 2.66% 2.66% 2.66% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 30.05% 30.16% 100% 37.67% 31.39% 30.07\% 30.07\% 30.07\% 30.07\% 30.	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment Faluer outage minutes were from one event due to a broken porcelain dead end insulator at g     Ks1-700 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event     due to ther falling otto a pole. The majority of the Public Accident/Damage outage minutes were from one event     due to ther falleng otto a pole. The majority of the Public Accident/Damage outage minutes     were from one event     due to there falleng otto a pole. The majority of the Public Accident/Damage outage minutes     were from one event     due to the falleng otto a pole. The majority of the Public Accident/Damage outage     equipment was replaced at the time of restoration. No further action is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes     from one event that also resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further     action is required.     The majority of the Public Accident/Damage outage minutes     were from one event due to a vehicle hitting pole CA11-550, bre     the cross arm brace, causing the phases to make contact and a redoser to lock out. All damaged equipment was replaced. N     intrine action is required.     All of the Unknown Cause and Other Cause outage minutes were from one event due to the phases slapping together at pale     All of the Unknown Cause and Other Cause outage minutes were from one event due to the phases slapping together at pale
WEST END 5TA - 1440C0150041 WILDER - 149320590044 WILDER - 149320590045	WEST END STA WILDER WILDER	H40C0150041 H9320590044 H9320590045	G4 Wildlife     G5 Planned (IEEE)     C0 Equipment failure     G1 Vagetation     G1 Vagetation     G2 Vagetation     G2 Planned (IEEE)     G2 Vagetation	3.64% 2.66% 2.66% 2.66% 39.38% 39.38% 39.38% 39.38% 39.42% 5.66% 5.66% 100% 77.67% 0.15% 0.10% 0.03%	B-1.1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment failure outage minutes were from one event due to a broken porcelain dead end insulator at parts.     The majority of the Equipment failure outage minutes were from one event due to a broken porcelain dead end insulator at parts.     The majority of the Equipment failure outage minutes were from one event due to a broken porcelain dead end insulator at parts.     The majority of the Equipment failure outage minutes were from one event due to a broken porcelain dead end insulator at parts.     The majority of the Equipment failure outage minutes were from one event due to a broken porcelain dead end insulator at parts.     All of the Weather outage minutes were from one event that the time of restoration. No further action is required.     The majority of the Equipment was replaced at the time of restoration. No further action is required.     The majority of the Public Accident/Damage outage minutes were from one event that a lar extens its required.     The majority of the Public Accident/Damage outage minutes were from one event that a lar estimate in the origin of the Public Accident/Damage outage minutes are required.     The majority of the Public Accident/Damage outage minutes were from one event due to a vehicle hitting pole CA11-550, bre the cross arm brace, causing the phases to make contact and a redoser to lock out. All damaged equipment was replaced.     All of the Unknown Cause and Other Cause outage minutes were from one event due to the phases slapping together at pole 79, outsing a circuit breaker to lock out. The phases were lightened at the to of restoration. No further action is required.     Desting a circuit breaker to lock out. The phases were lightened at the to of restoration. No further action is required.
WEST END STA - H40C0150041 WILDER - H9320590044 WILDER - H9320590045	WEST END STA WILDER WILDER	H40C0150041 H9320590044 H9320590045	0.4 Wildlife       0.5 Planned (IEE)       20 Equipment failure       20 Stepfstation       20 Equipment failure       20 Stepfstation       20 Equipment failure       20 Stepfstation       20 Equipment failure       20 Vegetation       20 Equipment failure       20 Vulic Accident/Damage       04 Wildlife       20 Equipment failure       11 Unknown Cause       21 Unknown Cause       23 Other Cause       24 Wildlife       25 Equipment failure       26 Equipment failure       27 Equipment failure       28 Other Cause       29 Public Accident/Damage       20 Equipment failure	3.64% 2.66% 2.66% 2.66% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 39.38% 30.08% 39.51% 3.75%	B-1.1. