



**Dominion
Energy[®]**

**Application, Appendix,
DEQ Supplement, Routing
Study, Direct Testimony
and Exhibits of Virginia
Electric and Power
Company**

**Before the State Corporation
Commission of Virginia**

**500 kV Morrisville-Wishing Star
Line #5008, 230 kV Anderson
Branch-Morrisville Line #2464,
Expanded Corridor Optimization
and Related Projects**

Application No. 357

Case No. PUR-2026-00021

Filed: February 27, 2026

Volume 6 of 7

*Application of Virginia Electric and Power Company
for Approval and Certification of Electric Transmission Facilities:
500 kV Morrisville-Wishing Star Line #5008, 230 kV Anderson Branch-Morrisville Line #2464,
Expanded Corridor Optimization and Related Projects
Case No. PUR-2026-00021*

Table of Contents

Volume 1

**Application
Appendix Sections I.A through I.I**

Volume 2

Appendix Section I.J

Volume 3

Appendix Sections I.K through II.B.3

Volume 4

**Appendix Sections II.B.4 through V.D
Identification, Summaries, and Testimony of Direct Witnesses**

Volume 5

Department of Environmental Quality Supplement

Volume 6

**Environmental Routing Study
Environmental Routing Study Report**

Volume 7

**Environmental Routing Study
Appendix A – Figures
Appendix B – Feature Crossing Tables
Appendix C – Visual Impact Assessment**



ERM

Environmental Routing Study

Morrisville-Wishing Star 500-230 kV Electric Transmission Project

PREPARED FOR



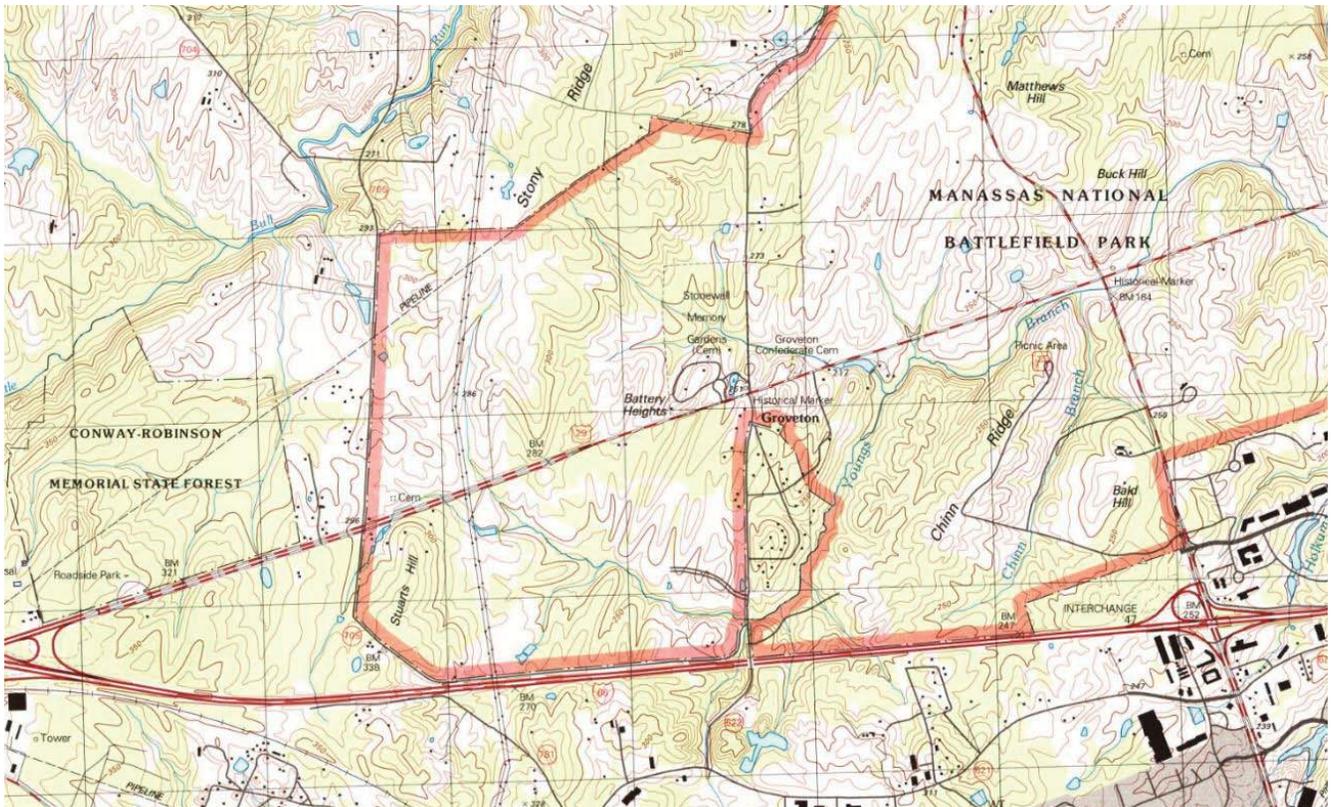
Dominion Energy Virginia

DATE

February 2026

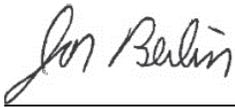
REFERENCE

0742442



Environmental Routing Study

Morrisville-Wishing Star 500-230 kV Electric Transmission Project
0742442



Jon Berkin
Partner



Jared Brandell-Douglas
Principal Consultant

Environmental Resources Management, Inc.
222 South 9th Street, Suite 2900
Minneapolis, Minnesota 55402

© Copyright 2026 by The ERM International Group Limited and/or its affiliates ('ERM'). All Rights Reserved.
No part of this work may be reproduced or transmitted in any form or by any means, without prior written permission of ERM.

CONTENTS

1.	INTRODUCTION	1
1.1	PROJECT DESCRIPTION	1
1.2	PURPOSE AND NEED	2
1.3	SEGMENT DESCRIPTIONS AND CROSS-SECTIONS	3
1.3.1	Segment 1	3
1.3.2	Segment 2A	4
1.3.3	Segment 2B	4
1.3.4	Segment 3	5
1.3.5	Segment 4	8
1.3.6	Transmission Structures	8
1.4	STUDY OBJECTIVES	8
1.4.1	End-to-end Greenfield Alternative	9
1.4.2	Underground Alternatives	9
1.5	ROUTES ELIMINATED FROM FURTHER CONSIDERATION	9
1.5.1	MNBP Crossing Options	10
1.6	COLLOCATION OPPORTUNITIES	12
1.6.1	Expanded Corridor Optimization	12
1.6.2	Gainesville and Pageland Alternatives	13
1.7	CONSTRUCTION, OPERATION, AND MAINTENANCE PROCEDURES	15
1.8	DATA SOURCES	16
2.	CORRIDOR REVIEW, ANALYSIS, AND ALTERNATIVES IDENTIFICATION	18
2.1	CORRIDOR REVIEW	18
2.2	ALTERNATIVE ROUTE DEVELOPMENT	19
2.3	STAKEHOLDER ENGAGEMENT	20
2.4	ANALYSIS AND RECOMMENDATIONS	20
3.	RESOURCE IDENTIFICATION AND ASSESSMENT METHODOLOGY	22
3.1	REPORT LAYOUT	23
3.2	METHODOLOGY OF RESOURCE IDENTIFICATION AND ASSESSMENT	24
3.2.1	Impact Centerline and Right-of-Way Impacts	24
3.2.2	Land Use	24
3.2.3	Natural Resources	42
3.2.4	Cultural Resources	51
3.2.5	Visual Resources	52
3.2.6	Environmental Justice	54
3.2.7	Geological Resources	57
4.	SEGMENT 1 RESOURCES AND IMPACTS	59
4.1	LAND USE	59
4.1.1	Public Lands	59
4.1.2	Land Use and Land Cover	59
4.1.3	Land Use Planning and Zoning	60
4.1.4	Residential Areas and Residences	61
4.1.5	Commercial/Industrial Areas and Buildings	62

4.1.6	Planned Developments	62
4.1.7	Conservation Easements and Lands	62
4.1.8	Recreational Resources	65
4.1.9	Cemeteries, Schools, and Places of Worship	66
4.1.10	Transportation Infrastructure	68
4.1.11	Airports and Heliports	69
4.2	NATURAL RESOURCES	73
4.2.1	Surface Waters	73
4.2.2	Natural Heritage Resources	76
4.2.3	Protected Species	78
4.2.4	Vegetation	89
4.3	CULTURAL RESOURCES	90
4.3.1	Archaeological Sites and Findings	90
4.3.2	Aboveground Historic Resources and Findings	91
4.4	VISUAL RESOURCES	91
4.4.1	Existing Conditions	91
4.4.2	Visual Impact Assessment	95
4.5	ENVIRONMENTAL JUSTICE	99
4.5.1	Existing Conditions	99
4.5.2	Impact Assessment	99
4.6	GEOLOGICAL RESOURCES	101
4.6.1	Existing Conditions	101
4.6.2	Impact Assessment	101
5.	SEGMENT 2A RESOURCES AND IMPACTS	102
5.1	LAND USE	102
5.1.1	Public Lands	102
5.1.2	Land Use and Land Cover	102
5.1.3	Land Use Planning and Zoning	103
5.1.4	Residential Areas and Residences	103
5.1.5	Commercial/Industrial Areas and Buildings	104
5.1.6	Planned Developments	104
5.1.7	Conservation Easements and Lands	105
5.1.8	Recreational Resources	107
5.1.9	Cemeteries, Schools, and Places of Worship	107
5.1.10	Transportation Infrastructure	108
5.1.11	Airports and Heliports	108
5.2	NATURAL RESOURCES	111
5.2.1	Surface Waters	111
5.2.2	Natural Heritage Resources	113
5.2.3	Protected Species	114
5.2.4	Vegetation	116
5.3	CULTURAL RESOURCES	117
5.3.1	Archaeological Sites and Findings	117
5.3.2	Aboveground Historic Resources and Findings	118
5.4	VISUAL RESOURCES	118
5.4.1	Existing Conditions	118
5.4.2	Visual Impact Assessment	119

5.4.3	Visual Impact Summary	119
5.5	ENVIRONMENTAL JUSTICE	120
5.5.1	Existing Conditions	120
5.5.2	Impact Assessment	120
5.6	GEOLOGICAL RESOURCES	122
5.6.1	Existing Conditions	122
5.6.2	Impact Assessment	122
6.	SEGMENT 2B RESOURCES AND IMPACTS	123
6.1	LAND USES	123
6.1.1	Public Lands	123
6.1.2	Land Use and Land Cover	123
6.1.3	Land Use Planning and Zoning	124
6.1.4	Residential Areas and Residences	125
6.1.5	Commercial/Industrial Areas and Buildings	126
6.1.6	Planned Developments	126
6.1.7	Conservation Easements and Lands	130
6.1.8	Recreational Resources	135
6.1.9	Cemeteries, Schools, and Places of Worship	135
6.1.10	Transportation Infrastructure	137
6.1.11	Airports and Heliports	138
6.2	NATURAL RESOURCES	142
6.2.1	Surface Waters	142
6.2.2	Natural Heritage Resources	144
6.2.3	Protected Species	148
6.2.4	Vegetation	150
6.3	CULTURAL RESOURCES	152
6.3.1	Archaeological Sites and Findings	152
6.3.2	Aboveground Historic Resources and Findings	153
6.4	VISUAL RESOURCES	154
6.4.1	Existing Conditions	154
6.4.2	Visual Impact Assessment	159
6.5	ENVIRONMENTAL JUSTICE	166
6.5.1	Existing Conditions	166
6.5.2	Impact Assessment	166
6.6	GEOLOGICAL RESOURCES	168
6.6.1	Existing Conditions	168
6.6.2	Impact Assessment	168
7.	SEGMENT 3 RESOURCES AND IMPACTS	168
7.1	LAND USES	168
7.1.1	Public Lands	168
7.1.2	Land Use and Land Cover	174
7.1.3	Land Use Planning and Zoning	177
7.1.4	Residential Areas and Residences	181
7.1.5	Commercial/Industrial Areas and Buildings	184
7.1.6	Planned Developments	184
7.1.7	Conservation Easements and Lands	195

7.1.8	Recreational Resources	196
7.1.9	Cemeteries, Schools, and Places of Worship	203
7.1.10	Transportation Infrastructure	210
7.1.11	Airports and Heliports	216
7.2	NATURAL RESOURCES	220
7.2.1	Surface Waters	220
7.2.2	Natural Heritage Resources	228
7.2.3	Protected Species	242
7.2.4	Vegetation	248
7.3	CULTURAL RESOURCES	251
7.3.1	Archaeological Sites and Findings	251
7.3.2	Aboveground Historic Resources and Findings	254
7.4	VISUAL RESOURCES	259
7.4.1	Existing Conditions	259
7.4.2	Visual Impact Assessment	272
7.5	ENVIRONMENTAL JUSTICE	280
7.5.1	Segment 3 Mainline	280
7.5.2	Gainesville Alternatives	287
7.5.3	Pageland Alternatives	287
7.6	GEOLOGICAL RESOURCES	287
7.6.1	Segment 3 Mainline	287
7.6.2	Gainesville Alternatives	288
7.6.3	Pageland Alternatives	288
7.6.4	Mineral Resources	288
8.	SEGMENT 4 RESOURCES AND IMPACTS	290
8.1	LAND USES	290
8.1.1	Public Lands	290
8.1.2	Land Use and Land Cover	292
8.1.3	Land Use Planning and Zoning	292
8.1.4	Residential Areas and Residences	295
8.1.5	Commercial/Industrial Areas and Buildings	296
8.1.6	Planned Developments	296
8.1.7	Conservation Easements and Lands	298
8.1.8	Recreational Resources	300
8.1.9	Cemeteries, Schools, and Places of Worship	301
8.1.10	Transportation Infrastructure	303
8.1.11	Airports and Heliports	304
8.2	NATURAL RESOURCES	309
8.2.1	Surface Waters	309
8.2.2	Natural Heritage Resources	311
8.2.3	Protected Species	312
8.2.4	Vegetation	314
8.3	CULTURAL RESOURCES	315
8.3.1	Archaeological Sites and Findings	315
8.3.2	Aboveground Historic Resources and Findings	315
8.4	VISUAL RESOURCES	316
8.4.1	Existing Conditions	316

8.4.2	Visual Impact Assessment	321
8.5	ENVIRONMENTAL JUSTICE	327
8.5.1	Existing Conditions	327
8.5.2	Impact Assessment	327
8.6	GEOLOGICAL RESOURCES	330
8.6.1	Existing Conditions	330
8.6.2	Impact Assessment	330
9.	SUMMARY AND CONCLUSIONS	331
	REFERENCES	334

APPENDIX A FIGURES

APPENDIX B FEATURE CROSSING TABLES

APPENDIX C VISUAL IMPACT ASSESSMENT

LIST OF TABLES

TABLE 1.6-1	COLLOCATION OF CORRIDOR OPTIMIZATION SEGMENTS (MILES)	13
TABLE 1.6-2	COLLOCATION OF SEGMENT 3 ROUTE ALTERNATIVES (MILES)	14
TABLE 3-1	FEATURES CONSIDERED FOR ROUTE DEVELOPMENT AND ANALYSIS	22
TABLE 3.2-1	PRINCE WILLIAM COUNTY SPECIAL PLANNING AREAS WITHIN 0.25 MILE OF PROJECT FACILITIES WITHIN SEGMENT 3	27
TABLE 3.2-2	POLICY AREAS WITHIN 0.25 MILE OF PROJECT FACILITIES WITHIN SEGMENT 4	28
TABLE 3.2-3	FEDERAL AVIATION REGULATION (FAR) PART 77 APPROACH SURFACE CLASSIFICATIONS	33
TABLE 3.2-4	AIRPORTS AND HELIPORTS WITHIN 10 NAUTICAL MILES OF THE PROJECT IMPACT CENTERLINE	37
TABLE 3.2-5	14 CFR PART 77 IMAGINARY SURFACE GEOMETRY OF AIRPORTS IN CLOSE PROXIMITY TO THE PROJECT	40
TABLE 3.2-6	LANDSCAPE UNITS	53
TABLE 4.1-1	LAND USE/LAND COVER CROSSED BY SEGMENT 1 (ACRES)	59
TABLE 4.1-2	ZONING DISTRICTS WITHIN 0.25 MILE OF SEGMENT 1 IMPACT CENTERLINE	60
TABLE 4.1-3	ZONING DISTRICTS CROSSED BY SEGMENT 1	61
TABLE 4.1-4	DWELLINGS NEAR SEGMENT 1 IMPACT CENTERLINE	61
TABLE 4.1-5	EASEMENTS WITHIN 0.25 MILE OF SEGMENT 1 IMPACT CENTERLINE	63
TABLE 4.1-6	RECREATIONAL RESOURCES WITHIN 0.25 MILE OF SEGMENT 1 IMPACT CENTERLINE	66
TABLE 4.1-7	CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP WITHIN 0.25 MILE OF SEGMENT 1 IMPACT CENTERLINE	67
TABLE 4.1-8	ROADS CROSSED BY PROJECT SEGMENT 1	69
TABLE 4.1-9	AIRPORTS AND HELIPORTS LOCATED WITHIN 10 NAUTICAL MILES OF SEGMENT 1	71
TABLE 4.2-1	ACREAGE OF HIGH, MEDIUM-HIGH, AND MEDIUM PROBABILITY WETLANDS AND WATERBODIES WITHIN THE SEGMENT 1 FOOTPRINT	74
TABLE 4.2-2	WATERBODIES CROSSED BY PROJECT ROUTE ALTERNATIVES	75
TABLE 4.2-3	VDCR-MAPPED ECOLOGICAL CORES CROSSED BY SEGMENT 1	77
TABLE 4.2-4	FEDERAL- AND STATE-LISTED SPECIES POTENTIALLY OCCURRING IN THE STUDY AREA	79
TABLE 4.2-5	RARE PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE STUDY AREA	86

TABLE 4.2-6	ACREAGE OF VEGETATION TYPES CROSSED BY SEGMENT 1	89
TABLE 4.2-7	FOREST CONSERVATION VALUE ALONG SEGMENT 1	90
TABLE 4.3-1	PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF SEGMENT 1	90
TABLE 4.3-2	ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR SEGMENT 1	91
TABLE 4.4-1	SEGMENT 1 VISUALLY SENSITIVE RESOURCES	93
TABLE 4.4-2	AREAS OF HIGH POTENTIAL VISIBILITY ALONG SEGMENT 1	94
TABLE 4.4-3	SEGMENT 1—SUMMARY OF ANTICIPATED IMPACTS BY VISUALLY SENSITIVE RESOURCE	96
TABLE 4.4-4	SEGMENT 1—VISUAL RESOURCE IMPACT SUMMARY	98
TABLE 4.5-1	ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY SEGMENT 1	100
TABLE 5.1-1	LAND USE/LAND COVER CROSSED BY SEGMENT 2A (ACRES)	102
TABLE 5.1-2	ZONING DISTRICTS WITHIN 0.25 MILE OF SEGMENT 2A IMPACT CENTERLINE	103
TABLE 5.1-3	ZONING DISTRICTS CROSSED BY SEGMENT 2A	103
TABLE 5.1-4	DWELLINGS NEAR SEGMENT 2A IMPACT CENTERLINE	104
TABLE 5.1-5	EASEMENTS WITHIN 0.25 MILE OF SEGMENT 2A IMPACT CENTERLINE	106
TABLE 5.1-6	CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP WITHIN 0.25 MILE OF SEGMENT 2A IMPACT CENTERLINE	107
TABLE 5.1-7	ROADS CROSSED BY PROJECT SEGMENT 2A	108
TABLE 5.1-8	AIRPORTS AND HELIPORTS LOCATED WITHIN 10 NAUTICAL MILES OF SEGMENT 2A	109
TABLE 5.2-1	ACREAGE OF HIGH, MEDIUM-HIGH, AND MEDIUM PROBABILITY WETLANDS AND WATERBODIES WITHIN THE SEGMENT 2A FOOTPRINT	112
TABLE 5.2-2	WATERBODIES CROSSED BY SEGMENT 2A	113
TABLE 5.2-3	VDCR-MAPPED ECOLOGICAL CORES CROSSED BY SEGMENT 2A	114
TABLE 5.2-4	ACREAGE OF VEGETATION TYPES CROSSED BY SEGMENT 2A	116
TABLE 5.2-5	FOREST CONSERVATION VALUE ALONG SEGMENT 2A	116
TABLE 5.3-1	PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF SEGMENT 2A	117
TABLE 5.3-2	ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR SEGMENT 2A	118
TABLE 5.4-1	SEGMENT 2A—VISUAL RESOURCE IMPACT SUMMARY	119
TABLE 5.5-1	ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY SEGMENT 2A	121
TABLE 6.1-1	LAND USE/LAND COVER CROSSED BY SEGMENT 2B (ACRES)	124
TABLE 6.1-2	ZONING DISTRICTS WITHIN 0.25 MILE OF SEGMENT 2B IMPACT CENTERLINE	124
TABLE 6.1-3	ZONING DISTRICTS CROSSED BY SEGMENT 2B	125
TABLE 6.1-4	DWELLINGS NEAR SEGMENT 2B IMPACT CENTERLINE	126
TABLE 6.1-5	PLANNED DEVELOPMENTS WITHIN 0.25 MILE OF SEGMENT 2B IMPACT CENTERLINE	127
TABLE 6.1-6	PLANNED DEVELOPMENT CROSSINGS (ACRES)	127
TABLE 6.1-7	PLANNED RECREATIONAL RESOURCES WITHIN 0.25 MILE OF SEGMENT 2B IMPACT CENTERLINE	129
TABLE 6.1-8	EASEMENTS WITHIN 0.25 MILE OF SEGMENT 2B IMPACT CENTERLINE	132
TABLE 6.1-9	CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP WITHIN 0.25 MILE OF SEGMENT 2B IMPACT CENTERLINE	135
TABLE 6.1-10	ROADS CROSSED BY SEGMENT 2B	137
TABLE 6.1-11	AIRPORTS AND HELIPORTS LOCATED WITHIN 10 NAUTICAL MILES OF SEGMENT 2B	139
TABLE 6.2-1	ACREAGE OF HIGH, MEDIUM-HIGH, AND MEDIUM PROBABILITY WETLANDS AND WATERBODIES WITHIN THE SEGMENT 2B FOOTPRINT	143
TABLE 6.2-2	WATERBODIES CROSSED BY SEGMENT 2B	144
TABLE 6.2-3	STREAM CONSERVATION SITE CROSSINGS BY SEGMENT 2B	147
TABLE 6.2-4	VDCR-MAPPED ECOLOGICAL CORES CROSSED BY SEGMENT 2B	147

TABLE 6.2-5	ACREAGE OF VEGETATION TYPES CROSSED BY SEGMENT 2B	151
TABLE 6.2-6	FOREST CONSERVATION VALUE ALONG SEGMENT 2B	151
TABLE 6.3-1	PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF SEGMENT 2B	152
TABLE 6.3-2	ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR SEGMENT 2B	153
TABLE 6.4-1	VISUALLY SENSITIVE RESOURCES AND USER GROUPS	155
TABLE 6.4-2	AREAS OF POTENTIAL VISIBILITY ALONG SEGMENT 2B	157
TABLE 6.4-3	SUMMARY OF ANTICIPATED IMPACTS BY VISUALLY SENSITIVE RESOURCE	160
TABLE 6.4-4	VISUAL RESOURCE IMPACT SUMMARY	164
TABLE 6.5-1	ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY SEGMENT 2B	167
TABLE 7.1-1	SEGMENT 3/GAINESVILLE ALTERNATIVES/PAGELAND ALTERNATIVES FEDERAL LANDS	173
TABLE 7.1-2	SEGMENT 3/GAINESVILLE ALTERNATIVES/PAGELAND ALTERNATIVES STATE LANDS	173
TABLE 7.1-3	SEGMENT 3/GAINESVILLE ALTERNATIVES/PAGELAND ALTERNATIVES LOCAL LANDS	174
TABLE 7.1-4	LAND USE/LAND COVER CROSSED BY THE SEGMENT 3 ROUTES (ACRES)	175
TABLE 7.1-5	ZONING DISTRICTS WITHIN 0.25 MILE OF SEGMENT 3 MAINLINE AND GAINESVILLE AND PAGELAND ALTERNATIVES IMPACT CENTERLINES	177
TABLE 7.1-6	ZONING DISTRICTS CROSSED BY SEGMENT 3 MAINLINE	179
TABLE 7.1-7	ZONING DISTRICTS CROSSED BY GAINESVILLE ALTERNATIVES	179
TABLE 7.1-8	ZONING DISTRICTS CROSSED BY PAGELAND ALTERNATIVES	181
TABLE 7.1-9	DWELLINGS NEAR THE SEGMENT 3 MAINLINE AND GAINESVILLE AND PAGELAND ALTERNATIVES IMPACT CENTERLINES	181
TABLE 7.1-10	PLANNED DEVELOPMENTS WITHIN 0.25 MILE OF THE SEGMENT 3 MAINLINE AND GAINESVILLE AND PAGELAND ALTERNATIVES IMPACT CENTERLINES	185
TABLE 7.1-11	PLANNED DEVELOPMENT CROSSINGS (ACRES)	188
TABLE 7.1-12	PLANNED RECREATIONAL RESOURCES	194
TABLE 7.1-13	EASEMENTS WITHIN 0.25 MILE OF SEGMENT 3 MAINLINE, GAINESVILLE ALTERNATIVES, AND PAGELAND ALTERNATIVES IMPACT CENTERLINES	196
TABLE 7.1-14	EXISTING RECREATIONAL RESOURCES	197
TABLE 7.1-15	CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP WITHIN 0.25 MILE OF THE SEGMENT 3 MAINLINE, GAINESVILLE ALTERNATIVES, AND PAGELAND ALTERNATIVES IMPACT CENTERLINES	204
TABLE 7.1-16	ROAD INFRASTRUCTURE IMPACTS BY THE SEGMENT 3 ROUTE ALTERNATIVES	212
TABLE 7.1-17	ROADS CROSSED BY SEGMENT 3 ROUTE ALTERNATIVES	212
TABLE 7.1-18	AIRPORTS AND HELIPORTS LOCATED WITHIN 10 NAUTICAL MILES OF SEGMENT 3	217
TABLE 7.2-1	ACREAGE OF HIGH, MEDIUM-HIGH, AND MEDIUM PROBABILITY WETLANDS AND WATERBODIES WITHIN THE SEGMENT 3 MAINLINE, GAINESVILLE ALTERNATIVES, AND PAGELAND ALTERNATIVES FOOTPRINTS	222
TABLE 7.2-2	WATERBODIES CROSSED BY THE SEGMENT 3 MAINLINE, GAINESVILLE ALTERNATIVES, AND PAGELAND ALTERNATIVES	225
TABLE 7.2-3	STREAM CONSERVATION SITE CROSSINGS BY SEGMENT 3 MAINLINE	235
TABLE 7.2-4	VDCR-MAPPED ECOLOGICAL CORES CROSSED BY SEGMENT 3 MAINLINE	236
TABLE 7.2-5	VDCR-MAPPED ECOLOGICAL CORES CROSSED BY GAINESVILLE 1	237
TABLE 7.2-6	VDCR-MAPPED ECOLOGICAL CORES CROSSED BY GAINESVILLE 2	238
TABLE 7.2-7	VDCR-MAPPED ECOLOGICAL CORES CROSSED BY GAINESVILLE 3	238
TABLE 7.2-8	VDCR-MAPPED ECOLOGICAL CORES CROSSED BY PAGELAND 1	239
TABLE 7.2-9	VDCR-MAPPED ECOLOGICAL CORES CROSSED BY PAGELAND 2	239
TABLE 7.2-10	ACREAGE OF PREDICTED SUITABLE HABITAT CROSSED BY SEGMENT 3 MAINLINE	244
TABLE 7.2-11	ACREAGE OF DOCUMENTED LOCATIONS CROSSED BY SEGMENT 3 MAINLINE	247

TABLE 7.2-12	ACREAGE OF VEGETATION TYPES CROSSED BY SEGMENT 3 ROUTES	249
TABLE 7.2-13	FOREST CONSERVATION VALUE ALONG ROUTE ALTERNATIVES	250
TABLE 7.3-1	PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF SEGMENT 3 MAINLINE	251
TABLE 7.3-2	PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF GAINESVILLE 1	252
TABLE 7.3-3	PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF GAINESVILLE 2	253
TABLE 7.3-4	PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF GAINESVILLE 3	253
TABLE 7.3-5	PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF PAGELAND 1	254
TABLE 7.3-6	PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF PAGELAND 2	254
TABLE 7.3-7	ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR SEGMENT 3 MAINLINE	255
TABLE 7.3-8	ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR GAINESVILLE 1	255
TABLE 7.3-9	ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR GAINESVILLE 2	256
TABLE 7.3-10	ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR GAINESVILLE 3	256
TABLE 7.3-11	COMPARISON OF PROJECT IMPACTS ON HISTORIC RESOURCES IN THE STUDY TIERS FOR EACH GAINESVILLE ROUTE	257
TABLE 7.3-12	ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR PAGELAND 1	258
TABLE 7.3-13	ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR PAGELAND 2	258
TABLE 7.3-14	COMPARISON OF PROJECT IMPACTS ON HISTORIC RESOURCES IN THE STUDY TIERS FOR EACH PAGELAND ROUTE	259
TABLE 7.4-1	SEGMENT 3 MAINLINE VISUALLY SENSITIVE RESOURCES	261
TABLE 7.4-2	AREAS OF POTENTIAL VISIBILITY ALONG SEGMENT 3 MAINLINE	264
TABLE 7.4-3	GAINESVILLE IMPACT CENTERLINE MILEAGE BY LANDSCAPE UNIT	265
TABLE 7.4-4	GAINESVILLE ALTERNATIVES VISUALLY SENSITIVE RESOURCES	266
TABLE 7.4-5	AREAS OF POTENTIAL VISIBILITY ALONG GAINESVILLE ALTERNATIVES	266
TABLE 7.4-6	PAGELAND ALTERNATIVES VISUALLY SENSITIVE RESOURCES	269
TABLE 7.4-7	AREAS OF POTENTIAL VISIBILITY ALONG PAGELAND ALTERNATIVES	271
TABLE 7.4-8	SEGMENT 3 MAINLINE—VISUAL RESOURCE IMPACT SUMMARY	273
TABLE 7.4-9	GAINESVILLE ALTERNATIVES—VISUAL RESOURCE IMPACT SUMMARY	275
TABLE 7.4-10	PAGELAND ALTERNATIVES—VISUAL RESOURCE IMPACT SUMMARY	278
TABLE 7.5-1	ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY SEGMENT 3 MAINLINE	281
TABLE 7.5-2	ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY GAINESVILLE 1	282
TABLE 7.5-3	ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY GAINESVILLE 2	283
TABLE 7.5-4	ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY GAINESVILLE 3	284
TABLE 7.5-5	ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY PAGELAND 1	285
TABLE 7.5-6	ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY PAGELAND 2	286
TABLE 8.1-1	SEGMENT 4 STATE LANDS	291
TABLE 8.1-2	SEGMENT 4 COUNTY LANDS	291
TABLE 8.1-3	LAND USE/LAND COVER CROSSED BY SEGMENT 4 (ACRES)	292
TABLE 8.1-4	ZONING DISTRICTS WITHIN 0.25 MILE OF SEGMENT 4 IMPACT CENTERLINE	293

TABLE 8.1-5	ZONING DISTRICTS CROSSED BY SEGMENT 4	294
TABLE 8.1-6	DWELLINGS NEAR SEGMENT 4 IMPACT CENTERLINE	295
TABLE 8.1-7	PLANNED DEVELOPMENTS WITHIN 0.25 MILE OF SEGMENT 4 IMPACT CENTERLINE	297
TABLE 8.1-8	CONSERVATION EASEMENTS WITHIN 0.25 MILE OF SEGMENT 4 IMPACT CENTERLINE	299
TABLE 8.1-9	CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP WITHIN 0.25 MILE OF SEGMENT 4 IMPACT CENTERLINE	302
TABLE 8.1-10	ROADS CROSSED BY SEGMENT 4	303
TABLE 8.1-11	AIRPORTS AND HELIPOINTS LOCATED WITHIN 10 NAUTICAL MILES OF SEGMENT 4	305
TABLE 8.2-1	ACREAGE OF HIGH, MEDIUM-HIGH, AND MEDIUM PROBABILITY WETLANDS AND WATERBODIES WITHIN THE SEGMENT 4 FOOTPRINT	310
TABLE 8.2-2	WATERBODIES CROSSED BY SEGMENT 4	310
TABLE 8.2-3	ACREAGE OF VEGETATION TYPES CROSSED BY SEGMENT 4	314
TABLE 8.2-4	FOREST CONSERVATION VALUE ALONG SEGMENT 4	314
TABLE 8.3-1	PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF SEGMENT 4	315
TABLE 8.3-2	ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR SEGMENT 4	316
TABLE 8.4-1	SEGMENT 4 VISUALLY SENSITIVE RESOURCES AND VIEWER GROUPS	317
TABLE 8.4-2	SEGMENT 4 AREAS OF HIGH POTENTIAL VISIBILITY	319
TABLE 8.4-3	SEGMENT 4: SUMMARY OF ANTICIPATED IMPACTS BY VISUALLY SENSITIVE RESOURCE AND KOP	322
TABLE 8.4-4	VISUAL RESOURCE IMPACT SUMMARY	325
TABLE 8.5-1	ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS WITHIN 1 MILE OF SEGMENT 4	329

LIST OF ATTACHED FIGURES

FIGURE 1.1-1	PROJECT OVERVIEW
FIGURE 1.3-1	RIGHT-OF-WAY WIDTH AND IMPACT CENTERLINE
FIGURE 1.3-2	ROUTE ALTERNATIVES OVERVIEW
FIGURE 1.5-1	ELIMINATED OVERHEAD ROUTE ALTERNATIVES
FIGURE 1.6-1	ROUTING CONSTRAINTS AND OPPORTUNITIES
FIGURE 3.2.1-1	LAND USE PLANNING AND ZONING
FIGURE 3.2.1-2	AVIATION FACILITIES WITHIN 10 NAUTICAL MILES OF PROJECT
FIGURE 3.2.1-3	IMAGINARY SURFACES FOR MANASSAS AIRPORT
FIGURE 3.2.1-4	IMAGINARY SURFACES FOR DULLES AIRPORT
FIGURE 3.2.5-1	DEMOGRAPHIC AND SOCIOECONOMIC INDICATORS
FIGURE 4.1.2-1	EXISTING LAND USE AND LAND COVER
FIGURE 4.1.4-1	EXISTING RESIDENTIAL STRUCTURES
FIGURE 4.1.5-1	EXISTING COMMERCIAL AND INDUSTRIAL STRUCTURES
FIGURE 4.1.6-1	PLANNED DEVELOPMENTS
FIGURE 4.1.7-1	EASEMENTS
FIGURE 4.1.8-1	RECREATIONAL RESOURCES
FIGURE 4.1.9-1	CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP
FIGURE 4.1.10-1	TRANSPORTATION INFRASTRUCTURE
FIGURE 4.2.1-1	SURFACE WATERS
FIGURE 4.2.2-1	VDCR CONSERVATION SITES AND STREAM CONSERVATION SITES
FIGURE 4.2.2-2	VCDR ECOLOGICAL CORES

FIGURE 4.2.3-1 DIABASE SOILS
 FIGURE 4.3.2-1 ABOVEGROUND HISTORIC RESOURCES
 FIGURE 6.3.3-1 VDCR PREDICTED SUITABLE HABITAT

ACRONYMS AND ABBREVIATIONS

Acronyms	Description
ABT	American Battlefield Trust
ADIP	Airport Data and Information Portal
AGL	above ground level
AMSL	Above mean sea level
BESS	Battery energy storage system
BMP	best management practice
CBG	Census Block Group
CCB	Center for Conservation Biology
CFR	Code of Federal Regulations
Company	Virginia Electric and Power Company
CPCN	Certificate of Public Convenience and Necessity
CS	Conservation Site
CT	Census tract
CWA	Clean Water Act
DOF	Digital Object File
Dominion	Virginia Electric and Power Company
EJ	environmental justice
EMF	electromagnetic field
ERM	Environmental Resources Management, Inc.
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FCV	Forest Conservation Value
GIS	geographic information system
HUC	hydrologic unit code
I-	Interstate highway
IFP	Instrument Flight
IPaC	Information for Planning and Consultation
IVMP	Integrated Vegetation Management Plan

Acronyms	Description
KOP	key observation point
kV	kilovolt(s)
NA	not applicable
NHD	National Hydrography Dataset
NHL	National Historic Landmark
NHP	Natural Heritage Program
NHR	natural heritage resource
NLEB	Northern long-eared bat
nm	nautical mile
NRHP	National Register of Historic Places
NVCT	Northern Virginia Conservation Trust
NWI	National Wetlands Inventory
ODLC	Old Dominion Land Conservancy
PEM	palustrine emergent
PFO	palustrine forested
Project	Morrisville-Wishing Star 500-230 kV Electric Transmission Project
Project team	Dominion and its consultants, including ERM
PSS	palustrine scrub-shrub
PUB	palustrine unconsolidated bottom
Rt.	Virginia State Route
SCC	State Corporation Commission
SCC Guidelines	Guidelines for Transmission Line Application Filed Under Title 56 of the Code of Virginia
SCS	Stream Conservation Site
T&E	rare, threatened, and endangered
TCB	Tricolored bat
TERPS	Terminal instrument procedures
TOYR	Time-of-year restriction
US	U.S. Route
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

Acronyms	Description
Va. Code	Code of Virginia
VAC	Virginia Administrative Code
VaFWIS	Virginia Fish and Wildlife Information Service
VCRIS	Virginia Cultural Resource Information System
VCU	Virginia Commonwealth University
VDCR	Virginia Department of Conservation and Recreation
VDEQ	Virginia Department of Environmental Quality
VDHR	Virginia Department of Historic Resources
VDHR Guidelines	<i>Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia</i>
VDOT	Virginia Department of Transportation
VDWR	Virginia Department of Wildlife Resources
VEJA	Virginia Environmental Justice Act
VOF	Virginia Outdoors Foundation
VSR	visually sensitive resource
WERMS	Wildlife Environmental Review Map Service

1. INTRODUCTION

Environmental Resources Management, Inc. (ERM or we) undertook an environmental constraint identification and routing study (Routing Study) on behalf of Virginia Electric and Power Company (Dominion Energy Virginia, Dominion, or the Company) for the Company's proposed Morrisville-Wishing Star 500-230 kilovolt (kV) Electric Transmission Project (Project) in Fauquier, Prince William, and Loudoun Counties, Virginia.

1.1 PROJECT DESCRIPTION

For the Project, Dominion proposes the following:

- Construct one new overhead 500 kV single circuit transmission line between the Company's Morrisville Station¹ and Wishing Star Station (Morrisville-Wishing Star Line #5008 or Line #5008) primarily by optimizing an existing transmission line corridor² (Morrisville-Wishing Star Corridor). Line #5008 will be supported primarily by single circuit 500 kV dulled galvanized steel monopoles.
- Construct one new overhead 230 kV single circuit transmission line between the Company's existing Morrisville Station and future Anderson Branch Station (Anderson Branch-Morrisville Line #2464 or Line #2464) primarily collocated on 500/230 kV (5/2 configured) double circuit dulled galvanized steel monopoles with rebuilt Loudoun-Morrisville Line #569 for approximately 8.1 miles. Line #2464 will be located entirely within existing primarily 235-foot-wide right-of-way corridor or within the Company's existing property rights.
- Optimize³ the existing Morrisville-Wishing Star Corridor in order to accommodate installation of Line #5008 and Line #2464 through the rebuild or partial rebuild of various existing 500 kV and 230 kV lines⁴; and line terminal upgrades and/or equipment installations at various existing stations⁵, including expansion of the Morrisville Station within the Company's existing

¹ Due to the numerous existing and future substations, switching stations, and delivery points (DPs) discussed herein, all such facilities will be referred to individually as Station or collectively as Stations for purposes of this report to avoid confusion or error.

² The existing Morrisville-Wishing Star Corridor is approximately 36.2 miles in length and typically varies in width between 235 and 250 feet, except for one approximately 1.5-mile section that is 335 feet wide and other sections of variable width corridor where additional right-of-way is necessary to accommodate existing transmission line and station interconnections throughout the remainder of the corridor.

³ For purposes of this report, "optimize," "optimized," "optimizing," and "optimization" are non-technical terms intended to simplify the description of the proposed wreck, rearrangement, and rebuild of existing transmission facilities within the existing corridor in order to install a new 500 kV line and a new 230 kV line within the existing right-of-way or within the Company's existing property rights to the maximum extent practicable. The terms are not intended to have any engineering or encroachment implications.

⁴ The Expanded Corridor Optimization (as defined herein) includes the rebuild or partial rebuild of the following existing lines, which are located at various points within the existing transmission corridor: Loudoun-Meadow Brook Line #535, Bristers-Morrisville Line #545, Mosby-Wishing Star Line #546, Loudoun-Morrisville Line #569, Mosby-Wishing Star Line #590, Gainesville-Loudoun Line #2030, Marsh Run CT-Morrisville Line #2039, Marsh Run CT-Morrisville Line #2040, Loudoun-Northstar Line #2045, Loudoun-Racefield Line #2094, Bristers-Vint Hill Line #2101, Remington CT-Rollins Ford Line #2114, Loudoun-Youngs Branch Line #2140, Liberty-Vint Hill Line #2163, Gainesville-Heathcote Line #2176, Gainesville-Rollins Ford Line #2222, Brambleton-Racefield Line #2227, and Brambleton-Northstar #2319.

⁵ The Expanded Corridor Optimization includes line terminal upgrades and/or equipment installations at the following stations: Bristers, Morrisville, and Wishing Star. The Company will perform other minor station-related work at Brambleton, Loudoun, Mosby, Northstar, and Racefield Stations.



property rights (the “Expanded Corridor Optimization”). Through this optimization of the existing Morrisville-Wishing Star Corridor, installation of Line #5008 will be primarily within the existing variable-width corridor with a combination of existing, expanded, and new right-of-way, as needed, or within the Company’s existing property rights, and installation of Line #2464 will be entirely within the primarily 235-foot-wide right-of-way corridor or within the Company’s existing property rights. The total length of the Project corridor as proposed is approximately 37.5 miles long, which includes approximately 17.9 miles entirely within the existing corridor, approximately 14.3 miles within expanded right-of-way either directly adjacent to the existing corridor or within Company property rights, and approximately 5.3 miles of new right-of-way not adjacent to the existing corridor or within Company property rights. In the expanded right-of-way areas, the expansion will range from 3 feet to up to 230 feet, with most expansion areas being either a 65-foot eastern or an 85-foot western expansion, resulting in a 305- to 325-foot-wide post-Project total right-of-way width in expansion areas. The right-of-way expansion areas also include variable width areas needed to facilitate transitions between various transmission line configurations or to avoid specific constraints. New right-of-way areas will entail 100- to 150-foot-wide greenfield rights-of-way.

The Company anticipates constructing the Project in segments, as follows:

- Segment 1: Morrisville Station to Bristers Station;
- Segment 2A: Bristers Station to Bristers Junction (where Line #535 enters the corridor);
- Segment 2B: Bristers Junction to Vint Hill Station;
- Segment 3: Vint Hill Station to the Loudoun/Mosby Stations; and
- Segment 4: Loudoun/Mosby Stations to the Wishing Star Station.

The proposed facilities and Project segments are depicted on Figure 1.1-1 in Appendix A.⁶ Additional information on the segments is provided in Section 1.3.

1.2 PURPOSE AND NEED

Dominion states that the Project would:

- Address violations of mandatory North American Reliability Corporation (NERC) reliability standards identified by PJM Interconnection, LLC (PJM) as part of the 2022 and 2024 Regional Transmission Expansion Plan (RTEP) cycles;
- Optimize the use of an existing transmission corridor (Morrisville-Wishing Star) consistent with Virginia law and SCC guidance; and
- Maintain the structural integrity and reliability of the Company’s transmission system.

More specifically, Dominion states that the Project—including Line #5008, the Expanded Corridor Optimization, and Line #2464—is needed to address violations of NERC Reliability Standards identified by PJM as part of the 2022 and 2024 RTEP cycles, to optimize the existing transmission integrity of Dominion Energy Virginia’s transmission system. Additionally, the Project will ensure that Dominion Energy Virginia can continue to provide reliable electric service to customers in the load area, which for purposes of this SCC Application extends north from the Company’s Bristers

⁶ All figures referenced in this document are provided in Appendix A.

Station to the future Wishing Star Station and includes customers in Fauquier County, Prince William County, and Loudoun County (collectively, the NOVA Load Area). The identified reliability violations, if not relieved by the Project, will severely impact the transmission system's ability to provide reliable service to Dominion Energy Virginia's customers in the NOVA Load Area.

The Company states that it originally proposed the Project to PJM as a wreck-and-rebuild of existing transmission facilities to construct an additional 500 kV circuit between Morrisville Station and the Wishing Star Station and a new 230 kV circuit between the Anderson Branch and Morrisville Stations, all within the existing transmission corridor. With the criticality of this corridor to the system, and the existing 500 kV lines running south to north, Dominion reviewed the constructability of its proposal relative to the availability of outages during construction. The segmentation of the Project described above reflects a mitigation of outage availability risk and an effort to optimize the existing transmission corridor to the extent practicable. The Company states that this optimization reasonably minimizes adverse impacts, including segments where the Project expands or diverges from the existing corridor. This combination of existing, expanded, and, when necessary, new right-of-way is referred to as the Expanded Corridor Optimization.

The Company retained ERM to review the Morrisville-Wishing Star Corridor and adjacent areas for constraints, identify areas where constraints prevent expansion of the corridor, and identify alternative routes for the Project around constraints which cannot be crossed or otherwise avoided through the Expanded Corridor Optimization. Alternative routes were not developed for segments where the Project would be limited to the Morrisville-Wishing Star Corridor and/or expanded (i.e., adjacent) right-of-way. Optimization of the existing corridor, where feasible, minimizes impacts consistent with best routing practices. An exception is Manassas National Battlefield Park (MNBFP) due to its significance as a land use and cultural resource and the potential for adverse impacts to changes in structure heights and/or an expansion of the right-of-way within the park (discussed in more detail in this study).

1.3 SEGMENT DESCRIPTIONS AND CROSS-SECTIONS

The Project is divided into segments based on their existing corridor widths and structure configurations to facilitate construction and other Project phasing to manage outages. The following sections describe the typical existing and proposed configurations of transmission lines by segment. The right-of-way widths and structure configurations vary based on land use or engineering constraints. For each segment, Figure 1.3-1 depicts existing Dominion facilities, rights-of-way, and parcels within existing Company property rights; the Project segments; and areas of expanded and/or new right-of-way. Typical right-of-way cross sections with structure designs for each segment are provided in the SCC Appendix Attachments II.A.5.a-j.

1.3.1 SEGMENT 1

Segment 1 extends approximately 7.9 miles from Morrisville Station to Bristers Station in Fauquier County. The Company's existing corridor in this segment, consisting of approximately 6.3 miles of 235-foot-wide and 1.5 miles of 335-foot-wide right-of-way, contains Line #569 (500 kV) on lattice structures to the west and Line #545 (500 kV) on lattice structures to the east.

Less than 0.1 acre of expanded right-of-way would be needed for the Project adjacent to the parcel containing Morrisville Station within the Company's property rights, and approximately 2.2 acres of expanded right-of-way on the parcel with the Morrisville Station. Otherwise, no additional right-of-way along the Morrisville-Wishing Star Corridor would be required in this segment to accommodate the Project. Lines #545 and #569 would be wrecked and rebuilt on monopoles and the new 500 kV Line #5008 would be installed on monopoles. The post-construction right-of-way would measure 235 or 335 feet in width with the new 230 kV Line #2464 and rebuilt Line #569 on double circuit monopoles to the west for the entire segment length. For approximately 3.4 miles from Morrisville Station, the rebuilt Line #545 would be on monopoles in the center and the new 500 kV Line #5008 would be on monopoles to the east. The 500 kV lines then cross within the existing right-of-way, and for the remaining 4.5 miles to Bristers Station the new Line #5008 would be on monopoles in the center and the rebuilt Line #545 would be on monopoles to the east.

1.3.2 SEGMENT 2A

Segment 2A extends approximately 1.6 miles from Bristers Station to Bristers Junction (where the existing Meadowbrook-Vint Hill Line #535 enters the corridor) in Fauquier County. The Company's existing corridor in this segment, measuring 240 feet in width, contains Line #569 (500 kV) on lattice structures to the west and Lines #2101 (230 kV) and #183 (115 kV) on lattice structures to the east.

Approximately 1.2 mile of existing right-of-way and 0.4 mile of variable width right-of-way would be needed south of Bristers Junction on the west side of the existing corridor, but otherwise no additional right-of-way would be required in this segment to accommodate new 500 kV Line #5008. Line #569 would be wrecked and rebuilt on monopoles and the new 500 kV Line #5008 installed on monopoles. The post-construction right-of-way would measure 240 feet in width with the rebuilt Line #569 on monopoles to the west, the new 500 kV Line #5008 on monopoles in the center, and Lines #2101 and #183 on existing lattice structures to the east.

1.3.3 SEGMENT 2B

Segment 2B extends approximately 10.3 miles from Bristers Junction in Fauquier County to Vint Hill Station in Prince William County. The Company's existing corridor in this segment, measuring 240 feet in width, contains Lines #535 (500 kV) and #2114 (230 kV) on lattice structures to the west and Lines #569 (500 kV) and #2101 (230 kV) on lattice structures to the east.

To accommodate the new 500 kV Line #5008, about 4.4 miles of existing right-of-way would be expanded by 65 feet to the east with the new 500 kV line installed on monopoles in the expanded area. About 0.4 mile of existing right-of-way would be expanded 85 feet to the west with existing Line #535 and Line #2114 installed on new double-circuit monopoles to the west, Line #569 and Line #2101 shifted to the existing lattice structures in the center, and the new 500 kV Line #5008 added to on the existing eastern lattice structures.

For about another 0.7 mile of existing corridor, an additional 100 to 150 feet of adjacent right-of-way would be required to avoid constraints. In these areas, Lines #535 and #2114 would remain on existing lattice structures to the west, Lines #569 and #2101 would remain on existing lattice

structures to the center, and the new 500 kV Line #5008 would be installed on monopoles to the east within the new 100-foot to 150-foot-wide right-of-way. About 1.9 miles of variable width right-of-way would also be needed where the Project transitions between the different right-of-way configurations described above.

The remaining approximately 2.8 miles of Segment 2B would not require expansion of the Morrisville-Wishing Star Corridor. Instead, the Company's existing transmission lines would be wrecked and rebuilt and the new line installed using a configuration of three monopoles in the existing corridor, with Lines #535 and #2114 installed on monopoles to the west, Line #569 installed on monopoles in the center, and Lines #5008 and #2101 installed on monopoles to the east. The right-of-way for this segment would remain 240-foot-wide.

1.3.4 SEGMENT 3

Segment 3 extends approximately 13.3 miles from Vint Hill Station in Prince William County to the Loudoun/Mosby Stations in Loudoun County. Segment 3 utilizes approximately 6.4 miles of the Morrisville-Wishing Star Corridor with either an expanded right-of-way or a full wreck-and-rebuild within existing right-of-way, referred to as the Segment 3 Mainline. For the remainder, new greenfield route alternatives were identified to avoid construction within MNBPs and other constraints along Interstate 66 (I-66). These alternative routes are referred to as Gainesville 1, 2, and 3 and Pageland 1 and 2 (Figure 1.3-2).

As described in more detail below, the post-construction right-of-way along the Segment 3 Mainline would measure between 240 and 325 feet in width while the right-of-way along the Gainesville and Pageland alternatives would range from 100 feet to 150 feet wide.

As discussed in more detail below, and except as noted, the post-construction configuration of Segment 3 typically would have the following:

- Line #535 and Lines #2114/2222/2176/2140 to the west on new H-frames within a new 150-foot-wide or monopoles within a new 100-foot-wide right-of-way, on new monopoles within the existing right-of-way, or on existing lattice structures within the existing right-of-way;
- Line #569 on monopoles or Lines #569 and #2163/2030 on existing lattice or H-frame structures or new monopoles in the center of the right-of-way; and
- The new 500 kV Line #5008 on monopoles or Lines #5008 and #2163/2030 on existing lattice structures or new monopoles to the east.

To avoid the new 500 kV Line #5008 having to cross over the Company's existing 500 kV lines where new or expanded right-of-way extends west of the Morrisville-Wishing Star Corridor, the existing 500 kV Lines #535 and #2114/2222/2176/2140 would be in the westernmost position in the right-of-way.

1.3.4.1 SEGMENT 3 MAINLINE

The Segment 3 Mainline is about 6.4 miles long, consisting of two non-contiguous areas extending approximately 3.8 miles south of and 2.6 miles north of the Gainesville and Pageland alternatives to avoid MNBPs. The segment begins at the Vint Hill Station south of Vint Hill Road and extends north along the existing transmission line corridor for 3.8 miles to Wellington Road, at the

southern end of the Gainesville alternatives. North of the Pageland alternatives, the Segment 3 Mainline continues from about 0.5 mile north of Sudley Road (Rte. 234) on the north side of Catharpin Recreational Park, then continues 2.6 miles north to the Loudoun/Mosby Stations. The Company's existing corridor along the Segment 3 Mainline, measuring 240 feet in width, contains Lines #535 (500 kV) and Lines #2114, #2222, #2176, or #2140 (all 230 kV) on lattice structures to the west, and Lines #569 (500 kV) and Lines #2163 or #2030 (all 230 kV) on lattice structures to the east.

To accommodate the new 500 kV Line #5008, for about 2.0 miles, the Company's existing right-of-way along the Segment 3 Mainline would be expanded 65 feet east for a total width of 305 feet, with the new 500 kV Line #5008 installed on monopoles in the expanded area to the east. About 0.3 mile of the existing right-of-way would be expanded by 85 feet to the west, with the existing Lines #535 and #2222 on new monopole structures to the west and all other lines shifting one structure position west to what would be the center position in the expanded right-of-way. The new 500 kV Line #5008 would be installed on existing lattice structures to the east. About 0.9 mile of 150-foot expansion would be needed on the property with the Loudoun/Mosby Stations to avoid those existing facilities, and 1.0 mile of variable width right-of-way expansion would be needed to avoid other constraints or facilitate engineering transitions.

In addition, about 0.9 mile of the existing right-of-way would be expanded 10 feet to the east, with the existing transmission lines wrecked and rebuilt and the new 500 kV Line #5008 installed on sets of three monopoles within an expanded 250-foot-wide corridor. For the remaining 1.3 miles of the Segment 3 Mainline, the existing transmission lines would be wrecked and rebuilt and the new 500 kV Line #5008 would be installed on sets of three monopoles within the existing 240-foot-wide right-of-way.

1.3.4.2 SEGMENT 3 GAINESVILLE ALTERNATIVE ROUTE 1

Segment 3 Gainesville Alternative Route 1 (Gainesville 1) is 2.7 miles long, which includes 2.2 miles of 500 kV line and 0.5 mile of 230 kV line. Because it passes west of the Company's existing corridor, the westernmost 500 kV Line #535 and 230 kV Line #2176/2140 would be placed on H-frames within a new 150-foot-wide greenfield corridor, and the new 500 kV Line #5008 would be added to the easternmost existing lattice structures in the Morrisville-Wishing Star Corridor. Starting south of Wellington Road, Gainesville 1 is within or adjacent to an existing corridor north to Piney Branch Lane, where the 500 kV Line #535 then leaves the existing corridor and heads west within a 150-foot-wide right-of-way, crossing the existing 230 kV Line #2161. The existing 230 kV Line #2176 leaves the existing corridor north of the existing Gainesville Station, joins the 500 kV Line #535, then heads north to Prince William Parkway in a combined, 500/230 kV double circuit configuration (*i.e.*, 5/2 configured). From there, the route crosses Prince William Parkway and continues northwest, crossing I-66 and the existing 230 kV Lines #2140/2176, at which point the 230 kV Line #2140 continues north on the double circuit configuration with Line #535, following the south/west side of Pageland Lane north, crossing U.S. Route (US) 29 (Lee Highway), and terminating northwest of US 29 and Pageland Lane.

1.3.4.3 SEGMENT 3 GAINESVILLE ALTERNATIVE ROUTE 2

Segment 3 Gainesville Alternative Route 2 (Gainesville 2) is 3.6 miles long. As with Gainesville 1, the existing 500 kV Line #535 and 230 kV Line #2176/2140 would be installed on new H-frames or monopoles within a greenfield corridor, and the new 500 kV Line #5008 would be added to the easternmost existing lattice structure within the Morrisville-Wishing Star Corridor. Starting south of Wellington Road, Gainesville 2 follows the south side of Wellington Road to the west, then crosses this road, Piney Branch Lane, and the existing 230 kV Line #2161, then follows the west side of Piney Branch Lane north. The 230 kV Line #2222 continues within the existing Morrisville-Wishing Star Corridor north from Wellington Road to the north side of Gainesville Station, where it then heads west as 230 kV Line #2176 and joins the 500 kV corridor south of an existing Norfolk Southern railroad. The combined 500-230 kV lines continue west, then head north, crossing I-66 and the existing 230 kV Lines #2176/2140, at which point the 230 kV Line #2140 continues north on the double circuit configuration with Line #535, then follows an existing private road north to US 29. It next heads east along the south side of US 29, then turns north across US 29, where it terminates northwest of US 29 and Pageland Lane.

1.3.4.4 SEGMENT 3 GAINESVILLE ALTERNATIVE ROUTE 3

Segment 3 Gainesville Alternative Route 3 (Gainesville 3) is 3.6 miles long. As with Gainesville 2, the existing 500 kV Line #535 and 230 kV Line #2176/2140 would be installed on H-frame or monopoles within the greenfield corridor, and the new 500 kV Line #5008 would be added to the easternmost existing lattice structure within the Morrisville-Wishing Star Corridor. Starting south of Wellington Road, Gainesville 3 follows the south side of Wellington Road to the west, then crosses this road, Piney Branch Lane, and the existing 230 kV Line #2161, then follows the west side of Piney Branch Lane north. The 230 kV Line #2222 continues within the existing corridor north from Wellington Road to the north side of Gainesville Station, where it then heads west as 230 kV Line #2176 and joins the 500 kV corridor south of the existing railroad. The combined 500-230 kV lines continue west to University Boulevard, then head north, crossing I-66 and the existing 230 kV Lines #2176/2140, at which point the 230 kV Line #2140 continues north on the double circuit configuration with Line #535, parallel to the east side of University Boulevard. It then heads east along the south side of US 29, then turns north across US 29, where it terminates northwest of US 29 and Pageland Lane.

1.3.4.5 SEGMENT 3 PAGELAND ALTERNATIVE ROUTE 1

Segment 3 Pageland Alternative Route 1 (Pageland 1) is 4.2 miles long. Beginning northeast of US 29 and Pageland Lane at the northern end of the Gainesville alternative routes, Pageland 1 (Lines #535 and #2140) heads north within a 150-foot-wide right-of-way generally along the west side of Pageland Lane to the north side of the MNBP. It crosses Artemus Road, then crosses to the east side of Pageland Lane and rejoins the Morrisville-Wishing Star Corridor north of Bull Run. The transmission line in this segment would utilize H-frame structures (which are shorter than monopoles and would minimize visual impacts on the nearby MNBP). Pageland 1 next heads north as an 85-foot-wide western expansion of the existing corridor, on monopole structures, to the north of Lick Branch, then leaves the existing corridor and continues west along Sudley Lane,

crosses Sudley Road, and terminates at the Company's existing corridor north of Catharpin Recreational Park.

1.3.4.6 SEGMENT 3 PAGELAND ALTERNATIVE ROUTE 2

Segment 3 Pageland Alternative Route 2 (Pageland 2) is 5.2 miles long. Beginning northeast of US 29 and Pageland Lane at the northern end of the Gainesville alternative routes, Pageland 2 (Lines #535 and #2140) initially heads north within a 150-foot-wide right-of-way along the east side (and outside) of Conway-Robinson State Forest. The transmission line in this segment would utilize H-frame structures (which, as noted above, are shorter than monopoles and would minimize visual impacts on the nearby MNBP). The route next continues along the north side of the state forest, then heads north within a 100-foot-wide right-of-way utilizing monopoles, crossing Little Bull Run, Artemus Road, and Thornton Drive. It then heads east and crosses Pageland Land, then turns north and crosses Sudley Road, terminating at the Company's Morrisville-Wishing Star Corridor north of Catharpin Recreational Park.

1.3.5 SEGMENT 4

Segment 4 extends approximately 4.4 miles from the Loudoun/Mosby Stations to the Wishing Star Station in Loudoun County. The Company's existing corridor in this segment, measuring 250 feet in width, contains Lines #590 (500 kV) and #2045/2319 (230 kV) on lattice structures to the west and Lines #546 (500 kV) and #2094/2227 (230 kV) on lattice structures to the east. About 0.5 mile of new variable width right-of-way would be needed at the Mosby Station and to accommodate future interconnections at the Racefield, Northstar, and Reed Farm Stations, but no additional right-of-way would be required along 3.9 miles of this segment to accommodate the Project. The existing lines would be wrecked and rebuilt on monopoles and the new 500 kV Line #5008 installed on monopoles. The post-construction right-of-way would measure 250 feet in width with the rebuilt Lines #590 and #2045/2319 on monopoles to the west, Line #546 on monopoles in the center, and the new 500 kV Line #5008 and rebuilt Lines #2094/2227 on monopoles to the east.

1.3.6 TRANSMISSION STRUCTURES

The new monopole structures are expected to be about 40 feet taller than the existing lattice structures within the corridor. The new H-frame structures to be installed near MNBP would have similar heights to the existing structures within the Company's Morrisville-Wishing Star Corridor where it crosses the park (see SCC Appendix Attachments II.A.5.a-j for cross-section drawings and II.B.3.a-p for typical structure drawings).

1.4 STUDY OBJECTIVES

As stated in Section 1.2, the Company engaged ERM to review the existing transmission corridor and planned expanded right-of-way to identify locations where it would or could be infeasible to develop the Project due to adjacent constraints, including MNBP and other existing and planned land uses. ERM developed greenfield alternative routes to avoid or minimize crossings of these constraints, which are shown on Figure 1.3-2. More specifically, our work included the following:

- Defining and describing a Project study area;

- Gathering and assessing data about routing constraints and opportunities;
- Identifying constraints along the existing corridor where route changes are recommended to avoid or minimize impacts;
- Participating in public outreach to gather input from stakeholders and the public;
- Conducting a field review to validate data and assist in routing;
- Identifying alternative routes where needed consistent with the SCC's Guidelines for Transmission Line Applications filed Under Title 56;
- Comparing the advantages and disadvantages of route alternatives;
- Recommending preferred routes from among the alternatives;
- Characterizing the impacts of the Project; and
- Preparing this report.

In developing alternative routes for the proposed Lines #5008 and #2464 where expansion of the existing right-of-way is constrained, ERM and the Company considered the following:

- Locations of constraints relative to the Morrisville-Wishing Star Corridor;
- Existing and proposed development in the area;
- The required width of new right-of-way (generally 100 feet);
- The potential for impacts on environmental resources and communities; and
- Cost.⁷

1.4.1 END-TO-END GREENFIELD ALTERNATIVE

As stated in Section 1.2, ERM was not engaged by the Company to evaluate a complete, end-to-end, greenfield alternative between the Morrisville and Wishing Star Stations. Instead, Dominion engaged ERM to assess the proposed Expanded Corridor Optimization for the Project, identify constraints that block expansion of the Company's existing right-of-way, and identify alternatives around or that avoid such constraints. Therefore, no end-to-end greenfield alternatives were identified and evaluated by ERM and none are discussed in this report. Additional information is provided in the Company's SCC Application for the Project.

1.4.2 UNDERGROUND ALTERNATIVES

The Company did not engage ERM to review underground routes for the Project. Therefore, we did not study underground solutions or transmission line routes for the Project, and none are discussed in this report.

1.5 ROUTES ELIMINATED FROM FURTHER CONSIDERATION

During the initial phase of Project planning, greenfield route alternatives were considered in resource-constrained areas where the Company's planning and engineering teams had not yet determined the feasibility of a wreck and rebuild of the existing lines within the Morrisville-Wishing Star Corridor. This included areas of Segments 1, 2B, 3, and 4. The Company presented the

⁷ Cost is addressed elsewhere in the Company's SCC Application for the Project.

alternatives developed by ERM for these areas at open houses for the Project. After the Company's planning and engineering teams determined that a wreck and rebuild would be feasible within the constrained areas, the Company concluded that the alternatives are unnecessary, and the routes were eliminated from further consideration for the Project. Figure 1.5-1 shows these alternatives.

Route options along the Company's existing transmission lines across MNBP also were considered but eliminated from further consideration due to land use constraints within the resource, the adverse impact on the park that would result from the Project, and uncertainty in permitting success. The MNBP route alternatives and the reasons for their rejection are discussed below.

1.5.1 MNBP CROSSING OPTIONS

During initial Project review the Company considered expanding the existing Morrisville-Wishing Star Corridor, which crosses the MNBP within a 240-foot-wide right-of-way utilizing sets of H-frame structures. The corridor in this area heads north from the existing Gainesville Station, located south of Prince William Parkway, entering the park on the north side of I-66. The corridor turns west then north along the eastern side of Pageland Lane, crosses US 29, and then continues along the east side of Pageland Lane and an existing natural gas pipeline easement to the northern park boundary. After leaving the park, the existing corridor continues north across private land, American Battlefield Trust (ABT) land, and an existing Prince William County open space easement, before crossing Little Bull Run. This segment of the Morrisville-Wishing Star Corridor is approximately 3.5 miles long.

Three potential options utilizing all or a portion of the existing corridor were considered, collectively referred to as the MNBP Crossing Options. The three options are:

- Expansion along the eastern side of the existing right-of-way, with installation of the new 500 kV Line #5008 on H-frame structures in the expanded corridor;
- Expansion along the western side of the existing right-of-way, with installation of the new 500 kV line #5008 on H-frame structures in the expanded corridor; and
- A full wreck and rebuild of the existing lines and installation of the new line on monopoles within the existing right-of-way.

Both expansion options would require additional NPS land to be used for transmission line right-of-way. The options additionally would result in increased visual impacts due to vegetation clearing and the installation of new transmission structures within the expanded corridor. The wreck and rebuild scenario would not require new NPS land for transmission line right-of-way, but at each structure location, the two existing H-frames would be removed and replaced with three monopoles, which use narrower rights-of-way than H-frames. Sets of three H-frames would not fit within the existing corridor. The monopoles, on average, would be about 45 feet taller than the H-frames, resulting in increased visual impacts within the park due to both the addition of structures and the increase in heights. Additional details on each option are provided below.

During Project development, the Company discussed potential crossings of MNBP with NPS staff, who could not provide specific comments on the crossings or the feasibility of Dominion obtaining approval for additional right-of-way until after the Company applies and NPS conducts an

environmental review of the Project under the National Environmental Policy Act (NEPA). With that caveat, however, NPS staff identified two primary concerns with the Project: the use of more NPS lands for transmission line rights-of-way and increased visual impacts on the park due to vegetation clearing and the installation of more or taller structures.

MNBP Eastern Expansion Option

This option would entail primarily a 100-foot-wide eastern expansion of the existing corridor and a 0.4-mile-long section where a 135-foot-wide eastern expansion would be needed adjacent to an existing natural gas pipeline at the northern end of the crossing. This option would utilize H-frame structures that would be similar in height and appearance to the existing H-frames within the right-of-way to minimize new visual impacts within the park. In addition to expanding the existing corridor on NPS lands to a width of 340 to 375 feet, this option is limited by an existing dwelling on private property just north of the park boundary about 85 feet from the Morrisville-Wishing Star Corridor. A new 150-foot-wide right-of-way away from the existing corridor to the east would be needed to avoid this home. North of the dwelling, the 100-foot-wide eastern expansion would continue and would require new right-of-way at the crossing of ABT land and a Prince William County Open Space easement.

The MNBP Eastern Expansion Option would require additional clearing within the park and would move transmission infrastructure closer to developed facilities, including an area that would directly overlap a portion of the Stuart's Hill Center Parking Area, as well as the Brawner Farm Interpretive Center Parking Area, from which there are direct views of the existing transmission line corridor.

MNBP Western Expansion Option

The MNBP Western Expansion would entail a 100-foot-wide expansion to the west between the existing transmission line and Pageland Lane. This expansion would require removal of the current tree buffer between Dominion's right-of-way and Pageland Lane along the majority of the MNBP crossing, although it would not be any closer to developed facilities than the existing corridor. Like the MNBP Eastern Expansion option, an existing dwelling (and outbuilding) are located within 30 feet of Dominion's existing corridor just north of the MNBP boundary. Due to space constraints, a western expansion in this area would require removal or relocation of the dwelling and outbuilding. Additionally, as with the eastern option, the western option would require new right-of-way from ABT and within a Prince William County Open Space easement north of the park. Due to the presence of an existing natural gas pipeline adjacent to the west side of the Morrisville-Wishing Star Corridor in this area, the western expansion across the ABT land and open space easement would be 135-feet-wide to provide sufficient space for new H-frame structures.

MNBP Wreck and Rebuild Option

Utilization of the existing 240-foot-wide corridor across MNBP would require removal of the existing sets of two H-frame structures and their replacement with sets of three monopoles. While no new right-of-way would be needed, the Company determined that the wreck and rebuild option, while limited to existing right-of-way, would require review by the NPS because the easement includes provisions related to construction time of year restrictions, impacts to

wetlands, tree and vegetation clearing adjacent to the existing right-of-way, and construction access. Additionally, the monopoles required for this option would be taller than the existing H-frames, which would modify existing conditions within the park and expand the area from which transmission structures are visible within the resource.

MNBP Crossing Options Summary

Following discussions with NPS staff, public comments received during public open house meetings in Summer 2025, and review of the Company's land rights in its existing easement across MNBP, Dominion concluded that the three options, while technically feasible, would introduce significant permitting, schedule, and viability risks due to impacts within the resource. As noted above, NPS review of the Project would require an evaluation of environmental impacts under NEPA. Based on feedback from NPS staff, and its own analysis, the Company assumes the Project would require an environmental impact statement (EIS), which includes an extensive review and public comment period. The Company assumes an EIS is the likely level of NEPA review (as opposed to the more abbreviated environmental assessment (EA)) due to the scope of potential impacts and public interest in the Project. We note that 12 non-governmental organizations (NGOs), in an open letter to NPS dated July 1, 2025, requested the completion of an EIS rather than an EA, reinforcing the Company's view that NPS would undertake an EIS. In addition to the schedule implications for the Project, permitting success at the end of the process is uncertain.

Each of the options would cross ABT-owned land acquired by ABT with funds from public sources. Because of this, some level of federal, state, and/or local review would be required to complete a conversion of the lands from their current use to a transmission line easement. A letter from ABT to the Company dated September 4, 2025, identified specific encumbrances to the parcel which would need to be modified; states ABT's belief that an extensive legal process would be required; and states that the Project is inconsistent with the organization's preservation goals. Each of the options additionally crosses an existing Prince William County open space easement, which would require approval from the Prince William BOS.

Given the uncertainty in the Company's ability to obtain new land rights across MNBP and the ABT parcel, the impacts that would occur to these resources, and the availability of viable alternatives (i.e., the Gainesville and Pageland alternatives), the MNBP Crossing Options were eliminated from further consideration.

1.6 COLLOCATION OPPORTUNITIES

A priority in developing route alternatives for linear facilities like electric transmission lines is the identification of feasible collocation routing opportunities. Existing linear facilities within the study area include electric transmission and distribution lines, pipelines (e.g., natural gas, water, sewer) and other utility easements, railroads, and several major road corridors, as depicted on Figure 1.6-1.

1.6.1 EXPANDED CORRIDOR OPTIMIZATION

As discussed in Sections 1.2 and 1.3, the Company's Morrisville-Wishing Star Corridor is the primary collocation opportunity for the Project. Each of the Project segments utilize this corridor

directly and/or for expanded right-of-way where available, which is a majority of the corridor. Table 1.6-1 denotes the collocation of the Segments 1, 2A, 2B, 3 Mainline, and 4 with expanded corridor optimization; the greenfield new right-of-way Gainesville and Pageland alternatives are presented in Section 1.6.2 and Table 1.6-2.

TABLE 1.6-1 COLLOCATION OF CORRIDOR OPTIMIZATION SEGMENTS (MILES)

Existing Facility	Segment 1	Segment 2A	Segment 2B	Segment 3 Mainline	Segment 4
Dominion Transmission Lines ^a	7.9	1.6	9.4	5.6	4.5
Total Collocation (percent)	100%	100%	91.3%	100%	100%

^a Transmission lines include existing and approved overhead transmission line corridors and future/existing substations and switching stations.

1.6.2 GAINESVILLE AND PAGELAND ALTERNATIVES

ERM reviewed potential routing opportunities when developing the Gainesville and Pageland alternatives where the Project would pass west of MNBP. For each alternative route, various collocation opportunities including Dominion transmission lines that are not within the Morrisville-Wishing Star Corridor, major roadways, other utility easements, and railroads were identified, assessed, and incorporated into routes.

1.6.2.1 ELECTRIC TRANSMISSION

Several existing Dominion-owned overhead transmission and distribution lines outside of the Morrisville-Wishing Star Corridor cross the study area near the Gainesville and Pageland alternatives. The transmission lines were used as routing opportunities for portions of each alternative as summarized in Table 1.6-2 and depicted on Figure 1.6-1. The transmission lines include:

- Line #2161—overhead 230 kV line that traverses north to south between Wellington Road and the Gainesville Station; and
- Line #2140—overhead 230 kV line that traverses east to west through the study area, north of I-66. Given its east to west orientation, this line provides less opportunity for collocation than Line #2161.

No existing underground transmission or overhead distribution lines were identified as suitable collocation opportunities for the Gainesville and Pageland alternatives.

1.6.2.2 EXISTING ROAD CORRIDORS

The study area includes a variety of road types, ranging from freeways to major arterials to local residential streets. Roadway corridors offering collocation opportunities near the Gainesville and Pageland alternatives include US 29, Pageland Lane, University Boulevard, Wellington Road, and Piney Branch Lane. Both the Company and Prince William County generally prefer that new transmission lines collocate along major roadways rather than creating new utility corridors through developed areas or undeveloped areas with sensitive environmental features. As shown in

Table 1.6-2, portions of the Gainesville and Pageland alternative routes each utilize road as collocation routing opportunities.

1.6.2.3 UTILITY EASEMENT CORRIDORS

Most of the existing electric utility infrastructure in the study area near the Gainesville and Pageland alternatives is owned by Dominion, but some facilities are owned and operated by Northern Virginia Electric Cooperative (NOVEC), whose service territory is within Prince William, County. No NOVEC facilities were identified for potential collocation routing opportunities for the Gainesville and Pageland alternatives.

1.6.2.4 RAILROADS

An existing Norfolk Southern railroad runs east to west through the study area in the vicinity of the Gainesville alternatives. Portions of Gainesville 2 and 3 collocate with the railroad as indicated in Table 1.6-2. Please see Section 7.1.10 for additional details.

1.6.2.5 COLLOCATION ASSESSMENT

Gainesville Alternatives

Each of the Gainesville alternatives utilizes collocation beyond the Company's existing Morrisville-Wishing Star Corridor (Table 1.6-2). Portions of each route collocate with existing Line #2161, a 230 kV line along the west side of Piney Branch Lane. Gainesville 1 collocates with Pageland Lane south of US 29, and Gainesville 2 and 3 both collocate with US 29 and the railroad. Gainesville 3 collocates with University Boulevard. While more of the Gainesville 2 and 3 routes collocate with existing linear corridor facilities than Gainesville 1, the former are longer than the latter. Gainesville 2 has the greatest percentage of collocation along the route.

Pageland Alternatives

Pageland 1 and 2 both collocate with Pageland Lane, but the former does so for approximately 1.3 miles more than the latter. Additionally, Pageland 1 collocates with the existing Morrisville-Wishing Star Corridor by utilizing an 85-foot-wide western expansion of the Morrisville-Wishing Star Corridor. Both Pageland 1 and Pageland 2 collocate with the existing corridor north of Catharpin Park, sharing a common alignment. Overall, more of Pageland 1 is adjacent to existing linear corridor facilities than Pageland 2.

TABLE 1.6-2 COLLOCATION OF SEGMENT 3 ROUTE ALTERNATIVES (MILES)

Existing Facility	Gainesville 1	Gainesville 2	Gainesville 3	Pageland 1	Pageland 2
Centerline Length	2.7	3.6	3.6	4.5	5.2
New Right-of-Way	1.9	2.9	2.8	2.7	5.0
Existing Right-of-Way	0.8	0.7	0.8	0.0	0.0
Dominion Infrastructure (Total) ^a	1.4	1.0	0.8	1.5	0.2

Existing Facility	Gainesville 1	Gainesville 2	Gainesville 3	Pageland 1	Pageland 2
Dominion Transmission Lines^b	1.4	1.0	0.8C	1.5	0.2
Dominion Distribution Lines ^c	0.0	0.0	0.0	0.0	0.0
Roads (Total)^d	0.7	0.9	1.0	1.4	0.1
Pageland Lane	0.3	0.0	0.5	1.4	0.1
US 29	0.0	0.0	0.0	0.0	0.0
University Boulevard	0.0	0.0	0.4	0.0	0.0
Piney Branch Lane	0.3	0.3	0.0	0.0	0.0
Wellington Road	0.1	0.3	0.1	0.0	0.0
Railroads	0.0	0.9	1.1	0.0	0.0
Total Collocation	2.1	2.8	2.9	2.9	0.3
Total Collocation (percent)	78%	78%	81%	69%	2%

^a Includes the portions of the alternatives that are located within the existing Dominion Morrisville-Wishing Star Corridor as well as new and expanded rights-of-way.

^b Transmission lines include existing and approved overhead transmission line corridors and future/existing substations and switching stations.

^c Distribution lines include existing overhead power lines only. Distance does not account for collocation with distribution lines in transmission line corridors (accounted for in transmission line totals) or underground distribution lines.

^d Totals may not match the sum of the addends due to rounding.

1.7 CONSTRUCTION, OPERATION, AND MAINTENANCE PROCEDURES

Construction of new overhead transmission lines may involve some or all the steps listed below:

- Detailed survey of the route alignment;
- Right-of-way acquisition and clearing;
- Construction of access roads, where necessary;
- Installation of tower foundations;
- Assembly and erection of new structures;
- Stringing and tensioning of conductors; and
- Final cleanup and land restoration.

All required materials for the Project's structures would be delivered and assembled at each structure location within the proposed (or existing) right-of-way. Dominion would complete detailed foundation design prior to construction. The foundation design could include poured concrete requiring excavation or steel piles or caissons that might be vibrated, drilled, or driven into place depending on soil conditions and final design. Dominion would erect structures with a crane and anchor them to the foundation during final assembly. In upland areas, Dominion would distribute excess soil from foundation construction (if any) evenly at each structure, replant vegetation, and stabilize exposed soils. In wetland areas, Dominion would remove and evenly

distribute excess soil on an upland site within the Project's right-of-way. Typical construction equipment could include hole diggers or drilling equipment, cranes, wire stringing rigs, tensioners, backhoes, and trucks.

Dominion would string all conductors and shield wires under tension. This system involves stringing a "lead line" between structures for the conductors and ground wires. The line pulls a steel cable that is connected to the conductors and shield wires, which are pulled through neoprene stringing blocks to protect the conductor and shield wire from damage. Stringing the conductors and shield wires under tension protects them from possible damage should they touch the ground, fences, and/or other objects.

Once the Project is in-service, maintenance of the right-of-way under the transmission lines would be essential for the reliable operation of the lines, as well as for public safety. Operation and maintenance of the Project would include periodic inspections of the line and the right-of-way; occasional replacement of hardware as necessary; periodic clearing of vegetation, either mechanically or by selective, low-volume application of approved herbicides within the corridor; and the cutting of danger trees. These are trees outside the cleared corridor that are sufficiently tall enough that they could impact the transmission line should the trees fall into the right-of-way. Periodic inspections would occur through both aerial and walking patrols. Normal operation and maintenance would require only infrequent visits by Dominion Energy Virginia or its contractors.

Most maintenance activities would consist of selective, low-volume herbicide applications targeting only tree species on the right-of-way every 3 to 5 years and the cutting of danger trees every 3 years. Dominion uses herbicides approved by the U.S. Environmental Protection Agency on power line rights-of-way.

Based on a discussion between the Company and representatives of the Virginia Department of Conservation and Recreation (VDCR) Division of Natural Heritage, the Company reviewed its Integrated Vegetation Management Plan (IVMP) for application to both woody and herbaceous species based on the species list available on the VDCR website. The Company continues to coordinate with Division of Natural Heritage on an addendum to the IVMP to further explain how the Company's operations and maintenance forestry program addresses invasive species. Most recently, on January 21, 2025, the Company met with VDCR to continue ongoing coordination. At that time, the Company committed to providing VDCR with the most recent working draft of the IVMP addendum and a list of the recommended shrub species for planting within the Company's electric transmission right-of-way for review. The Company's recommended planting list is for customers to reference when planting shrub species within its transmission rights-of-way on private property. Those documents were shared with DCR on February 7, 2025. Once the addendum is finalized, the Company will report on the results of its communications with VDCR in future proceedings.

1.8 DATA SOURCES

This Routing Study used the following sources to identify routing constraints and opportunities, as well as potentially affected resources. A full list of data source references is included in Section 10 of this report and is summarized below.

- Mapping and data from Dominion about its existing transmission system;
- Virginia Department of Transportation (VDOT) Projects and Studies Database (VDOT 2025);
- VDCR Conservation Lands Database (VDCR 2024a);
- U.S. Census Bureau American Community Survey, 5-Year Estimates (2019–2023) (U.S. Census Bureau 2024a, 2024b, 2024c, 2024d, 2024e);
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping (USFWS 2024);
- U.S. Geological Survey (USGS) topographic quadrangles (USGS 2025a);
- The National Hydrography Dataset (NHD) Plus High Resolution (USGS 2025b);
- ESRI World Elevation Terrain 2-foot contours (ESRI et al. 2025);
- Virginia Department of Historic Resources (VDHR) Virginia Cultural Resources Information System (VCRIS) (VDHR 2025);
- National Conservation Easement Database (NCED 2025);
- Soil Survey Geographic Database soils data from the U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS 2025);
- Mapping and geographic information system (GIS) data for the energy industry (Rextag 2025)—other than infrastructure operated by Dominion;
- Comprehensive Plans for Fauquier, Prince William, and Loudoun Counties (Fauquier County 2019), (PWC 2022), (Loudoun County 2019);
- Fauquier County, Prince William County, and Loudoun County GIS databases (Fauquier County 2025), (PWC 2025a, 2025b, 2025c, 2025d), (Loudoun County 2025);
- Fauquier County, Prince William County, and Loudoun County Land Development Online Portals (Fauquier County Government N.d) (Loudoun County N.d.), (Prince William County N.d.);
- Site plan submissions for planned developments (Fauquier County 2025, Prince William County 2025, and Loudoun County 2025);
- Communications with state agency staff;
- Communications with elected and appointed officials, county staff, school system representatives, residents, and other stakeholders in Fauquier, Prince William, and Loudoun Counties;
- Historic and recent digital aerial imagery (Google Earth, LLC 2025; VGIN Imagery 2025); Loudoun County Imagery 2025; Prince William County Aerial Imagery 2023); and
- Field reconnaissance

2. CORRIDOR REVIEW, ANALYSIS, AND ALTERNATIVES IDENTIFICATION

2.1 CORRIDOR REVIEW

ERM collected and compiled desktop data from the sources listed in Section 1.6 on the following routing constraints and opportunities within a 1.5-mile-wide study area centered on the Morrisville-Wishing Star Corridor:

- Public lands;
- Existing and planned land uses;
- Residences and residential areas;
- Planned developments;
- Conservation and open space easements;
- Recreational resources;
- Schools, cemeteries, and places of worship;
- Airports;
- Wetlands and waterbodies;
- Forested land;
- Natural heritage resources (NHRs);
- Protected species;
- Visually sensitive resources (VSRs);
- Archaeological and historic sites;
- Transportation infrastructure; and
- Electric transmission and other utility rights-of-way

ERM used these data to identify locations along the existing right-of-way where space is limited due to adjacent development or where resources considered moderate to high risk for permitting or stakeholder engagement, like public lands and conservation easements, would be crossed. In these areas, alternative routes were developed within the 1.5-mile-wide study area to avoid or minimize impacts on resources. ERM additionally conducted field reviews (in July and August 2024 and August 2025) to validate interpretations of constraint data, topographic and other maps, and aerial photography, as well as to review potential alternatives.