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Equipment failure outage minutes were from one event due to a broken porcelain dead end insulator at p     Kal-700 that caused the conductor to drop to the ground. The majority of the Vegetation outage minutes were from one event     deat to the failing onto a pole. The majority of the Public Accident/Damage outage minutes were from one event     deat to the failing onto a pole. The majority of the Public Accident/Damage outage minutes     were from one event     deat to the failing onto a pole. The majority of the Public Accident/Damage outage minutes     were from one event     deat to the failing onto a pole. The majority of the Public Accident/Damage outage minutes     were from one event     deat to the time of restoration. No further action is required. This circuit was tast tremmed in 2022.     Deater outage minutes were from one event     All of the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes     cons is required.     Deater outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes     the orses arm brace, causing the orthouse and the time of restoration. No further     action is required.     Deater outage minutes were from one event due to a vehicle hitting pole CA11-550, brec     deater outage minutes were from one event due to a vehicle hitting pole CA11-550, brec     All of the Unknown Cause and Other Cause outage minutes were from one event due to a select in time pole for the reaction is required.     All of the Unknown Cause and Other Cause outage minutes were from one event due to the phases slapping together at pole 1     for one service is a constant on the phases to make contact and a redoser to lock out. All damaged equipment was replaced. No     Deater one service is a constant on the phases were fightered at the to of restoration. No further action
WEST END STA - H40C0150041 WILDER - H9320590044 WILDER - H9320590045	WEST END STA WILDER WILDER	H40C0150041 H9320590044 H9320590045	GA Wildlife     GS Planned (IEE)     Z0 Equipment failure     G3 Vegetation     O3 Vegetation     G9 Public Accident/Damage     G9 Public Accident(Damage     G9 Panned (IEE)     EA Weather     Z8 Other Cause     O3 Vegetation     J0 Lightning strike     Z0 Equipment failure     O4 Wildlife     O9 Public Accident/Damage     O9 Public Accident/Damage     O9 Public Accident/Damage     I1 Unknown Cause     II Unknown Cause     III Unknown Cause     II Unknown Cause	3.64% 2.66% 2.66% 2.66% 2.66% 2.66% 39.38% 39.38% 39.38% 39.38% 38.42% 15.56% 0.16% 0.16% 0.16% 0.16% 0.16% 0.16% 0.16% 0.16% 0.16% 0.16% 0.06% 0.06% 0.06% 0.06% 0.06% 0.06% 0.06% 0.02% 0.06% 0.282% 0.282% 0.28% 0.22% 0.22% 0.22% 0.22% 0.22% 0.22% 0.25% 0.30% 0.05	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     In emajority of the Equipment Fallure outage minutes were from one event due to a broken porcelain dead end insulator at provide the time of restoration. No further action is required.     In emajority of the Equipment Fallure outage minutes were from one event due to a broken porcelain dead end insulator at provide the time of restoration. No further action is required.     In the majority of the Supprent Fallure outage minutes were from one event due to a broken porcelain dead end insulator at provide the time of restoration. No further action is required. This diruct was last trimmed in 2022.     In the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes from one event that to resulted in a blown fuse. All of the Other Cause outage minutes were from one event due to a which hitting pole CA11-550, breat the time of restoration. No further action is required.     The majority of the Public Accident/Damage outage minutes were from one event due to a which hitting pole CA11-550, breat the time of restoration. No further action is required.     All of the Unknown Cause and Other Cause outage minutes were from one event due to a which hitting pole CA11-550, breat the time of restoration. No further action is required.     All of the Unknown Cause and Other Cause outage minutes were from one event due to a which hitting pole CA11-550, breat the time of restoration. No further action is required.
WEST END STA - H40C0150041 WILDER - H9320590044 WILDER - H9320590045 WILDER - H9320590046	WEST END STA WILDER WILDER	H40C0150041 H9320590044 H9320590045 H9320590046	G4 Widlife     G5 Planned (IEE)     Z0 Equipment failure     S0 Vegetation     G5 Planned (IEE)     Z0 Equipment failure     S0 Vegetation     G5 Planned (IEE)     EA Weather     EA Weather     S0 Vegetation     G4 Widlife     Cause     G9 Public Accident/Damage     G9 Public Accident/Damage     G9 Public Accident/Damage     G4 Widlife     S0 Vegetation     S0 Public Accident/Damage     G4 Widlife     S0 Stepstand     S0 Public Accident/Damage     G4 Widlife     S0 Stepstand     S0 Public Accident/Damage     G4 Widlife     S0 Stepstand     S0 Public Accident/Damage     S0 Stepstand     S0 Public Accident/Damage     S0 Stepstand     S0 Step	3.64% 2.66% 2.66% 2.66% 39.38% 39.38% 39.38% 39.38% 38.42% 15.06% 0.05% 0.06% 0.05% 0.02%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     In emajority of the Equipment Fallure outage minutes were from one event due to a broken porcelain dead end insulator at provide the time of restoration. No further action is required.     