Much of the study area south of Vint Hill Station is rural, with space generally available for expansion of the existing right-of-way. From Vint Hill Station north to Interstate 66 (I-66), the existing corridor crosses developed and developing areas, where alternative routes may be needed to avoid constraint areas that limit expansion of the Morrisville-Wishing Star Corridor. Immediately north of I-66, the existing corridor parallels the western interior boundary of MNB on federal land administered by the NPS. The park was identified as a significant constraint given the resources it protects (interpreted portions of two Civil War battlefields) and the need for federal permitting of the Project under NEPA if MNB is crossed.

North of the battlefield to the Company's Loudoun/Mosby Stations, the existing corridor crosses rural residential areas, then crosses a series of dense residential developments north to the Wishing Star Station. In places, particularly in northern Prince William and Loudoun Counties, there is limited to no space available for widening the existing transmission right-of-way due to adjacent homes.

As discussed in detail in Section 3, the Morrisville-Wishing Star Corridor crosses county, state, and federal (NPS) lands in Prince William County. Public lands are considered moderate- to high-risk constraints for routing electric transmission lines because they are not subject to eminent domain. An agreement with the land managing agency (in addition to any environmental review required by that agency, such as NEPA review by the NPS) would be needed to expand the existing right-of-way on or route an alternative across public lands. For this reason, ERM developed alternative routes around public lands in Prince William County. No public lands are crossed by the existing transmission right-of-way in Fauquier and Loudoun Counties.

The Morrisville-Wishing Star Corridor crosses numerous conservation easements held by Fauquier County, Prince William County, Northern Virginia Conservation Trust (NVCT), VDHR, Old Dominion Land Conservancy (ODLC), and ABT. Conservation easements are considered moderate- to high-risk constraints because new development within easements is subject to:

- The requirements of the programs under which the easements were established;
- The specific terms of the easements crossed as reflected in title documents; and
- The willingness of easement holders to cooperate with the Company.

While the Company's preference is to work with easement holders to cross easements adjacent to its existing right-of-way, ERM developed alternative routes around easements where expansion of the existing corridor would be required. ERM did not develop alternative routes around easements in Project segments where expansion of the Morrisville-Wishing Star Corridor is not proposed (e.g., Segment 1) consistent with Virginia law and Commission guidance as to the use of existing right-of-way. Dominion states that its right-of-way agreements with affected landowners in these areas provide both for maintenance and the addition of transmission lines to the corridor. ERM did not develop alternative routes around conservation easements in Project segments where expansion of the Morrisville-Wishing Star Corridor is not proposed.

2.2 ALTERNATIVE ROUTE DEVELOPMENT

The process of routing electric transmission lines is sequential: potential route corridors are developed and refined into potential routes, which are further refined into viable alternatives. The objectives are to:

- Maximize collocation with compatible linear features or land uses, where practicable;
- Avoid, minimize, or mitigate impacts to the human and natural environments through route selection and best practices; and
- Provide regulators with constructable routes that are efficient and equitable while meeting the objectives of a project.

Efficiency in this context means developing the shortest logical alternatives avoiding or minimizing crossings of constraints given the surrounding environment, while equitable means balancing impacts, risks, and costs. Route viability is assessed through an analysis of constructability, environmental impact, and permitting risk, after the least impactful alternatives are identified. For constructability, ERM provides the Company's engineering team with draft routes for review and adjusts routes based on feedback provided.

ERM uses GIS software when developing routes. Spatial data on constraints and opportunities are overlain on aerial photography and topographic maps in GIS. Potential routes are developed that avoid constraints and utilize opportunities, where present, to the extent practicable. Throughout this process, the Project team continues to collect and assess data from desktop sources, field reconnaissance, and stakeholder/public engagement activities (discussed further in Section 2.3). The Project team uses this information to qualify and better understand resources that could be affected and to refine routes, where feasible, to avoid or reduce potential impacts.

Because Segments 1, 2A, and 4 of the Project almost entirely would be confined to within the Company's existing rights-of-way or property rights, no alternative routes are presented for these areas. For Segment 2B, ERM identified preliminary routes around various land use constraints, and presented these at open houses in May 2025. As noted in Section 2.3, however, Dominion's engineering team subsequently developed a solution which avoids the need to expand the existing corridor in this area. For Segment 3, ERM developed the Gainesville and Pageland alternatives to avoid constraints along and near the crossing of I-66, principally MNBP. These alternatives, discussed in detail throughout Section 7, incorporate feedback from Dominion's engineering team and various stakeholders consulted throughout the process.

2.3 STAKEHOLDER ENGAGEMENT

ERM conducted field reviews of the Project and supported Dominion's outreach to agencies and stakeholders as part of route development and evaluation. As of January 2026, the Company has held many individual meetings seeking stakeholder input, including with landowners, businesses, and agencies, such as Fauquier, Prince William, and Loudoun Counties, HOA managers, BOS members and staff, ABT, and NPS. Dominion also engaged the Prince William Energy Engagement Group (PWEEG) and Loudoun Reliability Engagement Group (LREG)— stakeholder groups with an interest in electric transmission line projects throughout each county—to provide information and solicit feedback on projects, including the Project. The Company held three in-person community meetings in May 2025 and one in-person community meeting in November 2025 to present information on the Project and gather feedback. The Company's SCC Application describes the stakeholder engagement process in further detail.

2.4 ANALYSIS AND RECOMMENDATIONS

ERM assessed the potential environmental impacts that would result from construction and operation of the Project along each segment. For Segment 3, this included a comparison of impacts for the Gainesville and Pageland alternatives to select the least impactful option for avoiding or minimizing constraint crossings along and near the I-66 corridor, particularly MNBP. The results of the comparison are discussed in Sections 4 through 8, with Section 9 providing a

comparison of the advantages and disadvantages of each alternative relative to SCC Guidelines. ERM's and the Company's recommendations for the preferred Gainesville and Pageland alternatives are provided in Section 9. Based on these recommendations, a Proposed Route and Alternative Routes, if applicable, are then presented for notice in the SCC Application for the Project. Conversely, routes deemed too impactful and/or infeasible or impracticable are not carried forward for notice.

3. RESOURCE IDENTIFICATION AND ASSESSMENT METHODOLOGY

After identifying areas where constraints may prevent expansion of Dominion's existing Morrisville-Wishing Star Corridor, ERM collected information on features within the study area to provide a basis for alternative route development and for the Project's impact analysis (Table 3-1). In cases where GIS data were not available for a particular resource or feature, ERM obtained the best available hardcopy or online version and hand-digitized the information needed for the study.

TABLE 3-1 FEATURES CONSIDERED FOR ROUTE DEVELOPMENT AND ANALYSIS

Feature Type	Examples
Linear Facilities	
Existing electric facilities	<ul style="list-style-type: none"> Transmission or distribution lines and stations
Other utilities	<ul style="list-style-type: none"> Water, sewer, or other pipelines
Transportation infrastructure	<ul style="list-style-type: none"> Highways, roads, railroads, and related corridors
Land Uses	
Public lands	<ul style="list-style-type: none"> Federal, state, and county lands
Land uses	<ul style="list-style-type: none"> Cover types (e.g., forested, agricultural, developed, open) Residential areas Commercial and industrial areas Cemeteries, schools, and places of worship
Recreational areas	<ul style="list-style-type: none"> Public parks and other managed recreation areas Private recreation facilities Interpreted historic sites Trails
Land use planning and zoning	<ul style="list-style-type: none"> Future land use designations Zoning districts County planning documents
Planned developments	<ul style="list-style-type: none"> Planned or proposed residential, commercial, and industrial developments
Conservation lands and easements	<ul style="list-style-type: none"> VDCR conservation lands and easements VOF easements County easements Wetland mitigation banks Other conservation lands
Transportation	<ul style="list-style-type: none"> Road and railroad crossings Public and private airport facilities
Natural Resources	
Surface waters	<ul style="list-style-type: none"> Wetlands Waterbodies
Protected or managed areas	<ul style="list-style-type: none"> Conservation sites Wildlife management areas Ecological cores

Feature Type	Examples
Protected species	<ul style="list-style-type: none"> • NHRs • Threatened and endangered species • Bald eagles
Vegetation	<ul style="list-style-type: none"> • Vegetation characteristics • Forest
Visual Resources	
Visual resources	<ul style="list-style-type: none"> • Existing landscape characteristics • Scenic Rivers, Scenic Byways, and other VSRs • Potential viewing opportunities
Cultural Resources	
Cultural resources	<ul style="list-style-type: none"> • Archaeological sites • Historical or architectural sites and districts • NRHP-listed and eligible properties • Battlefields • VDHR easements • Locally significant resources
Geological Resources	
Mineral resources	<ul style="list-style-type: none"> • Mines or quarries
Environmental Justice	
Environmental justice populations	<ul style="list-style-type: none"> • Low-income populations • Community of Color populations (including Linguistically Isolated Communities) •

NHR = natural heritage resource; NRHP = National Register of Historic Places; VDCR = Virginia Department of Conservation and Recreation; VDHR = Virginia Department of Historic Resources; VOF = Virginia Outdoors Foundation; VSR = visually sensitive resource.

3.1 REPORT LAYOUT

Review of the existing corridor identified resources that constrain expansion of the existing corridor along Segment 2B and Segment 3 of the Project. An engineering solution was found to avoid corridor expansion within constrained areas of Segment 2B, but as increased structures heights across MNBPs would not alleviate the risks associated with crossing MNBPs due to new right-of-way or visual impacts, route alternatives are considered in Segment 3. The following Resource and Impacts sections of this report describe the existing conditions along each segment and which resources require avoidance based on their overall risk to the Project. As no route alternatives are under consideration in Segments 1, 2A, 2B, and 4, these sections include a summary of the existing resources and impacts. Section 7, which includes Segment 3, also includes a comparative analysis of the route alternatives and ERM's recommendation of the least impactful options. Section 9 of this report then provides a summary of the least impactful end-to-end route, which is comprised of wreck and rebuild, corridor expansion, and new right-of-way solutions.

The potential resource impacts will vary along the different Project Segments based on the various electrical solutions being considered (i.e., wreck and rebuild, existing corridor expansion, or new

right-of-way alternative routes). As the physical impacts within a Project Segment vary based on the type of electrical solution, different resources are described in different levels of detail, commensurate with the type of anticipated impact. However, as there are similarities among resources across all segments, a description of the methodology of resource identification and assessment is included in Section 3, which applies to all Project segments.

3.2 METHODOLOGY OF RESOURCE IDENTIFICATION AND ASSESSMENT

The data sources used to identify resources described in Sections 3.2.1 through 3.2.6 are listed in Section 1.8, and specific source references included throughout this report are listed included in Section 10.

3.2.1 IMPACT CENTERLINE AND RIGHT-OF-WAY IMPACTS

As stated in Section 1.1, installation of new Line #5008 will be in the easternmost position of the existing and future corridor configuration for the entirety of the route, except for a 4.4 mile length south of Bristers Station where it is in the center position. Therefore, to quantify lengths for the Project where the new or expanded right-of-way will be located west of the existing corridor, an "Impact Centerline" was created which is always located within new or expanded right-of-way, whether on the east or west side of the existing corridor. This Impact Centerline, which is primarily along Line #5008 but also follows new or expanded right-of-way west of the existing corridor (notably including the Gainesville and Pageland alternatives), is the centerline shown on maps in this routing study and was used when measuring distances from the centerline to a resource. Thus, while portions of the Impact Centerline directly overlap Line #5008, the line does not represent the location of the new Line #5008 in its entirety. The Impact Centerline follows new or expanded right-of-way, defaulting to the Line #5008 position in areas where the Project would be limited to the existing corridor.⁸

While the length of the Impact Centerline does not match the new Lines #5008 and #2464 engineering lengths, the acreages provided throughout this report match the right-of-way needs that are required to accommodate installation of the new Lines #5008 and #2464, as well as other engineering transition areas and cut-ins as described in the Project's SCC Application.

3.2.2 LAND USE

3.2.2.1 PUBLIC LANDS

ERM identified public lands within the study area from various county sources and evaluated impacts on public lands crossed by the Project. Our analysis of impacts on public lands considered the potential for the Project to require new or expanded right-of-way on land owned and managed by federal, state, or county agencies as well as the limitation on uses of those lands imposed through the granting of an easement. Further discussion of public lands in relation to the Project is provided in Sections 4.1.1, 5.1.1, 6.1.1, 7.1.1, and 8.1.1. Analyses of specific uses of public lands

⁸ Because the centerline does not consistently follow Line #5008, its length will not match the length of Line #5008 as reported elsewhere in Dominion's SCC Application for the Project.

(e.g., recreational uses of public parks) or resources within those lands (e.g., historic sites within MNBPs) are addressed in the relevant subsections below.

3.2.2.2 LAND USE AND LAND COVER

ERM identified land use and land cover within the study area and along the Project segments and alternative routes using local and statewide datasets augmented by aerial photo interpretation to identify the most current uses, and evaluated impacts to land within the Project right-of-way. We classified land use and cover types using the following categories (with the corresponding VGIN categories provided in parentheses):⁹

- **Agricultural (Harvested/Disturbed, Pasture, Cropland):** Land used for commercial farming (e.g., commercial row crops or specialized agricultural activities) or grazing.
- **Developed (Impervious):** Land characterized by medium to high-density constructed buildings, including industrial areas, commercial areas, residential subdivisions, and impervious surfaces.
- **Forest (Forest, Tree):** Land cover consisting of natural or semi-natural woody vegetation.
- **Open space (Turf Grass, Shrub/Scrub):** Land primarily covered by planted grasses, including vegetation planted in developed settings for erosion control or aesthetic purposes, as well as natural herbaceous vegetation and undeveloped land, parks, and open space recreational facilities.
- **Open water (Hydro):** Open water features, including rivers, streams, and natural and artificial ponds.

Because the primary impact of the Project on land use and cover would be the conversion of forest to an herbaceous cover within expanded or new right-of-way, that was the focus of our analysis. Except for land directly beneath transmission structures, operation of the Project would not impact current uses of agricultural, open space, developed, and open water lands. Further discussion of land use and cover types in relation to the Project segments and Gainesville and Pageland alternatives are provided in Sections 4.1.2, 5.1.2, 6.1.2, 7.1.2, and 8.1.2.

3.2.2.3 LAND USE PLANNING AND ZONING

Section 15.2-2223 of the Code of Virginia (Va. Code) requires localities to adopt a Comprehensive Plan that provides guidance for the physical development within their jurisdiction. Comprehensive plans assess existing and future land uses, anticipate development trends, and make recommendations for guiding the long-term development decisions of a city or county. Virginia also requires localities to review and update their comprehensive plans at least once every 5 years to adjust to actual or projected changes in land use conditions or needs (Va. Code Section 15.2-2230). Local governments also use zoning to formally designate land use districts, establish standards to guide orderly and efficient land use and development, and implement the objectives of their comprehensive plan. Each county maintains its own zoning ordinance.

⁹ For purposes of land use/land cover, wetland areas have been classified as open space, forested land, or open water depending on wetland type. Wetlands near the routes are discussed separately in Section 5.2.1.

While zoning data was obtained for all counties crossed by the Project, ERM evaluated the impact on planning and zoning within the Project right-of-way. The Project construction would not alter any planning designations or zoning districts as construction and operation of transmission lines is exempt from local comprehensive plans and zoning ordinances (Title 9, Section 25-830-150 of the Virginia Administrative Code [9 VAC 25-830-150]). Land use planning and zoning districts and place types and other special zoning or comprehensive plan areas are depicted on Figure 3.2.1-1. Further discussion of the land use plans and ordinances in relation to the Project is provided in Sections 4.1.3, 5.1.3, 6.1.3, 7.1.3, and 8.1.3.

Under Virginia law, public utilities planning to construct a transmission line of 138 kV or higher are required to obtain a Certificate of Public Convenience and Necessity (CPCN) from the SCC, which, if granted, preempts local zoning ordinances (Va. Code § 56-265.2) and makes the transmission line components of a project meeting this criterion exempt from local zoning regulations. Stations and other facilities may be subject to local land use approvals and screening standards, including buffers and landscaping.

Fauquier County

The 2015 Fauquier County Comprehensive Plan guides development within the County for the next twenty years, including objectives for natural resource management, heritage resource preservation, accessible housing, economic development, public facility and utility infrastructure management, and transportation.

Fauquier County's vision statement in the Comprehensive Plan depicts commitment to balance natural and cultural resource management, agricultural heritage and rural character preservation, and sustainable economic development and growth within defined service districts. The County has established eight service districts (Beaeton, Catlett, Marshall, Midland, New Baltimore, Opal, Remington, and Warrenton) which serve as designated urban growth areas. Project facilities do not cross any of the eight service districts.

Chapter 9 of the Fauquier County Comprehensive Plan includes guidelines for electrical transmission line development. The County prefers to group electrical transmission lines in designated utility corridors, which follow existing corridors, including the Company's Morrisville-Wishing Star Corridor (Fauquier County, 2023).

Article 3 of the Fauquier County Zoning Ordinance sets forth standards and guidelines for development in designated zoning districts (Fauquier County, 2024).

Prince William County

Prince William County's 2040 Comprehensive Plan guides the growth and development within the County, including objectives for long-range land use, community development, infrastructure and facilities, and conservation and preservation. As part of a regional planning effort, the 2040 Comprehensive Plan followed the Prince William 2030 and the Council of Governments Region Forward plans for the metropolitan Washington area.

Prince William County's 2040 Comprehensive Plan employs strategies for accommodating future growth and creating equitable and sustainable communities. The County implements the plan's

goals and objectives through designated “special planning areas,” which are further divided into Activity Centers, Hamlets and Villages, Redevelopment Corridors, or Small Area Plans to emphasize specific visions or respond to existing conditions in distinct areas. Hamlets are compact areas with small-scale mixed uses that serve small-scale centers in a rural setting. The Prince William Digital Gateway Special Study Area envisions a technology corridor along Pageland Lane for data center development while preserving key environmental and cultural resources (Prince William County, 2022a).

Table 3.2-1 lists the special planning areas crossed by or within 0.25 mile of the Segment 3 Mainline and Gainesville and Pageland alternatives, describes the land use objective of the special planning area (based on the 2040 Comprehensive Plan), and identifies the Project segment or alternative routes crossing the area (Prince William County, 2022b).

TABLE 3.2-1 PRINCE WILLIAM COUNTY SPECIAL PLANNING AREAS WITHIN 0.25 MILE OF PROJECT FACILITIES WITHIN SEGMENT 3

Special Planning Area	Description	Project Facility
Hamlet (MU-1) Land Use	Mixed-use development designed to encourage residential, commercial, and civic uses in areas at a lower density than the Mixed-Use Village land classification. Encourages conservation and open space as well as adaptive reuse to protect properties with historic value.	Segment 3 Mainline
Prince William Digital Gateway Special Study Area	Technology corridor that balances industry growth for data center uses and preservation of key environmental and cultural resources.	Pageland 1

Chapter 32 of the Prince William County Code of Ordinances sets forth standards and guidelines for development in designated zoning districts (Prince William County, 2025a).

Loudoun County

The 2019 Loudoun County General Plan guides the County’s land use policy and legislative actions, including objectives for natural resource management, accessible housing, cultural heritage protection, and economic development. The Plan was most recently amended through February 2023, and Loudoun County is undergoing an electrical infrastructure amendment to the General Plan. The Electrical Infrastructure Comprehensive Plan Amendment adopts mapping, text, and policy amendments to the General Plan for high-voltage transmission corridors. The proposed Electrical Infrastructure Comprehensive Plan Amendment emphasizes the County’s preference to collocate and/or expand existing and approved transmission corridors where feasible, as well as using new technologies such as smart grids and advanced conductors to optimize existing networks and limit the need for new transmission corridors. The proposed Electrical Infrastructure Comprehensive Plan Amendment map includes the Morrisville-Wishing Star Corridor as an existing approved corridor (Loudoun County, 2025a).

Loudoun County emphasizes the need to balance land uses between commercial, industrial, residential, and recreational growth while addressing existing land constraints. The General Plan



provides future land use recommendations used to guide zoning decisions and direct capital projects. Loudoun County implements the General Plan's goals and objectives through designation of "policy areas" which are further divided into "place types." Policy areas, which broadly define land planning objectives for a geographically defined region, are based on the size and configuration of buildings, land uses, availability and purpose of open spaces, and special amenities (Loudoun County 2023a). Table 3.2-2 lists the policy areas crossed by or within 0.25 mile of Project route in Segment 4, describes the land use objective of the policy area (based on the 2019 General Plan), and indicates if the area is crossed by or in the vicinity of a Project facility.

TABLE 3.2-2 POLICY AREAS WITHIN 0.25 MILE OF PROJECT FACILITIES WITHIN SEGMENT 4

Policy Area	Description	Applicable Project Facility
Rural	Limits residential development to support a rural economy and low-density development options, characterized by rural economy uses, working agricultural lands, open space, and a limited residential base.	Segment 4
Transition	Features open spaces visually distinct from surrounding development; incorporates public recreation, residential development, and clusters of economic activity	Segment 4; Wishing Star Station ¹⁰
Suburban	Contains a combination of self-sustaining residential, commercial, and employment uses which promote community and a high standard of living; incorporates public services and facilities.	Segment 4; Wishing Star Station

Chapter 2 of the Loudoun County Zoning Ordinance sets forth standards and guidelines for development in designated zoning districts (Loudoun County, 2023b).

3.2.2.4 RESIDENTIAL AREAS AND RESIDENCES

ERM identified dwellings (including single-family dwellings and individual dwelling units within multi-family buildings) to quantify the number of dwellings within 500 feet of the Project Impact Centerline through review of Loudoun County GIS (2025b) and Existing and Approved Development Mapping Tool (Loudoun County 2025c); Prince William County's GIS Data Portal and subdivision mapping (PWC 2025b, 2025c); Fauquier County's GIS Data portal for Residential zoning (Fauquier County 2025a); and various digital datasets, maps, and recent (2025) digital aerial photography (Google Earth, LLC 2025; VGIN Imagery 2025). For each Project segment, we quantified the number of homes within 100 feet, 250 feet, and 500 feet of the centerline.

Our analysis of impacts on residences and residential areas considered the number of dwellings proximate to each Project segment or alternative route; the use of existing right-of-way where practicable to minimize new impacts (particularly visual) on homes; and existing conditions within the landscape. Further discussion of residences and residential areas in relation to the Project is

¹⁰ Wishing Star Station is not a component of the Project, but is the termination point for the new 500 kV line #5008.

provided in Sections 4.1.4, 5.1.4, 6.1.4, 7.1.4, and 8.1.4. Visual impacts are discussed in Sections 4.4, 5.4, 6.4, 7.4, and 8.4.

3.2.2.5 COMMERCIAL/INDUSTRIAL AREAS AND BUILDINGS

Commercial and industrial areas and buildings in the study area include office buildings, retail/mixed use areas, and various businesses. ERM evaluated impacts on commercial buildings within 500 feet of the Impact Centerline. In accordance with SCC Guidelines, crossings of commercial and industrial lands are preferred to crossings of residential areas as the former are more compatible with transmission infrastructure. Therefore, our analysis generally viewed crossings of industrial/commercial lands as a routing opportunity but also considered the potential for impacts on business operations or plans. Further discussion of commercial/industrial lands in relation to each Project segment and alternative route are provided in Sections 4.1.5, 5.1.5, 6.1.5, 7.1.5, and 8.1.5.

3.2.2.6 PLANNED DEVELOPMENTS

ERM identified publicly announced, planned commercial, industrial, residential, and recreational developments within the study area by reviewing county planning department webpages (Fauquier County Government 2025b; Fauquier County Government n.d.; Loudoun County 2025c; Loudoun County n.d.c; Prince William County 2025bb; Prince William County 2025c), land developer websites, and publicly available applications submitted to government agencies. The Company also had discussions with existing and future customers related to planned developments, when applicable. ERM evaluated impacts on planned developments crossed by the Project. Our analysis of impacts on planned developments considered the size and scope of the developments, their location relative to the Project, the locations of future buildings or other infrastructure, if known; and the status of the development. Further discussion on planned development in relation to the Project is provided in Sections 4.1.6, 5.1.6, 6.1.6, 7.1.6, and 8.1.6. Planned road or other transportation projects are addressed in ERM's analysis of impacts to transportation infrastructure in Sections 4.1.10, 5.1.10, 6.1.10, 7.1.10, and 8.1.10).

3.2.2.7 CONSERVATION EASEMENTS AND LANDS

The Open-Space Land Act allows any "public body", which includes state, county, local, or other public entities such as park authorities, to obtain and designate land as either open-space easements (including conservation easements) or as open-space lands. These protections are intended to preserve lands for agricultural, forestal, recreational, or open space, protect natural resources, maintain or enhance air or water quality, or preserve the historical, architectural or archaeological aspects of real property.

Land conservation easements help preserve Virginia's heritage, provide recreational opportunities, and improve water and habitat quality and overall quality of life. In addition to managing lands under its jurisdiction, the VDCR helps landowners, land trusts, and localities by serving as a clearinghouse, keeping an inventory of protected lands, and providing grants and information on easements and land protection. The agency also helps by identifying important open space and lands rich with plant and animal diversity.

Using the VDCR's Managed Conservation Lands Database, ERM identified various conservation easements within the study area and evaluated impacts on conservation easements crossed by the Project (VDCR 2025d). Our analysis of impacts on easements considered their location relative to the Project and the limits imposed on future development within the easement. Further discussion of the conservation easements and lands in relation to the Project, including the specific types of easements proximate to the Project, is provided in Sections 4.1.7, 5.1.7, 6.1.7, 7.1.7, and 8.1.7. Analyses of impacts on the specific resources protected by an easement (e.g., historic resources within a VDHR-held easement) are addressed in the relevant subsections below.

3.2.2.8 RECREATIONAL RESOURCES

ERM collected information on recreational resources within the study area through digital data sets and maps, recent (2025) digital aerial photography, publicly available information on Fauquier County, Prince William County, and Loudoun County websites, and through consultation with county officials and other stakeholders and evaluated impacts on recreational resources crossed by the Project. Our analysis of impacts on recreational resources considered the potential for direct impacts on developed or undeveloped recreational facilities; the potential for indirect impacts, including temporary construction impacts, to disrupt or limit uses of recreational resources; and the potential for visual impacts from the Project to impact uses of recreational resources where viewshed is significant. Further discussion of recreational resources in relation to the Project segments and alternative routes is provided in Sections 4.1.8, 5.1.8, 6.1.8, 7.1.8, and 8.1.8.

3.2.2.9 CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP

ERM identified cemeteries, schools, and places of worship within a quarter mile of the Project Impact Centerline through review of county parcel data (Fauquier County 2025a; Loudoun County 2025b; Prince William County Government 2025b), topographic quadrangles (USGS 2025a), Google Earth, including its Street Map imagery (Google Earth LLC 2025), findagrave.com (2025), school department websites (Fauquier County School Board 2025; Prince William County School Board 2025), and Historic and recent digital aerial imagery (Google Earth, LLC 2025; VGIN Imagery 2025; Loudoun County Imagery 2025; Prince William County Aerial Imagery 2023). ERM evaluated impacts on these resources within 500 feet of the Impact Centerline. ERM's review of schools considered public and private pre-kindergarten through secondary schools, religious schools, daycare centers (excluding in-home daycares), technical schools, after-school enrichment and tutoring programs, and college/university campuses. Our analysis considered the potential for direct physical impacts on cemeteries, schools, and places of worship as well as indirect impacts, including construction activities, on uses of those resources within 500 feet of the segment of Impact Centerline. Further discussion of the cemeteries, schools, and places of worship is provided in Sections 4.1.9, 5.1.9, 6.1.9, 7.1.9, and 8.1.9.

3.2.2.10 TRANSPORTATION INFRASTRUCTURE

ERM reviewed recent aerial imagery (Google Earth 2025), transportation plans for each county crossed (Fauquier County 2023; Loudoun County 2023c; PWC 2022a) and VDOT's Six-Year Improvement Program (VDOT 2022) to identify existing road corridors and planned transportation

projects in the study area. Where transportation infrastructure is intersected by the Project, VDOT guidelines indicate a preference for perpendicular crossings, which reduce the distance spanned and the visual impacts of a transmission line across the road. VDOT also prefers placement of transmission structures outside their rights-of-way to avoid conflicts with future road improvements. Our analysis of impacts on transportation infrastructure considered the number and type of roads crossed, the potential for temporary road closures or detours due to Project construction, the potential for impacts on future road expansion, and the potential for visual impacts in areas where viewshed is considered significant. Further discussion of the existing and planned transportation infrastructure relative to the Project is provided in Sections 4.1.10, 5.1.10, 6.1.10, 7.1.10, and 8.1.10.

Fauquier County, Loudoun County, and Prince William County classify roads according to VDOT and Federal Highway Administration (FHWA) guidelines. Roads fall into four main functional categories. Principal arterials include interstates, other freeways and expressways, and major arterial roads that provide high-speed, high-capacity connections for long-distance travel and regional mobility. Minor arterials serve moderate-length trips, linking smaller communities to principal arterials. Collectors are divided into major and minor collectors. Major collectors channel traffic from local roads to arterials and serve larger towns, while minor collectors gather traffic from local roads and feed into major collectors, often serving rural areas. Local roads provide direct access to adjacent land.

Fauquier County Transportation Plan

Transportation planning is guided by the County's Comprehensive Plan, adopted in 2019, and associated transportation planning documents. The Plan provides guidance in prioritizing funding and implementing County transportation projects. County staff is responsible for updating the Transportation Chapter of the County's Comprehensive Plan as well as developing Six-Year Plans for primary and secondary roads, working with VDOT to identify transportation improvements needed throughout the county, reviewing applications for consistency with the County's planning requirements, reviewing traffic impact analyses, and working with residents to resolve transportation concerns in their area. (Fauquier County 2019).

Prince William County Transportation Plans

The Prince William County Comprehensive Plan, adopted in 2022 provides guidance for future roadway infrastructure needed to address existing and projected traffic demands in the County (PWC 2022a).

Loudoun County Transportation Plan

In 2019, the Loudoun County Board of Supervisors adopted the Loudoun County 2019 Comprehensive Plan, which includes the Loudoun County 2019 General Plan and Loudoun County 2019 Countywide Transportation Plan (2019 CTP). The plan is intended to guide transportation development through 2040 and includes a revised and enhanced arterial and collector road network (Loudoun County 2023c).

3.2.2.11 AIRPORTS AND HELIPORTS

Transmission line structures have the potential to affect airspace in and around airports. This section describes the airspace regulations that could impact the Project, and the procedures for assessing impacts to regulated airspace.

Federal Aviation Administration Regulations

The Federal Aviation Administration (FAA) oversees air transportation in the U.S., focusing on air transportation safety, including the enforcement of safety standards for aircraft manufacturing, operation, and maintenance. The FAA also manages air traffic in the U.S. and evaluates physical objects that may affect the safety of aeronautical operations through an obstruction evaluation. The prime objective of an FAA obstruction evaluation is to ensure the safety of air navigation and the efficient utilization of navigable airspace by aircraft.

The regulations that govern objects that may affect navigable airspace are codified in the Code of Federal Regulations (CFR), Title 14, Part 77 (14 CFR Part 77). A summary of the rule as it relates to the Project is provided below. The full rule is available online at: <https://www.ecfr.gov/current/title-14/chapter-I/subchapter-E/part-77>.

The FAA only regulates public use and federally operated (military use) airports and heliports. Private use airports without at least one instrument approach procedure do not require evaluation under 14 CFR Part 77.

Civil Airport Imaginary Surfaces

The FAA establishes civil airport imaginary surfaces (described below) for each airport and each runway, pursuant to 14 CFR Part 77. Imaginary surfaces are intended to prevent existing or proposed objects from extending from the ground into navigable airspace.

- **Horizontal surface:** This surface is a horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each runway and connecting the adjacent arcs by lines tangent to those arcs. The radius of the arc is 5,000 feet for all runways designated as utility or visual and 10,000 feet for all other runways. The radius of the arc specified for each end of a runway will have the same arithmetical value. That value will be the highest determined for either end of the runway.
- **Conical surface:** This is a surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.
- **Primary surface:** This surface is longitudinally centered and extends 200 feet beyond the end of each runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. This surface is 250 feet wide for visual approach runways, 500 feet wide for runways with non-precision instrument approaches, and 1,000 feet wide for precision instrument runways.
- **Approach surface:** This surface is longitudinally centered on the extended runway centerline and extends outward and upward from each end of the primary surface. An

approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end.

- **Transitional surface:** These surfaces extend outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces. Transitional surfaces for those portions of the precision approach surface that project through and beyond the limits of the conical surface extend 5,000 feet measured horizontally from the edge of the approach surface and at right angles to the runway centerline.

There are six common runway approach classifications which inform the geometric configuration of an airport's imaginary surfaces. The runway classifications are described in Table 3.2-3 below:

TABLE 3.2-3 FEDERAL AVIATION REGULATION (FAR) PART 77 APPROACH SURFACE CLASSIFICATIONS

FAR Part 77 Category	Approach Slope Category Description	Typical Inner Width (feet)	Maximum Flare Width (feet)	Maximum Horizontal Distance (feet)	Slope (Run : Rise) (feet)
PIR	Precision Instrument Approach	1,000	16,000	50,000	50:1 for 10,000 40:1 for 40,000
D	Nonprecision Instrument Approach Visibility Minimums as Low As 3/4 Mile	1,000	4,000	10,000	34:1
C	Nonprecision Approach Visibility Minimums Greater Than 3/4 Mile	500, or Primary Surface	3,500	10,000	34:1
B(V)	Visual Approach	500, or Primary Surface	1,500	5,000	20:1
A(NP)	Nonprecision Approach (Utility Runway)	500, or Primary Surface	2,000	5,000	20:1
A(V)	Visual Approach (Utility Runway)	250, or Primary Surface	1,250	5,000	20:1

Terminal Instrument Procedures

In addition to the civil and military airport imaginary surfaces, FAA Order 8260.3G establishes imaginary surfaces associated with Terminal Instrument Procedures (TERPS). TERPS are FAA guidelines that prescribe standardized methods for designing and evaluating airport-specific Instrument Flight Procedures (IFPs), including approach and departure procedures, for civil and military airports. IFPs detail required flight paths, altitude restrictions, and maximum descent and takeoff gradients that guide aircraft through approach airspace and provide protocols for missed approaches. IFPs consider obstructions around the airport, including natural topography and

constructed structures, to establish Minimum and Required Obstacle Clearance Surfaces. This facet of TERPS allows safe aeronautical navigation in poor visibility conditions.

Civil airport imaginary surfaces are typically more restrictive than surfaces associated with TERPS to ensure that developers seek FAA consultation prior to constructing structures within controlled airspace. If a structure were to penetrate imaginary surfaces and/or FAA imaginary "Notice" surfaces (described in the following section) of an airport, the IFP for that airport may be required to include that obstruction on navigation charts. If the FAA identifies a structure as an obstruction to air navigation, the FAA will issue determinations regarding options for design requirements, such as prescribed maximum height thresholds, or lighting and marking requirements. In some cases, the FAA may prohibit the construction of a structure at the proposed location.

Pursuant to 14 CFR Part 77, an existing object (including a mobile object) is, and a future object would be, an obstruction to air navigation if it is of greater height than any of the following:

- 499 feet above ground level (AGL) at the site of the object;
- 200 feet AGL or above the established airport elevation (whichever is higher) within 3 nm of the established reference point of an airport (excluding heliports), where the longest runway is more than 3,200 feet in actual length; that height increases in the proportion of 100 feet for each additional nautical mile (nm) from the airport up to a maximum of 499 feet;
- A height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, that would result in the vertical distance between any point on the object and an established minimum instrument flight altitude within that area or segment to be less than the required obstacle clearance;
- A height within an enroute obstacle clearance area, including turn and termination areas, of a Federal Airway or approved off-airway route that would increase the minimum obstacle clearance altitude; or
- The surface of a takeoff and landing area of an airport or any imaginary surface established under 14 CFR §§ 77.19, 77.21, or 77.23.

Federal Aviation Administration Notice Requirement and Timing

Construction of any structure that exceeds any of the surfaces or heights specified above requires notice to the FAA. In addition, pursuant to 14 CFR Part 77.9, a notice must be filed with the FAA for the following:

- Any construction or alteration that is more than 200 feet AGL at its site;
- Any construction or alteration exceeding an imaginary "Notice" surface, as defined in 14 CFR Part 77, including surfaces extending outward and upward at the following slopes:
 - 25 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of each heliport;
 - 50 to 1 for a horizontal distance of 10,000 feet from the nearest point of the nearest runway that is no more than 3,200 feet in actual length; or
 - 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway that is more than 3,200 feet in actual length; or

- If requested by the FAA.

Construction or alteration of any structure meeting the criteria above requires submittal of FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA regional office with jurisdiction over the area, or submittal electronically via the FAA Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) website. The required information to be provided with the notice includes the coordinates, site elevation, and structure height AGL for each pole/structure and the height of construction equipment (e.g., cranes).

State and Local Aviation Regulations

Va. Code § 5.1-25.1 prohibits erection of any structure that penetrates into or through any licensed airport's clear zone, approach zone, imaginary surface, obstruction clearance surface, obstruction clearance zone, or surface or zone (as defined by the FAA or the regulations of the Virginia Department of Aviation) without first securing a permit from the Board of Aviation. This requirement does not apply to structures erected in a jurisdiction that has an ordinance regulating the height of such structures to prevent the penetration of zones and surfaces established in 14 CFR Part 77 and Rule 19 of the Virginia Department of Aviation. State law (Va. Code §§15.2-2280, 15.2-2282, 15.2-2293, and 15.2-2294) gives local jurisdictions the power to establish and regulate zoning districts, make airspace subject to their zoning ordinance, and establish airport safety zoning.

Fauquier County

Fauquier County's Airport Safety and Impact Overlay District (APSID, Article 4, Part 5, Fauquier County Code of Ordinances) regulates and restricts structure heights and land use around Warrenton-Fauquier Airport. The boundaries of this overlay zone match the boundaries of the standard FAA Civil Airport Imaginary Surfaces for the airport. The Fauquier County overlay also regulates the portion of the County within the FAA Civil Airport Imaginary Surfaces for Culpeper Regional Airport. Because none of the Project components would overlap with the FAA Civil Airport Imaginary Surfaces for Warrenton-Fauquier Airport or Culpeper Regional Airport, the standard 14 CFR Part 77 airspace restrictions apply to the Project rather than the local ordinance.

Prince William County

Prince William County's Airport Safety Overlay District (Article V, Part 505 of the County's Zoning Ordinance) regulates and restricts the height of structures and the use of property in the vicinity of Manassas Regional Airport that may cause obstruction to aviation navigation and increase the potential for endangering lives and property. The district overlays all other established zoning districts within its boundaries, which are defined the same as the standard FAA Civil Airport Imaginary Surfaces for the airport. The Airport Safety Overlay District also establishes a Runway Safety Area, which comprises each runway's primary surface and established Runway Clear Zones. The only uses permitted within the safety area are agriculture and open space uses not involving concentrations of people.

The Runway Clear Zones begin at the end of each runway's primary surface and extend horizontally with the width of each runway approach surface as described below.

- North end of runway 16L-34R: 1,000 feet wide where it connects to the primary surface, 1,750 feet wide at its northern edge and extending south/north for 2,500 feet.
- South end of runway 16L-34R: 1,000 feet wide where it connects to the primary surface, 1,425 feet wide at its southern boundary and extending 1,700 feet north/south.
- North end of runway 16R-34L: 500 feet wide where it connects to the primary surface, 1,010 feet wide at its northern boundary and extending 1,700 feet south/north.
- South end of runway 16R-34L: 500 feet wide where it connects to the primary surface, 1,010 feet wide at its southern boundary and extending 1,700 feet north/south.

None of the proposed Project infrastructure would be in the Runway Safety Areas but the Gainesville and Pageland alternatives and portions of the Segment 3 Mainline are within the Airport Safety Overlay District (Figure 3.2.1-3). Because the overlay district surfaces are the same as the standard FAA imaginary surfaces, the 14 CFR Part 77 airspace restrictions apply to the Project rather than the local ordinance.

Loudoun County

Loudoun County has established zoning and land use restrictions around Washington Dulles International Airport (Dulles Airport) associated with noise contour lines, an area referred to as the Airport Impact Overlay District (AIOD). The AIOD is a zoning overlay district administered by the county's Department of Building and Development. The boundaries are based on the 60-decibel (dB) and 65-dB day-night noise contours and a 1-mile buffer extending beyond the 60 dB day-night average sound level contour for Dulles Airport (Loudoun County 2024c). The zone includes all land lying beneath the approach surfaces, transitional surfaces, horizontal surfaces, and conical surfaces that apply to the airport. Except for non-residential structures, building heights within the AIOD are required to comply with FAA standards, though regulations are less restrictive than FAA standards for non-residential structures. Therefore, the CFR Part 77 airspace restrictions apply to the Project rather than the local ordinance. Portions of Segment 4 are within the AIOD.

Airports Near the Project Area

ERM reviewed the FAA website (FAA n.d.-a, n.d.-b) to identify the following types of airports and heliports within 10 nm of the Project:

- Public Use Civil Airports/Heliports—public use airports that are open to the public and are required to be evaluated for obstruction impacts under 14 CFR Part 77.
- Military/Federal Government Airports/Heliports—government owned, private use airports operated by the Department of Defense (DOD), National Aeronautics and Space Administration, or other agencies of the Federal Government, and are required to be evaluated for obstruction impacts under 14 CFR Part 77.
- Private Airports/Heliports—privately owned airports designated for private or restricted use only, not open to the public, and typically not required to be evaluated for obstruction impacts under 14 CFR Part 77.

A list of all public and private use airport and heliport facilities within 10 nm of any portion of the Project is provided in Table 3.2-4 while the locations of each are depicted on Figure 3.2.1-2. No

Military/Federal Government airports or heliports are located within 10 nm of the Project. Assessments on the Project's potential to obstruct airspace is provided in Sections 4.1.11, 5.1.11, 6.1.11, 7.1.11, and 8.1.11 of this report.

**TABLE 3.2-4 AIRPORTS AND HELIPORTS WITHIN 10 NAUTICAL MILES OF THE PROJECT
IMPACT CENTERLINE**

Airport/Heliport Name	FAA ID	Approximate Distance and Cardinal Direction from Nearest Project Facility to an Established Airport Reference Point ^a				
		Segment 1	Segment 2A	Segment 2B	Segment 3 ^b	Segment 4
Public Use Facilities Subject to 14 CFR Part 77						
Manassas Regional Airport	HEF	10.2 nm N	8.9 nm NE	3.6 nm E	3.6 nm E	10.8 nm S
Washington Dulles International Airport	IAD	23.9 nm N	22.5 nm N	14.3 nm NE	5.7 nm NE	4.2 nm E
Warrenton/ Fauquier Airport	HWY	4.8 nm N	5.5 nm W	5.5 nm W	10.4 nm SW	19.8 nm S
Leesburg Executive Airport	JYO	30.9 nm N	29.5 nm N	20.8 nm N	10.9 nm N	7.2 nm N
Culpeper Regional Airport	CJR	7.3 nm W	12.6 nm W	13.0 nm W	17.7 nm SW	26.2 nm SW
Private Use Facilities						
Maples Field Airport	VG57	2.6 nm N	1.2 nm N	0.3 nm E	7.6 nm S	17.4 nm S
Glascok Heliport	98VA	22.9 nm N	21.6 nm N	12.9 nm N	3.1 nm N	0.5 nm E
Stonesprings Heliport	6VG4	22.7 nm N	21.4 nm N	12.7 nm N	2.8 nm N	0.6 nm E
Rambo Airfield Airport	OVA0	1.0 nm N	4.9 nm SW	5.7 nm SW	13.3 nm S	23.0 nm S
Skyview Airport	51VA	9.3 nm N	8.0 nm N	1.9 nm W	2.3 nm SW	11.3 nm S
Valley View Airport	8VA9	8.0 nm N	6.7 nm N	2.0 nm E	3.0 nm SE	12.3 nm S
Rhynalds Ranch Airport	29VA	2.2 nm NW	7.0 nm W	7.6 nm SW	14.0 nm SW	23.5 nm S
Walnut Hill Airport	58VA	3.0 nm NW	2.5 nm W	2.5 nm W	8.6 nm S	18.4 nm S
UVA Health/ Haymarket Medical Center Heliport	45VA	15.5 nm N	14.2 nm N	5.8 nm NW	2.6 nm W	5.8 nm SW
Flying Circus Aerodrome Airport	3VA3	2.8 nm N	5.7 nm W	6.1 nm W	12.4 nm SW	21.9 nm S

Airport/Heliport Name	FAA ID	Approximate Distance and Cardinal Direction from Nearest Project Facility to an Established Airport Reference Point ^a				
		Segment 1	Segment 2A	Segment 2B	Segment 3 ^b	Segment 4
UVA Health/Prince William Medical Center Heliport	27VA	13.1 nm NE	11.9 nm NE	5.2 nm NE	3.9 nm E	8.6 nm SE
Goose Hunt Farm Airport	3VA5	27.9 nm N	26.6 nm N	17.9 nm N	8.4 nm N	5.5 nm NW
Rular Airport	VG07	6.1 nm W	11.0 nm W	11.4 nm W	16.1 nm SW	24.7 nm SW
Inova Loudoun Hospital Heliport	34VA	31.1 nm N	29.7 nm N	21.2 nm N	11.4 nm N	7.7 nm NE
Horse Feathers Airport	53VA	8.2 nm N	8.2 nm W	7.9 nm W	9.8 nm SW	18.1 nm SW
Aviacres Airport	3VA2	8.2 nm NW	9.3 nm W	9.2 nm W	11.3 nm SW	19.3 nm SW
Inova Fair Oaks Hospital Heliport	74VA	21.8 nm NE	20.5 nm NE	13.5 nm NE	8.6 nm E	8.7 nm E
Reston Hospital Center Heliport	43VA	26.3 nm NE	25.0 nm NE	17.4 nm NE	10.1 nm NE	8.7 nm E
Fairfax County Police Heliport	26VA	20.2 nm NE	19.0 nm NE	12.5 nm NE	8.9 nm E	9.3 nm E
Hickory Tree Farm Airport	VA79	24.4 nm N	23.1 nm N	15.1 nm NW	9.2 nm W	9.0 nm W
Egypt Farms Heliport	4VA0	29.4 nm N	28.1 nm N	19.6 nm N	11.2 nm NW	9.1 nm NW
Lost Griz Aerodrome Airport	7VG0	9.9 nm NW	10.0 nm NW	9.2 nm W	10.3 nm SW	17.8 nm SW
Fauquier Hospital Emergency Transport Heliport	8VA3	13.4 nm NW	12.7 nm NW	10.0 nm W	10.4 nm W	15.9 nm SW

^a Distance measurements were calculated via standard ArcGIS Geoprocessing tools (Near Analysis), utilizing route centerlines and established Airport Reference Points retrieved from the FAA Airport Data and Information Portal (ADIP). 'Nearest Project Facility' may refer to any point along a route impact centerline that is geographically nearest to the Airport Reference Point. The measurements provided above are to be used for general location reference. Runways and airport property boundaries may be closer to a project component than calculated and presented in the above table. Refer to Figure 3.2.1-2 for airport locations.

^b Segment 3 in this table is comprised of the Segment 3 Mainline, Gainesville 1, and Pageland 1.

Impact Assessments

ERM conducted an airport analysis of each Project segment to review the height limitations associated with 14 CFR Part 77. Impact assessments for each segment are provided in Sections 4.1.11, 5.1.11, 6.1.11, 7.1.11, and 8.1.11.



ERM conducted preliminary evaluations of transmission infrastructure heights and locations using the FAA-defined Civil and DOD airport imaginary surfaces, and applied standard GIS tools, including ESRI's ArcGIS Pro software with Spatial Analyst, 3D Analyst, and Aviation Airports Extensions, to create and georeference imaginary surfaces in space and in relationship to transmission structures. ERM derived ground surface data for the evaluation from a USGS 10 Meter Digital Elevation Model.

ERM utilized the FAA OE/AAA Prescreening Tool (FAA n.d.-d) to verify if the proposed transmission structures would require notification to the FAA based on their planned height above ground level. The OE/AAA Prescreening Tool utilizes structure type, latitude, longitude, height, and ground surface elevation to verify if notification would be required based on any FAA obstruction criteria. It is important to note that the FAA pre-screening tool may consider a wide range of data, including standard and specific airport procedures, airspace restrictions and existing obstacle data when determining if notification is required. The tool may also assume user submitted location data can be subject to inaccuracies, meaning a tower could be flagged as a precaution in case reporting errors exist. As such, identification of a structure requiring construction notice on the OE/AAA Prescreening Tool may not mean a structure will certainly be considered an obstruction to air navigation; however, it does represent an FAA request for review under 14 CFR Part 77.11(a)(2).

Lastly, the Company used the FAA's Digital Obstacle File (DOF) database (FAA, July 23, 2025) to review existing structures around and near the Project area. For a structure to be included in the DOF database, it must have first been reviewed by the FAA in a formal aeronautical study and been found to be an obstacle that exceeded a threshold defined in 14 CFR Part 77, but determined to not pose a significant adverse impact to air navigation. These structures were allowed to be built under the condition that the structure be mapped with a prescribed level of accuracy in aeronautical charts and may have been required to implement design alterations for safety (lights, marker balls, etc.). By reviewing these existing obstacles, the Company gains valuable routing and engineering insights into the height limitations that may exist, and the FAA's tolerance for exceedances to surface in an area.

Based on our review of the surfaces applicable to the public airports listed in Table 3.2.-5, the only airports whose imaginary surfaces overlap with the Project are Dulles Airport and Manassas Regional Airport. The other nearby airports—Warrenton/Fauquier Airport, Leesburg Executive Airport, and Culpeper Regional Airport—are at sufficient distances from the Project that their 14 CFR Part 77 imaginary surfaces and notification surfaces are not crossed by the Project. Some planned structures in line with the Warrenton/ Fauquier Airport runway, however, may require notification based on the FAA's OE/AAA Prescreening Tool.

Airport specific surface geometries for Dulles Airport, Manassas Regional Airport, and Warrenton/ Fauquier Airport are provided in Table 3.2-5 below. Visuals of imaginary surfaces of Manassas Regional Airport and Dulles Airport are provided on Figures 3.2.1-3 and 3.2.1-4, respectively.

TABLE 3.2-5 14 CFR PART 77 IMAGINARY SURFACE GEOMETRY OF AIRPORTS IN CLOSE PROXIMITY TO THE PROJECT

		Washington Dulles International Airport	Manassas Regional Airport	Warrenton/ Fauquier Airport										
Airport Code		IAD	HEF	HWY										
Runway IDs		01L/19R, 01C/19C, 01R/19L, 12/30	16L/34R, 16R/34L	15/33										
Horizontal Surface														
Established Airport Elevation ^a		312.3	192.2	336.2										
Horizontal Surface Elevation ^a		462.3	342.2	486.2										
Radius (feet)		10,000	10,000	10,000										
Conical Surface														
Slope Ratio, distance (feet)		20:1, 4,000	20:1, 4,000	20:1, 4,000										
Elevation Range ^a		462.3-662.3	342.2-542.2	486.2-686.2										
Primary Surface and Approach Surfaces														
Runway End	01L	19R	01C	19C	01R	19L	12	30	16L	34R	16R	34L	15	33
Heading	1°	181°	1°	181°	1°	181°	111°	291°	151°	331°	151°	331°	139°	319°
Runway elevation ^a	296	277	286.1	268.6	311.7	293	309.9	287.6	192.2	177.4	185.7	175.1	313.2	336.2
Obstruction Category ^b	PIR	PIR	PIR	PIR	PIR	PIR	PIR	B(V)	PIR	C	C	B(V)	D	C
Primary Surface Width	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000C	1,000	1,000C	500	500	1,000	1,000
Inner/Extended Approach Distance (feet)	10,000 40,000	10,000 40,000	10,000 40,000	10,000 40,000	10,000 40,000	10,000 40,000	10,000 40,000	5,000	10,000 40,000	10,000	10,000	5,000	10,000	10,000
Surface end width (feet)	16,000	16,000	16,000	16,000	16,000	16,000	16,000	1,500	16,000	3,500	3,500	1,500	4,000	3,500



3.2.3 NATURAL RESOURCES

3.2.3.1 SURFACE WATERS

ERM identified and mapped watersheds, wetlands, and waterbodies (e.g., lakes, streams, ponds, and stormwater features) in the study area using the data sources described in Section 1.8 (USFWS 2025; USGS 2025a; USGS 2025b; ESRI et al. 2025; USDA-NRCS 2025; Google Earth, LLC 2025; VGIN Imagery 2025; Loudoun County Imagery 2025; and Prince William County Aerial Imagery 2023).

Watersheds

Watersheds are used to define the geographic area within the boundaries of drainage divides throughout the country. For purposes of classifying watersheds, the U.S is divided into four levels of hydrologic units—regions, subregions, accounting units, and cataloging units—containing all or part of a watershed. Each level is identified by a hydrologic unit code (HUC). Two-digit HUCs are major geographic areas or regions containing several rivers or the drainage area of a major river. The Project is within the Mid-Atlantic HUC 2-digit (02) region, which discharges into the Atlantic Ocean, Long Island Sound, and the Riviere Richelieu, a tributary of the St. Lawrence River. Subsequent levels encompass progressively smaller areas based on the drainage divides of lower order waterbodies. Further discussion on watersheds in relation to the Project is provided in the Sections 4.2.1, 5.2.1, 6.2.1, 7.2.1, and 8.2.1. The information provided on watershed in contextual, to inform the analysis of wetlands and waterbodies described below.

Wetlands

ERM identified wetlands within the Project footprint based on a desktop probability analysis as described and shown in the Wetland and Waterbody Desktop Summary (Attachment 2.D.1 of the DEQ Supplement). ERM did not conduct an onsite delineation of wetlands or waterbodies along the Project segments or route alternatives. Wetlands and waterbodies were classified based on the Cowardin system using the following categories:

- Palustrine emergent (PEM) wetlands: characterized by erect, rooted, herbaceous hydrophytes (i.e., aquatic plants) and woody species less than 3 feet in height, excluding mosses and lichens;
- Palustrine scrub-shrub (PSS) wetlands: characterized by woody vegetation, excluding woody vines, approximately 3 to 20 feet in height;
- Palustrine forested (PFO) wetlands: characterized by woody vegetation, excluding woody vines, approximately 20 feet or more in height and 3 inches or larger diameter at breast height;
- Palustrine unconsolidated bottom (PUB) open waters: characterized by bottom substrate particles smaller than stones (less than 10 inches in diameter) covering greater than 25 percent of the area, with plants covering less than 30 percent of the area; and
- Riverine waterbodies: channels containing periodically or continuously moving water (USFWS 2013).

Wetlands provide a wide range of ecological functions, including flood storage and groundwater recharge, nutrient and sediment capture, erosion control, filtration of pollutants from adjacent waterbodies, and diverse fish and wildlife habitats. PFO wetlands are of especially high value due to their habitat biodiversity and carbon sequestration functions, as well as increased filtration capabilities. Further discussion on wetlands in relation to the Project is provided in Sections 4.2.1, 5.2.1, 6.2.1, 7.2.1, and 8.2.1.

Waterbodies

ERM identified and mapped waterbodies, including streams, rivers, and other open waterbody features (e.g., reservoirs, lakes, impoundments, ponds, and stormwater features) within the study area using the publicly available GIS databases identified in Section 1.8 and listed above. Surface water crossings and impacts may be regulated by the US Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), and by Virginia Department of Environmental Quality under Section 401 of the CWA and the Virginia Water Protection permit program. The Project does not cross any navigable waters and therefore would not require a Rivers and Harbors Act Section 10 authorization from the USACE. Further discussion on waterbodies in relation to the Project is provided in Sections 4.2.1, 5.2.1, 6.2.1, 7.2.1, and 8.2.1. Our impacts analysis by Project segment considers the number and types of waterbodies (e.g. perennial or intermittent) crossed.

General Resource Impacts

To minimize impacts on wetland areas, the Project has been designed to span or avoid wetlands, keeping transmission structures outside of wetland boundaries to the extent practicable. As discussed in more detail in Sections 4 through 8, the Project's use of and collocation with existing Company right-of-way minimizes impacts on wetlands, particularly clearing impacts on PFO wetlands.

Most direct impacts on wetlands from Project construction would be temporary in nature. The Company would use temporary timber matting for construction equipment to travel over wetlands, as appropriate. In the absence of an existing right-of-way, some new access roads may be necessary along the route. If a section of line cannot be accessed from existing roads, Dominion may need to install a culvert, ford, or temporary bridge along the right-of-way to cross small streams. In such cases, some temporary fill material in wetlands may be required. This fill would be placed on erosion control fabric and removed when work is completed, returning ground elevations to preexisting conditions.

Permanent direct impacts on wetlands would be limited to placement of structures within wetlands, if unavoidable, and the permanent conversion of PSS/PFO wetlands within the existing, expanded, or new right-of-way to PEM-type wetlands due to the necessity of removing trees and shrubby vegetation. The conversion of PFO and PSS wetlands would reduce or eliminate some wetland functions, such as peak flood flow reduction, nutrient and sediment capture, filtration of pollutants to adjacent waterbodies, and habitat diversity.

Waterbodies crossed by the Project would be maintained for proper drainage using culverts or other crossing devices in accordance with Dominion's standard policies. The Project would span

waterbodies crossed by the routes, with permanent impacts limited to the conversion of riparian buffer from tree cover to herbaceous vegetation within the maintained rights-of-way.

Tree removal adjacent to waterbodies would reduce riparian buffer functions such as stream bank stabilization and erosion control, nutrient and sediment filtration, floodwater storage and peak flow reduction, and water temperature changes due to loss of shading. Tree removal in the floodplains of perennial waterbodies could reduce water absorption capacity, which could increase total inundation in the area during flood events. Where existing vegetation does not conflict with intended land uses, the right-of-way would be maintained with a cover of herbaceous vegetation during operations, which would provide some filtration and stabilization to protect waterbodies from runoff. Perpendicular stream crossings, where feasible, minimize riparian stream buffer impacts by reducing the amount of vegetation cleared adjacent to the waterbodies.

Where removal of trees and/or woody shrubs is required in new or expanded right-of-way, clearing within 100 feet of a stream would be conducted by hand. Vegetation would be cut at or slightly above ground level, and there would be no grubbing of stumps. Dominion would use sediment barriers along waterways and steep slopes during construction to protect waterways from soil erosion and sedimentation.

Project construction could result in temporary, minor impacts on water quality from disturbed soils transported by stormwater entering adjacent surface waters during rain events. Increased turbidity and localized sedimentation of stream bottoms may occur because of sediment runoff. Potential impacts would be mitigated by the implementation of erosion control measures.

Upon SCC approval of the Project and final line engineering, Dominion would obtain the appropriate permits from the USACE and Virginia Department of Environmental Quality for work within wetlands and waterbodies to ensure compliance with Sections 404 and 401 of the CWA and to minimize potential impacts on aquatic resources within the approved transmission line corridor.

3.2.3.2 NATURAL HERITAGE RESOURCES

The Virginia Natural Area Preserves Act of 1989 defines NHRs as "habitat[s] of rare, threatened, or endangered plant and animal species; rare or state-significant natural communities or geologic sites; and similar features of scientific interest benefiting the welfare of the citizens of the Commonwealth" (Va. Code § 10.1-209 through 217). VDCR assigns a state rank (an "S-ranking") to the species, natural communities, and geologic features classified as NHRs to indicate their conservation status and rarity within the Commonwealth. State rankings range from S1 to S5 as follows (VDCR 2021a):

- Critically imperiled (S1),
- Imperiled (S2),
- Vulnerable (S3),
- Apparently secure (S4), or
- Secure (S5).

ERM consulted VDCR's Natural Heritage Program (NHP) and requested an environmental review to identify NHRs in the study area and along and near each Project segment and alternative route.

ERM reviewed and requested data from the NHP's ecological datasets for the area within 1.0 mile of the rights-of-way for each segment of alternative. The requested NHP review included natural area preserves, conservation sites (CSs), stream conservation sites (SCSs), and ecological cores, described below (VDCR 2024b, 2025b).

The VDCR responded to ERM's request for environmental review of the study area in a letter dated July 18, 2024 and to a supplemental request for the Gainesville and Pageland alternatives in a letter dated November 12, 2025 (Attachment 2.G.1 of the DEQ Supplement). The VDCR letters indicate that no natural area preserves or state-listed insect species are present along the routes; therefore, no further discussion of these resource types is provided in this study. The VDCR's review identified CSs, SCSs, ecological cores, and diabase soils supporting rare plant species along the segments and alternative routes.

Our analysis of impacts on NHRs considered their ranking and condition, the specific resource of concern, and the surrounding environment. Further discussion of NHRs in relation to the individual Project segments and routes is provided in Sections 4.2.2, 5.2.2, 6.2.2, 7.2.2, and 8.2.2.

Conservation Sites

Conservation sites delineate the NHP's best determination of the land and water area (in public or private ownership) occupied by one or more rare, threatened, or endangered species, rare or significant natural communities, or geologic sites necessary to maintain ecological processes that facilitate long-term survival of these resources. The size and dimensions of a CS are based on the habitat requirements of the rare, threatened, or endangered plant and animal species or natural communities present and the physical features of the surrounding landscape. The latter include hydrology, slope, aspect, vegetation structure, current land uses, and potential threats from invasive species. Conservation sites may require ecological management, such as invasive species control or water management, to maintain or enhance their viability.

Each CS is given a biodiversity significance ranking (a "B-ranking") by VDCR based on rarity, quality, and the number of individual resources it contains. Conservation site rankings range from B1 to B5 as follows (VDCR 2021a):

- Outstanding significance (B1),
- Very high significance (B2),
- High significance (B3),
- Moderate significance (B4), or
- General significance (B5).

Rankings for CSs can also include indicators of the presence/absence of federally listed species, state-listed species, or no listed species.

Stream Conservation Sites

SCSs "encompass stream/river reaches, waterbodies, and terrestrial contributing areas containing or associated with aquatic or semi-aquatic resources, including upstream and downstream reaches and tributaries up to 3-kilometer stream distance from the aquatic resources" (VDCR 2024b, 2025b). The VDCR considers hydrology of the waterway and surrounding landscape, dam

locations, and determination of tidal waterways in establishing the size and dimensions of a SCS. The SCS designation can be used to identify land management needs, protection priorities, and potential conflicts with development.

VDCR assigns a biodiversity significance ranking (a “B-ranking”) to each SCS based on rarity, quality, and the number of resources it contains. Rankings range from B1 to B5, as follows (VDCR 2021a):

- Outstanding significance (B1),
- Very high significance (B2),
- High significance (B3),
- Moderate significance (B4), or
- General significance (B5).

Rankings for SCSs can also include indicators of the presence/absence of federally listed species, state-listed species, or no listed species.

Ecological Cores

Ecological cores are areas comprising at least 100 acres of continuous interior, natural cover (e.g., forests, woodlands) that provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists. Interior ecological core areas begin 100 meters inside the nearest core edges and continue to the deepest parts of the core. Smaller areas of continuous interior cover (i.e., 10 to 99 acres), called habitat fragments, support ecological cores and provide similar functions and values. Ecological cores and habitat fragments together provide the natural and economic benefits of open space, recreation, water quality (including erosion prevention and drinking water recharge and protection), and air quality (including carbon sequestration and oxygen production). VDCR ranks the integrity of ecological cores from C1 to C5 (see description below) using nine prioritization criteria, including habitats within the cores. Habitat fragments are similarly classified, although none are ranked above C3 (VDCR 2023a, 2024c).

The VDCR ranking system, for the integrity of ecological cores, includes the following categories:

- Outstanding (C1),
- Very High (C2),
- High (C3),
- Moderate (C4), and
- General (C5).

Generally, VDCR assigns a higher ranking (e.g., C1 or C2) to larger and more biologically diverse ecological cores. Ecological integrity can be considered enhanced if the core is part of a larger complex of natural lands or if the core contributes to water quality enhancement. Ecological cores ranked C1 and C2 are typically connected by extended landscape corridors with forests that comprise a statewide network of natural lands. For this reason, the VDCR recommends avoidance of ecological cores ranked C1 or C2 and a formal impact analysis to minimize impacts if they are unavoidable (Gustafson 2024). Lower ranked ecological cores may have smaller fragments of forested habitat, but VDCR notes that habitat fragments can provide important ecological

functions and values and recommends avoiding impacts to these resources when feasible. Impacts on ecological cores occur when their natural cover is partially or completely converted to developed land uses. Habitat conversion can result in changes that reduce ecosystem processes, biodiversity, population viability, and habitat quality (VDCR 2024b, 2025b).

3.2.3.3 PROTECTED SPECIES

Protected species are generally defined as animal and plant species that are protected under state or federal law. ERM reviewed protected species according to the following regulations:

- Federal- and state-listed threatened and endangered (T&E) species protected under the federal Endangered Species Act (ESA), administered by the USFWS and National Oceanic and Atmospheric Administration (NOAA) in cooperation with the Virginia Department of Wildlife Resources (VDWR);
- State-listed T&E species protected under the Virginia Endangered Plant and Insect Species Act, administered by the Virginia Department of Agriculture and Consumer Services in cooperation with the VDCR;
- Bald eagles (*Haliaeetus leucocephalus*) protected under the federal Bald and Golden Eagle Protection Act, administered by the USFWS; and
- Migratory birds protected under the Migratory Bird Treaty Act, administered by the USFWS.

In addition to the sources listed in Section 1.8, ERM used the following sources to identify protected species along and near the Project:

- USFWS Information for Planning and Consultation System (IPaC) online system (USFWS n.d.)
- VDCR NHP (VDCR 2025a);
- VDCR Environmental Review (VDCR 2024b, 2025b);
- VDWR Wildlife Environmental Review Map Service (WERMS) (VDWR 2026e);
- Virginia Fish and Wildlife Information Service (VaFWIS) (VDWR 2026d);
- Center for Conservation Biology (CCB) Eagle Nest Locator (CCB 2022); and
- VDWR Northern Long-eared Bat, Tri-colored Bat, and Little Brown Bat Consultation Tool (VDWR 2026b).

ERM obtained database query results from the VDCR NHP, the VDWR VaFWIS, the VDWR WERMS, and the USFWS IPaC to identify federal- and state-listed species that may occur in the study area. ERM also obtained digital data from the VDCR to identify locations within potential rights-of-way of the Project (along with an associated 100-foot buffer) that potentially support protected species.

Query results from the VDCR identify species known to occur in the area and communities known to contain protected species either historically or currently (VDCR 2025a). Query results from the IPaC identify species that may occur in the study area (USFWS n.d.). Query results from VaFWIS identify species known to occur or likely to occur within a 2.0-mile radius of the Project study area (VDWR 2026d). Query results from the CCB database provided information on Bald eagle nests and migratory birds (CCB 2022). Query results from the VDWR WERMS provided data for species known to occur within the rights-of-way of the various Project segments and route alternatives.

Specific occurrences of species are discussed by segment or alternative route in Sections 4.2.3, 5.2.3, 6.2.3, 7.2.3, and 8.2.3.

Federal- and State-Listed Threatened and Endangered Species

To protect and recover imperiled species and the ecosystems they depend on, Congress passed the federal ESA in 1973, which states that T&E plant and animal species are of “[a]esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people” and that protection of these species and their habitats is required. The ESA protects fish, wildlife, plants, and invertebrates that are federally listed as endangered or threatened by prohibiting the “take” of these species and the interstate or international trade of the species, including their parts and products, unless permitted by federal law.

To take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct” (33 U.S.C. § 1532). A federally endangered species is any species that is in danger of extinction throughout all or a significant portion of its range, with exceptions for certain insect pests (33 U.S.C. § 1532). A federally threatened species is any species that is likely to become endangered throughout all or a significant portion of its range (33 U.S.C. § 1532).

Virginia has adopted separate codes for protecting animals and plants in the state. The Virginia ESA (Va. Code, §§ 29.1-563 through -570) designates the VDWR as the state agency with jurisdiction over state-listed T&E fish and wildlife. The Virginia ESA authorizes the Board of the VDWR to adopt the federal list of T&E species and to identify and protect state-listed wildlife. The Virginia ESA prohibits the taking, transportation, processing, sale, or offer for sale of those species.

Under the Virginia Endangered Plant and Insect Species Act (2 VAC 5-320-10), the taking or possession of T&E plant and insect species is prohibited. The VDWR represents the Virginia Department of Agriculture and Consumer Services, which is responsible for state-listed plants and insects, in providing comments regarding potential impacts on these species. Further discussion on federal- and state-listed T&E species in relation to the Project segments and alternative routes is provided in Sections 4.2.3, 5.2.3, 6.2.3, 7.2.3, and 8.2.3.

ERM’s review accounted for regulatory changes and requirements associated with the USFWS uplisting of the Northern long-eared bat (NLEB, *Myotis septentrionalis*) from federally threatened to federally endangered. On October 15, 2024, USFWS issued the NLEB Final Guidance for development projects. The USFWS interim guidance for the NLEB expired on November 30, 2024, and the final guidance for NLEB took effect.

The review also accounted for regulatory changes and requirements associated with Tricolored bat (TCB, *Perimyotis subflavus*) and Monarch butterfly (*Danaus plexippus*) and the proposed USFWS listing of these species as federally endangered and federally threatened, respectively. The Company is anticipating the TCB and Monarch butterfly will be listed; therefore, it assumes any regulatory changes associated with the potential listing of the TCB and Monarch butterfly will affect this Project. On September 14, 2022, the TCB was proposed to be listed as Endangered by the USFWS (USFWS 2022). USFWS extended its Final Rule issuance target from September 2023

to the end of 2024, but as of the date of this filing, the TCB listing decision has not been issued. On December 12, 2024, the Monarch butterfly was proposed to be listed as Threatened by the USFWS, and the 90-day public comment period was extended and closed on May 19, 2025. The Company is tracking this ruling and evaluating the effects of potential outcomes on permitting, construction, and in-service dates for its projects, including electric transmission lines.

In October 2024, USFWS issued a final NLEB and TCB Range-wide Determination Key to allow project proponents to assess project impacts, practicable avoidance and minimization measures, and consultation requirements under the final NLEB guidance and the eventual TCB listing ahead of the final decision. The Company would use the Determination Key to further assess Project impacts and determine appropriate avoidance and minimization measures to ensure compliance with state and federal regulations when the Project begins permitting.

Dominion would coordinate with state and federal agencies as needed to determine if surveys, construction time-of-year-restrictions (TOYRs), or other mitigation would be required to mitigate potential impacts on threatened or endangered species.

Bald Eagle Management

Multiple large river tributary systems that flow into Chesapeake Bay host large populations of Bald eagles during winter and summer seasons. Eagles across the Atlantic Coast are attracted to habitat in the Chesapeake Bay watershed due to the temperate climate and abundance of fish and waterfowl prey. Eagles from the southeastern U.S. migrate north to the Chesapeake Bay every spring, and Bald eagles from the northeastern U.S. (and Canada) migrate south to the Bay for the winter. As a result, the Chesapeake Bay watershed supports three populations of Bald eagles, including Chesapeake Bay residents, southeast migrants, and northeast migrants.

While the Bald eagle is no longer federally listed under the ESA and was de-listed from the Virginia List of T&E Species in 2013, the species remains protected under the federal Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act, as well as Va. Code § 29.1-521 and VDWR regulations (4 VAC 15-30-10). *The Management of Bald Eagle Nests, Concentration Areas, and Communal Roosts in Virginia: A Guide for Landowners*, issued by the then Virginia Department of Game and Inland Fisheries (now VDWR), identifies management practices for avoiding the take of Bald eagles and outlines restrictions on construction activities within defined management zones. Proposed activities that have the potential to affect Bald eagles are evaluated by the VDWR on a case-by-case basis (Virginia Department of Game and Inland Fisheries 2012).

ERM reviewed current eagle datasets in Virginia, including Eagle Concentration Areas and individual Bald eagle nests available from the CCB VaEagles website and the CCB's annual eagle nest survey (CCB 2022). ERM also reviewed Bald eagle data provided through the VaFWIS and WERMS databases. Current CCB and VDWR data show that the study area is not within an Eagle Concentration Area. Further discussion on bald eagle management in relation to the Project is provided in Sections 4.2.3, 5.2.3, 6.2.3, 7.2.3, and 8.2.3.

Other Species of Interest

Other species of interest when evaluating projects typically include rare plants and animals that are not afforded the same level of protection as federal- and state-listed T&E species.



NatureServe, an international network of NHPs, assigns a global rank to species based on their rarity and conservation status (NatureServe 2025). Species ranked "G1" (global rank 1/critically imperiled) or "G2" (global rank 2/imperiled) are most at risk. State rankings are similar (S1 and S2) but only indicate the status of the species within Virginia. The VDCR continually catalogs, gathers, and analyzes geographic information about Virginia's rare species to develop land conservation data, provide online mapping tools, and help resource agencies make conservation decisions. Further discussion on other species of interest in relation to the Project is provided in the following sections.

3.2.3.4 VEGETATION

Local Vegetation Characteristics

The study area is situated within the Northern Piedmont physiographic province. Upland forest vegetation in this province has been extensively altered by clearing as part of ongoing agricultural and silvicultural practices as well as residential and non-residential development occurring since European settlement. As a result, the characteristics of plant species or community types present prior to European settlement are difficult to determine.

More recently, the effects of human development activities on the landscape have resulted in a patchwork of early and late-successional forests. The study area contains a mix of agricultural/forested land, developed and developing areas, and residential areas. Forest clearing has occurred across much of the study area in the last 20 years; thus, much of the vegetation in the study area consists of immature mixed pine (*Pinus spp.*), hardwood forest communities, and forested "edge" communities that border larger forested tracts. Small areas of open space within the study area are generally associated with lawns on residential and commercial parcels.

Forested vegetation in the study area generally consists of relatively small contiguous tracts of trees. These forests contain both deciduous hardwood stands and evergreen/mixed forests and are described mostly as Appalachian oak, oak-pine, or oak-hickory-pine forests (VDCR 2021b). When left unattended, fallow farmlands (which were present in the study area prior to extensive commercial, industrial, and residential development), undergo a successional regeneration process that generally results in a prevalence of early successional tree stands of pines and Tulip-poplar (*Liriodendron tulipifera*) (VDCR 2021b).

The Project would minimize impacts on forest resources through its optimization of the existing Morrisville-Wishing Star Corridor. Tree clearing will generally be limited to areas where new or expanded right-of-way or danger tree clearing is required. Moreover, as noted in Sections 1 and 2, in developing route alternatives for the Project, ERM leveraged existing or planned developed lands to limit the amount of new clearing that would be required.

Forest Conservation Values

The Forest Conservation Values (FCV) model is a tool designed by the Virginia Department of Forestry (VDOF) to strategically identify the highest priority forestland for conservation in Virginia (VDCR 2023b, VDOF 2020). The intent is to maximize the efficiency of limited resources by focusing conservation efforts on the highest quality, most productive, and most vulnerable forestland statewide. The FCV model identifies five conservation values:

- 5: Outstanding
- 4: Very High
- 3: High
- 2: Moderate
- 1: Average

ERM reviewed FCV data to assess the value of forest vegetation along the Project segments and Gainesville and Pageland alternatives. Our analysis considered both the assigned value of FCV crossed as well as the current condition of the FCV, as some areas with assigned FCV values have been developed or cleared. Further discussion on FCV in relation to the individual Project segments and alternative routes is provided in Sections 4.2.4, 5.2.4, 6.2.4, 7.2.4, and 8.2.4.

3.2.4 CULTURAL RESOURCES

Dominion's consultant, Stantec Consulting Services, Inc. (Stantec), conducted a Stage 1 Pre-Application Analysis (the Stage 1) of potential impacts on known cultural resources along and near the Project's segments and route alternatives in accordance with the VDHR's *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (VDHR Guidelines) (VDHR 2008). For each route, the Stage 1 identified and assessed the potential for impacts on previously recorded resources, meeting criteria within the following study tiers as specified in the VDHR Guidelines:

- National Historic Landmarks (NHLs) within a 1.5-mile radius of the Impact Centerline;
- Properties listed on the National Register of Historic Places (NRHP), NHLs, battlefields, and historic landscapes within a 1.0-mile radius of the Impact Centerline;
- NRHP-eligible and NRHP-listed properties, NHLs, battlefields, and historic landscapes within a 0.5-mile radius of the Impact Centerline; and-mile radius of each
- All the above qualifying resources and archaeological sites within the right-of-way for each Project component.

Stantec obtained data on previously recorded cultural resources within each study tier from the VCRIS. Other data sources used by Stantec are listed in the Stage 1, which is included as Attachment 2.I.1 of the DEQ Supplement.

Many previously recorded aboveground cultural resources in the vicinity of the Project segment and the Gainesville and Pageland alternatives have not been assessed for NRHP eligibility and, therefore, are not included in the Stage 1, per the VDHR Guidelines. These resources should be considered potentially eligible for listing in the NRHP until they are assessed and a determination of their eligibility made by the VDHR. Additionally, there may be unreported historic and archaeological resources that could be affected by construction or operation of the Project. Any such resources would be addressed during an intensive cultural resources survey to be conducted after the Project is approved by the SCC in a subsequent phase of study to support permitting.

3.2.4.1 ARCHAEOLOGICAL SITES

Information on the condition of sites is based on previous investigations and air photo interpretation. A confident and complete assessment of each site's integrity, however, would

require field investigations. Accordingly, a survey of the Project footprint would be completed in a subsequent phase of study after the Project is approved by the SCC to support permitting. Further discussion on archaeological sites in relation to the Project is provided in Sections 4.3.1, 5.3.1, 6.3.1, 7.3.1, and 8.3.1.

3.2.4.2 ABOVEGROUND HISTORIC RESOURCES AND FINDINGS

Along with the records review, Stantec conducted field assessments of the architectural resources and historic districts meeting the criteria and within the applicable study tiers defined by the VDHR Guidelines. Stantec captured digital photographs of each of these resources with views toward the applicable segment of alternative route. Visual simulations were prepared using these photos to depict Project infrastructure as it would appear from each resource to assess potential visual effects (Attachment 2.I.1 of the DEQ Supplement). Each project segment reviewed in this study has the potential to affect historic architectural sites and districts. Further discussion on aboveground historic resources in relation to the Project is provided in Sections 4.3.2, 5.3.2, 6.3.2, 7.3.2, and 8.3.2.

3.2.4.3 EXISTING DATA COLLECTED UNDER SECTION 106 OR 110 OF THE NATIONAL HISTORIC PRESERVATION ACT

Some portions of the route alternatives were previously surveyed for cultural resources. Research indicates that 30 prior Phase I cultural resource surveys have been conducted within or adjacent to the Project individual segments or alternative routes. The previous surveys relevant to the Project are identified in Attachment 2.I.1 of the DEQ Supplement.

3.2.5 VISUAL RESOURCES

ERM conducted a visual impact assessment to characterize the existing scenic/landscape character of the study area and understand the potential impact of the Project on this character (Appendix C). The aesthetic or scenic character of a landscape refers to the overall visual qualities that give a landscape its distinct and recognizable identity. It generally captures the features (e.g., topography/terrain, vegetation, waterbodies, and human development), elements (forms, lines, colors, and textures), patterns and spatial relationships, and visual composition of the landscape. The visual impact assessment identifies important visible features and elements of the study area landscapes as the basis for determining how and to what degree the Project may affect visual resources.

The visual impact assessment was based on site reconnaissance and local outreach efforts, as well as the following activities (Appendix C provides a more detailed description of the visual impact assessment methodology):

- Review of regulatory setting—ERM reviewed federal, state, regional, and local plans or policies to identify relevant guidance related to scenic resources. These plans and policies typically outline goals and objectives, ordinances, protective measures, and/or highlight sensitive scenic resources that are crucial for understanding the existing visual resource context of a project.

- Delineate and describe landscape units—Landscape units are characterized by similar types of land cover, along with other corresponding visual traits. ERM delineated the units using various GIS data layers (e.g., physiographic provinces, land use / land cover, slope/topography, logical boundaries such as roads and rivers, VSRs), field reconnaissance, and review of photographs from the study area. Table 3.2-6 describes the five landscape units identified in the Project study area.
- Identify visually sensitive resources—VSRs are sites or areas where existing scenic qualities are susceptible to and could be impacted by a project. ERM identified VSRs through the review of recent (2024) digital aerial photography and other available mapping resources.
- Identify primary viewer groups—understanding how different viewer groups perceive visual resources is essential for evaluating a project’s potential visual impacts. Based primarily on land uses, ERM determined and described the potential user groups (i.e., groups of people, such as residents or tourists who experience views) within the study area and the sensitivity of these groups to visual changes in the landscape.
- Establish key observation points (KOPs) and create photographic simulations—KOPs document location-specific existing conditions and broader landscape characteristics within a landscape unit. For each KOP, ERM captured existing photographs to help describe existing conditions and to use for photographic simulations. The simulations display the anticipated changes to visual resources from the Project, and were used to evaluate visual resource impacts.

ERM used the results of these activities to evaluate potential visual impacts from the Project. This approach to visual resources is structured, relying on established techniques for describing existing landscape characteristics and identifying the potential changes or contrasts created by surface-disturbing activities and the introduction of new infrastructure. This approach includes, but is not limited to, the Bureau of Land Management’s Visual Resource Management system (BLM 1984), the U.S. Forest Service’s Scenery Management System (USFS 1995), and the Federal Highway Administration’s Visual Impact Assessment for Highway Projects (FHWA 2015).

The results of our analyses are presented in Sections 4.4, 5.4, 6.4, 7.4, and 8.4.

TABLE 3.2-6 LANDSCAPE UNITS

Landscape Unit	Description	Study Area Acres
Rural Agriculture and Residential	Expansive agricultural fields interspersed with patches of dense forest and low-density residential areas, with frequent, broad, panoramic views and sporadic residential and agricultural buildings	43,299
Rural Residential	Very low density, large-lot residential development with occasional panoramic views amid patches of dense forest; residential structures, lawns, and landscaping are common	7,178

Landscape Unit	Description	Study Area Acres
Suburban Residential	Dense single-family and multifamily residential development, interspersed with commercial and recreation areas; substantial alteration of natural topography; views generally constrained to the foreground by development, landscaping along roads, and sporadic forest	15,564
Industrial/Commercial	Concentrated areas of commercial and industrial development near Gainesville and Bristow, with generally flat topography, pockets of dense forest, maintained lawns, energy infrastructure, and the I-66 corridor	4,278
Conway Robinson State Forest and Manassas National Battlefield Park	Two protected areas (the state forest and battlefield), along with intervening pockets of low-density rural development; dense woods within the state forest and a combination of forest and open fields within the battlefield; views (especially within the battlefield) are generally focused inward	3,765

3.2.6 ENVIRONMENTAL JUSTICE

Environmental justice (EJ) requires the “just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability” and protects people from “disproportionate and adverse human health and environmental effects” including cumulative and systemic burdens (USEPA 2025). The Commonwealth of Virginia’s EJ guidelines are established in the Virginia Environmental Justice Act (VEJA) of 2021 (Va. Code §§ 2.2-234 through 2.2-235), which defines “Environmental Justice” and “Environmental Justice Community” as follows (Va. Code § 2.2-234):

- “Environmental Justice” means the fair treatment and meaningful involvement of every person, regardless of race, color, national origin, income, faith, or disability, regarding the development, implementation, or enforcement of any environmental law, regulation, or policy.
- “Fair treatment” means the equitable consideration of all people whereby no group of people bears a disproportionate share of any negative environmental consequence resulting from an industrial, governmental, or commercial operation, program, or policy.
- “Meaningful involvement” means the requirements that (i) affected and vulnerable community residents have access and opportunities to participate in the full cycle of the decision-making process about a proposed activity that will affect their environment or health and (ii) decision makers will seek out and consider such participation, allowing the views and perspectives of community residents to shape and influence the decision. “Environmental Justice Community” means any low-income community, population of color, or community of color.

Based on the VEJA guidelines, EJ communities are identified in this report using the criteria described below.