In emajority of the Equipment Fallure outage minutes were from one event due to a broken porcelain dead end insulator at provide the time of restoration. No further action is required.     In the majority of the Supprent Fallure outage minutes were from one event due to a broken porcelain dead end insulator at provide the time of restoration. No further action is required. This diruct was last trimmed in 2022.     In the Weather outage minutes were from one event that resulted in a blown fuse. All of the Other Cause outage minutes from one event that to resulted in a blown fuse. All of the Other Cause outage minutes were from one event due to a which hitting pole CA11-550, breat the time of restoration. No further action is required.     The majority of the Public Accident/Damage outage minutes were from one event due to a which hitting pole CA11-550, breat the time of restoration. No further action is required.     All of the Unknown Cause and Other Cause outage minutes were from one event due to a which hitting pole CA11-550, breat the time of restoration. No further action is required.     All of the Unknown Cause and Other Cause outage minutes were from one event due to a which hitting pole CA11-550, breat the time of restoration. No further action is required.
WEST END STA - H40C0150041 WILDER - H9320590044 WILDER - H9320590045 WILDER - H9320590046	WEST END STA WILDER WILDER	H40C0150041 H9320590044 H9320590045 H9320590046	GA Wildlife     GS Planned (IEE)     Z0 Equipment failure     G3 Vegetation     O3 Vegetation     G9 Public Accident/Damage     G9 Public Accident(Damage     G9 Panned (IEE)     EA Weather     Z8 Other Cause     O3 Vegetation     J0 Lightning strike     Z0 Equipment failure     O4 Wildlife     O9 Public Accident/Damage     O9 Public Accident/Damage     O9 Public Accident/Damage     I1 Unknown Cause     II Unknown Cause     III Unknown Cause     II Unknown Cause	3.64% 2.66% 2.66% 2.66% 2.66% 39.38% 39.38% 39.38% 39.38% 5.56% 5.56% 0.41% 0.06% 77.67% 0.16% 0.05% 0	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     In emajority of the Equipment Fallure outage minutes were from one event due to a broken porcelain dead end insulator at public Action by the Public Action of the Public Act
WEST END STA - H40C0150041 WILDER - H9320590044 WILDER - H9320590045 WILDER - H9320590046	WEST END STA WILDER WILDER	H40C0150041 H9320590044 H9320590045 H9320590046	0 4 Wildlife 05 Planned (IEE) 20 Equipment failure 20 I Vegetation 07 Public Accident/Damage 05 Planned (IEE) 28 Weather 28 Other Cause 06 Public Accident/Damage 07 Public Accident/Damage 08 Public Accident/Damage 09 Public Accident/Damage 09 Public Accident/Damage 11 Unknown Cause 28 Other Cause 11 Unknown Cause 11 Unknown Cause 29 Public Accident/Damage 20 Public Accident/Damage 20 Public Accident/Damage 20 Public Accident/Damage 21 Unknown Cause 23 Other Cause 24 Other Cause 25 Planned failure 28 Other Cause 29 Vegetation 20 Equipment failure 20 Equipment failure 29 Vegetation 20 Equipment failure 20 Vegetation 20 Equipment failure 20 Vegetation 20 Yegetation 20 Ye	3.64% 2.66% 2.66% 2.66% 39.38% 39.38% 39.38% 39.38% 38.42% 15.06% 0.05% 0.06% 0.05% 0.02%	B1-1. All damaged equipment was replaced at the time of restoration. No further action is required.     In emajority of the Equipment Fallure outage minutes were from one event due to a broken porcelain deal end insulator at the time of restoration. No further action is required.     The majority of the Equipment Fallure outage minutes were from one event due to a broken porcelain deal end insulator at the time of restoration. No further action is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that tas resulted in a blown fuse. All of the Other Cause outage minutes from one event that also resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further action is required. This circuit was last trimmed in 2022.     All of the Weather outage minutes were from one event that tas resulted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Public Accident/Damage outage minutes were from one event due to a wehicle hitting pole CA11-550, brot the transmitted in a blown fuse. All damaged equipment was replaced at the time of restoration. No further action is required.     The majority of the Public Accident/Damage outage minutes were from one event due to a wehicle hitting pole CA11-550, brot the transmitter is required.     All of the Unknown Cause and Other Cause outage minutes were from one event due to a wehicle hitting pole CA11-550, brot the transmitter is required.     All of the Unknown Cause and Other Cause outage minutes were from one event due to a wehicle hitting pole CA11-550, brot majority of the Public Accident/Damage outage minutes were from one event due to a wehicle hitting pole CA11-550, brot the transmitter is required.     The majority of the Public Accident/Damage outage minutes were from one event due to the phases shapping together at pole 79, causing a circuit breaker to lock out. The phases were tightened at the

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Distribution Vegetation Management Program – Duke Energy Kentucky, Inc

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#### **SECTION 1- GOAL, OBJECTIVES, AND PURPOSE**

Duke Energy Kentucky's vegetation management goal is to balance the need for safe and reliable utility service with safe and cost-effective vegetation management practices.

The primary objective of the Duke Energy Kentucky Vegetation Management Program is to control the growth of incompatible vegetation along its electric lines to help provide safe and reliable service to our customers. This is accomplished by using qualified personnel to monitor the condition of the utility rightsof-way and by initiating various vegetation control practices to reduce, manage or eliminate incompatible growth. This integrated vegetation management program is essential in providing safe and reliable electric service by ensuring that trees and brush near or within rights-of-way are periodically trimmed or removed to help reduce potential outages and hazards near our facilities.

The consistent implementation of industry accepted vegetation management practices reduces the likelihood of tree and power line conflicts, as well as service interruptions, and allows for the full utilization of the operating system.

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#### **SECTION 2 – DEFINITIONS**

ANSI A300 - American National Standards Institute (ANSI) A300 for Tree Care Operations provides the generally accepted industry performance standards for the care and management of trees, shrubs, and other woody plants.

ANSI Z133 - American National Standards Institute (ANSI) Z133 for Arboricultural Operations provides the generally accepted industry safety standards for the care and management of trees, shrubs, and other woody plants.

BRUSH - A perennial woody stem less than six inches DBH (diameter at breast height).

CIRCUIT MILES - (for reference and reporting purposes) The distance, in miles, of primary voltage electric lines from the substation to the end of the circuit including single phase, two phase or three phase configurations. The distance is measured to the nearest 1/10th of a mile.

COMPATIBLE VEGETATION – Vegetation within the distribution right of way that does not present a grow-in or fall-in threat that has a typical mature height of less than 15 feet and whose trunk is typically no closer than 20 feet from the center of the right of way.

CONTRACTOR - Corporation to whom the vegetation management work is awarded.

DANGER TREE – A tree that if it were to fall or be cut would be tall enough to strike electrical lines and equipment of the distribution system.

HAZARD TREE - A tree that is dead, structurally unsound, diseased, shallow-rooted, leaning or otherwise defective that could strike electrical lines or equipment of the distribution system if it falls or is cut.

INCOMPATIBLE VEGETATION – Vegetation within or outside the distribution right of way that will mature to a height or size that will pose a grow-in, fall-in, or blowing-together threat to the distribution conductor, or that will limit or block access to distribution facilities during routine or emergency maintenance activity.

INTEGRATED VEGETATION MANAGEMENT - Vegetation plan that combines various components including pruning, mowing, removals, and herbicide applications to manage the growth of vegetation on the electric utility rights-of-way.

LEGAL- Duke Energy Legal Department.

MAINTAINED/LANDSCAPED AREAS - An area where cut brush typically cannot be left on-site. Maintained areas typically include maintained yards and landscaped areas.

NON-MAINTAINED/NON-LANDSCAPED AREAS - An area where cut brush can be left on-site. Non-Maintained areas are unimproved areas or natural areas.

OPEN WIRE SECONDARY (OWS): A distribution line configuration that uses 2, 3 or 4 un-insulated conductors stacked vertically with 12 inches spacing between conductors, used to deliver secondary voltages ranging from 120-600 volts to the customer.

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#### **SECTION 2 – DEFINITIONS CONTINUED**

PRIMARY LINE: Electric conductor(s) energized at greater than 600 volts of electricity.

RIGHT-OF-WAY (ROW)- A strip of land that an electric utility uses to construct, operate, inspect, maintain, repair, or replace an overhead or underground power line. The ROW allows the utility to provide clearance from trees, buildings and other structures that could interfere with the line installation, maintenance, and operation. ROW may include licenses, easements and other rights to access property.

SECONDARY LINE: Electric conductor(s) are energized at 600 volts or less of electricity.

SERVICE – TRIPLEX – MULTIPLEX CABLE: Electric conductor(s) energized at 600 volts or less of electricity and terminate at a service delivery point. A bundle of three or four conductors, most commonly used to provide aerial service to homes and businesses, denoted by its 3 or 4 polyethylene coated conductors wrapped around a bare, aluminum conductor.

SINGLE PHASE PRIMARY: A type of electric power line construction that contains one (1) conductor energized at primary voltage.

THREE PHASE PRIMARY: A type of electric power line construction that contains three (3) conductors energized at primary voltage.

TREE- A perennial woody stem equal or greater than six inches in DBH (diameter at breast height)

TWO PHASE OR OPEN WYE: A type of electric power line construction that contains two (2) conductors energized at primary voltage.

UNIT MILE: A mile within a circuit that is required to be or has been trimmed per contract specifications.