Racial/Ethnic Composition:

- The percent of “population of color” in the analysis area is greater than the Commonwealth average of 41 percent (i.e., “community of color”); or
- The percent of any racial or ethnic group that is not “white alone, non-Hispanic” in the population for the analysis area is greater than the Commonwealth average for that racial or ethnic group (i.e., “population of color”); or
- The percent of the population in the analysis area considered linguistically isolated is greater than the Commonwealth average of 3 percent.

Low-Income:

- The share of households making less than 200 percent of the Federal Poverty level and less than or equal to 80 percent of the median household income of the analysis area is greater than 30 percent (Va. Code § 2.2-234). The Virginia Department of Environmental Quality developed the VA EJScreen+ Map Tool, which includes a ‘low-income’ data layer designed to identify low-income communities at the Census Block Group (CBG) level. VA EJScreen+ is updated with the latest US Census Bureau data and was used to determine which areas qualify as low-income communities in this assessment.

ERM used the CBG as the primary geographic unit (i.e., the analysis area referred to in the criteria above) for this EJ analysis, because it is the smallest unit for which U.S. Census Bureau demographic data are available, providing information at a sub-county level. CBGs are a statistical division of census tracts. As such, CBGs are identified first according to the tract that contains them and then by their unique block group within that tract. ERM collected demographic data from the U.S. Census Bureau American Community Survey, 5-Year Estimates (2019–2023) (U.S. Census Bureau 2024d and 2023a). Demographic and socioeconomic data for CBGs in the study area for the counties crossed are depicted on Figure 3.2.5-1.

While the Commonwealth of Virginia is the reference population for this analysis, ERM also considered data for Fauquier, Prince William, and Loudoun Counties in the review to assess regional demographic variations. ERM compared Commonwealth-wide demographic data with individual CBGs to help identify the presence of potential EJ communities. For example, if the reported percentage of population of color within an individual CBG is greater than the percentage of population of color in Virginia as a whole (41 percent), then ERM identified a potential EJ community in that CBG.

To ensure that stakeholder concerns regarding the potential direct and indirect impacts of the Project are understood and considered in routing decisions, Dominion designed and implemented a comprehensive outreach program early in the Project’s development phase to identify and engage with all community stakeholders, regardless of EJ community status, including federally recognized tribes. The outreach program was designed in line with the VEJA and the Company’s EJ Policy to share Project materials through written and in-person methods (e.g., letters and open houses), to document comments provided by stakeholders, and to respond to feedback by seeking ways to mitigate or avoid identified impacts, including potential disproportionate impacts on vulnerable communities. As part of the outreach, the Company hosted community meetings in May and November 2025.



In assessing whether a community would bear a disproportionately adverse impact from the Project, ERM considered construction impacts, visual impacts, property devaluation, and health impacts related to electromagnetic fields (EMF).

Further discussion on EJ in relation to the Project is provided in Sections 4.5, 5.5, 6.5, 7.5 and 8.5.

3.2.6.1 CONSTRUCTION ACTIVITIES

Impacts associated with Project construction would be temporary, with active construction in a given area typically lasting less than a year (although the time from initial construction activity to final restoration may exceed a year due to periods of inactivity between construction phases). Construction activity and crews would be present at a particular location during daytime hours for a few to several days at a time, on multiple occasions throughout the construction period, between initial right-of-way clearing and final restoration.

Various regulations, industry standards, and best management practices (BMP) would guide construction and restoration of the right-of-way. The short-term impacts associated with construction could include equipment noise, dust, potential changes in traffic patterns, and general ground disturbance. All these impacts would be short-term and temporary.

Noise is generally defined as unwanted sound. The primary noise receptors in the study area would be residents along the Project.

During construction, temporary, localized noise from heavy equipment and increased vehicle traffic is expected to occur during daytime hours. Exceedances of daytime noise limits are not expected, and if they occur, the exceedances would be temporary.

During construction, Dominion would minimize ground-disturbing activities to the extent practicable. Following construction, the Company would remove construction-related equipment and debris from the right-of-way and restore the land within the right-of-way as closely as possible to preconstruction conditions. Dominion would maintain the right-of-way with herbaceous cover during operations.

3.2.6.2 VISUAL IMPACTS

Because the Project crosses CBGs with sensitive populations and/or potential EJ communities, KOPs used in the analysis of visual impacts are representative of views in potential EJ communities. As such, ERM utilized results from the visual impact analysis (Sections 4.4, 5.4, 6.4, 7.4, and 8.4) to determine the degree of visual change and overall impact rating of Project components on potential EJ communities.

3.2.6.3 PROPERTY VALUES

Affected communities and landowners often express concern that the presence of transmission lines in the viewshed of homes could adversely affect aesthetics, resulting in the reduction of property values and deterring potential buyers. Indirect impacts on property values caused by direct visual impacts from high-voltage transmission lines (i.e., lines carrying more than 69 kV) depend on proximity, visibility, size, and type of transmission structures; easement landscaping;

and surrounding topography. Based on a review of industry research published in peer-reviewed journals and trade journals, residential property values and sales prices are primarily affected by factors unrelated to the presence of a transmission line. Other factors have been shown through research to have greater influence on the value of residential property than the presence of a transmission line, such as location, type, and condition of improvements to the property; neighborhood; and local real estate market conditions (Jackson and Pitts 2010; Anderson et al. 2017). We note that with the exception of the Gainesville and Pageland alternatives, the Project utilizes the Company's existing Morrisville-Wishing Star Corridor, such that the vast majority of homes proximate to the Project are already near transmission infrastructure.

3.2.6.4 HEALTH IMPACTS

The conclusions of multidisciplinary scientific review panels assembled by national and international scientific agencies during the past three decades are the foundation of Dominion's opinion that no adverse health impacts are anticipated to result from the operation of the transmission infrastructure. Research on EMF and human health varies widely in approach. Some studies evaluate the impacts of high, short-term EMF exposures not typically found in people's day-to-day lives on biological responses, while others evaluate the impacts of common, lower EMF exposures found throughout communities. Studies also have evaluated the possibility of impacts of long-term exposure (e.g., cancer, neurodegenerative diseases, and reproductive impacts). Altogether, this research includes well over 100 epidemiologic studies of people in their natural environment, and many more laboratory studies of animals (in vivo) and isolated cells and tissues (in vitro). Standard scientific procedures, such as weight-of-evidence methods, were used by the expert panels assembled by agencies to identify, review, and summarize the results of this large and diverse research.

The reviews of EMF-related biological and health research have been conducted by numerous scientific and health agencies, including, for example, the European Health Risk Assessment Network on Electromagnetic Fields Exposure, the International Commission on Non-Ionizing Radiation Protection, the World Health Organization, the Institute of Electrical and Electronics Engineers International Committee on Electromagnetic Safety, the Scientific Committee on Emerging and Newly Identified Health Risks of the European Commission, and the Swedish Radiation Safety Authority (formerly the Swedish Radiation Protection Authority; WHO 2007; SCENIHR 2009, 2015; ICNIRP 2010; SSM 2015, 2016, 2018, 2019, 2020, 2021, 2022; ICES 2019). The general scientific consensus of the agencies that have reviewed this research, relying on generally accepted scientific methods, is that the evidence does not confirm that common sources of EMF in the environment, including transmission lines and other parts of the electric system, appliances, etc., are not a cause of any adverse health impacts. More information on Dominion's opinion can be found at <https://www.dominionenergy.com/projects-and-facilities/electric-projects/emf> (Dominion Energy 2024).

3.2.7 GEOLOGICAL RESOURCES

The study area is within the Piedmont geologic province, which lies between the mountainous Blue Ridge province to the west and the terraced slopes of the Coastal Plain province to the east. The

Piedmont is characterized by rolling topography, thick soils, and heavily weathered bedrock primarily caused by the region's humid climate. The geologic terranes of the province are relatively complex, with many of the rock units separated by faults and containing various igneous and metamorphic histories. Based on review of the Geologic Map of Virginia, the Project is within a Mesozoic basin situated between the Blue Ridge and Western Piedmont-Potomac Terranes (William and Mary Department of Geology 2024).

ERM reviewed publicly available Virginia Energy datasets (Virginia Energy 2024a, 2024b), USGS topographic quadrangles (USGS 2025b), and recent digital aerial photography (Google Earth, LLC 2025; VGIN Imagery 2025) to identify mineral resources in the study area. Further discussion on mineral resources in relation to the Project is provided in 4.6, 5.6, 6.6, 7.6, and 8.6. Our assessment for impacts on mine resources considered the potential of the Project to impact ongoing or future operations at active mines or for conflicts between mining and transmission line infrastructure.

4. SEGMENT 1 RESOURCES AND IMPACTS

4.1 LAND USE

4.1.1 PUBLIC LANDS

4.1.1.1 EXISTING CONDITIONS

Segment 1 crosses a Fauquier County School Board property containing Mary Walter Elementary School. The approximately 28-acre tract containing the campus is adjacent to and northeast of the Company's existing Morrisville Station and is crossed by the Morrisville-Wishing Star transmission corridor for about 0.2 mile, encompassing approximately 4.3 acres. The edge of the right-of-way passes about 150 feet north of outdoor play equipment, the nearest school facility to the corridor, and about 200 feet north of the nearest building. The school currently serves 397 students (VDOE, 2025; Fauquier County School Board 2025). The location of Mary Walker Elementary School is depicted on Figure 1.6-1.

4.1.1.2 IMPACT ASSESSMENT

Because the Project would be limited to the Company's existing Morrisville-Wishing Star Corridor where it crosses the school property, no new right-of-way would be required. The change in the configuration and number of structures within the existing right-of-way along Segment 1 would not significantly modify existing conditions or land uses within the corridor. The potential for direct and indirect impacts on school uses of the property is addressed in Section 4.1.9.

4.1.2 LAND USE AND LAND COVER

4.1.2.1 EXISTING CONDITIONS

The predominant land use and cover type along Segment 1, which almost entirely would be within the Company's existing right-of-way, consists of open space (Table 4.1-1 and Figure 4.1.2-1). Segment 1 also encompasses about 2.1 acres of forest in expanded right-of-way areas where the segment leaves Morrisville Station and enters Bristers Station. Segment 1 does not cross developed or agricultural lands.

TABLE 4.1-1 LAND USE/LAND COVER CROSSED BY SEGMENT 1 (ACRES)

Land Use/Land Cover ^a	Unit	Segment 1
Total right-of-way ^b	Acres	251.8
Agricultural	Acres	0.0
Forested	Acres	4.1
Developed	Acres	0.0
Open Space	Acres	247.7
Open Water	Acres	0.0

^a Based on local and statewide data sets and aerial photo interpretation by ERM. The values include both the existing corridor and expanded workspace along Segment 1.

^b The total may not match the sum of the addends due to rounding.

4.1.2.2 IMPACT ASSESSMENT

Segment 1 requires approximately 251.8 acres of right-of-way, nearly all of which is within the Company’s existing Morrisville-Wishing Star Corridor. There would be no impact on lands uses and cover types in the right-of-way which would remain a transmission line corridor. A total of about 2.1 acres of forest would be cleared in expanded right-of-way where the segment exits Morrisville Station and crosses Bristers Station. The primary impact of Segment 1 on land use and cover would be the conversion of this forest to open land (herbaceous cover) due to right-of-way maintenance during Project operations.

4.1.3 LAND USE PLANNING AND ZONING

4.1.3.1 EXISTING CONDITIONS

Table 4.1-2 identifies and describes zoning districts within 0.25 mile of Segment 1 Impact Centerline, each of which is crossed (Figure 3.2.1-1). Because Dominion would obtain a CPCN from the SCC, the Project would be exempt from zoning requirements. This section provides information on zoning to assist in a general analysis of land use compatibility of the Project. Zoning is not further analyzed in the report.

Segment 1 does not cross zoning overlay districts.

TABLE 4.1-2 ZONING DISTRICTS WITHIN 0.25 MILE OF SEGMENT 1 IMPACT CENTERLINE

Zoning District	Description and Allowed Uses
Fauquier County	
Agriculture (RA) District	Designed to protect and preserve agricultural uses and to mitigate land use conflicts between agricultural uses and appropriately limited residential development. Contains areas where agriculture and forestry are the predominant uses or where significant agricultural lands or large lot farmette-type residential development exists.
Residential (R-1) District	Primarily single family residential communities and planned residential and non-residential uses consistent with the size, density, and character of the existing area. R-1 is a general purposed District to be used in settlements and other areas of similar character.
Rural Residential (RR-2) District	Low density residential development in areas where agriculture and forestal activity is not the predominant use.
Industrial Park (I-1) District	Designed for industrial uses occurring both within structures and outdoors, as well as public access type industrial uses and limited office and business service uses.

4.1.3.2 IMPACT ASSESSMENT

Table 4.1-3 lists the area of each zoning district within the Segment 1 footprint. About 82 percent is within the Agriculture (RA) District followed by 14 percent within the Rural Residential (R-2) District, 3 percent within the Residential (R-1) District, and 1 percent within the Industrial Park (I-



1) District. As discussed in further detail below, there are relatively few homes along and near Segment 1, which is consistent with the zoning.

TABLE 4.1-3 ZONING DISTRICTS CROSSED BY SEGMENT 1

Zoning District	Unit	Segment 1	
		Existing ROW	Expanded ROW
Fauquier County			
Agriculture (RA)	Acres	201.7	4.2
Residential (R-1)	Acres	6.7	0.0
Rural Residential (R-2)	Acres	35.9	0.0
Industrial Park (I-1)	Acres	3.3	<0.1

4.1.4 RESIDENTIAL AREAS AND RESIDENCES

4.1.4.1 EXISTING CONDITIONS

Table 4.1-4 lists the number of dwellings within the tiers described in Section 3.2.1.1 for Segment 1, while Figure 4.1.4-1 depicts the locations of homes and neighborhoods along the Project segments. All residences within 500 feet of the Segment 1 Impact Centerline are single-family dwellings on agriculturally zoned properties or within residentially zoned subdivisions. The residential parcels in Fauquier County average 27 acres, reflective of the expansive, rural nature of the area (Fauquier County 2025a). Notably, near Morrisville Station, nine dwellings along Coventry Road and its intersecting cross-streets are within 500 feet of the Impact Centerline, of which three dwellings fall within 60 feet of the right-of-way, and one, at 4400 Coventry Road, is within the existing corridor. At the northeast end of Segment 1, along Yeats Drive, six dwellings are within 250 feet of the right-of-way.

TABLE 4.1-4 DWELLINGS NEAR SEGMENT 1 IMPACT CENTERLINE

Route Alternative	Dwellings within 100 Feet of Impact Centerline	Dwellings within 250 Feet of Impact Centerline	Dwellings within 500 Feet of Impact Centerline
Segment 1	1	6	27

4.1.4.2 PLANNED RESIDENTIAL AREAS

There are no known planned residential areas or residences within 500 feet of Segment 1 Impact Centerline.

4.1.4.3 IMPACT ASSESSMENT

Residents along and near Segment 1 could be impacted by construction noise, dust, or traffic, but these impacts would be short term and temporary, limited to the period of construction. Because the Project almost entirely would be limited to the Company’s existing corridor, no new right-of-way near homes would be needed. The change in the configuration, number, and heights of structures would alter existing visual conditions from homes and could expand the number of

homes with views to transmission structures due to the increase in heights, but the impact would be consistent with existing conditions. The corridor will continue to operate as a transmission right-of-way during Project operations. Visual impacts are further discussed in Section 4.4.

As noted above, there is one residence within the Company's existing right-of-way along Segment 1. The Company has determined that blowout requirements for the new or rebuilt transmission lines can be maintained for the segment such that removal of this home is not required.

4.1.5 COMMERCIAL/INDUSTRIAL AREAS AND BUILDINGS

4.1.5.1 EXISTING CONDITIONS AND IMPACT ASSESSMENT

There are no commercial or industrial buildings or areas within 500 feet of Segment 1 Impact Centerline. Therefore, no such buildings or areas would be impacted by this component of the Project.

4.1.6 PLANNED DEVELOPMENTS

4.1.6.1 EXISTING CONDITIONS

ERM identified one new development within 0.25 mile of Segment 1 Impact Centerline, the Anderson Branch Station, a substation on Company-owned land adjacent to the existing Bristers Station (Figure 4.1.6-1). The development is crossed by about 500 feet of Segment 1. The Company submitted a site plan for the substation on August 8, 2023, to Fauquier County (SITP-23-020600) which approved the plan in 2024. The project began construction in the summer of 2025 and is anticipated to be in-service in 2026.

4.1.6.2 IMPACT ASSESSMENT

Anderson Branch Station

The new 230 kV Line #2464 passes along the north side of the existing Bristers Station, entering the Anderson Branch Station from the south, with Segment 2A exiting the station to the north where Line #2464 terminates. Segment 1 is within existing Company right-of-way or Company property rights where it crosses the Bristers/Anderson Branch Station parcel, encompassing approximately 6.8 acres. A proposed expansion of the right-of-way in this area would add an additional 1.4 acres of right-of-way, all within the same parcel. The 500 kV lines in Segment 1 and Segment 2A would not cross the Anderson Branch Station; rather they would bypass along the western side of the station within the existing corridor. The Project was designed by the Company to be compatible with the new Anderson Branch Station, such that there would be no impact on the development.

4.1.7 CONSERVATION EASEMENTS AND LANDS

4.1.7.1 EXISTING CONDITIONS

ERM identified 14 conservation easements within 0.25 mile of Segment 1 Impact Centerline, ten of which are crossed, using sources identified in Section 1.8. These include Fauquier County Purchase of Development Rights (PDR) and Open Space easements and Agricultural and Forestal

Districts (AFD). Information on the 14 easements is provided in Table 4.1-5, while the locations of the easements are depicted on Figure 4.1.7-1

Purchase of Development Rights

The PDR program aims to preserve rural and undeveloped lands by allowing landowners to sell future development rights to the County (Fauquier County Department of Agricultural Development 2025). The County purchases development rights from the landowner at a rate of \$60,000 per right, permanently protecting the land from non-agricultural development regardless of future ownership changes. The owner maintains ownership of the land and can continue their farming operations.

ERM identified eight parcels enrolled in the PDR program within 0.25 mile of Segment 1 Impact Centerline, six of which are also within AFDs (described below). Seven of the parcels are crossed by the Company’s existing Morrisville-Wishing Star Corridor.

Open Space Easement

Fauquier County Open Space Easements (Fauquier County Planning Department 2025) are agreements between property owners and the County in which landowners commit to limiting development and preserving their property as open space or agricultural land. The easements are formalized through a Deed of Gift of Conservation Easement, which details the development limitations applicable to the enrolled parcel.

ERM identified four parcels enrolled as open space easements within 0.25 mile of Segment 1 Impact Centerline, three of which are crossed by Segment 1.

Agricultural and Forestal Districts

Agricultural and Forestal Districts are temporary agreements (up to 10 years) between landowners and the County prohibiting development within enrolled parcels for purposes other than agriculture for the duration of the enrollment (Fauquier County Planning Department 2025). This commitment ensures the land will not be developed for commercial and industrial land uses. To date, there are 13 distinct AFDs preserving over 75,000 acres of land in the County.

Of the 14 conservation parcels identified within 0.25 mile of Segment 1 Impact Centerline, eight are AFDs, of which six are also enrolled in the PDR program. Six of the eight parcels are crossed by the Company’s existing transmission corridor.

TABLE 4.1-5 EASEMENTS WITHIN 0.25 MILE OF SEGMENT 1 IMPACT CENTERLINE

Tax # Identifier	Easement Type	Management	Description	Approximate Distance and Direction to the Segment	Right-of-Way Acreage Crossed
7817-80-4329-000	PDR Easement	Fauquier County	Partially forested area with residence; 151-acre parcel with 129 acres enrolled	Crossed by Segment 1	11.1 acres existing right-of-way



Tax # Identifier	Easement Type	Management	Description	Approximate Distance and Direction to the Segment	Right-of-Way Acreage Crossed
7827-04-3320-000	Open Space Easement	Fauquier County	Partially forested area with a residence; 128 acres enrolled	About 125 feet north of Segment 1	NA
7827-30-7849-000	Open Space Easement	Fauquier County	Forested area; 27 acres enrolled	Crossed by Segment 1	<0.1 acres existing right-of-way
7827-32-5352-000	Open Space Easement	Fauquier County	Partially forested area with a residence; 45 acres enrolled	Crossed by Segment 1	6.7 acres existing right-of-way
7837-23-8602-000	AFD Easement	Fauquier County	Mostly forested area; 53 acres enrolled	About 530 feet south of Segment 1	NA
7837-05-9897-000	AFD and PDR Easement	Fauquier County	Mostly cleared area; 26 acres enrolled	Crossed by Segment 1	1.3 acre existing right-of-way
7837-26-0406-000	AFD and PDR Easement	Fauquier County	Mostly cleared but some forested area and potential wetlands; 60 acres enrolled	Crossed by Segment 1	7.3 acres existing right-of-way
7837-28-9280-000	AFD and PDR Easement	Fauquier County	About half cleared and half forested; 110 acres enrolled	Crossed by Segment 1	12.9 acres existing right-of-way
7837-56-1637-000	AFD and PDR Easement	Fauquier County	About half cleared and half forested, potential agricultural operations, 177 acres	Crossed by Segment 1	1.0 acre existing right-of-way
7837-29-9795-000	AFD and PDR Easement	Fauquier County	About half cleared and half forested, 110 acres	Crossed by Segment 1	0.2 acres existing right-of-way
7837-59-6459-000	AFD Easement	Fauquier Easement	Mostly cleared with some forested area, 55 acres	Crossed by Segment 1	4.5 acres existing right-of-way
7837-09-9135-000	AFD and PDR Easement	Fauquier County	Almost entirely forested, 110 acres	About 1000 feet west of Segment 1	NA
7838-94-1339-000	PDR Easement	Fauquier County	Mostly forested area with some clearance, 233 acres	Crossed by Segment 1	9.6 acres existing right-of-way
7848-28-9212-000	Open Space Easement	Fauquier County	Mostly cleared with some forested area, potential wetlands, 28 acres	About 900 feet east of Segment 1	NA

PDR = Purchase of Development Rights

AFD = Agricultural and Forestal District



4.1.7.2 IMPACT ASSESSMENT

While Segment 1 crosses ten parcels subject to PDR, Open Space, and/or AFD easements, Project activities at these crossings would be limited to the Company's existing transmission corridor. No additional right-of-way would be required within the easements, within which Dominion has the right to modify existing or install new transmission lines. No additional clearing would be required within the easements, (although normal vegetation maintenance could occur). The Project would not impact agriculture within the easements, as most farming activities are compatible with an electric transmission right-of-way (demonstrated by the Company's ongoing operation of the existing lines across agricultural lands). Areas currently used for agricultural production within the right-of-way would continue to be used as such during Project operations (unless the landowner withdraws them for reasons unrelated to the Project). There would be no impact on the easements which are near to, but not crossed by, the Project.

4.1.8 RECREATIONAL RESOURCES

4.1.8.1 EXISTING CONDITIONS

ERM identified two recreational resources within 0.25 mile of Segment 1 Impact Centerline, both of which are crossed (Table 4.1-6 and Figure 4.1.8-1).

Virginia Birding and Wildlife Trail—Battle for Virginia Loop

The Virginia Bird and Wildlife Trail consists of a network of roads and waterbodies linking various wildlife viewing sites in Virginia (VDWR 2021; VDWR 2025; VDWR 2026c). One component of the network, the Battle for Virginia Loop, follows U.S. Highway 17 (Marsh Road) through the study area. The loop connects 10 sites (C.F. Phelps Wildlife Management Area, Curtis Memorial Park, Motts Run Reservoir Recreation Area, Chancellorsville Battlefield, Alum Spring Park, Fredericksburg Battlefield, Duff McDuff Green Memorial Park, Loriella Park, Ni River Recreation Area, and Spotsylvania Courthouse Battlefield), none of which lie in the study area. Where the Company's existing right-of-way crosses Marsh Road, surrounding lands consist of a mix of forest and developed land, including residential areas and the Mary Walker Elementary School.

State Scenic Byway—State Route 806

Virginia's scenic byway program recognizes roads with high aesthetic or cultural values connecting sites of natural, historic, or recreational significance (VDOT 2025). Within the study area, State Route 806 (Elk Run Road), a two-lane connector road from Morrisville to Catlett through a rural agricultural area, is designated as a byway. The Company's existing Morrisville-Wishing Star Corridor crosses State Route 806 in an agricultural area with fields on either side of the road. See also the discussion of the scenic qualities of the byway in Section 4.4.

TABLE 4.1-6 RECREATIONAL RESOURCES WITHIN 0.25 MILE OF SEGMENT 1 IMPACT CENTERLINE

Recreational Resource	Recreation Type	Description	Approximate Distance to Project Facilities
Battle for Virginia Loop	Virginia Birding & Wildlife Trail	Highway (U.S. Route 17) connecting wildlife viewing areas outside the study area	Crossed by Segment 1
State Route 806	Virginia Scenic Byway	Two-lane two-way road (State Route 806 / Elk Run Road) from Route 17 to Route 28	Crossed by Segment 1

VDWR = Virginia Department of Wildlife Resources; VDOT = Virginia Department of Transportation.

4.1.8.2 IMPACT ASSESSMENT

While Segment 1 crosses both a wildlife and birding trail and scenic byway, Project activities at each crossing would be limited to the Company’s existing transmission corridor as no additional right-of-way would be required. Impacts related to demolition and construction, such as dust, noise, and traffic, would be temporary. Other than changing the number and configuration of transmission structures in the existing corridor, there would be no substantive change in existing land use conditions at either crossing.

Specific to the Battle for Virginia Loop, the crossing occurs where the trail occupies U.S. Route 17, a divided highway, with no associated stops for wildlife viewing. The only recreational use of the trail is automobile traffic between designated sites located outside the study area. The Project would not impact this use of U.S. Route 17.

The scenic byway follows Elk Run Road through a rural agricultural area. The Project would not impact vehicular traffic along Elk Run Road or significantly modify the viewshed from the resource, which contains existing transmission infrastructure. Therefore, the Project would have no impact on recreational uses of the resource. See also the discussion of visual impacts in Section 4.1.8.

4.1.9 CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP

4.1.9.1 EXISTING CONDITIONS

ERM identified five resources—two cemeteries, one school, and two places of worship—within 0.25 mile of Segment 1 Impact Centerline. Additional review of the resources within 500 feet of the right-of-way edge are identified and described in Table 4.1-7 and depicted on Figure 4.1.9-1.

TABLE 4.1-7 CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP WITHIN 0.25 MILE OF SEGMENT 1 IMPACT CENTERLINE

Name	Description	Approximate Distance and Direction from the Route Right-of-Way ^a
Soul Purpose Community Church	The church occupies an approximately 3.0-acre parcel west of the intersection of Shipps Store and Old Shipps Store roads. The parcel is mostly cleared with forest along its northern, western, and southern boundaries, and Shipps Store Road to the east. The property contains the church building, parking facilities, and lawn space.	About 930 feet north/northwest of Segment 1 right-of-way and the Morrisville Station expansion
Mary Walker Elementary School	This public elementary school occupies an approximately 28-acre parcel on the south side of Morrisville Road at its intersection with Marsh Road. Most of the parcel is cleared or developed with forest along the western and northwestern boundaries. The property contains the school building, parking lot, playground areas, and athletic fields. The Company's existing Morrisville-Wishing Star Corridor crosses the parcel along its western and northwestern boundaries. Surrounding lands are forested to the northwest and south and residential to the east.	Crossed by Segment 1 for about 980 feet
Morrisville Methodist Church and Cemetery	This resource occupies an approximately 3.9-acre parcel south of Marsh Road and north of Morrisville Road. The church building and an associated parking lot encompass about 0.5 acre, and the remainder of the parcel is cleared, including a 1.0-acre area just north of the church building used as the burial ground. There are at least 281 burials ranging in date from 1834 to 2025 in the cemetery (findagrave.com, 2025).	About 0.25 mile south of the Segment 1 right-of-way
Unnamed cemetery	Identified on a USGS topographic map and in county parcel data, the cemetery occupies a tract of county-owned land encompassing less than 0.1 acre as an inholding within a larger approximately 8.3-acre privately-owned parcel at the intersection of Marsh and Coventry roads. Review of aerial photography indicates the cemetery is fenced and maintained, situated on the edge of an open field with herbaceous cover and adjacent forest. There is no cemetery indicated at this location on findagrave.com (2025). An aerial photo from 2017 taken in leaf-off conditions suggests that five or more people may be interred at the site.	About 440 feet southeast of Segment 1 right-of-way
Unnamed cemetery	Identified on a USGS topographic map, the resource is a burial ground encompassing less than 0.1 acre within a larger, approximately 230-acre parcel. The cemetery is within a forested area in an otherwise open (herbaceous) field. It is unclear if the cemetery is maintained. There is no record of a cemetery at this location on findagrave.com (2025).	About 0.2 mile south of the Segment 1 right-of-way

4.1.9.2 IMPACT ASSESSMENT

Of the five resources described in Table 4.1.7, two—Mary Walker Elementary School and an unnamed cemetery—are within 500 feet of the edge of right-of-way for Segment 1. There would be no direct impact on the three resources greater than 500 feet from the segment, and any indirect impacts, such as construction noise, dust, and traffic, would be short term and temporary. The Project would not impact land uses at these resources.

Similarly, there would be no direct impact on the unnamed cemetery at the intersection of Marsh and Coventry roads. This resource is 440 feet from the existing right-of-way with the intervening land largely consisting of forest but also including a road and residential property. These barriers most likely block or obscure views towards the existing right-of-way. The change in the configuration and number of structures within the existing right-of-way due to the Project would not significantly modify existing conditions in the vicinity of the cemetery. Construction impacts such as dust, noise, and traffic, would be temporary and short term.

Mary Walker Elementary School is crossed by the Company's existing Morrisville-Wishing Star Corridor. The change in the configuration and number of structures within the existing right-of-way along the Segment 1 would not significantly modify existing conditions. The Project would not impact any developed school facilities or require additional right-of-way within the property. Construction impacts from dust, noise, and traffic are possible depending on season, but these would be short term and temporary. Dominion would coordinate with the school ahead of construction to minimize temporary impacts on outdoor or special activities.

4.1.10 TRANSPORTATION INFRASTRUCTURE

4.1.10.1 EXISTING TRANSPORTATION INFRASTRUCTURE

The road network in the study area includes a variety of functional classifications identified by VDOT's Six-Year Improvement Program (VDOT 2022) and the Fauquier Transportation Plan (Fauquier County 2019) (Figure 4.1.10-1). The functional classifications identify the purposes and intended characteristics of roads and the right-of-way necessary to accommodate traffic volumes and trip types. Of the 11 roads along Segment 1, Bristersburg and Midland Roads are identified as collectors, Marsh Road is a principal arterial, and the other roads are classified as local roads.

4.1.10.2 PLANNED TRANSPORTATION PROJECTS

ERM identified one road project within 0.25 mile of Segment 1 Impact Centerline. The Bristersburg Road Project would improve safety and operational capacity of Bristersburg Road from Aquia Road to Courtney School Road (Fauquier County 2023). This road project is a response to recommendations in the Fauquier County Transportation Plan but is not listed as a "current" mobility project, and no construction progress is specified.

4.1.10.3 IMPACT ASSESSMENT

There are 11 roads crossed along Segment 1, including two collector, one arterial, and eight local roads (Table 4.1-8). The Project would be confined to the Company's existing Morrisville-Wishing Star Corridor at each crossing. The only permanent change would be in the number and configuration of transmission structures within the corridor, but no structures would be placed

within existing or planned road rights-of-way. Ten of the 11 crossings are perpendicular, which is favored by VDOT and the Company, with one crossing at an angle, but as noted, the majority of Segment 1 is almost entirely within the Company's existing right-of-way, including at these crossing locations.

Project construction would cause noise, dust, and traffic at road crossings and roads near the segment, but these impacts would be short term and temporary. Temporary road closures could also be required when needed to move material and equipment across roads. Dominion would coordinate with the County and VDOT in cases where construction activities require temporary closures or detours to mitigate impacts.

Visual impacts at road crossings are addressed in Section 4.4

TABLE 4.1-8 ROADS CROSSED BY PROJECT SEGMENT 1

Road Name	Lanes at Crossing	Functional Classification	Crossing Type
Morrisville Road	2	Local	Perpendicular
Marsh Road	2	Other Principal Arterial	Perpendicular
Lake Coventry Drive	2	Local	Perpendicular
Summersweet Lane	2	Local	Perpendicular
Hogue Lane	2	Local	Perpendicular
Coventry Road	2	Local	Perpendicular
Elk Run Road	2	Local	Perpendicular
Elk Church Road	2	Local	Perpendicular
Midland Road	2	Minor Collector	Perpendicular
Bristersburg Road	2	Major Collector	Perpendicular
Mill Creek Lane	2	Local	Angled

I = Interstate highway; Rt. = Virginia state route; US = U.S. Route

4.1.11 AIRPORTS AND HELIPORTS

4.1.11.1 EXISTING CONDITIONS

Based on review of FAA resources, two public and 11 private airports or heliports, as depicted on Figure 3.2.1-2, are within 10 nm of Segment 1 (Table 4.1-9).

4.1.11.2 IMPACT ASSESSMENT

Public Airports

Based on ERM's airport analysis, the structures for Segment 1 are not expected to overlap with or exceed any portion of the 14 CFR Part 77.19-defined imaginary surfaces, or 14 CFR Part 77.9-defined notification thresholds of Warrenton/Fauquier Airport or Culpeper Regional Airport. In addition, no structures would exceed 14 CFR Part 77.17 obstruction standards.

The OE/AAA prescreening review indicates that structures flagged for notification span from a cluster west of Elk Run Church Road (structure numbers 569/141, 5008/20, and 545/141), northeast along the segment to a cluster just west of Town Run and north of Midland Road (structure numbers 569/128, 5008/35 and 545/128). No other structures along Segment 1 were flagged for FAA notification in the pre-screening tool.

TABLE 4.1-9 AIRPORTS AND HELIPORTS LOCATED WITHIN 10 NAUTICAL MILES OF SEGMENT 1

Airport/Heliport Name	FAA ID	Distance and Direction ^a	Runways and Approach Classifications ^b	14 CFR Part 77 Applicability ^c	Anticipated Project Impact Determination ^d
Public Use Facilities Subject to 14 CFR Part 77					
Warrenton/ Fauquier Airport	HWY	4.8 nm N	15[D] / 33[C]	Applicable	No impact, Notification anticipated based on FAA OE/AAA Prescreening
Culpeper Regional Airport	CJR	7.3 nm W	04[C] / 28[C]	Applicable	No impact, No 14 CFR Part 77 surface overlap
Private Use Facilities					
Rambo Airfield Airport	0VA0	1.0 nm N	13[A(V)] / 31[A(V)]	NA, No IAP	No Impact
Maples Field Airport	VG57	2.6 nm N	04[A(V)] / 22[A(V)]	NA, No IAP	No Impact
Rhynalds Ranch Airport	29VA	2.2 nm NW	10/28	NA, No IAP	No Impact
Flying Circus Aerodrome Airport	3VA3	2.8 nm N	02/2016/34	NA, No IAP	No Impact
Walnut Hill Airport	58VA	3.0 nm NW	18 / 36	NA, No IAP	No Impact
Rular Airport	VG07	6.1 nm W	14[A(V)] / 32[A(V)]	NA, No IAP	No Impact
Valley View Airport	8VA9	8.0 nm N	02[A(V)] / 20[A(V)]	NA, No IAP	No Impact
Horse Feathers Airport	53VA	8.2 nm N	18/36	NA, No IAP	No Impact
Aviacres Airport	3VA2	8.2 nm NW	06/24	NA, No IAP	No Impact
Skyview Airport	51VA	9.3 nm N	09/29	NA, No IAP	No Impact
Lost Griz Aerodrome Airport	7VG0	9.9 nm NW	04[A(V)] / 22[A(V)] 15[A(V)] / 33[A(V)]	NA, No IAP	No Impact

FAA = Federal Aviation Administration; NA = not applicable; OE/AAA = Obstruction Evaluation/ Airport Airspace Analysis; IAP = FAA Approved Instrument Approach Procedure

^a Distance (nm) measurements and approximate direction (cardinal directions; N, NE, E, SE, S, SW, W, NW) were calculated via standard ArcGIS Geoprocessing tools (Near Analysis), utilizing route centerlines and established airport reference points retrieved from the FAA ADIP. 'Nearest project facility' may refer to any point along a route centerline that is geographically nearest to the Established Airport Reference Point. Runways and airport property boundaries may be closer to a project component than calculated and presented in the above table.



- ^b Runway identification numbers and approach classifications were obtained via the FAA ADIP: <https://adip.faa.gov/agis/public/#/public>; Refer to Section 3.2.1.1.1 and Table 3.2-3 for Approach Classification definitions.
- ^c Public airports and private facilities with at least one FAA approved IAP are subject to 14 CFR Part 77.
- ^d Impact determination based on the company's review of 14 CFR Part 77 regulations and airport imaginary surface modeling using standard GIS tools. Refer to impact assessment section for additional information.

Dominion would use cranes to install the Project's transmission structures. The typical temporary crane height needed for construction is approximately 35 feet above the structure height. The 500 kV structures along Segment 1 would range in height from 1152 to 187 feet above ground surface, with an average height of approximately 171 feet, based on preliminary conceptual design, including foundation reveal, and subject to change based on final engineering and design. The 230 kV structures are typically shorter than 500 kV structures. As such, the average tower with a temporary crane would exceed 200 feet above ground surface. Any temporary structure that exceeds 200 feet above ground surface requires notification to the FAA under 14 CFR Part 77.9 and could be considered a temporary impact to air navigation. As crane usage is temporary in nature and would be utilized in discrete locations during phased construction, however, Dominion anticipates that the FAA would likely issue an "Exceeds But Okay" determination, as defined in FAA Order JO 7400.2R.7-1-3.b (FAA, n.d.-c), indicating that a temporary structure exceeds obstruction standards but does not result in a substantial adverse effect.

None of the final structures along Segment 1 are anticipated to cause impacts to air navigation, though Dominion plans to submit notification to the FAA prior to construction for all temporary and permanent structures, where required. Dominion would utilize FAA Form 7460-1—Notice of Proposed Construction or Alteration via the OE/AAA online portal to submit the notification, which would be completed after the SCC has approved the Project and at least 45 days before the start of construction or the date an application for a construction permit is filed, whichever is earliest.

Private Airports

The FAA does not regulate private airports and heliports without at least one FAA approved Instrument Approach Procedure (IAP) under 14 CFR Part 77; however, the Company does review the locations of private facilities near proposed transmission line structures to ensure potential safety hazards to private air navigation are mitigated. Based on ERM's review of private facilities within 10 nm of Segment 1, no impacts to private air navigation are anticipated due to distance from the nearest facility. As such, no additional review of private facilities near Segment 1 is included in this report.

4.2 NATURAL RESOURCES

4.2.1 SURFACE WATERS

4.2.1.1 WATERSHEDS

Segment 1 is split into two HUC 4-digit watersheds: the Lower Chesapeake (0208) and the Potomac (0207) HUC 4-digit watersheds (Figure 4.2.1-1). The watersheds divide along Ensor Shop Road and Midland Road, which bisect the Segment 1 study area from northwest to southeast.

The southwestern portion of Segment 1 within the Lower Chesapeake watershed is further split into the Rapidan-Upper Rappahannock HUC 8-digit (02080103) and the Marsh Run-Rappahannock River HUC 10-digit (0208010306) watersheds (from Morrisville Station to Midland Road). Waterbodies within this section include Harpers Run, Deep Run, Sumerduck Run, Rock Run, Pine

Branch, Mire Branch, and their associated tributaries. Surface waters generally flow south into the Rappahannock River.

The northeastern portion of Segment 1 within the Potomac watershed is further split into the Middle Potomac-Anacostia-Occoquan HUC 8-digit (02070010) and the Cedar Run HUC 10-digit (0207001006) watersheds (from Midland Road to Bristers Station). Waterbodies within this section include Town Run, Anderson Branch, Negro Run, Furrs Run, and associated tributaries. Surface waters generally flow north into Cedar Run.

4.2.1.2 Wetlands

Existing Conditions

The majority of Segment 1 is almost entirely within the Company's existing Morrisville-Wishing Star Corridor, bordered on both sides primarily by forest but in places by agricultural or residential land. Most of the existing right-of-way is cleared of trees, except for small amounts along its edges between Elk Run Road and Bristers Station. The segment requires less than 0.1 acre of expanded right-of-way adjacent to the Morrisville Station, but no aquatic resources were identified in this area.

Table 4.2-1 provides the areas in acres along Segment 1 assigned high, medium-high, or medium probabilities of containing wetlands (see the Wetland and Waterbody Desktop Study in Attachment 2.D.1 of the DEQ Supplement). The segment encompasses approximately 44.1 acres of wetlands and waterbodies, most of which are PEM wetlands associated with Harpers Run, Deep Run, Pine Branch, Town Run, Anderson Branch, and other associated perennial and intermittent tributaries. Wetlands within the Cedar Run watershed in the northeast portion of Segment 1 generally flow north into Town Run and its associated tributaries, while wetlands within the Marsh Run-Rappahannock River watershed in the southwestern portion of Segment 1 generally flow south into Deep Run and tributaries, and northwest into Harpers Run and its tributaries (Figure 4.2.1-1).

Maps depicting the identified aquatic resources and their probabilities of occurrence are provided in Attachment 2.D.1 of the DEQ Supplement. Impacts on waterbodies (riverine and PUB features) are described in Section 4.2.1.3.

TABLE 4.2-1 ACREAGE OF HIGH, MEDIUM-HIGH, AND MEDIUM PROBABILITY WETLANDS AND WATERBODIES WITHIN THE SEGMENT 1 FOOTPRINT

Surface Waters	Segment 1 acres ^a
Total	39.9
Palustrine Forested	2.8
Palustrine Scrub-shrub	0.1
Palustrine Emergent	39.9
Palustrine Unconsolidated Bottom	0.1
Riverine	1.2

^a Values have been rounded to the tenths-place; as a result, the total may not reflect the sum of the addends.