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#### SECTION 3 – FEDERAL, STATE, AND LOCAL LAWS

Contractor shall perform all work in conformance with Duke Energy Kentucky Vegetation Management Program requirements and work specifications, Occupational Health and Safety Administration (OSHA) regulations, American National Standards Institute (ANSI) A300 and Z133, and all federal, state, county, and municipal laws, ordinances, and regulations applicable to said work.

The governing entities include but are not limited to:

- Kentucky Public Services Commission (Commission)
- Kentucky Transportation Cabinet (Department of Transportation)
- Kentucky Department of Agriculture
- Occupational Health and Safety Administration (OSHA)
- American National Standards Institute (ANSI)
- Easement and/or Permit Documents

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#### SECTION 4 – PROPERTY ACCESS RIGHTS / REQUIREMENTS

The rights to access, inspect, or perform the work associated with vegetation management practices include, but are not limited to, established legal instruments, easements, public road rights-of-way, municipal ordinances, state statutes, regulatory rules, tariffs, and other legal authority. Personnel responsible for implementing vegetation management on behalf of Duke Energy Kentucky should, when necessary, utilize the available supporting documents to pursue the completion of necessary work activities to maintain vegetation growth to the established standards of acceptance in the provision of safe and reliable electric service. If there are objections, restrictions or limitations that prevent completion of the necessary work activities, personnel should contact the Land Services Department or Legal Department for specialized assistance.

A list of items to determine property access rights include, but are not limited to:

- Existing property easement, prescriptive easements, public road rights of way and / or agreements
- State statutes
- Municipal codes
- Commission rules, regulations, orders, and approved tariffs.

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#### SECTION 5 – WORK QUALITY AND SAFETY STANDARDS

All work shall be performed in conformance with the governing rules from the following: Duke Energy Kentucky Vegetation Management Program Requirements, OSHA regulations, National Electrical Safety Code (NESC) and all federal, state, county, and municipal laws, statutes, ordinances, and regulations applicable to said work.

Clearance to obtain safety and reliable electric service are based on, but not limited to, consideration of the following:

NESC

ANSI A300 Standard - American National Standards Institute A300 for Tree Care Operations For utility line clearance work, the primary foci are Parts 1, 7 and 9.

ANSI Z133 Standard - American National Standards Institute Z133 for Tree Care Operations - Safety Requirements

OSHA Standard 29 Code of Federal Regulations (CFR) 1910.269 - OSHA Standard 29 CFR 1910.269 (a)(1)(i)(E) for Electric Power Generation, Transmission, and Distribution

Pruning Trees Near Electrical Utility Lines – A Field Pocket Guide for Qualified Line-Clearance Tree Workers by Dr. Alex L. Shigo

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#### SECTION 6 –DISTRIBUTION VEGETATION MANAGEMENT OVERVIEW FOR PLANNED WORK

Based on a data driven approach and to facilitate a 5-year trim cycle, Duke Energy Kentucky will review, and clear vegetation as needed from approximately 20% of distribution system miles annually. Vegetation maintenance may include tree pruning, mechanical trimming, brush cutting/mastication, herbicide application and tree removal. The primary objective of the Duke Energy Kentucky Vegetation Management Program is to control the growth of incompatible vegetation and remove hazard trees along its electric lines to help provide safe and reliable service to our customers by limiting or eliminating the possibility of contact by vegetation which has grown towards or could fall into the overhead distribution lines. This is accomplished by using qualified personnel to monitor the condition of the utility rights-of-way and by initiating various vegetation control practices to reduce, manage or eliminate incompatible growth.

The consistent implementation of industry accepted vegetation management practices reduces the likelihood of tree and power line conflicts, as well as service interruptions, and allows for the full utilization of the operating system.

#### **Distribution Line Clearances**

Trees located along the right-of-way edge will, in most cases, encroach upon the electrical conductors through the side growth of their limbs. The maintenance of these trees requires the removal or partial removal of those potentially interfering limbs. Industry standards dictate the proper methods of "pruning" such limbs to minimize any damages to the tree. Incompatible brush within the distribution right-of-way corridors is eliminated if possible. When such vegetation is eliminated, it will normally be cut down either by manual or mechanical means.

- Primary distribution lines are typically cleared during routine pruning to obtain no less than ten feet of side clearance. Unsuitable branches which are dead, dying, diseased or structurally unsound and above distribution facilities are removed during pruning.
- Secondary, including open wire secondary distribution conductors (without a primary distribution line and excluding a service drop), are trimmed on an as needed basis.
- Multiplex cables and guy wires (without a primary distribution line and excluding a service drop), are trimmed on an as needed basis. Removal of load bearing limbs that are in contact with conductors and have a size and weight that causes tension on the conductor or interference with the normal sag or alignment of the conductor will be pruned for a minimum of 12 inches of clearance.
- Duke Energy Kentucky shall have no responsibility to clear vegetation from a service drop.

#### **Hazard Tree Mitigation**

Trees found within or adjacent to the right-of way that are dead, structurally unsound, diseased, shallow-rooted, leaning or otherwise defective that could strike electrical lines or equipment are targeted to be taken down. Stumps from trees (live) taken down shall be treated with herbicides where appropriate and possible.

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#### **SECTION 7 – INSPECTIONS AND MONITORING**

Duke Energy Kentucky can and may perform inspections on distribution circuits to observe vegetation conditions on the distribution system. These inspections should provide for the capabilities to specifically identify potentially incompatible vegetation conditions. The intent of these inspections is to identify off-cycle vegetation threats along the distribution line corridors and take appropriate action.

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Transmission Vegetation Management Program – Duke Energy Kentucky, Inc.

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#### SECTION 1 – GOALS, OBJECTIVES AND PURPOSE

Duke Energy Kentucky's vegetation management goal is to balance the need for safe and reliable utility service with safe and cost-effective vegetation management practices.

The primary objective of the Duke Energy Kentucky Vegetation Management Program is to control the growth of incompatible vegetation along its electric lines to help provide safe and reliable service to our customers. This is accomplished by using qualified personnel to monitor the condition of the utility rights-of-way and by initiating various vegetation control practices to reduce, manage or eliminate incompatible growth. This integrated vegetation management program is essential in providing safe and reliable electric service by ensuring that trees and brush near or within rights-of-way are periodically trimmed or removed to help reduce potential outages and hazards near our facilities.

The consistent implementation of industry accepted vegetation management practices reduces the likelihood of tree and power line conflicts, as well as service interruptions, and allows for the full utilization of the operating system.

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#### **SECTION 2 – DEFINITIONS**

ANSI A300 - American National Standards Institute (ANSI) A300 for Tree Care Operations, provides the generally accepted industry performance standards for the care and management of trees, shrubs, and other woody plants.

ANSI Z133 - American National Standards Institute (ANSI) Z133 for Arboricultural Operations, provides the generally accepted industry safety standards for the care and management of trees, shrubs, and other woody plants.

ASSET PROTECTION - Duke Energy department that enforces transmission right of way legal rights.

BRUSH - A perennial woody stem less than six inches DBH (diameter at breast height).

COMPATIBLE VEGETATION – Vegetation within the Transmission Right of Way that will not mature to a height or size that will pose a grow-in, fall-in, or blowing-together threat to the transmission conductor, or that will not limit or block access, or the safe and reliable operation, emergency restoration, or maintenance activity, which is typically within 25 feet of any Duke Energy facilities (towers, poles, guy wires, guy anchors, etc.).

CONTRACTOR - Corporation to whom the Vegetation Management work is awarded.

CONDUCTOR BLOWOUT – Conductors horizontal position/location at National Electrical Safety Code (NESC) designed wind and temperature.

CONDUCTOR SAG – Conductors vertical position/location at designed maximum operating conditions.

DANGER TREE – A tree that if it were to fall or be cut would be tall enough to strike electrical lines and equipment of the transmission or distribution system.

HAZARD TREE - A tree that is dead, structurally unsound, diseased, shallow-rooted, leaning or otherwise defective that could strike electrical lines or equipment of the transmission system if it falls or is cut.

INCOMPATIBLE VEGETATION – Vegetation within or outside the Transmission Right of Way that will mature to a height or size that will pose a grow-in, fall-in, or blowing-together threat to the transmission conductor, or that will limit or block access, or the safe and reliable operation, emergency restoration, or maintenance activity, which is typically within 25 feet of any Duke Energy facilities (towers, poles, guy wires, guy anchors, etc.).

INTEGRATED VEGETATION MANAGEMENT - Vegetation plan that combines various components including pruning, mowing, removals, and herbicide applications to manage the growth of vegetation on the electric utility rights-of-way.

LEGAL- Duke Energy Legal Department.

MAINTAINED/LANDSCAPED AREAS - An area where cut brush typically cannot be left on-site. Maintained areas typically include maintained yards and landscaped areas.

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION (NERC) CIRCUITS – Transmission lines typically operated at more than 200 kV. Some transmission lines operated at voltages lower than 200 kV may be designated as NERC circuits if deemed critical.