Impact Assessment

As noted above, Segment 1 almost entirely is within existing, previously cleared and maintained, Company right-of-way, thus avoiding new clearing impacts to PFO or PSS wetlands. About 2.8 acres of PFO, at the edges of the existing corridor, would be cleared and converted to PEM wetlands. Within PEM wetlands, temporary impacts on surface vegetation would result from vehicle and equipment traffic. Permanent fill would be placed where new transmission structures are installed in wetlands. Wetland impacts and mitigation measures are discussed in Section 3.2.2.

4.2.1.3 WATERBODIES

Existing Conditions

Table 4.2-2 lists the number of and type of waterbody crossings along Segment 1. Based on the Wetland and Waterbody Desktop Study methodology (Attachment 2.D.1 of the DEQ Supplement), the segment encompasses approximately 1.2 acres of riverine features and 0.1 acre of PUB open waterbody features while crossing 30 waterbodies (of which 23 are NHD-mapped). Attachment 2.D.1 of the DEQ Supplement depicts waterbody crossing locations for the Project.

Segment 1 crosses the following named waterbodies: Deep Run, Pine Branch, Mire Branch, Town Run (three crossings), and Anderson Branch, as well as associated unnamed tributaries.

TABLE 4.2-2 WATERBODIES CROSSED BY PROJECT ROUTE ALTERNATIVES

Waterbodies Crossed	Segment 1 ^a count
Total	30
NHD-mapped perennial streams/rivers	7
NHD-mapped intermittent streams/rivers	16
NHD-mapped perennial lakes/ponds	0
Non-NHD-mapped waterbodies ^b	7

Source: USGS 2025a

NHD = National Hydrography Dataset

^a Based on recent (2025) aerial imagery, one NHD-mapped perennial stream was identified as a PEM wetland, and one NHD-mapped intermittent stream is no longer present.

^b Identified during desktop analysis using recent (2025) aerial imagery (VGIN 2025; Prince William County 2025).

Impact Assessment

As noted above, Segment 1 is mostly within the Company’s existing Morrisville-Wishing Star Corridor, the majority of which is cleared of trees. Riparian buffer/PFO wetlands would be cleared around a portion of Mire Branch, Pine Branch, and associated tributary features, where trees are



present along the edges of the existing corridor. See the discussion of waterbody impacts in Section 3.2.2.1 for additional details.

4.2.2 NATURAL HERITAGE RESOURCES

4.2.2.1 CONSERVATION SITES

Existing Conditions

VDCR's review of the Project did not identify CSs within the study area near Segment 1; therefore, this component of the Project would have no impact on such resources.

4.2.2.2 STREAM CONSERVATION SITES

Existing Conditions

VDCR identified one SCS crossed by Segment 1—the Town Run at Rt. 616 SCS, described below. Figure 4.2.2-1 depicts the location of this site.

Town Run at Rt. 616 Stream Conservation Site

The Town Run at Rt. 616 SCS encompasses 643 acres of forested and agricultural land along Town Run and its tributaries with a biodiversity rating of B4, indicating a site of moderate significance. Portions of the SCS have been cleared and function as agricultural land, while the forested riparian lands along Town Run and tributaries are partially fragmented by existing transmission lines and roads.

The NHR associated with the SCS is an Aquatic Natural Community (Northern Piedmont [NP]-Middle Potomac-Anacostia-Occoquan First Order Stream), designated in Virginia Commonwealth University's (VCU's) Interactive Stream Assessment Resource (INSTAR) database (VDCR 2024b, 2025b). This database represents over 2,000 statewide aquatic collections of fish and macroinvertebrates, and allows for analysis of fish and macroinvertebrate assemblages, instream habitat, and stream health assessments (VDCR 2024b, 2025b). VCU classified streams within the SCS as Grade B (indicating relative regional significance), with a "Healthy" stream designation per the INSTAR Virtual Stream Assessment (VSS) score (VDCR 2024b, 2025b). The database also indicates that streams within the SCS contribute to high biological integrity at the watershed level (6th order), due to the presence of multiple native/non-native, pollution-tolerant/intolerant, and rare, threatened, or endangered fish and macroinvertebrate species.

The Town Run at Rt. 616 SCS is mostly west of Bristersburg Road, north of Midland Road and Eagle Nest Drive, and south of Courtney School Road. Segment 1 crosses approximately 1.1 miles of the SCS in three locations between Midland Road and Cromwell Road. The Company's existing Morrisville-Wishing Star Corridor encompasses about 27.5 acres of the SCS.

Impact Assessment

While crossing the SCS in three places, Project activities along Segment 1 would be limited to the Company's existing transmission corridor with no new or expanded right-of-way required. The Project would span waterbodies within the resource with no instream construction work required. Therefore, with adherence to applicable state/local erosion and sediment control and stormwater

management standards, it is unlikely the Project would impact the Aquatic Natural Community within the SCS. The only change in the setting due to the Project would be in the number and configuration of transmission structures within the existing right-of-way.

Once the Project is approved by the SCC, Dominion will coordinate with state and federal agencies, as needed, to determine if surveys, construction TOYRs, or other measures would be required to mitigate potential impacts on sensitive species, including those within the SCS.

4.2.2.3 ECOLOGICAL CORES

Existing Conditions

Table 4.2-3 summarizes existing conditions for each core crossed by Segment 1. Figure 4.2.2-2 depicts the ecological cores crossed by the Project.

TABLE 4.2-3 VDCR-MAPPED ECOLOGICAL CORES CROSSSED BY SEGMENT 1

Ecological Core Rank	Ecological Core ID	Total Core Acreage	Total Acres of Expanded/New ROW Crossed	Total Acres of Existing ROW Crossed	Existing Condition
C1	NA	NA	NA	NA	NA
C2	NA	NA	NA	NA	NA
C3	40984	738	NA	1.7	Mostly forested but fragmented by small paths and cleared areas
	41135	709	NA	3.5	Mostly forested but fragmented by a managed timber parcel that was recently cleared/replanted
	41841	751	NA	1.0	Mostly forested
C4	40740	465	NA	5.9	Mostly forested with some clearing in the center
	41682	809	NA	6.0	Mostly forested with a few scattered cleared areas
	41590	552	NA	20.8	Mostly managed timber that was recently cleared or is currently regenerating forest
	41807	229	NA	0.1	Northern half is maintained as open land or is regenerating forest
	41666	364	NA	3.1	Mostly forested but fragmented by a cleared area in the northern portion
C5	40859	58	NA	<0.1	Mostly forested with a cleared area in the northern portion
	41209	44	NA	0.5	Mostly forested

Ecological Core Rank	Ecological Core ID	Total Core Acreage	Total Acres of Expanded/New ROW Crossed	Total Acres of Existing ROW Crossed	Existing Condition
	42098	46	NA	1.2	Mostly forested

Notes: ROW = right-of-way, NA = not applicable

Impact Assessment

VDCR's review of the Project found that Segment 1 does not cross ecological cores with the higher C1 or C2 rankings (VDCR 2025b). The segment crosses cores with rankings of C3, C4, and C5, collectively encompassing about 43.8 acres. Because Segment 1 requires limited new right-of-way, however, limited tree clearing of about 1.2 acres would occur within a C5 core (ID 42098). Therefore, the Segment 1 component of the Project would have minimal impact on the cores which are crossed.

4.2.3 PROTECTED SPECIES

4.2.3.1 FEDERAL- AND STATE-LISTED THREATENED AND ENDANGERED SPECIES

ERM's queries of various database identified multiple federal- and state-listed T&E species within and adjacent to the study area. Federally listed and federally proposed species include Indiana bat (*Myotis sodalis*), NLEB, TCB, Dwarf wedgemussel (*Alasmidonta heterodon*), Yellow lance (*Elliptio lanceolata*), Green floater (*Lasmigona subviridis*), Monarch butterfly (*Danaus plexippus*), and Small whorled pogonia (*Isotria medeoloides*). All but one of these species, the Monarch butterfly, are also state listed. Five additional state-listed species (which are not also federally listed) were identified by the queries including Brook floater (*Alasmidonta varicosa*), Wood turtle (*Glyptemys insculpta*), Torrey's mountain-mint (*Pycnanthemum torreyi*), Loggerhead shrike (*Lanius ludovicianus*), and Henslow's sparrow (*Centronyx henslowii*).

ERM reviewed the potential for each federal- and state-listed species to occur within and adjacent to Segment 1. Table 4.2-4 provides information on those species with potential to occur in the study area and/or a 2.0-mile buffer.

TABLE 4.2-4 FEDERAL- AND STATE-LISTED SPECIES POTENTIALLY OCCURRING IN THE STUDY AREA

Common Name	Scientific Name	Status ^a	Global Rank ^b	Habitat	Source	Confirmed Presence and Proximity ^c
Mammals						
Indiana bat	Myotis sodalis	FE, SE	G2	During winter the bats are restricted to suitable underground hibernacula where the ambient temperature remains below 10°C, or 50.0°F, but above freezing, and remains relatively stable. In summer, most reproductive females occupy roost sites in forested areas under the exfoliating bark of dead or dying trees. Habitats in which maternity roosts occur include riparian zones, bottomland and floodplain areas, and wooded wetlands and upland communities. Adult males occupy similar habitats but can use a wider range of roosts compared to females.	IPaC	No
Northern long-eared bat	Myotis septentrionalis	FE, SE	G2	Generally associated with old growth or late successional interior forests, the bats use partially dead or decaying trees for breeding, summer day roosting, and foraging. Hibernation occurs primarily in caves, mines, and tunnels.	IPaC VDWR—Northern Long-eared Bat, Tri-colored Bat, and Little Brown Bat Consultation Tool	No
Tricolored bat	Perimyotis subflavus	FPE, SE	G3	The species typically roost in trees near forest edges during summer and hibernates deep in caves or mines in areas with warm, stable temperatures during winter.	IPaC VaFWIS VDWR—Northern Long-eared Bat, Tri-colored Bat, and Little Brown Bat Consultation Tool	Yes; Pageland 1 and Segment 4

Common Name	Scientific Name	Status ^a	Global Rank ^b	Habitat	Source	Confirmed Presence and Proximity ^c
Invertebrates						
Dwarf wedgemussel	Alasmidonta heterodon	FE, SE	G2	The species occupies large rivers and small streams, often burrowing into clay banks among the root systems of trees; it is also associated with mixed substrates of cobble, gravel, and sand.	IPaC VaFWIS	Yes; Segment 1
Yellow lance	Elliptio lanceolata	FT, ST	G2	The species depends on clean, moderately flowing water with high dissolved oxygen. They are found in medium-sized rivers to smaller streams, burying deep into coarse to medium sand substrate and sometimes gravel. The species moves with shifting sand settling in the downstream end of stable sand and gravel bars.	IPaC VaFWIS WERMS	Yes; Segment 2B and Segment 3 Mainline
Brook floater	Alasmidonta varicosa	SE	G3	The floater occupies streams with clean, flowing water and substrates they can anchor into while filter feeding. Evidence suggests they are sensitive to high water flows that can dislodge them from stream bottoms. Their habitat is vulnerable to pollution, development, invasive species, and changes in temperature and precipitation patterns due to climate change.	VaFWIS NHIDE	Yes; Segment 3 Mainline
Green floater	Platynaia subviridis	FPT, ST	G2	The species occupies streams with slow to medium flows and good water quality. They are often found in sand or small gravel substrates where they establish a foothold and bury themselves as deep as 15 inches. When they occur in larger streams and rivers, they are found in quieter pools and eddies, away from strong currents.	IPaC VaFWIS	No

Common Name	Scientific Name	Status ^a	Global Rank ^b	Habitat	Source	Confirmed Presence and Proximity ^c
Monarch butterfly	Danaus plexippus	FPT	G4	The butterflies are habitat generalists that rely on flowering plants. They require milkweed to lay eggs, for reproduction, and for the caterpillar stage.	IPaC	No
Plants						
Small whorled pogonia	Isotria medeoloides	FT, SE	G2	This plant grows in older hardwood stands of beech, birch, maple, oak, and hickory that have an open understory. Sometimes it grows in stands of softwoods such as hemlock. It prefers acidic soils with a thick layer of dead leaves, often on slopes near small streams.	IPaC NHDE	No
Torrey's mountain-mint	Pycnanthemum torreyi	ST	G2	This species occupies dry, rocky or sandy woodlands and clearings, occurring on both extremely acidic and strongly basic substrates.	NHDE	Yes; Segment 3 Mainline
Reptiles						
Wood turtle	Glyptemys insculpta	ST	G2	Although highly terrestrial, these turtles must remain in a moist habitat. They are found primarily in or near clear streams or brooks in deciduous woodlands but also utilize woodland bogs and marshy fields. The turtles hibernate in deep pools or mud/sand bottom waterways, also under submerged logs, beaver lodges, and muskrat burrows. In Virginia specifically, the species are found in floodplains of creeks and along trout streams.	VaFWIS	No

Common Name	Scientific Name	Status ^a	Global Rank ^b	Habitat	Source	Confirmed Presence and Proximity ^c
Birds						
Loggerhead shrike	Lanius ludovicianus	ST	G4	These birds prefer grazed pastures for nesting purposes and shrub/open forest habitats during winters. For breeding season, the species prefers open country with shrubs, scrubs, and scattered trees.	VaFWIS NHDE	Potential; Segment 2B
Henslow's sparrow	Centronyx henslowii	ST	G4	This species occupies open grasslands with few or no woody plants, tall dense grasses, and litter layer.	VaFWIS NHDE WERMS	Yes; Segment 3 Mainline and Segment 4

Sources: USFWS n.d.; VDCR 2024b, 2025b; VDWR 2026b, 2026d, 2025; Virginia Botanical Associates 2026.

IPaC = Information for Planning and Consultation; NHDE = Natural Heritage Data Explorer; VaFWIS = Virginia Fish and Wildlife Information Service; VDWR = Virginia Department of Wildlife Resources; WERMS = Wildlife Environmental Review Map Service.

^a Federal/State Status:

FE	Federally listed as endangered	SE	State listed as endangered	FPE	Federally proposed as endangered
FT	Federally listed as threatened	ST	State listed as threatened	FPT	Federally proposed as threatened

^b Global Rank:

- G1 Critically Imperiled: At very high risk of extinction due to extreme rarity (often five or fewer populations), very steep declines, or other factors
- G2 Imperiled: At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors
- G3 Vulnerable: At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors
- G4 Apparently Secure: Uncommon but not rare; cause for long-term concern due to declines or other factors
- G5 Secure: Common, widespread, and abundant

^c Indicates whether there is confirmed presence of the species within the Project's study area or within the 2.0-mile buffer from those study area.



Existing Conditions

Federal-Listed Species

As shown in Table 4.2-4, ERM identified five federally listed species and three species with a proposed federal listing that may potentially occur within a 2.0-mile search radius of the study area boundary for the Project. All the species, except the Monarch butterfly, are also state listed. Three of the eight species (TCB, Dwarf wedgemussel, and Yellow lance) have confirmed occurrences and one (Green floater) has a potential occurrence within the study area or within a 2.0-mile radius of the study area.

Potential summer foraging habitat for the Indiana bat, NLEB, and TCB in the study area includes forested areas along each Project segment. VDWR's online mapping of winter habitat and roost trees shows no summer habitat (i.e., maternity roosts), winter habitat (i.e., hibernacula), or roost trees for TCB along the Project segments or alternative routes (VDWR 2026b). The VaFWIS database confirmed the presence of TCB within the Project study area in two locations. These occurrences, which are nearest to Pageland 1 and Segment 4, are discussed in Sections 7.2.3 and 8.2.3, respectively.

Potential habitat for the Dwarf wedgemussel and Yellow lance is present within the Project study area, and the VaFWIS database confirmed the presence of both species in multiple locations. Due to the documented occurrences of the Dwarf wedgemussel, Aquia Creek has been classified as Threatened and Endangered Species Waters (T&E Waters). This designation classifies streams and rivers that contain documented occurrences of federal- or state-listed species and their habitat. Aquia Creek crosses into the study area east of the intersection of Bristersburg Road and Blackwells Mill Road near Segment 1. The WERMS database confirmed the presence of the Yellow lance within Kettle Run near Segment 2B, and the VaFWIS database confirmed the presence of the Yellow lance within Broad Run near the Segment 3 Mainline (VDWR 2026d, 2026e). These occurrences are discussed below in Sections 6.3.3 and 7.2.3, respectively.

The VaFWIS database identified multiple waterbodies within the study area classified as predicted habitat for the Green floater; however, neither VaFWIS nor the WERMS databases indicate a documented occurrence of this species in the study area (VDWR 2026d, 2026e).

State-Listed Species

As shown in Table 4.2-4, ERM identified five state-listed species (not also federally listed) that may potentially occur within the study area (i.e., Brook floater, Wood turtle, Torrey's mountain-mint, Loggerhead shrike, and Henslow's sparrow). Of these, Brook floater, Torrey's mountain-mint, and Henslow's sparrow have documented occurrences within the 2.0-mile search radius around the study area, and the Wood turtle and Loggerhead shrike have been identified as potentially occurring in this area.

Due to the documented occurrences of the Brook floater, Broad Run has been classified as T&E Waters. This waterbody, which crosses the study area south of Linton Hall Road and north of Vint Hill Road, is intersected by the Segment 3 Mainline. VDCR identified a documented occurrence of Torrey's mountain-mint in their November 2025 review of the Project. This occurrence of the

species is south of Wellington Road, north of Linton Hall Road, and adjacent to the Segment 3 Mainline (VDCR 2025b). VaFWIS and WERMS databases confirmed the presence of Henslow's sparrow within the study area, near the point where Segment 3 and Segment 4 join (VDWR 2026d, 2026e). Additionally, according to the VDCR's predicted suitable habitat (PSH) modeling, there is potential for Brook floater, Torrey's mountain-mint, and Henslow's sparrow to occur within the study area and along the segments (VDCR 2024b).

The Virginia Breeding Bird Atlas Survey recorded the presence of Loggerhead shrike in 1989 within the Nokesville, CE Atlas Quadrangle Block. The western boundary of the block intersects the eastern edge of the study area near Segment 2B, which is discussed below in Section 6.3.3 (VDWR 2026d). Additionally, VDCR's PSH modeling shows potential for Loggerhead shrike habitat within the study area (VDCR 2024b). This habitat includes agricultural land, open space, and shrub/open forest which is seen across the study area.

The VaFWIS database has identified multiple waterbodies within the study area that have been classified as predicted habitat for the Wood turtle; however, neither VaFWIS nor the WERMS databases provide a documented occurrence of this species in the study area (VDWR 2026d, 2026e).

Impact Assessment

Because the Segment 1 component of the Project almost entirely would be limited to the Company's existing Morrisville-Wishing Star Corridor, no permanent impacts on these protected species are anticipated. The only species listed in Table 4.2.4 with a documented occurrence near Segment 1 is Dwarf wedgemussel, which has been observed in Aquia Creek. Because this waterbody crosses into the study area approximately 1.5 miles east of Segment 1, impacts on Aquia Creek or the Dwarf wedgemussel would not occur. Impacts on all other species confirmed as present along and near Segments 2A, 2B, 3, and 4 are discussed in Sections 5.2.3, 6.3.3, 7.2.3, and 8.2.3, respectively.

Assuming the Commission authorizes the Project, Dominion would coordinate with state and federal agencies as needed to determine if surveys, construction TOYRs, or other mitigation is required to mitigate potential impacts on T&E species for Segment 1 and the Project.

4.2.3.2 BALD EAGLE MANAGEMENT

Existing Conditions

The eagle nest nearest to Segment 1 (Nest ID ST1302) is approximately 4.5 miles to the southeast. The nest was last observed to be occupied in 2013 (CCB 2022).

Impact Assessment

The VDWR provides activity-specific guidelines for work within 330-foot and 660-foot buffer zones surrounding known eagle nests. No such nests were identified within the 660-foot buffer of Segment 1. If eagle nests should be identified within 660 feet of this segment, Dominion would work with VDWR and other appropriate agencies to develop and implement measures to minimize impacts on the species.

4.2.3.3 OTHER SPECIES OF INTEREST

Existing Conditions

The VDCR letters dated July 18, 2024, and November 12, 2025 included in Attachment 2.G.1 of the DEQ Supplement , concluded that the Project as planned would not affect any documented state-listed insects along Segment 1 and that the segment does not cross any state natural area preserves under VDCR’s jurisdiction. VDCR indicated a potential for rare plant species, mostly associated with diabase soils, to occur in the study area if suitable habitat is present (VDCR 2024b, 2025b). Figure 4.2.3-1 depicts diabase soils in the study area. Table 4.2-5 lists these species and describes their habitats.

TABLE 4.2-5 RARE PLANT SPECIES WITH THE POTENTIAL TO OCCUR IN THE STUDY AREA

Common Name	Scientific Name	Federal/State Status	Global Rank	State Rank	Habitat
Plants					
Earleaf false foxglove	Agalinis auriculata	None	G3	S1	Clearings and old fields on soils weathered from diabase. Known only from the Culpeper Basin of Fairfax and Prince William counties.
Red milkweed	Asclepias rubra	None	G4/G5	S2	Bogs, sphagnum power-line swales, and seeps.
American bluehearts	Buchnera americana	None	G5?	S1/S2	Seasonally moist to dry soils of barrens, clearings, old fields, meadows, and roadsides. In the Piedmont region, the species occurs on calcareous or mafic substrates.
Brown bog sedge	Carex buxbaumii	None	G5	S2	Bogs, seeps, calcareous and mafic fens, depression swamps and ponds, and wet meadows. The species occurs in both extremely acidic and highly calcareous soils.
False hop sedge	Carex lupuliformis	None	G4	S1/S2	Alluvial swamps (especially seasonally flooded sloughs and swales in large bottomlands), nonriverine swamps, depression swamps, and ponds.
Wolf's spikerush	Eleocharis wolfii	None	G3/G5	S1	Poorly drained oak flatwoods, in a Triassic Basin floodplain of the southern Piedmont; upland depression swamps of the northern Piedmont Culpeper Basin with similar clay and hardpan soils.
Appalachian quillwort	Isoetes appalachiana	None	G4	S1	Seeps and flats in swamp forests, backwater edges, and river shores on a variety of clay, silt, sand, and cobble substrates.
Torrey's rush	Juncus torreyi	None	G5	S1	Fens, seeps, wet meadows, and ditches, typically in soil weathered from limestone and other calcium-bearing substrates.
Grove sandwort	Moehringia lateriflora	None	G5	S1	Power-line right-of-way over diabase.

Common Name	Scientific Name	Federal/State Status	Global Rank	State Rank	Habitat
Downy phlox	<i>Phlox pilosa</i>	None	G5	S1	Dry to less often mesic open forests, clearings, and road banks. Occurs in rocky or clay hardpan soils.
Hairy nutrush	<i>Scleria ciliata</i> var. <i>ciliata</i>	None	G5	S1	Wet to dry clearings, fields, and woodlands managed by prescribed fire. Rare, but can be found in all physiographic regions; mostly in the southern half of Virginia.
Stiff goldenrod	<i>Solidago rigida</i> var. <i>rigida</i>	None	G5	S2	Dry, rocky woodlands, barrens, and outcrops. Also located in clearings and old fields in areas that once supported vegetation with prairie affinities. Strictly located on calcareous or mafic substrates (limestone, dolostone, metabasalt, amphibolite, diabase, and calcareous shales).
Hairy hedgenettle	<i>Stachys arenicola</i>	None	G5	S1	Fens, wet meadows, power-line clearings, and depression swamps on soils weathered from carbonate or basic intrusive rocks. Moderately shade-intolerant.
Rough hedge-nettle	<i>Stachys aspera</i>	None	G4?	S2	Freshwater and oligohaline tidal marshes, tidal swamps, depression swamps and ponds, and wet clearings; prefers open or partly open habitats.
Buffalo clover	<i>Trifolium reflexum</i>	None	G3/G4	S1	Woodlands, rocky bluffs, shaly slopes, clearings, and fields.
Small whorled pogonia	<i>Isotria medeoloides</i>	FT, SE	G2/G3	S2	Grows in older hardwood stands of beech, birch, maple, oak, and hickory that have an open understory. Sometimes it grows in stands of softwoods such as hemlock. It prefers acidic soils with a thick layer of dead leaves, often on slopes near small streams.
Torrey's mountain-mint	<i>Pycnanthemum torreyi</i>	ST	G2	S2	Dry, rocky or sandy woodlands and clearings. Occurs on both extremely acidic and strongly basic substrates.

Source: VDCR 2024b, 2025b; Virginia Botanical Associates 2026.

Federal/State Status:**FE:** Federally listed as endangered**FT:** Federally listed as threatened**SE:** State listed as endangered**ST:** State listed as threatened**Global Rank:**

G1: Critically Imperiled: At very high risk of extinction due to extreme rarity (often five or fewer populations), very steep declines, or other factors
G2: Imperiled: At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors
G3: Vulnerable: At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors

G4: Apparently Secure: Uncommon but not rare; some cause for long-term concern due to declines or other factors**G5: Secure:** Common, widespread, and abundant

? Global ranks followed by a question mark denote inexact or uncertain ranking by the VDCR

State Rank:**S1: Critically Imperiled:** At very high risk of extirpation in the jurisdiction due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors**S2: Imperiled:** At high risk of extirpation in the jurisdiction due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors**S3: Vulnerable:** At moderate risk of extirpation in the jurisdiction due to a restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors**S4: Apparently Secure:** At a fairly low risk of extirpation in the jurisdiction due to an extensive range and/or many populations or occurrences, but with possible cause for some concern because of recent local declines, threats, or other factors**S5: Secure:** At very low or no risk of extirpation in the jurisdiction due to a very extensive range, abundant populations or occurrences, with little to no concern from declines or threats

Impact Assessment

The VDCR (VDCR 2024b, 2025b) reviews of the Project found that Segment 1 does not cross diabase soils or CSs associated with rare plants, but indicated that site-specific field investigations are necessary for detailed habitat and impact analysis. In suitable habitat types that meet specific requirements for any of these rare plant species, VDCR recommends conducting detailed plant inventories and coordinating with VDCR biologists to minimize habitat impacts. If suitable habitat conditions for these species are identified within the Project footprint, the Company would work with the VDCR and appropriate regulatory agencies to identify and implement measures to minimize impacts on rare plants and/or rare plant habitat.

4.2.4 VEGETATION

4.2.4.1 EXISTING CONDITIONS

Local Vegetation Characteristics

Segment 1 is mostly within an existing maintained Dominion right-of-way bordered on both sides by forest. The segment is situated entirely within the Northern Piedmont physiographic province, described in Section 3.2.2.4. Because Segment 1 would be mostly limited to the Company's existing Morrisville-Wishing Star Corridor, virtually the entire area consists of open space with maintained herbaceous vegetation (Table 4.2-6 and Figure 4.1.2-1). Approximately 2.1 acres of forest land would be impacted by a small area of expanded right-of-right on the Morrisville Station parcel and directly north of the Morrisville Station, and approximately 2.0 acres of forested land would be impacted on the existing Morrisville Station parcel.

TABLE 4.2-6 ACREAGE OF VEGETATION TYPES CROSSED BY SEGMENT 1

Vegetation Cover Type	Unit	Existing Right-of-Way	Expanded Right-of-Way
Agriculture	acres	0.0	0.0
Forest	acres	2.0	2.1
Open Space	acres	247.5	3.9
Total ^a	acres	249.5	6.0

Sources: VGIN Land Cover data with aerial photo interpretation by ERM (VGIN 2025)

^a Totals may not match the sum of the addends due to rounding.

Forest Conservation Values

Table 4.2-7 summarizes the area of FCV within the existing and expanded right-of-way for Segment 1. While FCV values have been assigned to the area within the existing right-of-way, the corridor is entirely cleared and maintained in herbaceous vegetation. As noted above, only 4.1 acres of forest would be impacted by the Project along Segment 1.

TABLE 4.2-7 FOREST CONSERVATION VALUE ALONG SEGMENT 1

Forest Conservation Value	Unit	Existing Right-of-Way	Expanded Right-of-Way
Average (1)	acres	28.9	0.0
Moderate (2)	acres	43.9	1.1
High (3)	acres	38.9	0.3
Very High (4)	acres	35.0	0.1
Outstanding (5)	acres	20.3	0.0
Total ^a	acres	167.0	1.4

^a The sum of the addends may not equal the totals due to rounding.

4.2.4.2 IMPACT ASSESSMENT

Potential impacts on herbaceous vegetation in the existing corridor could result from vehicle and equipment traffic, equipment staging, and installation of new structures. Disturbed areas would be re-vegetated and maintained in an herbaceous cover. Only 4.1 acres of forest would be cleared for the Segment 1 component of the Project.

4.3 CULTURAL RESOURCES

4.3.1 ARCHAEOLOGICAL SITES AND FINDINGS

Crossings of archaeological sites are considered a routing constraint due to the potential for an electric transmission line to impact intact archaeological deposits, if present, because of tree clearing, transmission structure placement, or the use or movement of heavy equipment within a site. A confident and complete assessment of the integrity of each site would require archaeological field investigations. A survey would be completed in a subsequent phase of study for the Project along the routes certificated by the SCC.

Stantec identified four known archaeological sites within the rights-of-way of Segment 1 (Table 4.3-1).

TABLE 4.3-1 PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF SEGMENT 1

Site Number	New or Existing/Expanded Right-of-Way	Description	NRHP Status
44FQ0073	Existing	Mine, 19 th Century	Unevaluated
44FQ0199	Existing	Other, 19 th Century	Not Eligible
44FQ0200	Existing	Other, 19 th Century	Not Eligible
44FQ0201	Existing	Other, 19 th Century	Not Eligible

Source: VDHR 2026.

NRHP = National Register of Historic Places

4.3.1.1 IMPACT ASSESSMENT

4.3.2 ABOVEGROUND HISTORIC RESOURCES AND FINDINGS

This section presents information on known aboveground cultural resources near Segment 1, using VDHR’s tiered study area model described above. Figure 4.3.2-1 depicts the locations of resources relevant to Segment 1. Attachment 2.I.1 of the DEQ Supplement, the Pre-application Report, provides a description, location, and impact assessment of each resource. None of the route alternatives would affect a National Historic Landmark; therefore, these resources are not further discussed.

Table 4.3-2 provides information on the considered resources within the VDHR study tiers for Segment 1. As detailed in the Stage 1, Segment 1 would have a minimal impact on two resources (030-5587 and 030-5588).

TABLE 4.3-2 ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR SEGMENT 1

Buffer (miles)	Resource Category	Resource Number	Description	Impact
1.0 to 1.5	National Historic Landmarks	Not applicable	None identified	Not applicable
0.5 to 1.0	National Register Properties (Listed)	Not applicable	None identified	Not Applicable
0.0 to 0.5	National Register—Eligible	030-5588	Elk Run Rural Historic District	Minimal
0.0 (within right-of-way)	Historic Districts (Potentially Eligible)	030-5587	Mt. Holly Ridge-Marsh Run Rural Historic District	Minimal

Source: VDHR 2026.

VDHR = Virginia Department of Historic Resources

4.4 VISUAL RESOURCES

Appendix C provides more detailed information about existing visual conditions and visual impacts along Segment 1.

4.4.1 EXISTING CONDITIONS

Segment 1 is within southeastern Fauquier County. This area includes a mix of agricultural and rural residential areas interspersed with forested areas. This segment of the Project crosses two landscape units (see Section 3.2.3.3): the Rural Agriculture and Residential Landscape Unit and the Rural Residential Landscape Unit. These landscape unit types share similar visual characteristics, but are differentiated by the extent of low-density agricultural and residential development.

The Segment 1 Impact Centerline crosses 6.2 miles of Rural Agriculture and Residential Landscape Unit and 1.7 miles of Rural Residential Landscape Unit (Table 3.2-6). These units offer broad, panoramic views of the landscape, framed by patches of forest cover and scattered residential and agricultural structures that add vertical elements and geometric features (structures) to the landscape. These features also provide screening that encloses views in certain areas. Existing high voltage transmission lines cross portions of these units are often the tallest visible features in the area. Table 4.4-1 describes the VSRs along Segment 1, including recreational resources and residential areas. At these VSRs, the primary viewer groups (defined in Section 3.2.3 and listed in Table 4.4-1), are more aware of and sensitive to changes in visual resource conditions.

In addition to the VSRs, there are several other areas along Segment 1 (Table 4.4-2) where the potential to view the Project would be greater, due to the proximity of these areas to the new transmission line. While proximity does not guarantee visibility, closer viewpoints are more likely to have unobstructed views and greater viewer awareness of (but not necessarily higher viewer sensitivity to) the Project.

TABLE 4.4-1 SEGMENT 1 VISUALLY SENSITIVE RESOURCES

VSR# and Name	VSR Description	Landscape Unit(s) ^a	Primary Viewer Group(s) ^b
Recreational Resources (see Section 4.1.7)			
1	Virginia Bird & Wildlife Trail—Battle for Virginia Loop	RR, RAR	L, R, M
2	Virginia Scenic Byway SC-806N	RR, RAR	L, R, M
Residential Areas and Subdivisions			
3	Elk Run Road Residences	RR	L
4	Morrisville Road Residences	RR	L
5	Waterford Estates Subdivision	RAR	L

Sources: Fauquier County (Subdivisions).

Rte. = Virginia State Route; US = U.S. Route; VSR = visually sensitive resource.

^a Landscape Units (see Table 3.2-6 and Appendix C): IC = Industrial/Commercial; MNB = Conway Robinson State Forest and Manassas National Battlefield Park; RAR = Rural Agricultural & Residential; RR = Rural Residential; SR = Suburban Residential.

^b Viewer Groups: L = local/area residents viewer group; M = motorists, commuters, and through travelers; R = recreationists and tourists viewer groups; W = workers viewer groups.

TABLE 4.4-2 AREAS OF HIGH POTENTIAL VISIBILITY ALONG SEGMENT 1

Area Name	Area Description	Landscape Unit(s) ^a	Primary Viewer Group(s) ^b
Educational Resources (Schools)			
Mary Waller Elementary School	Public elementary school (Pre-Kindergarten through 5th grade) with associated playground and athletic fields on the south side of Morrisville Road, south of US 17	RR	L, R
Places of Worship & Cemeteries			
Morrisville United Methodist Church	Place of Worship on the south side of Morrisville Road, south of US 17	RR	L
Soul Purpose Community Church	Place of Worship on the west side of Shipps Store Road, south of US 17	RR	L
Road Corridors^b			
Cromwell Road	Two-lane, paved, and striped roadway running northwest-southeast between Elk Run Road and Bristersburg Road; AADT is not available for this road	RAR	L, M, W
Elk Run Church Road	Two-lane unpaved road running northwest-southeast from Elk Run Road to Deep Run Mill Road; AADT is not available for this road	RAR	L, M, W
Midland Road	Two-lane, paved, and striped roadway running northwest-southeast with an AADT of approximately 2,000 vpd between Elk Run Road and Bristersburg Road	RAR	L, M, W
US 17	Four-lane divided highway with vegetated medians and at-grade intersections, and AADT of approximately 17,000 vpd between Elk Run Road and Rte. 28	RR	L, M, W

Sources: U.S. Census Bureau 2024 (population data); VDOT 2024 (AADT data).

AADT = annual average daily traffic; Rte. = Virginia State Route; US = U.S. Route; vpd = vehicles per day; VSR = visually sensitive resource.

^a Landscape Units (see Table 3.2-6 and Appendix C): IC = Industrial/Commercial; MNB = Conway Robinson State Forest and Manassas National Battlefield Park; RAR = Rural Agricultural & Residential; RR = Rural Residential; SR = Suburban Residential.

^b Viewer Groups: L = local/area residents viewer group; M = motorists, commuters, and through travelers; R = recreationists and tourists viewer groups; W = workers viewer groups.

4.4.2 VISUAL IMPACT ASSESSMENT

To evaluate anticipated changes from the Project, ERM compared photographic simulations to existing visual resource conditions at representative locations within each landscape unit and along the different route segments (Appendix C). Along Segment 1, KOP 301 provides a representative view of the Project from a Rural Residential Landscape Unit. While not along Segment 1, KOPs 302, 312, 314, 315, and 316 provide representative views of the Project as it crosses Rural Agriculture and Residential Landscape Units. Existing conditions and simulations from these KOPs are provided in Appendix C.

Because almost the entirety of Segment 1 would be constructed within the existing right-of-way, there would be no changes to existing landforms and vegetation in either of the landscape unit types. Changes in the built environment would be similar in both the Rural Agriculture and Residential and Rural Residential landscape units. The primary visible change from Segment 1 of the Project would be the new monopoles that replace the existing lattice structures within the cleared right-of-way. The new monopoles would appear as tall, solid, vertical structures with short horizontal cross arms connected by a series of thin, parallel, horizontal overhead lines that form gentle waves as they stretch between towers. The existing lattice structures have an open, angular, skeletal form with a larger physical footprint that makes them appear visually expansive and complex. While the new monopole structures would be taller than the existing lattice structures, they generally appear more compact, sleeker, and less complex. These visual changes would be most apparent in foreground views (less than 0.5 mile) and adjacent foreground and middle ground (0.5 to 2 miles) areas where open fields, roads, and other locations with few to no screening features provide open, panoramic views of the landscape.

Table 4.4-3 describes the Project's impacts on visual resource conditions and indicates the anticipated degree of visual change (small, medium, large), viewer sensitivity (low, medium, high), and an overall impact rating for each VSR (negligible, minor, moderate, major) along Segment 1. The degree of visual change and viewer sensitivity are based on the assessment of visual change and sensitivity at each KOP and within each landscape unit (see Appendix C). Overall, Segment 1 would have minor impacts on VSRs.

Table 4.4-4 summarizes the anticipated visual impacts of Segment 1 by landscape unit, including an overall impact rating (major, moderate, minor, or negligible). Overall, Segment 1 would have minor impacts on visual resources across both Rural Agriculture and Residential and Rural Residential Landscape Unit types.

TABLE 4.4-3 SEGMENT 1—SUMMARY OF ANTICIPATED IMPACTS BY VISUALLY SENSITIVE RESOURCE

VSR # and Name	KOP#	Approximate Distance to Relevant Project Features	Summary of Impacts	Impact Assessment
Recreational Resources				
1 Virginia Bird & Wildlife Trail—Battle for Virginia Loop	NA	Segment 1: crosses the trail at the intersection of Morrisville Road and Marsh Road	The Virginia Bird & Wildlife Trail parallels Marsh Road and would have similar views as those for the roadway. Transmission poles and infrastructure would be visible on either side of the trail at the crossing point, but views would be limited at existing vegetation breaks in the treeline.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Minor
2 Virginia Scenic Byway SC-616N	NA	Segment 1: 1.1 miles southeast of the VSR	Views from the scenic byway would be limited due to distance from the project, topography, and dense vegetation screening. Minimal to no visibility is expected.	Degree of Visual Change: Small Viewer Sensitivity: Medium Overall Impact: Negligible
3	NA	Segment 1: crosses the road approximately 0.3 mile north of the intersection with Longhorn Trail	Transmission poles and infrastructure would be partially visible on either side of the route where they cross. Views would be limited to existing vegetation breaks in the treeline on both sides of the road.	Degree of Visual Change: Small Viewer Sensitivity: Medium Overall Impact: Minor

VSR # and Name	KOP#	Approximate Distance to Relevant Project Features	Summary of Impacts	Impact Assessment
Residential Areas and Subdivisions				
4 Elk Run Road Residences	NA	Segment 1: crosses 1.0 miles of the residential area	The route would be intermediately visible from portions of the residential area along Elk Run Road. Existing vegetation and topography otherwise provide screening for the majority of the residential area.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Minor
5 Morrisville Road Residences	301	Segment 1: crosses the northern corner of the residences along US 17	The route would be partially visible from a small number of residences along the northern portion of the residential area. Existing vegetation provides screening for the majority of the residential area.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Minor
6 Waterford Estates Subdivision	NA	Segment 1: crosses 0.5 mile of the subdivision, south of Yeats Road	Residents on the eastern portion of the VSR and south of Yeats Road would have a full view of the route due to the close distance. Otherwise, existing topography and treelines within the subdivision would screen most views to the east of the VSR.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Minor

KOP = key observation point; NA = not applicable (no representative KOPs); Rte. = Virginia State Route; US = U.S. Route; VSR = visually sensitive resource.



TABLE 4.4-4 SEGMENT 1—VISUAL RESOURCE IMPACT SUMMARY

Landscape Unit Type / Component	Impacted VSRs	Impacted Areas and Viewer Groups	Impacted Viewer Groups	Potential Impact Rating
Rural Agriculture and Residential / Segment 1	VSR 1-3, 6 Total: 4	Road crossings: <ul style="list-style-type: none"> Existing right-of-way—3 crossings Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Virginia Bird & Wildlife Trail—Battle for Virginia Loop (VSR 1) Virginia Scenic Byway SC-616N (VSR 2) Virginia Scenic Byway SC-806N (VSR 3) Waterford Estates Subdivision (VSR 6) 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Recreationists/tourists Workers 	Degree of Visual Change: Small Viewer Sensitivity: Medium Overall Rating: Minor
Rural Residential / Segment 1	VSR 1, 3-5 Total: 4	Road crossings: <ul style="list-style-type: none"> Existing right-of-way—6 crossings Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Virginia Bird & Wildlife Trail—Battle for Virginia Loop (VSR 1) Virginia Scenic Byway SC-806N (VSR 3) Elk Run Road Residences (VSR 4) Morrisville Road Residences (VSR 5) 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Recreationists/tourists Workers 	Degree of Visual Change: Small Viewer Sensitivity: Medium to High Overall Rating: Minor

NA = not applicable; VSR = visually sensitive resource.

4.5 ENVIRONMENTAL JUSTICE

4.5.1 EXISTING CONDITIONS

Based on the EJ criteria thresholds for race, ethnicity, income, and limited English-speaking households described in Section 3.2.5, three of the four CBGs crossed by of Segment 1 meet EJ criteria (Figure 3.2.5-1). Table 4.5-1 provides population and demographic information for these CBGs.

4.5.2 IMPACT ASSESSMENT

Based on the EJ criteria thresholds, Segment 1 would cross three potential EJ communities. As discussed below, impacts on views, property values, and health from construction activities are not anticipated to be significantly adverse. Thus, while Segment 1 crosses potential EJ communities, Segment 1 would not have overall significantly adverse impacts on potential EJ communities. Section 3.2.5 discusses impacts to EJ communities more broadly. The below analysis addresses Segment specific information.