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#### **SECTION 2 – DEFINITIONS CONTINUED**

NON-NERC CIRCUITS – Transmission lines that typically operate at less than 200 kV.

NON-MAINTAINED/NON-LANDSCAPED AREAS - An area where cut brush can be left on-site. Non-Maintained areas are unimproved areas or natural areas.

RECLAMATION – The establishment or reestablishment of Integrated Vegetation Management (IVM) objectives in areas not actively maintained.

RIGHT-OF-WAY (ROW)- A strip of land that an electric utility uses to construct, operate, inspect, maintain, repair, or replace an overhead or underground power line. The ROW allows the utility to provide clearance from trees, buildings and other structures that could interfere with line installation, maintenance, and operation. ROW may include licenses, easements and other rights to access property.

TRANSMISSION LINE– A set of electrical conductors that carry 69 kV or more of electricity.

TREE- A perennial woody stem equal or greater than six inches in DBH (diameter at breast height)

#### SECTION 3 – FEDERAL, STATE, AND LOCAL LAWS

Contractor shall perform all work in conformance with the Duke Energy Kentucky Vegetation Management Program requirements and work specifications, Occupational Health and Safety Administration (OSHA) regulations, American National Standards Institute (ANSI) A300 and Z133, and all federal, state, county, and municipal laws, ordinances, and regulations applicable to said work.

The governing entities include but are not limited to:

- Kentucky Public Service Commission (Commission)
- Kentucky Transportation Cabinet (Department of Transportation)
- Kentucky Department of Agriculture
- Occupational Health and Safety Administration (OSHA)
- American National Standards Institute (ANSI)
- Easement and/or Permit Documents

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#### SECTION 4 – PROPERTY ACCESS RIGHTS / REQUIREMENTS

The rights to access, inspect, or perform the work associated with vegetation management practices include, but are not limited to, established legal instruments, easements, public road rights-of-way, municipal ordinances, state statutes, regulatory rules, tariffs, and other legal authority. Personnel responsible for implementing vegetation management on behalf of Duke Energy Kentucky should, when necessary, utilize the available supporting documents to pursue the completion of necessary work activities to maintain vegetation growth to the established standards of acceptance in the provision of safe and reliable electric service. If there are objections, restrictions or limitations that prevent completion of the necessary work activities, Duke Energy Vegetation Management should contact the Land Services Department or Legal Department for specialized assistance.

A list of items to determine property access rights include, but are not limited to:

- Existing property easement, prescriptive easements, public road rights of way and / or agreements
- State statutes
- Municipal codes
- Commission rules, regulations, orders, and approved tariffs.

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#### SECTION 5 – WORK QUALITY AND SAFETY STANDARDS

All work shall be performed in conformance with the governing rules from the following: Duke Energy Kentucky Vegetation Management Program Requirements, OSHA regulations, NESC and all federal, state, county, and municipal laws, statutes, ordinances, and regulations applicable to said work.

Clearance to obtain safety and reliable electric service are based on, but not limited to, consideration of the following:

#### National Electrical Safety Code (NESC)

**ANSI A300 Standard** - American National Standards Institute A300 for Tree Care Operations - For utility line clearance work, the primary foci are Parts 1, 7 and 9.

ANSI Z133 Standard - American National Standards Institute Z133 for Tree Care Operations - Safety Requirements

**OSHA Standard 29 Code of Federal Regulations (CFR) 1910.269** -OSHA Standard 29 CFR 1910.269 (a)(1)(i)(E) for Electric Power Generation, Transmission, and Distribution

*Pruning Trees Near Electrical Utility Lines – A Field Pocket Guide for Qualified Line-Clearance Tree Workers* by Dr. Alex L. Shigo

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#### SECTION 6 – TRANSIMISSION VEGETATION MANAGEMENT OVERVIEW FOR PLANNED WORK

Duke Energy's program is designed on an Integrated Vegetation Management (IVM) strategy that targets removals of incompatible vegetation to minimize potential outages to the Transmission system and ensure necessary access within all transmission line corridors. The reason for IVM is to create, promote, and conserve sustainable plant communities that are compatible with the intended use of the site, and manage incompatible plants that may conflict with the intended use of the site. This approach is recognized as an industry best management practice and is in alignment with ANSI A300 Part 7 standard.

As part of an IVM strategy, Duke Energy utilizes a threat and condition-based approach to planned work. This approach of identifying threats as triggers to determine incompatible vegetation within and outside the Transmission Right of Way. Duke Energy utilizes a process to define compatible and incompatible vegetation to balance the needs of public and worker safety as well as the reliable operation of the Transmission system. A time-based herbicide program will be used to further manage the ROW of incompatible vegetation and support IVM.