TABLE 4.5-1 ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY SEGMENT 1

Geography	Population	Total Populations of Color	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic or Latino	Low-Income Population	Limited English-Speaking Household
Virginia	8,657,499	41%	59%	18%	0.1%	7%	0.1%	0.5%	4%	11%	23%	3%
Fauquier County	73,935	24%	76%	6%	0.0%	2%	0.0%	0.0%	4%	12%	15%	2%
CT 9307.03 BG 2	958	25%	75%	12%	0.0%	0%	0.0%	0.0%	7%	5%	75%	0%
CT 9307.04 BG 1	1,233	6%	94%	5%	0.0%	0%	0.0%	0.0%	0%	0%	37%	0%
CT 9307.04 BG 2	1,440	21%	79%	0%	0.0%	0%	0.0%	0.0%	0%	20%	22%	0%
CT 9307.04 BG 3	1,464	15%	85%	5%	0.0%	1%	0.0%	0.0%	3%	7%	17%	0%

Sources: U.S. Census Bureau 2023a, 2023b, 2023c (Tables B03002, C17002, C16002), VADEQ 2025

CT = Census Tract; BG = Block Group

Gray shaded cells include reference population.

Blue shaded cells indicate populations of color including community of color is composed primarily of one of the groups listed in the VEJA definition of "population of color" or the analysis area has a greater percentage of a community of color than the state as a whole.

Yellow shaded cells indicate low-income populations.



4.5.2.1 CONSTRUCTION ACTIVITIES

The primary noise receptors in the study area would be residents along Segment 1. No existing commercial or industrial buildings are within 250 feet of the right-of-way. The Mary Walker Elementary School is roughly 260 feet away from Segment 1.

Students and staff at Mary Walker Elementary School and the 27 residences within 500 feet of Segment 1 Impact Centerline are most likely to experience unwanted noise from construction activities. As discussed in Section 3, Dominion does not anticipate noise exceedances and will limit construction activities to daytime hours. Residences are unlikely to experience adverse effects from construction activities; however, the Mary Walker Elementary School may experience temporary adverse effects from construction noise when construction activities are immediately nearby. During operations, noise and visual conditions are expected to remain consistent with the current environment.

4.5.2.2 VISUAL IMPACTS

Section 4.4 assesses Segment 1 visual impacts. Because Segment 1 crosses 3 CBGs with sensitive populations and/or potential EJ communities, many of the KOPs used in the analysis of visual impacts are representative of views in potential EJ communities. As detailed in Section 4.4.2, Segment 1 would have a small degree of visual change on visual resources and the overall impact rating would be minor.

4.5.2.3 PROPERTY VALUES AND HEALTH IMPACTS

There are 27 residences that are within 500 feet of the Segment 1 Impact Centerline. Section 3.2.5 addresses the effect of transmission lines on property values and health impacts.

4.6 GEOLOGICAL RESOURCES

4.6.1 EXISTING CONDITIONS

Segment 1 starts within a unit of mélange deposit known as the Mine Run Complex–Melange Zone III, primarily composed of clay, gravel, and sand. The route then briefly encounters an igneous, intrusive deposit known as the Goldvein Pluton spanning from Mill Creek Lane to Midland Road. Next, the route crosses the Purcell Branch Formation primarily comprised of metasandstone before crossing a unit of sedimentary bedrock belonging to the Newark Supergroup made up of sandstone and conglomerate at the right-of-way intersection with Bristersburg Road, spanning to the segment terminus at the Bristers Station (USGS 2005). There are no active mines or mineral resources within 0.25 mile of Segment 1 Impact Centerline (Virginia Energy 2024a, b).

4.6.2 IMPACT ASSESSMENT

Because there are no active permitted mining sites or inactive mineral resource prospects within 0.25 mile of the Segment 1 Impact Centerline, Segment 1 would have no impact on mineral resources.

5. SEGMENT 2A RESOURCES AND IMPACTS

5.1 LAND USE

5.1.1 PUBLIC LANDS

5.1.1.1 EXISTING CONDITIONS AND IMPACT ASSESSMENT

No public lands are crossed by or within 0.25 mile of Segment 2A Impact Centerline. Therefore, no such land would be impacted by this component of the Project.

5.1.2 LAND USE AND LAND COVER

5.1.2.1 EXISTING CONDITIONS

The predominant land use and cover type along Segment 2A, which almost entirely would be within existing Company right-of-way, consists of open space (Table 5.1-1 and Figure 4.1.2-1). Segment 2A also encompasses about 0.4 acre of forest and 2.9 acres of agricultural land in expended right-of-way areas where the segment exits Bristers Station. Segment 2A does not cross developed or agricultural lands.

TABLE 5.1-1 LAND USE/LAND COVER CROSSED BY SEGMENT 2A (ACRES)

Land Use/Land Cover ^a	Unit	Segment 2A
Total right-of-way ^b	Acres	48.6
Agricultural	Acres	2.9
Forested	Acres	0.4
Developed	Acres	0.0
Open Space	Acres	45.3
Open Water	Acres	0.0

^a Based on local and statewide data sets and aerial photo interpretation by ERM. Acreage includes the proposed new rights-of-way.

^b Land use/land cover acreage the totals may not match the sum of the addends due to rounding.

5.1.2.2 IMPACT ASSESSMENT

Segment 2A requires approximately 48.6 acres of right-of-way, of which 45.3 acres are within the Company's existing Morrisville-Wishing Star Corridor. There would be no impact on lands uses and cover types in the right-of-way which would remain a transmission line corridor. This includes agricultural land, which would remain in production during Project operations (unless removed by the owner for reasons unrelated to the Project). About 0.4 acre of forest would be cleared in expanded right-of-way where the segment exits Bristers Station. The primary impact of Segment 2A on land use and cover would be the conversion of this forest to open land due to right-of-way maintenance during Project operations.

5.1.3 LAND USE PLANNING AND ZONING

5.1.3.1 EXISTING CONDITIONS

One zoning district, Agriculture, is crossed by or within 0.25 mile of Segment 2A Impact Centerline (Table 5.1-2 and Figure 3.2.1-1). Because Dominion would obtain a CPCN from the SCC, the Project would be exempt from zoning requirements. This section provides information on zoning to assess general land use compatibility with the Project. Zoning is not further analyzed in this report.

Segment 2A does not cross zoning overlay districts.

TABLE 5.1-2 ZONING DISTRICTS WITHIN 0.25 MILE OF SEGMENT 2A IMPACT CENTERLINE

Zoning District	Description and Allowed Uses
Agriculture (RA) District	Designed to protect and preserve agricultural uses and to mitigate land use conflicts between agricultural uses and appropriately limited residential development. Contains areas where agriculture and forestry are the predominant uses or where significant agricultural lands or large lot farmette-type residential development exists.

5.1.3.2 IMPACT ASSESSMENT

Table 5.1-3 lists the area of existing and expanded right-of-way for Segment 2A within the Rural Agriculture (RA) zoning district. As discussed in further detail below, there are relatively few homes along and near Segment 1, which is consistent with the zoning.

TABLE 5.1-3 ZONING DISTRICTS CROSSED BY SEGMENT 2A

Zoning District	Unit	Segment 2A	
		Existing ROW	Expanded ROW
Agriculture (RA)	Acres	45.3	3.3

5.1.4 RESIDENTIAL AREAS AND RESIDENCES

5.1.4.1 EXISTING CONDITIONS

Table 5.1-4 lists the number of residences within 100 feet, 250 feet, and 500 feet of the Segment 2A Impact Centerline, while Figure 4.1.4-1 depicts the locations of homes and neighborhoods along the Project segments. Each of the residences are single-family dwellings on agriculturally zoned properties or within residentially zoned subdivisions. The homes are near the southern end of Segment 2A on the north side of Bristers Station.

TABLE 5.1-4 DWELLINGS NEAR SEGMENT 2A IMPACT CENTERLINE

Route Alternative	Dwellings within 100 Feet of Impact Centerline	Dwellings within 250 Feet of Impact Centerline	Dwellings within 500 Feet of Impact Centerline
Segment 2A	0	1	4

5.1.4.2 PLANNED RESIDENTIAL AREAS

There are no planned residential areas or residences within 500 feet of Segment 2A Impact Centerline.

5.1.4.3 IMPACT ASSESSMENT

Residents along and near Segment 2A could be impacted by construction noise, dust, or traffic, but these impacts would be short term and temporary, limited to the period of construction. The change in the configuration, number, and heights of structures would alter existing visual conditions from homes and could expand the number of homes with views to transmission structures due to the increase in heights, but the impact would be consistent with existing conditions. The corridor will continue to operate as a transmission right-of-way during Project operations. Visual impacts are further discussed in Section 4.4.

5.1.5 COMMERCIAL/INDUSTRIAL AREAS AND BUILDINGS

5.1.5.1 EXISTING CONDITIONS AND IMPACTS

There are no commercial or industrial buildings or areas within 500 feet of Segment 2A Impact Centerline. Therefore, no such buildings or areas would be impacted by this component of the Project.

5.1.6 PLANNED DEVELOPMENTS

5.1.6.1 EXISTING CONDITIONS

The only planned development identified within 0.25 mile of Segment 2A Impact Centerline is the Bristers/Anderson Branch Station, described in Section 4.1.6. The proposed 230 kV Line #2464 will terminate at the future Anderson Branch Station, which will be energized in 2026.

5.1.6.2 IMPACT ASSESSMENT

Bristers/Anderson Branch Station

As discussed in Section 4.1.6, Segment 2A does not cross but bypasses the future Anderson Branch Station along its western substation boundary within the Company's existing transmission line corridor. The Project was designed by the Company to be compatible with the new Anderson Branch Station, such that there would be no impact on the development.

5.1.7 CONSERVATION EASEMENTS AND LANDS

5.1.7.1 EXISTING CONDITIONS

ERM identified three Fauquier County AFD parcels crossed by Segment 2A and a Fauquier County Open Space easement within 0.25 mile of the Segment 2A Impact Centerline (Table 5.1-5 and Figure 4.1.7-1). See the description of the Fauquier County AFD and Open Space easement programs provided in Section 4.1.7.

TABLE 5.1-5 EASEMENTS WITHIN 0.25 MILE OF SEGMENT 2A IMPACT CENTERLINE

Tax # Identifier	Easement Type	Management	Description	Approximate Distance and Direction to Segment	Right-of-Way Acreage Crossed
7849-11-3813-000	AFD	Fauquier County	Mostly cleared; 70 acres enrolled	Crossed by Segment 2A	3.9 acres existing right-of-way
7849-15-7177-000; 7849-17-0225-000	AFD	Fauquier County	Mostly cleared; 122 acres and 152 acres enrolled	Crossed by Segment 2A	21.2 acres existing right-of-way and 3.3 acres new right-of-way
7849-36-6261-000	Open Space Easement	Fauquier County	Mostly cleared; 27 acres enrolled	About 0.2 mile east of the segment	NA

AFD = Agricultural and Forestal District

5.1.7.2 IMPACT ASSESSMENT

While crossing three parcels within AFDs, Project activities in these areas would be limited to the Company's existing transmission corridor and about 3.3 acres of expanded right-of-way in the approach to Bristers Junction from the south. Land use in this area is classified as open space. Thus, while additional right-of-way within AFDs would be required, it would be adjacent to the Company's existing corridor in an area lacking forest or agricultural resources. The Company would coordinate with Fauquier County regarding the additional 3.3 acres of right-of-way required within the AFD. There would be no impact on the Open Space easement, which is located about 0.2 mile east of Segment 2A.

5.1.8 RECREATIONAL RESOURCES

5.1.8.1 EXISTING CONDITIONS AND IMPACT ASSESSMENT

No recreational resources were identified by ERM within 0.25 mile of Segment 2A Impact Centerline. Therefore, no such resources would be impacted by this component of the Project.

5.1.9 CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP

5.1.9.1 EXISTING CONDITIONS

ERM identified a single unnamed cemetery within 0.25 mile of Segment 2A Impact Centerline. Additional review of the resources within 500 feet of the right-of-way edge are described in Table 5.1-6 and depicted in Figure 4.1.9-1. There are no schools or places of worship within 0.25 mile of the Segment 2A Impact Centerline.

TABLE 5.1-6 CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP WITHIN 0.25 MILE OF SEGMENT 2A IMPACT CENTERLINE

Name	Description	Approximate Distance and Direction from the Route Right-of-Way
Unnamed Cemetery	Identified on a USGS topographic map, the cemetery occupies about 0.2 acre of forested land within an otherwise clear, agricultural parcel. It is unclear if the cemetery is fenced or maintained. There are no indications of headstones on examined aerial photography and no record of a cemetery at the site on findagrave.com (2025). The number and date of interments is unknown.	About 0.2 mile west of the segment 2A right-of-way

5.1.9.2 IMPACT ASSESSMENT

There would be no direct impact on land uses at the cemetery due to its distance from Segment 2A. Construction impacts from dust, noise, and traffic, if any, would be short term and temporary.

5.1.10 TRANSPORTATION INFRASTRUCTURE

5.1.10.1 EXISTING TRANSPORTATION INFRASTRUCTURE

Segment 2A intersects a single local road with a perpendicular crossing (Table 5.1-7 and Figure 1.3-1).

TABLE 5.1-7 ROADS CROSSED BY PROJECT SEGMENT 2A

Road Name	Lanes at Crossing	Functional Classification	Crossing Type
Cromwell Road	2	Local	Perpendicular

5.1.10.2 PLANNED TRANSPORTATION PROJECTS

There are no planned road construction and transportation improvement projects within 0.25 mile of Segment 2A.

5.1.10.3 IMPACT ASSESSMENT

The Project would be confined to the Company's existing Morrisville-Wishing Star Corridor at the Segment crossing of Cromwell Road, which would be perpendicular. The only permanent change would be in the number and configuration of transmission structures within the corridor, but no structures would be placed within existing or planned road rights-of-way.

Project construction would cause noise, dust, and traffic at the road crossing and other roads near the segment, but these impacts would be short term and temporary. Temporary road closures could also be required when needed to move material and equipment across roads. Dominion would coordinate with the County and VDOT in cases where construction activities require temporary closures or detours to mitigate impacts.

Visual impacts at road crossings are addressed in Section 5.4

5.1.11 AIRPORTS AND HELIPORTS

5.1.11.1 EXISTING CONDITIONS

Based on review of FAA resources (FAA n.d.-a, n.d.-b), there are two public and 10 private airports or heliports within 10 nm of Segment 2A (Table 5.1-8 and Figure 3.2.1-1).

TABLE 5.1-8 AIRPORTS AND HELIPORTS LOCATED WITHIN 10 NAUTICAL MILES OF SEGMENT 2A

Airport/Heliport Name	FAA ID	Distance and Direction ^a	Runways and Approach Classifications ^b	14 CFR Part 77 Applicability ^c	Anticipated Project Impact Determination ^d
Public Use Facilities Subject to 14 CFR Part 77					
Warrenton/ Fauquier Airport	HWY	5.5 nm W	15[D] / 33[C]	Applicable	No impact, No 14 CFR Part 77 surface overlap
Manassas Regional Airport	HEF	8.9 nm NE	16L[PIR] / 34R[C] 16R[C] / 34L[B(V)]	Applicable	No impact, No 14 CFR Part 77 surface overlap
Private Use Facilities					
Maples Field Airport	VG57	1.2 nm N	04[A(V)] / 22[A(V)]	NA, No IAP	No Impact
Walnut Hill Airport	58VA	2.5 nm W	18 / 36	NA, No IAP	No Impact
Rambo Airfield Airport	OVA0	4.9 nm SW	13[A(V)] / 31[A(V)]	NA, No IAP	No Impact
Flying Circus Aerodrome Airport	3VA3	5.7 nm W	02/20 16/34	NA, No IAP	No Impact
Valley View Airport	8VA9	6.7 nm N	02[A(V)] / 20[A(V)]	NA, No IAP	No Impact
Rhynalds Ranch Airport	29VA	7.0 nm W	10/28	NA, No IAP	No Impact
Skyview Airport	51VA	8.0 nm N	09/29	NA, No IAP	No Impact
Horse Feathers Airport	53VA	8.2 nm W	18/36	NA, No IAP	No Impact
Aviacres Airport	3VA2	9.3 nm W	06/24	NA, No IAP	No Impact
Lost Griz Aerodrome Airport	7VG0	10.0 nm NW	04[A(V)] / 22[A(V)] 15[A(V)] / 33[A(V)]	NA, No IAP	No Impact

FAA = Federal Aviation Administration; NA = not applicable; OE/AAA = Obstruction Evaluation/ Airport Airspace Analysis; IAP = FAA Approved Instrument Approach Procedure

^a Distance (nm) measurements and approximate direction (cardinal directions; N, NE, E, SE, S, SW, W, NW) were calculated via standard ArcGIS Geoprocessing tools (Near Analysis), utilizing route centerlines and established airport reference points retrieved from the FAA ADIP. 'Nearest project facility' may refer to any point along a route centerline that is geographically nearest to the Established Airport Reference Point. Runways and airport property boundaries may be closer to a project component than calculated and presented in the above table.

^b Runway identification numbers and approach classifications were obtained via the FAA ADIP: <https://adip.faa.gov/agis/public/#/public>; Refer to Section 3.2.1.1.1 and Table 3.2-3 for Approach Classification definitions.

^c Public airports and private facilities with at least one FAA approved IAP are subject to 14 CFR Part 77.

^d Impact determination based on the company's review of 14 CFR Part 77 regulations and airport imaginary surface modeling using standard GIS tools. Refer to impact assessment section for additional information Impact Assessment



5.1.11.2 IMPACT ASSESSMENT

Public Airports

Based on ERM's airport analysis, the structures associated with Segment 2A are not expected to overlap with or exceed any portion of the 14 CFR Part 77.19 defined imaginary surfaces or 14 CFR Part 77.9 defined notification thresholds for Warrenton/ Fauquier Airport or Manassas Regional Airport. In addition, no structures would exceed 14 CFR Part 77.17 obstruction standards. Based on the results of the OE/AAA prescreening review, none of the final structures would be requested for review by the FAA.

Dominion would use cranes to install the Project's transmission structures. The typical temporary crane height needed for construction would be approximately 35 feet above the structure height. The 500 kV structures along Segment 2A would range in height from 151 to 197 feet above ground surface, with an average height of approximately 183 feet, including foundation reveal. Any temporary structure that exceeds 200 feet above ground surface would require notification to the FAA under 14 CFR Part 77.9 and could be considered a temporary impact to air navigation. As crane usage is temporary in nature and would occur in discrete locations during phased construction, Dominion anticipates that the FAA would likely issue an "Exceeds But Okay" determination, as defined in FAA Order JO 7400.2R.7-1-3.b (FAA, n.d.-c), indicating that a temporary structure exceeds obstruction standards but does not result in a substantial adverse effect.

None of the final structures along Segment 2A are anticipated to cause impacts to air navigation, though Dominion plans to submit notification to the FAA prior to construction for all temporary and permanent structures. Dominion would utilize FAA Form 7460-1—Notice of Proposed Construction or Alteration via the OE/AAA online portal to complete the notification. Dominion would complete the notifications after the SCC has approved the Project, during the permitting phase, and at least 45 days before the start of the proposed construction or the date an application for a construction permit is filed, whichever is earliest.

Private Airports

The FAA does not regulate private airports and heliports without at least one FAA approved IAP under 14 CFR Part 77, though the Company reviews the location of private facilities near proposed transmission line structures to ensure potential safety hazards to private air navigation are mitigated. Based on ERM's review of private facilities within 10 nm of Segment 2A, no impacts on private air navigation are anticipated due to distance from the nearest facility. As such, no additional review of private facilities near Segment 2A is included in this report.

5.2 NATURAL RESOURCES

5.2.1 SURFACE WATERS

5.2.1.1 WATERSHEDS

Segment 2A is entirely within the following HUC watersheds:

- Potomac HUC 4-digit (0207) subregion, which drains about 14,600 square miles within the Potomac River basin, including Washington D.C. and portions of Maryland, Pennsylvania, Virginia, and West Virginia;
- Middle Potomac-Anacostia-Occoquan HUC 8-digit (02070010) watershed; and
- Cedar Run HUC 10-digit (0207001006) watershed (USGS 2023).

Waterbodies along the segment include Town Run, Anderson Branch, Elk Run, Negro Run, and associated tributaries (Figure 4.2.1-1). Surface waters generally flow northeast into Cedar Run.

5.2.1.2 Wetlands

Existing Conditions

The majority of Segment 2A is within the Company's existing Morrisville-Wishing Star Corridor, surrounded on either side by forest or agricultural land. About 0.8 acre of expanded right-of-way would also be required south of Courthouse Road.

Table 5.2-1 provides the areas in acres assigned high, medium-high, or medium probabilities of containing wetlands along Segment 2A (see the Wetland and Waterbody Desktop Study in Attachment 2.D.1 of the DEQ Supplement). The segment encompasses approximately 11.7 acres of wetlands and waterbodies, predominantly within Dominion's cleared and maintained right-of-way, associated with Town Run and its intermittent tributaries (Figure 4.2.1-1). Wetlands within the Cedar Run watershed generally flow northeast into Town Run. Large areas of PEM wetlands are concentrated around Town Run in the northern portion of Segment 2A.

Maps depicting the identified aquatic resources and their probabilities of occurrence are provided in Attachment 2.D.1 of the DEQ Supplement. Section 5.2.1.3 describes riverine and PUB features.

TABLE 5.2-1 ACREAGE OF HIGH, MEDIUM-HIGH, AND MEDIUM PROBABILITY WETLANDS AND WATERBODIES WITHIN THE SEGMENT 2A FOOTPRINT

Surface Waters	Segment 2A acres ^a
Total	11.7
Palustrine Forested	NA
Palustrine Scrub-shrub	NA
Palustrine Emergent	11.1
Palustrine Unconsolidated Bottom	0.1
Riverine	0.5

NA = Not applicable due to absence of a wetland type within the Project footprint

^a Values have been rounded to the tenth place; as a result, the totals may not reflect the sum of the addends. A value of <0.1 indicates that less than 0.05 but more than 0.0 acre of a wetland type is present.

Impact Assessment

As noted, Segment 2A is mostly within the Company's existing, maintained right-of-way, which would avoid clearing of PFO wetlands. Within PEM wetlands, temporary impacts on surface

vegetation would result from vehicle and equipment traffic, and permanent impacts would result from any placement of new transmission structures if installed in wetlands. Impacts and mitigation measures are further described in Section 3.2.2.1.

5.2.1.3 WATERBODIES

Existing Conditions

Table 5.2-2 lists the number and type of waterbody crossings for Segment 2A. Based on the Wetland and Waterbody Desktop Study (Attachment 2.D.1 of the DEQ Supplement) methodology, the segment encompasses approximately 0.5 acre of riverine features and 0.1 acre of PUB open waterbody features. Segment 2A crosses 12 waterbodies (of which 7 are NHD-mapped). Attachment 2.D.1 of the DEQ Supplement depicts waterbody crossing locations for the Project. Segment 2A intersects perennial Town Run twice, as well as unnamed perennial and intermittent tributaries and stormwater features.

TABLE 5.2-2 WATERBODIES CROSSED BY SEGMENT 2A

Waterbodies Crossed	Segment 2A count
Total	12
NHD-mapped perennial streams/rivers	4
NHD-mapped intermittent streams/rivers	3
NHD-mapped perennial lakes/ponds	0
Non-NHD-mapped waterbodies ^a	5 ^b

Source: USGS 2025a.

NHD = National Hydrography Dataset

^a Identified using recent (2025) aerial imagery (Planet Imagery 2025 (VGIN 2025; Prince William County 2025)

^b These surface waters identified using aerial imagery were stormwater ponds rather than natural features.

Impact Assessment

Segment 2A is predominantly within the Company's existing, maintained right-of-way or in limited expanded areas. There would be some tree clearing around two intermittent tributaries to Town Run due to the Project. See the discussion of waterbody impacts in Section 3.2.2.1 for additional details.

5.2.2 NATURAL HERITAGE RESOURCES

5.2.2.1 CONSERVATION SITES

Existing Conditions

The VDCR did not identify any CSs within the study area near Segment 2A; therefore, this component of the Project would have no impact on such resources.

5.2.2.2 STREAM CONSERVATION SITES

Existing Conditions

The VDCR did not identify any SCSs within the study area near Segment 2A; therefore, this component of the Project would have no impact on such resources.

5.2.2.3 ECOLOGICAL CORES

Existing Conditions

Table 5.2-3 summarizes existing conditions for each ecological core crossed by Segment 2A. Figure 4.2.2-2 depicts each core relative to the Project.

TABLE 5.2-3 VDCR-MAPPED ECOLOGICAL CORES CROSSED BY SEGMENT 2A

Ecological Core Rank	Ecological Core ID	Total Core Acreage	Total Acres of Expanded/New ROW Crossed	Total Acres of Existing ROW Crossed	Existing Condition
C1	NA	NA	NA	NA	NA
C2	NA	NA	NA	NA	NA
C3	NA	NA	NA	NA	NA
C4	NA	NA	NA	NA	NA
C5	40605	172	NA	6.0	Mostly forested
	40688	54	NA	1.0	Almost entirely cleared

Notes: ROW = right-of-way, NA = not applicable

Impact Assessment

While Segment 2A crosses two C5-ranked ecological cores, the crossings occur in areas where the Project is limited to the Company's existing Morrisville-Wishing Star Corridor. Because no additional right-of-way is required, there would be no new tree clearing within the cores.

5.2.3 PROTECTED SPECIES

5.2.3.1 FEDERAL- AND STATE-LISTED THREATENED AND ENDANGERED SPECIES

See Section 4.2.3 for a discussion of federal- and state-listed species with potential to occur in the study area and/or within a 2.0-mile buffer around the study area.

Existing Conditions

Federal-Listed Species

There are no confirmed occurrences of federal-listed species present within the study area and/or a 2.0-mile buffer around the study area near Segment 2A.

State-Listed Species

There are no confirmed occurrences of state-listed species present within the study area and/or a 2.0-mile buffer around the study area near Segment 2A.

Impact Assessment

Based on the above discussion, the Company's plan to build most of Segment 2A within existing right-of-way, and the limited tree clearing thereby required, impacts on federal- and state-listed species are not anticipated for this Project component.

Assuming the Commission authorizes the Project, Dominion will coordinate with state and federal agencies as needed to determine if surveys, construction TOYRs, or other mitigation would be required to mitigate potential impacts on T&E species for Segment 2A and the Project.

5.2.3.2 BALD EAGLE MANAGEMENT

Existing Conditions

The eagle nest nearest to Segment 2A (Nest ID ST1302) lies approximately 5.2 miles to the southeast. This nest was observed to be occupied in 2013 (CCB 2022).

Impact Assessment

ERM did not identify any eagle nests within the 660-foot buffer of Segment 2A. If eagle nests should be identified within 660 feet of the segment, Dominion would work with the VDWR and other appropriate agencies to develop and implement measures to minimize any impact on the species.

5.2.3.3 OTHER SPECIES OF INTEREST

Existing Conditions

The VDCR reviews of the Project found that Segment 2A does not cross diabase soils or CSs associated with the rare plants listed in Section 4.2.3 (VDCR 2024b, 2025b).

Impact Assessment

While Segment 2A does not cross diabase soils or CSs associated with rare plants, the VDCR indicated that site-specific field investigations are necessary for detailed habitat and impact analysis. In suitable habitat types that meet specific requirements for any of these rare plant species, VDCR recommends conducting detailed plant inventories and coordinating with VDCR biologists to minimize habitat impacts. If suitable habitat conditions for these species should be identified within the Project footprint, the Company would work with the VDCR and appropriate regulatory agencies to identify and implement measures to minimize impacts on rare plants and/or rare plant habitat.

5.2.4 VEGETATION

5.2.4.1 EXISTING CONDITIONS

Local Vegetation Characteristics

Segment 2A is located mostly within a maintained Dominion right-of-way bordered on both sides by agricultural land and some forested areas. The segment is situated entirely within the Northern Piedmont physiographic province, described in Section 3.2.2.4. Because Segment 2A would be mostly limited to the Company's existing Morrisville-Wishing Star Corridor, the area generally consists of open space with maintained herbaceous vegetation (Table 5.2-4 and Figure 4.1.2-1). Approximately 0.4 mile of variable-width right-of-way would be needed south of Bristers Junction on the west side of the existing corridor, but the additional right-of-way is mostly cleared land. About 0.4 acre of forested land would be impacted along the segment.

TABLE 5.2-4 ACREAGE OF VEGETATION TYPES CROSSED BY SEGMENT 2A

Vegetation Cover Type	Unit	Existing Right-of-Way	Expanded Right-of-Way
Agriculture	acres	0.0	2.9
Forested	acres	0.0	0.4
Open Space	acres	45.3	0.0
Total ^a	acres	45.3	3.3

Sources: VGIN Land Cover data with aerial photo interpretation by ERM (VGIN 2025)

^a Totals may not match the sum of the addends due to rounding.

Forest Conservation Values

Table 5.2-5 summarizes the area of FCV within the existing and expanded right-of-way for Segment 2A. While FCV values have been assigned to the area within the existing right-of-way, the corridor is entirely cleared and maintained in herbaceous vegetation. As noted above, only 0.4 acre of forest would be impacted by the Project along Segment 2A, none of which is classified FCV.

TABLE 5.2-5 FOREST CONSERVATION VALUE ALONG SEGMENT 2A

Forest Conservation Value	Unit	Existing Right-of-Way	Expanded Right-of-Way
Average (1)	acres	3.8	0.0
Moderate (2)	acres	5.4	0.0
High (3)	acres	5.6	0.0
Very High (4)	acres	0.4	0.0
Outstanding (5)	acres	0.0	0.0
Total ^a	acres	15.2	0.0

^a The sum of the addends may not equal the totals due to rounding.

5.2.4.2 IMPACT ASSESSMENT

Potential impacts on herbaceous vegetation in the existing corridor could result from vehicle and equipment traffic, equipment staging, and installation of new structures. Disturbed areas would be re-vegetated and maintained in an herbaceous cover. Only 0.4 acre of forest would be permanently cleared and maintained for the Segment 2A component of the Project, none of which is classified as FCV.

5.3 CULTURAL RESOURCES

5.3.1 ARCHAEOLOGICAL SITES AND FINDINGS

Crossings of archaeological sites are considered a routing constraint due to the potential for an electric transmission line to impact intact archaeological deposits, if present, because of tree clearing, transmission structure placement, or the use or movement of heavy equipment within a site. A confident and complete assessment of the integrity of each site would require archaeological field investigations. A survey would be completed in a subsequent phase of study for the Project along the routes certificated by the SCC.

Stantec identified two known archaeological sites within the rights-of-way of Segment 2A (Table 5.3-1).

TABLE 5.3-1 PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF SEGMENT 2A

Site Number	New or Existing/Expanded Right-of-Way	Description	NRHP Status
44FQ0106	Expanded	Camp, Pre-Contact	Unevaluated
44FQ0110	Existing	Camp, Pre-Contact	Potentially Eligible

Source: VDHR 2026.

NRHP = National Register of Historic Places

5.3.2 ABOVEGROUND HISTORIC RESOURCES AND FINDINGS

5.3.2.1 EXISTING CONDITIONS

This section presents information on known aboveground cultural resources near Segment 2A, using VDHR’s tiered study area model described above. Figure 4.3.2-1 depicts the locations of resources relevant to Segment 2A. Attachment 2.I.1 of the DEQ Supplement, the Pre-application Report, provides a description, location, and impact assessment for each resource.

Table 5.3-2 provides information on the considered resources within the VDHR study tiers for Segment 2A. As detailed in the Stage 1, Segment 2A would have a minimal impact on one resource (030-5161) and a moderate impact on one resource (030-5588).

TABLE 5.3-2 ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR SEGMENT 2A

Buffer (miles)	Resource Category	Resource Number	Description	Impact
1.0 to 1.5	National Historic Landmarks	Not applicable	None identified	Not applicable
0.5 to 1.0	National Register Properties (Listed)	030-5161	Bristersburg Historic District	Minimal
0.0 to 0.5	National Register—Eligible	Not applicable	None identified	Not applicable
0.0 (within right-of-way)	National Register—Eligible	030-5588	Elk Run Rural Historic District	Moderate

Source: VDHR 2026.

VDHR = Virginia Department of Historic Resources

5.4 VISUAL RESOURCES

Appendix C provides more detailed information about existing visual conditions and visual impacts along Segment 2A.

5.4.1 EXISTING CONDITIONS

Segment 2A is within the southeastern corner of Fauquier County, near Bristers Station, in a mixture of agricultural and rural residential areas interspersed with forested areas. The segment crosses through one Rural Agriculture and Residential Landscape Unit. The visual characteristics of this landscape unit type are summarized in Section 4.4.1 for Segment 1, and described in more detail in Appendix C.

There are no VSRs along Segment 2A. Additionally, there is only one road crossed by Segment 2A from which viewers would encounter and view the new transmission line infrastructure. Cromwell Road (Rt. 639) passes under the proposed transmission line to the north of the Bristers Substation. This road is a two-lane, paved, and striped roadway running northwest-southeast

between Elk Run Road to the west and Bristersburg Road to the east (AADT is not available for this road). The primary viewer groups on this road include local residents, motorists, and workers.

5.4.2 VISUAL IMPACT ASSESSMENT

While there are no KOPs along Segment 2A and limited opportunities for public visibility, the types of visual resource changes would be commensurate with those in a Rural Agricultural and Residential Landscape Unit. That is, there would be few to no changes to existing landforms and vegetation, but there would be changes in the visual characteristics of the built environment. A small expansion of the existing right-of-way at the northern end of the segment may require additional vegetation clearing and corresponding small changes in the forms and lines of the vegetation in this area. The proposed Project’s primary change from Segment 2A would be the new monopoles that replace the existing lattice structures within the cleared right-of-way.

As noted for Segment 1, the new monopoles would appear as tall, solid, vertical structures with short horizontal cross arms connected by a series of thin, parallel, horizontal overhead lines that form gentle waves as they stretch between towers. The existing lattice structures have an open, angular, skeletal form with a larger physical footprint that makes them appear visually expansive and complex. While the new monopole structures would be taller than the existing lattice structures, they generally appear more compact, sleeker, and less complex. These visual changes would be most apparent in limited foreground views (less than 0.5 mile) and adjacent middle ground (0.5 to 2 miles) areas where open fields, roads, and other locations with few to no screening features provide occasional open, panoramic views of the landscape.

As noted in Table 5.4-1, Segment 2A would result in minor impacts on visual resources.

TABLE 5.4-1 SEGMENT 2A—VISUAL RESOURCE IMPACT SUMMARY

Landscape Unit Type / Component	Impacted VSRs	Impacted Areas and Viewer Groups	Impacted Viewer Groups	Potential Impact Rating
Rural Agriculture and Residential / Segment 2A	Total: 0	Road crossings: Existing right-of-way— 1 crossing	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Workers 	Degree of Visual Change: Small Viewer Sensitivity: Low to high Overall Rating: Minor

NA = not applicable; VSR = visually sensitive resource.

5.4.3 VISUAL IMPACT SUMMARY

Segment 2A is fully within the Rural Agriculture and Rural Residential Landscape Unit. The open agricultural parcels allow for open views of the Project while forested areas would screen full views of the structures. Additional vegetation clearing for the right-of-way expansion would create a negligible to minor impact due to the existing landscape having a low number of trees and tall woody vegetation in this area. As noted above in Section 4.4.2 for Segment 1, the changes to the built environment would include the introduction of tall, vertical, linear structures with less visual complexity compared to existing conditions. There is one public road crossing for Segment 2A and

most residences to the east have screened views due to forested areas and topography. Overall, because of limited visibility and small changes to the existing visual characteristics, the proposed Project would result in minor impacts to visual resources.

5.5 ENVIRONMENTAL JUSTICE

5.5.1 EXISTING CONDITIONS

Based on the EJ criteria thresholds for race, ethnicity, income, and limited English-speaking households described in Section 3.2.5, the CBG crossed by Segment 2A does not meet EJ criteria (Figure 3.5.2-1). Table 5.5-1 provides population and demographic information for this CBG.

5.5.2 IMPACT ASSESSMENT

Based on EJ criteria thresholds, Segment 2A would not cross any potential EJ communities. As discussed below, impacts on views, property values, and health from construction activities are also not anticipated to be significantly adverse. As such Segment 2A would not have overall significantly adverse impacts on potential EJ communities. Section 3.2.5 discusses impacts on EJ communities more broadly. The below analysis addresses Segment-specific information.

5.5.2.1 CONSTRUCTION ACTIVITIES

The primary noise receptors in the study area would be residents along Segment 2A. There are 4 residences within 500 feet of the Segment 2A Impact Centerline. Construction will be temporary and occur during daylight hours. During operations, noise and visual conditions are expected to remain consistent with the current environment.

5.5.2.2 VISUAL IMPACTS

Section 5.4 assesses Segment 2A visual impacts. While there are no potential EJ communities crossed by Segment 2A, the KOPs used in the analysis of visual impacts are representative of views in the area. As detailed in Section 5.4.2, Segment 2A would have a small degree of visual change and the overall impact rating on visual resources would be minor.

5.5.2.3 PROPERTY VALUES AND HEALTH IMPACTS

There are four homes that are within 500 feet of the Segment 2A Impact Centerline. Section 3.2.5 addresses the effect of transmission lines on property values and health impacts.

TABLE 5.5-1 ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY SEGMENT 2A

Geography	Population	Total Populations of Color	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic or Latino	Low-Income Population	Limited English-Speaking Household
Virginia	8,657,499	41%	59%	18%	0.1%	7%	0.1%	0.5%	4%	11%	23%	3%
Fauquier County	73,935	24%	76%	6%	0.0%	2%	0.0%	0.5%	4%	12%	15%	2%
CT 9307.04 BG 3	1,464	15%	85%	5%	0.0%	1%	0.0%	0.0%	3%	7%	17%	0%

Sources: U.S. Census Bureau 2023a, 2023b, 2023c (Tables B03002, C17002, C16002); VADEQ 2025

CT = Census Tract; BG = Block Group

Gray shaded cells include reference population.

5.6 GEOLOGICAL RESOURCES

5.6.1 EXISTING CONDITIONS

Segment 2A encounters sedimentary bedrock belonging to the Newark Supergroup primarily comprised of sandstone, siltstone, and shale for its entirety (USGS 2005). There are no active mines or mineral resources within 0.25 miles of Segment 2A (Virginia Energy 2024a,b).

5.6.2 IMPACT ASSESSMENT

Because there are no active permitted mining sites or inactive mineral resource prospects within 0.25 miles of the routes, the Project would have no impact on mineral resources.

6. SEGMENT 2B RESOURCES AND IMPACTS

6.1 LAND USES

6.1.1 PUBLIC LANDS

6.1.1.1 EXISTING CONDITIONS

Segment 2B crosses a complex of county-owned land in Prince William County associated with its Department of Fire and Rescue Public Safety Training Center (Figure 1.6-1). No other public-owned land is crossed by or within 0.25 mile of the Segment 2B Impact Centerline.

Prince William County Land

The Company's existing Morrisville-Wishing Star Corridor crosses about 4,180 feet of Prince William County land in the southwest corner of the intersection at Warrenton and Carriage Ford Roads, encompassing about 23 acres of right-of-way. The land consists of five contiguous parcels, one of which contains the Public Rescue Training Center, a training facility for firefighters, emergency medical technicians, and paramedics (Prince William County 2025a). The center is about 0.2 mile west of the Company's existing right-of-way and would not be impacted by the Project. Of the three remaining parcels in the complex, two are undeveloped and one is partially developed, containing storage facilities and a water tower. The County is reserving the undeveloped lands for future public safety training needs should such needs arise. None of the County-owned lands crossed by the existing transmission corridor are used by Prince William County for training. The County supports use of the existing corridor for the Project.

6.1.1.2 IMPACT ASSESSMENT

Project activities across the County-owned land would be limited to the Company's existing transmission corridor as no additional right-of-way would be required. There would be no impact on existing land uses within the County lands, which as noted above, are undeveloped where crossed by the Company's right-of-way. The only change would be in the number and configuration of transmission structures.

6.1.2 LAND USE AND LAND COVER

6.1.2.1 EXISTING CONDITIONS

The predominant land use and land cover type along Segment 2B is open space (83 percent), followed by forest and agricultural land (8 percent each) and developed land (<1 percent). The forest, agricultural, and developed lands predominantly occur in areas along Segment 2B where the Company's existing Morrisville-Wishing Star Corridor would be expanded or the segment passes around substations. Land use and land cover types within Segment 2B are depicted on Figure 4.1.2-1 and summarized in Table 6.1-1.

TABLE 6.1-1 LAND USE/LAND COVER CROSSED BY SEGMENT 2B (ACRES)

Land Use/Land Cover ^a	Unit	Segment 2B
Total right-of-way ^b	Acres	365.4
Agricultural	Acres	29.9
Forested	Acres	30.3
Developed	Acres	0.7
Open Space	Acres	304.5
Open Water	Acres	0.0

^a Based on local and statewide data sets and aerial photo interpretation by ERM. Acreage includes the proposed new rights-of-way.

^b Land use/land cover acreage the totals may not match the sum of the addends due to rounding.

6.1.2.2 IMPACT ASSESSMENT

Segment 2B requires about 365.4 acres of right-of-way, of which 297.2 acres consist of existing right-of-way, 59.6 acres of expanded, and 8.6 acres of new right-of-way Segment 2B. The primary impact of Segment 2B on land use and cover would be the conversion of forested land to an herbaceous cover within expanded or new right-of-way. Except for land directly beneath transmission structures, operation of the Project would not impact current uses of agricultural, open space, and developed land. Because Segment 2B primarily uses existing right-of-way or expansions or new right-of-way adjacent to the Morrisville-Wishing Star Corridor, there would be no impact to current uses of open space, developed land, agricultural land, and only minimal impact on forested land which would be converted to open space.

6.1.3 LAND USE PLANNING AND ZONING

6.1.3.1 EXISTING CONDITIONS

Table 6.1-2 lists and describes the zoning districts within 0.25 mile of Segment 2B Impact Centerline. Because Dominion would obtain a CPCN from the SCC, the Project would be exempt from zoning requirements. This section provides information on zoning districts to assess general land use compatibility with the Project. Zoning is not further analyzed in this report.