#### THREAT/CONDITION-BASED TRIGGERS

For planned work, threat trigger distances are used to identify vegetation threats that do not allow for safe operation of the transmission facilities, under all operating conditions (designed blowout and designed maximum operating sag). These threat triggers are radial distances based on engineering design criteria for the conductor sag and blowout operating locations and are voltage dependent.

These threat trigger distances provide for approximately 6 years of typical vegetation re-growth and supports minimum safe worker distances. Once vegetation has been identified as a threat, the vegetation will be evaluated to determine a mitigation strategy through the work planning process.

#### THREAT/CONDITION-BASED ACTION

During the work planning and marking process, many factors and criteria must be considered when developing the mitigation strategy. A Duke Energy Kentucky utility vegetation management professional will evaluate the vegetation based on arboricultural, regulatory/safety standards, legal ROW rights and criteria such as size, age, location, growth rate, maintained/landscaped vs. non-maintained/non-landscaped, etc. Property owner concerns with the proposed mitigation strategy shall be communicated to Duke Energy Kentucky personnel and alternative mitigation strategies will be considered. One mitigation strategy includes herbicide application.

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#### MITIGATION FOR INCOMPATIBLE VEGETATION THREATS

All identified incompatible vegetation will be evaluated and removed.

#### SPECIAL/SPECIFIC SITUATIONS

- **Potential Outage Risk:** When a Transmission outage risk is identified, Duke Energy Kentucky will attempt to notify the affected property owner if practical and possible. However, Duke Energy Kentucky may need to take immediate action, such as remove the vegetation, to protect the reliability and security of the Transmission system.
- **Roadside:** For situations such as roadside, overhead Transmission lines built within public road right of way with limited Transmission Right of Way rights, a Wire Zone / Border Zone approach will be utilized with property owners to manage vegetation threats within and outside of the public road right of way.
- **Off ROW Danger Tree:** Duke Energy Kentucky personnel will focus on removing danger tree threats for reliability and storm hardening purposes on narrow corridors or rural areas where rights outside of the easement allow.
- **Storm:** During storm events, debris in maintained or landscaped areas associated with emergency operations restoration efforts will be left on site and is the responsibility of the property owner.

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#### **SECTION 7 – INSPECTION AND MONITORING**

Duke Energy Kentucky can and may perform inspections on each transmission circuit (69kv and above) to observe vegetation conditions on the transmission system. These inspections should provide for the capabilities to specifically identify potentially incompatible vegetation conditions. The intent of these inspections is to identify off-cycle vegetation threats along the transmission line corridors and take appropriate action.

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#### **SECTION 8 – VEGETATION CONTROL METHODS**

**TREE PRUNING** - Trees found within or adjacent to the right-of-way edge will, in most cases, encroach upon the electrical conductors through the growth of their limbs. The management of these trees requires the removal or partial removal of those potentially interfering limbs. Industry standards dictate the proper methods of "pruning" such limbs to minimize any damages to the tree. These methods are in alignment with industry standards which refer to natural pruning, drop crotch and lateral pruning techniques. Stubbing and tearing of bark shall be avoided. When utilizing boom mounted cutting devices or helicopters to perform the pruning activities in rural locations, proper pruning methods are not typically a viable option.

**HAZARD TREE MITIGATION** - Trees found within or adjacent to the right-of way that are dead, structurally unsound, diseased, shallow-rooted, leaning or otherwise defective that could strike electrical lines or equipment are targeted to be taken down. Stumps from downed trees shall be treated with herbicides where appropriate and possible.

**INCOMPATIBLE VEGETATION MITIGATION (i.e., trees)** - Trees which are in close proximity to electrical facilities can require extensive pruning to prevent them from causing reliability or safety risk. These trees within the right-of-way will be targeted to be taken down and Duke Energy Kentucky will attempt to notify the affected property owner.

**BRUSH MANAGEMENT** - Because of a variety of terrain, differences in soil, land use, and vegetation types, Duke Energy Kentucky uses IVM practices which include environmentally acceptable herbicides to control brush within the right-of-way. All herbicides used in brush management operations shall be registered with the EPA and the applicable regulating state authority. In situations where brush height is of significant size and therefore not conducive to herbicide applications, the right of way may be mechanically mowed. In landscaped/maintained areas, brush will typically be hand cut and the remaining stumps treated.

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#### **SECTION 9 – CONTRACTOR RESPONSIBILITIES**

**STANDARDS TO FOLLOW** - Contractor shall perform all work in conformance with Duke Energy Kentucky Vegetation Management Program requirements (Contract Terms and Conditions).