TABLE 6.1-2 ZONING DISTRICTS WITHIN 0.25 MILE OF SEGMENT 2B IMPACT CENTERLINE

Zoning District	Description and Allowed Uses
Fauquier County	
Agriculture	Designed to protect and preserve agricultural uses and to mitigate land use conflicts between agricultural uses and limited residential development. Contains areas where agriculture and forestry are the predominant uses or where significant agricultural lands or large lot farmette-type residential development is present.



Zoning District	Description and Allowed Uses
Prince William County	
Agricultural	Encourages conservation of natural resources including prime agricultural land, forest land, and/or open space as well as rural character preservation.
Residential Planned Community	Promotes residential development in planned developments of 500 contiguous acres or more under one ownership. The district encourages a variety of housing accommodations and land uses compatible with planned communities such as school sites, parks, playgrounds, recreational areas, etc.
Heavy Industrial	Encourages the development of heavy and intensive industrial processing, manufacturing, and storage.

In addition to the zoning districts noted above, Segment 2B crosses a portion of the Data Center Opportunity Zone Overlay District in Prince William County. The overlay district includes areas in Prince William County, including along its border with Fauquier County, designated for data center and advancing high-tech industrial development.

6.1.3.2 IMPACT ASSESSMENT

Segment 2B crosses/encompasses parts of three zoning districts as depicted on Figure 3.2.1-1 and listed in Table 6.1-3. About 96 percent of the segment is within agricultural districts in Fauquier and Prince William counties, with 4 percent within an industrial district. As discussed in further detail below, there are relatively few homes along and near Segment 2B, which is consistent with the zoning. Additionally, the Project is consistent with the intended land uses (data centers and industrial development) of the Data Center Opportunity Zone Overlay District.

TABLE 6.1-3 ZONING DISTRICTS CROSSED BY SEGMENT 2B

Zoning District	County	Unit	Segment 2B Right-of-Way		
			Existing	Expanded	New
Agricultural (RA)	Fauquier	acres	109.9	25.9	5.5
Agricultural (A-1)	Prince William	acres	177.4	31.6	3.1
Heavy Industrial (M-1)	Prince William	acres	9.9	2.0	0.0

6.1.4 RESIDENTIAL AREAS AND RESIDENCES

6.1.4.1 EXISTING CONDITIONS

Table 6.1-4 lists the number of residences within 100 feet, 250 feet, and 500 feet of the Segment 2B Impact Centerline, while Figure 4.1.4-1 depicts the locations of homes and neighborhoods along the Project segments. Each of the residences are single-family detached dwellings on agriculturally zoned properties. The highest densities of dwellings within 500 feet of Segment 2B



Impact Centerline generally occur at or near road crossings, particularly Carriage Ford Road, Laws Ford Road, Nokesville Road, and Reid Lane.

TABLE 6.1-4 DWELLINGS NEAR SEGMENT 2B IMPACT CENTERLINE

Route Alternative	Dwellings within 100 Feet of Impact Centerline	Dwellings within 250 Feet of Impact Centerline	Dwellings within 500 Feet of Impact Centerline
Segment 2B	0	11	41

6.1.4.2 PLANNED RESIDENTIAL AREAS

There are two planned residential developments within 500 feet of Segment 2B Impact Centerline: Hawthorne at Kettle Run and Alderwood at Kettle Run. These are discussed in Section 6.3.6.

6.1.4.3 IMPACT ASSESSMENT

Residents along and near Segment 2B could be impacted by construction noise, dust, or traffic, but these impacts would be short term and temporary, limited to the period of construction. The change in the configuration, number, and heights of structures would alter existing visual conditions from homes and could expand the number of homes with views to transmission structures due to the increase in heights, but the impact would be consistent with existing conditions. The corridor will continue to operate as a transmission right-of-way during Project operations. Visual impacts are further discussed in Section 4.4.

6.1.5 COMMERCIAL/INDUSTRIAL AREAS AND BUILDINGS

6.1.5.1 EXISTING CONDITIONS AND IMPACTS

There are no commercial or industrial buildings or areas within 500 feet of Segment 2B Impact Centerline. Therefore, no such buildings or areas would be impacted by this component of the Project.

6.1.6 PLANNED DEVELOPMENTS

6.1.6.1 EXISTING CONDITIONS

Table 6.1-5 lists planned developments within 0.25 mile of Segment 2B Impact Centerline, identifying the location, type, and status of each (as of December 2025). Figure 4.1.6-1 depicts the boundaries and proposed building footprints (where known) for the developments. Section 6.1.6.2 provides additional information on those planned developments crossed by the Project, with planned recreational resources, mainly trails, discussed separately in Section 6.2.6.3.

TABLE 6.1-5 PLANNED DEVELOPMENTS WITHIN 0.25 MILE OF SEGMENT 2B IMPACT CENTERLINE

Development Name	Development Type	Status	Approximate Distance to Project Facilities
Public Safety Training Facility	Commercial	Approved	Segment 2B crosses the center of the site.
Haijoe Property	Industrial/ Manufacturing	Rezoning request under review	Segment 2B is 0.1 mile east of site boundary.
Madera Farm	Industrial	Rezoning request under review	Segment 2B crosses westernmost portion of the site.
Hawthorne at Kettle Run	Residential	Approved	Segment 2B crosses western portion of site.
Reid Energy Center	Battery Energy Storage Facility	Site plan under review	Segment 2B crosses eastern portion of the site.
Vint Hill Station	Electrical Substation	Under review	Segment 2B crosses the center of the site.

6.1.6.2 IMPACT ASSESSMENT

Five of the six planned developments listed in Table 6.1-5 are crossed by Segment 2B. The area of existing and proposed expanded right-of-way along the segment within each of these developments is summarized in Table 6.1-6. Potential impacts on the developments are discussed below. There would be no impact on the Haijoe Property development, which is not crossed by the Project.

TABLE 6.1-6 PLANNED DEVELOPMENT CROSSINGS (ACRES)

Development Name	Existing Right-of-Way	Expanded Right-of-Way
Public Safety Training Facility	12.6	0
Madera Farm	5.1	2.0
Hawthorne at Kettle Run	19.7	5.7
Reid Energy Center	3.3	0.9
Vint Hill Substation	3.7	2.4
Total ^a	44.4	10.9

^a Totals may not match the sum of the addends due to rounding.

Impact Summary

Public Safety Training Facility

Prince William County approved a public facilities review (PFR2024-00012) on February 26, 2025, and an early-grading site plan site plan (SPR2025-00297) on May 5, 2025, for construction of a new, approximately 25,000-square-foot classroom building on county-owned land. The building,

which will be used for police and fire training, will include classroom space, administrative support space, and a parking lot. The schedule for the project is unknown.

While about 0.5 mile of Segment 2B crosses the County-owned land containing the planned development, the Project would be confined to the Company's existing Morrisville-Wishing Star Corridor in this area. Moreover, the boundaries of the planned development are approximately 480 feet east of the existing right-of-way, with forest in between. For these reasons, there would be no impact on the planned development from the Project.

Madera Farm

This project's proponent submitted a request on September 17, 2024 (REZ2025-00007) to Prince William County for rezoning approximately 229 acres of agricultural to heavy industrial land. The rezoning would allow for future unspecified industrial use of the site. The request is under review by the County.

The Company's existing Morrisville-Wishing Star Corridor crosses the western edge of the area subject to the rezoning request for about 0.2 mile. An additional up to 80 feet of expanded right-of-way adjacent to the existing corridor would be required across the parcel. The expanded right-of-way is approximately 170 feet west of the Land Bay A limit of disturbance as indicated on a site plan for the rezoning application. Expansion of the existing corridor for the Project would reduce the area available for forest retention along the western edge of the Madera site by approximately 1.8 acres. This would not prohibit the planned industrial use within Land Bay A. Moreover, we note that transmission lines are compatible with industrial land uses.

Hawthorne at Kettle Run

On December 9, 2025, Prince William County approved a request to rezone approximately 462 acres of agricultural to planned mixed residential (PMR) land (REZ2024-00034) south of Vint Hill Road and east of the Company's Morrisville-Wishing Star Corridor. The project proponent plans to construct up to 277 single-family detached and attached homes within the development. The schedule of the project is unknown.

Segment 2B crosses approximately 0.7 mile of the western edge of the development, with the nearest planned residence about 730 feet east of the Segment 2B Impact Centerline. A 65-foot-wide expansion of the existing right-of-way would be required in this area, within which no future housing is currently planned. A forested buffer of 730 feet or more would remain between the planned future houses and the expanded right-of-way required for the Project. For these reasons, the planned development would not be impacted by the Project.

Reid Energy Center

The proponent of this project submitted a site plan for a battery energy storage facility to Prince William County on January 20, 2025 (SPR2025-00233). The site plan for the development identified eight battery enclosures and six inverter/transformer pads to support a battery energy storage system (BESS) area. The project timeline including the start of construction and planned in-service dates have not been determined. The site plan is under review by the County.

The Company's existing transmission corridor bisects the parcel, with the planned BESS facility about 100 feet west of the right-of-way. The right-of-way would be expanded by 65 feet to the east across the parcel. Therefore, there would be no impact of the Project on the future BESS facility, which we note is a compatible use for an electric transmission line.

Vint Hill Station

Dominion submitted a special use permit application for a proposed expansion and upgrade of the Company's existing Vint Hill Station to Prince William County on September 9, 2025. This project would convert the station to gas-insulated equipment and accommodate the networking of transmission line interconnections into the facility. Dominion designed the Project to avoid conflicts with the Vint Hill expansion and upgrade. The application is under review by Prince William County.

6.1.6.3 PLANNED RECREATIONAL RESOURCES

Existing Conditions

ERM identified three planned recreational trails along and near Segment 2B (Table 6.1-7). These projects include a planned paved shoulder along Carriage Ford Road, a planned shared use path along Nokesville Road from Fitzwater Drive to the Fauquier County line, and a planned paved shoulder along Fitzwater Drive from Burwell Road to Nokesville Road. These are envisioned to promote further mobility alternatives and active transportation throughout the County.

TABLE 6.1-7 PLANNED RECREATIONAL RESOURCES WITHIN 0.25 MILE OF SEGMENT 2B IMPACT CENTERLINE

Recreational Resource	Recreation Type	Status	Approximate Distance to Project Facilities
Carriage Ford Road Paved Shoulder	Planned paved shoulder extending from Aden Road to the Fauquier County line	Planned in PWC Mobility Plan	Crossed by and adjacent to Segment 2B
Nokesville Road Shared Use Path	Planned shared use path extending from Fitzwater Drive to the Fauquier County line	Planned in PWC Mobility Plan	Crossed by Segment 2B
Fitzwater Drive Paved Shoulder	Planned paved shoulder extending from Burwell Road to Nokesville Road	Planned in PWC Mobility Plan	Crossed by Segment 2B

PWC = Prince William County.

Impact Assessment

The Project would not impact Prince William County's ability to construct the planned shoulders/path listed in Table 6.1-7 nor would it prevent use of these features, which would be compatible with an electric transmission right-of-way. Moreover, the trails and greenways are unlikely to be impacted by structure placement as they generally would be adjacent to linear features like roads or waterbodies and either within road right-of-way or on public lands.

6.1.7 CONSERVATION EASEMENTS AND LANDS

6.1.7.1 EXISTING CONDITIONS

ERM identified 11 easements within 0.25 mile of Segment 2B Impact Centerline, five of which are crossed (Table 6.1-8 and Figure 4.1.7-1). The easements include Fauquier County AFD and PDR easements; Prince William County AFD easements; VDHR easements; easements held by a private land trust (NVCT); and easements held by wetland mitigation banks (Broad Water Innovations, Evergreen Environmental, and Marsh Resources). Descriptions of the Fauquier County PDR and AFD programs are provided in Section 4.1.7. Descriptions of the VDHR and other easement programs are provided below.

Prince William County

The Prince William County Parks, Recreation & Open Space Master Plan outlines the importance and need for recreational areas and open spaces, especially with the increasing trend of developing smaller single-family lots with small yard spaces (PWC Parks and Recreation 2020). In addition to its PDR program, the County establishes open space easements under Virginia's Open-Space Land Act Open to protect natural resources and/or open space to enhance life quality and preserve ecosystems. Easements establish limitations on future development with the land remaining in private ownership. In many instances, open space easements in the county are managed by land trusts, like NVCT.

Virginia Department of Historic Resources

The VDHR serves as the State Historic Preservation Office (SHPO) in Virginia, administering various federal and state programs to encourage and support Virginia's preservation of historic and archaeological sites. As part of its many functions, VDHR administers an easement program—the Virginia Historic Preservation Easement Program—designed to allow private property owners to protect historic resources in perpetuity while retaining ownership. Preservation easements under the program restrict future development, prohibit some activities, and require pre-approval for others (Department of Historic Resources 2025a, 2025b).

Mitigation Banks

Mitigation banks are created under Section 404 of the CWA as a tool to preserve wetlands, streams, and other aquatic environments as compensation for unavoidable impacts to other wetlands authorized under a permitting program managed by the USACE (US EPA). Mitigation banks were first introduced in 1983 to address impacts from federal and state transportation projects but evolved to include mitigation for wetland impacts on all projects subject to CWA permitting (US EPA). Mitigation banks are funded through impact fees paid by permittees to enhance, restore, or acquire wetlands for conservation. Although development within banks is prohibited, electric transmission lines may cross with additional permitting, including mitigation for impacts on wetlands and new losses or conversions within the banks.

Segment 2B crosses portions of two mitigation banks—the Bender Farm and Pandora Farms. Both banks were developed by Evergreen Environmental and appear to be managed by the NVCT.

Evergreen Environmental

Evergreen Environmental, LLC, is a wetland mitigation bank development and asset management company serving the Mid-Atlantic region, including Virginia. It developed the Bender Farm Wetland Bank on behalf of Marsh Resources and the Pandora Farms Wetland Bank on behalf of the Metropolitan Washington Airport Authority (Evergreen Environmental 2025).

Northern Virginia Conservation Trust

The NVCT is a private land trust founded in 1994 committed to safeguarding wildlife resources and natural landscapes in the state. The organization has preserved over 9,000 acres of land in rural and urban areas of Northern Virginia through conservation easements. Private landowners work with the organization to craft restrictive deeds tailored to their own property and needs, ensuring the land is protected from future development. For enrolled properties, the program includes yearly visits from Trust members to ensure the land is maintained in accordance with the easement (The Northern Virginia Conservation Trust 2025).

Chesapeake Bay Preservation Areas

Prince William County is subject to the Chesapeake Bay Preservation Act, which regulates development in lands near the Chesapeake Bay and its tributaries. The County adopted an ordinance in 1990 to create overlays called Resource Protection Areas (RPAs) intended to regulate development within these sensitive areas. ERM identified five RPAs crossed by Segment 2B—Cedar Run, Cedar Creek, State Run, South Run, and Kettle Run—encompassing 28.6 acres of RPA. Of these, 26.5 acres of these lands (93 percent) are within the Company's existing right-of-way. Electric transmission lines regulated by the SCC are exempt from RPA permitting provided they are constructed and maintained in accordance with the Virginia Erosion and Stormwater Management Act and an approved erosion and sediment control plan and stormwater plan, which the Company maintains.

TABLE 6.1-8 EASEMENTS WITHIN 0.25 MILE OF SEGMENT 2B IMPACT CENTERLINE

Tax # or PIN ID Identifier	Easement Type	Management	Description	Approximate Distance and Direction to Segment	Right-of-Way Acreage Crossed
7849-17-02225-000	AFD	Fauquier County	Mostly agricultural, some forest; 143 acres enrolled	Crossed by Segment 2B	4.4 acres existing right-of-way and 2.3 acres new right-of-way
7940-00-2346-000	Open Space	Fauquier County	Partly agricultural and partly forested; 28.3 acres enrolled	About 870 feet west of the segment	NA
7940-18-8268-000	Mitigation Bank	Broad Water Innovations	Forested riparian corridor; 31.5 acres enrolled	About 640 feet west of the segment	NA
7940-66-3045-000	PDR	Fauquier County	Mostly agricultural with some forest; 216 acres enrolled	About 890 feet east of the segment	NA
7941-23-3304-000	AFD	Fauquier County	Mostly cleared with some forest and agriculture; 257 acres enrolled	Crossed by Segment 2B	10.7 acres existing right-of-way and 6.4 acres new right-of-way
7941-23-3304-000	Mitigation Bank (Bender Farm)	Evergreen Environmental/NVCT	Forested riparian corridor within the same parcel as an AFD; 22 acres enrolled	About 80 feet east of the segment	NA
7941-16-6353-000; 7491-37-8160; 7941-19-2225-0000; 7491-37-8160; 7491-28-8985; 7941-19-2225-000	Mitigation Bank (Pandora Farms)	Evergreen Environmental/NVCT	Forested riparian corridor; 127 acres enrolled	Crossed by Segment 2B in three places	5.9 acres existing right-of-way
7941-19-2225-000	Conservation Easement	Fauquier PDR	Partly agricultural and partly forested; 129 acres enrolled	About 240 feet west of the segment	NA
7492-20-9206; 7492-21-6288; 7492-21-5833	Historic Preservation Easement	VDHR	Pilgrim's Rest Historic Site; partially forested, partially cleared; 137 acres enrolled	Crossed by Segment 2B in two places	12.0 acres existing right-of-way

Tax # or PIN ID Identifier	Easement Type	Management	Description	Approximate Distance and Direction to Segment	Right-of-Way Acreage Crossed
7493-24-4694	AFD	PWC	Mostly cleared with some forest; the cleared area is used for materials storage; 206 acres enrolled	Crossed by Segment 2B	5.0 acres existing right-of-way and 1.7 acres new right-of-way in forested area
7493-17-8304	AFD	PWC	Forested; 4 acres enrolled	About 535 feet east of the segment	NA

VDHR = Virginia Department of Historic Resources
 PWC = Prince William County
 NVCT = Northern Virginia Conservation Trust
 PDR = Purchase of Development Rights
 AFD = Agricultural and Forestal District



6.1.7.2 IMPACT ASSESSMENT

Of the five easements crossed by Segment 2B, additional right-of-way would be required at three, as follows:

- About 2.3 acres of expanded right-of-way in the Fauquier County AFD easement on parcel 7849-17-0225-000 (south side of Courthouse Road), of which 1.9 acres, all on the west side of the existing corridor, is cleared, and 0.4 acre, all on the east side of the corridor, is forest.
- About 6.3 acres of new right-of-way in the Fauquier County AFD easement on parcel 7941-23-3304-000 (north side of Laws Ford Road), nearly all of which is agricultural land, with about 5.2 acres on the east side of the existing corridor and 1.1 acres to the west.
- About 2.0 acres of expanded right-of-way in the Fauquier County AFD easement on parcel 7493-24-4694 (south of the railroad tracks on the south side of Nokesville Substation), all of which is forested, though much of the parcel containing the easement is cleared and appears to be used for commercial material storage.

Although additional right-of-way would be needed, the Project would have minimal impact on agricultural and forest resources in these easements. Existing agricultural uses in the easements would not be affected, as most farming activities are compatible with an electric transmission right-of-way. Areas currently used for agricultural production within the expanded or new right-of-way would continue to be used as such during Project operations (unless the landowner chooses to withdraw them for reasons unrelated to the Project). The Company would coordinate with Fauquier County staff regarding the additional right-of-way required for the AFD crossings.

While Segment 2B also crosses the Pandora Farms Wetland Bank and VDHR easement, no new or expanded right-of-way would be required across these resources. The Project at the crossings would be limited to the existing Morrisville-Wishing Star Corridor within which Dominion has the right to modify existing or install new transmission lines. While indirect impacts are possible during construction due to noise, dust, and equipment traffic, these would be short term and limited to periods of active construction.

Specific to the mitigation bank, the Project could impact wetlands within the bank due to the change in the number and configuration of new transmission structures, but any such impact would be limited to wetlands within the maintained right-of-way (i.e., to palustrine emergent wetlands). There would be no additional conversion of forested wetlands to palustrine emergent wetlands, and as noted, no additional right-of-way would be required within the bank. Wetland impacts are discussed in Section 6.2.1.2.

Specific to the VDHR easement, the Project would modify existing visual conditions from within the resource due to the change in configuration and number of transmission structures as well as the increase in heights, but the land use would stay the same. Dominion consulted with the property owner and VDHR regarding the resource, and both indicated a preference for use of the existing right-of-way for the Project to any potential greenfield alternative around it, which would likely result in additional visual impacts to the property due to viewshed changes created by the new right-of-way and transmission line. Cultural resources and visual impacts on the resource are discussed in Sections 6.3 and 6.4, respectively. Alternative routes considered but rejected for further review, including a route around the VDHR easement, are discussed in Section 1.5.

There would be no direct impact on the conservation easements which are near to but not crossed by Segment 2B. Indirect impacts, such as construction noise, dust, and traffic, would be short term and temporary.

Regarding the RPA lands, trees would be removed within the 2.1 acres where expanded right-of-way is required. These areas would be revegetated and maintained with an herbaceous cover during Project operations. The Company would also follow erosion and sediment control BMPs to minimize impacts on these areas.

6.1.8 RECREATIONAL RESOURCES

6.1.8.1 EXISTING CONDITIONS AND IMPACT ASSESSMENT

No recreational resources were identified by ERM within 0.25 mile of Segment 2B Impact Centerline. Therefore, no such resources would be impacted by this component of the Project. See Section 6.1.6 for a discussion of planned trails along the Company’s existing transmission corridor in this segment.

6.1.9 CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP

6.1.9.1 EXISTING CONDITIONS

ERM identified four cemeteries and one school within 0.25 mile of Segment 2B Impact Centerline, of which the school property is crossed. Additional review of the resources within 500 feet of the right-of-way edge are described in Table 6.1-9 and whose locations are depicted on Figure 4.1.9-1. There are no places of worship within 0.25 mile of the Segment 2B Impact Centerline.

TABLE 6.1-9 CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP WITHIN 0.25 MILE OF SEGMENT 2B IMPACT CENTERLINE

Name	Description	Approximate Distance and Direction from Route Right-of-Way
Unnamed cemetery	Identified on a USGS topographic map, this cemetery occupies about 0.7 acre of forest within a larger, approximately 62-acre, agricultural parcel north of Courthouse Road. There is no indication of headstones or a fence at the cemetery on examined aerial photography due to vegetation (including leaf-off imagery). It is not known if the cemetery is maintained. There is no record of a cemetery at this location on findagrave.com (2025). The number and dates of interments are unknown.	About 320 feet east of the Segment 2B right-of-way

Name	Description	Approximate Distance and Direction from Route Right-of-Way
Unnamed cemetery	Identified on a USGS topographic map, the cemetery occupies about 0.1 acre of fenced space in the center of an agricultural field south of Laws Ford Road. Aerial photography indicates the cemetery is maintained and contains at least one interment, the date of which is unknown. There is no record of a cemetery at this location on findagrave.com (2025).	About 710 feet east/southeast of the Segment 2B right-of-way
Cedar Cemetery	Identified through stakeholder input, the burial ground appears to occupy less than 0.1 acre of fenced space within an open (herbaceous) field west of Carriage Ford Road. Based on review of recent aerial photography, a road to the site and a human-made object, possibly a monument, were installed between 2013 and 2014. The number of interments at the site is unknown. There is no record of a cemetery at this location on findagrave.com (2025).	About 660 feet west of the Segment 2B right-of-way
NVCJTA	Located along Warrenton Road in Ashton, the NVCJTA is one of the largest regional criminal justice academies in Virginia (Prince William County 2025). The campus, which encompasses about 91 acres, includes buildings and parking facilities, outdoor training facilities, and a driver training course. The Company's existing Morrisville-Wishing Star transmission corridor crosses the campus for about 0.3 mile. Within the academy, the right-of-way crosses parking facilities and the driver training course.	Crossed by Segment 2B for about 0.3 mile
Robinson Cemetery (also known as Manley Cemetery)	Identified on findagrave.com (2025), this cemetery occupies an undefined area west of the Company's existing Morrisville-Wishing Star Corridor east of Reid Lane. Based both on aerial photography and a photo on findagrave.com, the cemetery is unmaintained and overgrown. It reportedly contains seven interments dating from 1861 to 1943. There is no indication of headstones on aerial photography of the area.	About 110 feet (estimated) west of the Segment 2B right-of-way

6.1.9.2 IMPACT ASSESSMENT

Of the five resources described in Table 6.1-9, one (the NVCJTA) is crossed and two (an unnamed cemetery and Robinson Cemetery) are within 500 feet of Segment 2B right-of-way. There would be no direct impact on those resources greater than 500 feet from the Segment 2B right-of-way, and any indirect impacts, such as construction noise, dust, and traffic, if any, would be short term and temporary. The Project would not impact land uses at these resources.

Similarly, there would be no direct impact on the unnamed cemetery north of Courthouse Road and Robinson Cemetery east of Reid Lane. These resources are 320 and 110 feet from Segment

2B right-of-way, respectively. The former is within a heavily overgrown area in which surrounding vegetation likely obscures views of the existing transmission lines. There are other trees and a home between the cemetery and segment in sight lines from the resource. Dominion would construct an additional transmission line within a 65-foot-wide expanded corridor on the east side of the existing right-of-way, decreasing the distance between the right-of-way and resource to 255 feet. The change in viewshed from the cemetery due to the new line would be consistent with existing conditions. There would be no permanent impacts on the resource, and construction impacts, such as noise, dust, and traffic, would be short term and temporary.

While Robinson Cemetery is closer to the Company's existing corridor, it would be on the opposite side of the right-of-way as the Project's planned 65-foot-wide expansion for installation of the new 500 kV line. As with the unnamed cemetery discussed above, the change in viewshed from the cemetery due to the addition of the line would be consistent with existing conditions. There would be no permanent impacts on the resource, and construction impacts, such as noise, dust, and traffic, would be short-term and temporary.

The Project would be confined to the Company's existing corridor where it crosses the NVCJTA. The change in the configuration and number of transmission structures within the right-of-way due to the Project would not significantly modify existing conditions. The Project would not impact any developed school facilities or require additional right-of-way within the property. Construction impacts from dust, noise, and traffic are possible depending on season, but these would be short term and temporary. Dominion would coordinate with the academy ahead of construction to minimize temporary impacts on outdoor or training activities.

6.1.10 TRANSPORTATION INFRASTRUCTURE

6.1.10.1 EXISTING TRANSPORTATION INFRASTRUCTURE

Segment 2B crosses 10 roads and one railroad (Table 6.1-10 and Figure 4.1.10-1).

TABLE 6.1-10 ROADS CROSSED BY SEGMENT 2B

Road Name	Lanes at Crossing	Functional Classification	Crossing Type
Courthouse Road	2	Major Collector	Perpendicular
Sowego Road	2	Local	Perpendicular
Laws Ford Road	2	Local	Perpendicular
Carriage Ford Road	2	Local	Perpendicular
Belmont Grove Road	2	Local	Perpendicular
Public Safety Drive	2	Local	Perpendicular
Warrenton Road	2	Local	Perpendicular
Farmview Road	2	Local	Perpendicular
Nokesville Road	2	Minor Arterial	Perpendicular
Fitzwater Drive	2	Major Collector	Perpendicular

Road Name	Lanes at Crossing	Functional Classification	Crossing Type
Norfolk Southern Railway	NA	Railroad	Perpendicular

6.1.10.2 PLANNED TRANSPORTATION PROJECTS

ERM reviewed VDOT's Six-Year Improvement Program (VDOT 2022), and county comprehensive plans for Fauquier County (Fauquier County 2019) and Prince William County (PWC 2022) to identify planned road projects in the study area, identifying one planned development.

Nokesville Road Widening: Fauquier County Line to Fitzwater Drive

This project will widen Nokesville Road from 2 to 4 lanes from the Fauquier County line to Fitzwater Drive. Bicycle and pedestrian facilities will be included, with an estimated completion date of 2045. No project activity has been reported as of a March 2024 plan from the Metropolitan Washington Council of Governments (MWCG) (MWCG 2024).

6.1.10.3 IMPACT ASSESSMENT

There are 10 road crossings along Segment 2B, of which Courthouse Road and Fitzwater Drive are classified as major collectors and Nokesville Road as a minor arterial, with the remainder consisting of local roads (Table 6.1-10). Other than an approximately 2.8-mile-long section of the segment, within which the Project would be confined to the Company's existing Morrisville-Wishing Star Corridor, expanded right-of-way along the existing corridor or new right-of-way around substations would also be required. Road crossings in areas of expanded or new right-of-way include Courthouse Road, Sowego Road, Laws Ford Road, Farmville Road, Nokesville Road, and Fitzwater Drive. The other four road crossings—Carriage Ford Road, Belmont Grove Road, Public Safety Drive, and Warrenton Road—are in areas where the Project would be limited to the existing corridor.

In addition to expanded or new right-of-way, where applicable, the only permanent change at the road crossings would be in the number and configuration of transmission structures within the corridor, but no structures would be placed within existing or planned road rights-of-way. All 10 crossings are perpendicular, which is favored by VDOT and the Company.

Project construction would cause noise, dust, and traffic at road crossings and roads near Segment 2B, but these impacts would be short term and temporary. Temporary road closures could also be required when needed to move material and equipment across roads. Dominion would coordinate with the County and VDOT in cases where construction activities require temporary closures or detours to mitigate impacts.

Visual impacts at road crossings are addressed in Section 6.4

6.1.11 AIRPORTS AND HELIPORTS

6.1.11.1 EXISTING CONDITIONS

Based on a review of FAA resources (FAA n.d.-a, n.d.-b)), there are two public and nine private airports and 3 private heliports within 10 nm of Segment 2B (Table 6.1-11 and Figure 3.2.1-2).

TABLE 6.1-11 AIRPORTS AND HELIPORTS LOCATED WITHIN 10 NAUTICAL MILES OF SEGMENT 2B

Airport/Heliport Name	FAA ID	Distance and Direction ^a	Runways and Approach Classifications ^b	14 CFR Part 77 Applicability ^c	Anticipated Project Impact Determination ^d
Public Use Facilities Subject to 14 CFR Part 77					
Manassas Regional Airport	HEF	3.6 nm E	16L[PIR] / 34R[C] 16R[C] / 34L[B(V)]	Applicable	No impact, Notification anticipated based on FAA OE/AAA Prescreening
Warrenton/ Fauquier Airport	HWY	5.5 nm W	15[D] / 33[C]	Applicable	No impact, No 14 CFR Part 77 surface overlap
Private Use Facilities					
Maples Field Airport	VG57	0.3 nm E	04[A(V)] / 22[A(V)]	NA, No IAP	Facility impacts evaluated, refer to impact assessment
Valley View Airport	8VA9	2.0 nm E	02[A(V)] / 20[A(V)]	NA, No IAP	No Impact
Walnut Hill Airport	58VA	2.5 nm W	18/36	NA, No IAP	No Impact
UVA Health/Prince William Medical Center Heliport	27VA	5.2 nm NE	Helipad	NA, No IAP	No Impact
Rambo Airfield Airport	0VA0	5.7 nm SW	13[A(V)] / 31[A(V)]	NA, No IAP	No Impact
UVA Health/ Haymarket Medical Center Heliport	45VA	5.8 nm NW	Helipad	NA, No IAP	No Impact
Flying Circus Aerodrome Airport	3VA3	6.1 nm W	02/20 16/34	NA, No IAP	No Impact
Rhynalds Ranch Airport	29VA	7.6 nm SW	10/28	NA, No IAP	No Impact
Horse Feathers Airport	53VA	7.9 nm W	18/36	NA, No IAP	No Impact
Lost Griz Aerodrome Airport	7VG0	9.2 nm W	04[A(V)] / 22[A(V)] 15[A(V)] / 33[A(V)]	NA, No IAP	No Impact
Aviacres Airport	3VA2	9.2 nm W	06/24	NA, No IAP	No Impact
Fauquier Hospital Emergency Transport Heliport	8VA3	10.0 nm W	Helipad	NA, No IAP	No Impact

FAA = Federal Aviation Administration; NA = not applicable; OE/AAA = Obstruction Evaluation/ Airport Airspace Analysis; IAP = FAA Approved Instrument Approach Procedure

^a Distance (nm) measurements and approximate direction (cardinal directions; N, NE, E, SE, S, SW, W, NW) were calculated via standard ArcGIS Geoprocessing tools (Near Analysis), utilizing route centerlines and established airport reference points retrieved from the FAA ADIP. ^bNearest



project facility' may refer to any point along a route centerline that is geographically nearest to the Established Airport Reference Point. Runways and airport property boundaries may be closer to a project component than calculated and presented in the above table.

^b Runway identification numbers and approach classifications were obtained via the FAA ADIP: <https://adip.faa.gov/agis/public/#/public>; Refer to Section 3.2.1.1.1 and Table 3.2-2 for Approach Classification definitions.

^c Public airports and private facilities with at least one FAA approved IAP are subject to 14 CFR Part 77.

^d Impact determination based on the company's review of 14 CFR Part 77 regulations and airport imaginary surface modeling using standard GIS tools. Refer to impact assessment section for additional information.

6.1.11.2 IMPACT ASSESSMENT

Public Airports

Based on ERM's airport analysis, structures associated with Segment 2B are not expected to overlap with or exceed any portion of the 14 CFR Part 77.19 defined imaginary surfaces of Manassas Regional Airport or Warrenton/ Fauquier Airport. In addition, no structures would exceed 14 CFR Part 77.17 obstruction standards. Portions of the segment south of Vint Hill Station, however, are within 20,000 feet of Runway 16R/34L at Manassas Regional Airport, placing structures within the horizontal extent of that runway's 14 CFR Part 77.9-defined notification surface (Figure 3.2.1-2). Based on the results of the OE/AAA prescreening review, the planned structures flagged for notification along the segment extend south of Vint Hill Road for about 0.9 mile. No other structures along Segment 2B were flagged for FAA notification based on the planned structure heights.

Dominion would use cranes to install the Project's transmission structures. The typical temporary crane height needed for construction would be approximately 35 feet above the structure height. The 500 kV structures along Segment 2B would range in height from 131 to 197 feet above ground surface, with an average height of approximately 174 feet, including foundation reveal. Any temporary structure that exceeds 200 feet above ground surface would require notification to the FAA under 14 CFR Part 77.9 and could be considered a temporary impact to air navigation. As crane use is temporary in nature and would be utilized in discrete locations during phased construction, Dominion anticipates that the FAA would likely issue an "Exceeds But Okay" determination, as defined in FAA Order JO 7400.2R.7-1-3.b (FAA, n.d.-c), indicating that a temporary structure exceeds obstruction standards but does not result in a substantial adverse effect.

None of the final structures along Segment 2B are anticipated to cause impacts to air navigation, though Dominion plans to submit notification to the FAA prior to construction for all temporary and permanent structures. Dominion would utilize FAA Form 7460-1—Notice of Proposed Construction or Alteration via the OE/AAA online portal to complete the notification. Dominion would complete the notifications after the SCC approves the Project, during the permitting phase, and at least 45 days before the start of the proposed construction or the date an application for a construction permit is filed, whichever is earliest.

Private Airports

The FAA does not regulate private airports and heliports without at least one FAA approved IAP under 14 CFR Part 77, though the Company reviews the locations of private facilities near proposed transmission line structures to ensure potential safety hazards to private air navigation are mitigated.

Maples Airfield Airport (VG57) is located at 1700 Sowego Road in Catlett. This private facility consists of a single turf runway (Runway 04/22) positioned in a north-northeast to south-southwest orientation with Approach 04 pointing towards Segment 2B. According to the FAA ADIP database, both ends of the runway have an A(V) approach classification. The Approach 04

controlling obstacle is Sowego Road, located about 140 feet south. The facility does not have an IAP, and as such, is not subject to FAA obstruction analysis.

Currently, a portion of Dominion's existing Morrisville-Wishing Star Corridor is within the Maples Airfield property along its western edge, approximately 1,350 feet west of the runway. This portion of the right-of-way encompasses existing structures 2101/17 / 569/1113 at 118 feet AGL, 2114/77 / 535/114 at 118 feet AGL, and 2101/18 / 569/1112 at 119 feet AGL. Further, the right-of-way section containing structures 2101/16 / 569/1114 at 133 feet AGL, 2114/76 / 535/1115 at 128 feet AGL, 2101/15/ 569/1115 at 138 feet AGL, and 2114/75 / 535/116 at 138 feet AGL are located approximately 1,500 to 2,350 feet southwest of the runway, in the general direction of Approach 04. The existing 230 kV and 500 kV lines in this section have marker balls on the conductor for visibility. The existing towers in this location are anticipated to remain in place.

The new 500 kV line proposed in this section of Segment 2B would require a 65-foot right-of-way expansion to the east, two new 175-foot-tall monopole structures on the Maples Airfield property, and two new 195-foot-tall monopoles placed in parallel with the existing structures southwest of the runway. Dominion would work with the airport owner to minimize impacts on private air navigation at Maples Airfield. No other potential impacts to private air navigation are anticipated from construction and operation of the Project along Segment 2B.

6.2 NATURAL RESOURCES

6.2.1 SURFACE WATERS

6.2.1.1 WATERSHEDS

Segment 2B is within the Potomac HUC 4-digit (0207) subregion, described above, and the Middle Potomac-Anacostia-Occoquan HUC 8-digit (02070010) watershed (USGS 2023) (Figure 4.2.1-1). The area crossed by the segment is further split into two smaller HUC 10-digit watersheds—Cedar Run (0207001006) and Broad Run (0207001005)—which divide Segment 2B approximately along Fitzwater Drive and Nokesville Road.

The southern portion of Segment 2B is within the Cedar Run watershed until it crosses Fitzwater Drive. Waterbodies in this section include Town Run, Cedar Run, Elk Run, Dorrells Run, and associated tributaries, as well as open water features. Surface waters generally flow northeast into Slate Run, southwest into Cedar Run, and ultimately northeast into the Occoquan River.

The northern portion of Segment 2B is within the Broad Run watershed, from Fitzwater Drive to the Vint Hill Station. Waterbodies in this section include South Run, Kettle Run, Broad Run, Rocky Branch, Dawkins Branch, and associated tributaries. Surface waters generally flow southeast into Kettle Run, west into Broad Run, and ultimately southwest into the Occoquan River.

6.2.1.2 WETLANDS

Existing Conditions

Segment 2B requires an expansion of Dominion's existing right-of-way of between 65 and 150 feet for about 6.8 miles and approximately 0.7 mile of new 100-foot right-of-way. For the remaining 2.8 miles of the segment, the Project would be confined to the Company's existing

Morrisville-Wishing Star Corridor to avoid constraints, including wetland mitigation banks. The existing right-of-way along the segment is bordered mainly by forest and agricultural land.

Table 6.2-1 provides the areas in acres assigned high, medium-high, or medium probabilities of containing wetlands along Segment 2B (see the Wetland and Waterbody Desktop Study in Attachment 2.D.1 of the DEQ Supplement). The segment encompasses approximately 132.2 acres of wetlands and waterbodies. Wetlands within the Company's existing transmission corridor are predominantly PEM type wetlands, with PFO and PSS wetlands in areas where expanded right-of-way would be required. Wetlands are associated with Town Run, Cedar Run, Cedar Creek, Slate Run, Kettle Run, South Run, and associated tributaries. Wetlands within the Cedar Run watershed generally flow west into Cedar Run and its associated tributaries, while wetlands within the Broad Run watershed generally flow west into Broad Run and its associated tributaries.

Figure 4.2.1-1 depicts watershed boundaries and NWI- and NHD-mapped surface waters. Maps depicting the identified aquatic resources and their probabilities are provided in Attachment 2.D.1 of the DEQ Supplement. Section 6.2.1.3 describes riverine and PUB features.

TABLE 6.2-1 ACREAGE OF HIGH, MEDIUM-HIGH, AND MEDIUM PROBABILITY WETLANDS AND WATERBODIES WITHIN THE SEGMENT 2B FOOTPRINT

Surface Waters	Segment 2B acres ^a
Total	132.2
Palustrine Forested	20.1
Palustrine Scrub-shrub	0.2
Palustrine Emergent	104.5
Palustrine Unconsolidated Bottom	4.5
Riverine	2.9

NA = Not applicable due to absence of a wetland type within the Project footprint

^a Values have been rounded to the tenth place; as a result, the totals may not reflect the sum of the addends.

Impact Assessment

Segment 2B utilizes both existing Dominion right-of-way and areas of expanded corridor. Permanent wetland impacts would include the conversion of PFO and PSS to PEM wetlands due to tree clearing where the right-of-way would be expanded and placement of transmission infrastructure within wetlands if unavoidable. Within PEM wetlands, temporary impacts on surface vegetation would result from vehicle and equipment traffic. Impacts and mitigation are further discussed in Section 3.2.2.1.

6.2.1.3 WATERBODIES

Existing Conditions

Table 6-2-2 lists the number of and type of waterbody crossings for Segment 2B. Based on the Wetland and Waterbody Desktop Study (Attachment 2.D.1 of DEQ Supplement) methodology, the

segment encompasses approximately 2.9 acres of riverine features and 4.5 acres of PUB open waterbody features, crossing 32 waterbodies (of which 24 are NHD-mapped). Attachment 2.D.1 of the DEQ Supplement depicts waterbody crossing locations for the segment, which crosses the following named waterbodies: Town Run (three times), Cedar Run, Cedar Creek, Slate Run, Kettle Run, and South Run, as well as unnamed perennial and intermittent tributaries and open waterbody features.

TABLE 6.2-2 WATERBODIES CROSSED BY SEGMENT 2B

Waterbodies Crossed	Segment 2B count ^a
Total	38
NHD-mapped perennial streams/rivers	8
NHD-mapped intermittent streams/rivers	19
NHD-mapped perennial lakes/ponds	6
Non-NHD-mapped waterbodies ^b	5

Source: USGS 2025a.

NHD = National Hydrography Dataset

^a Based on recent (2025) aerial imagery, three NHD-mapped intermittent streams and one NHD-mapped lake/pond were identified as PEM wetlands, and one NHD-mapped lake/pond is no longer present.

^b Identified via aerial imagery during desktop analysis using recent (2025) aerial imagery (VGIN 2025; Prince William County 2025).

Impact Assessment

As noted above, Segment 2B utilizes both existing Dominion right-of-way and areas of expanded corridor. Riparian buffer clearing would be required in the expanded right-of-way at the following waterbodies: Town Run at both crossings and five tributaries; a tributary to Cedar Run; Slate Run and one tributary; South Run and one tributary; and Kettle Run. Waterbody impacts are further described in Section 3.2.2.1.

6.2.2 NATURAL HERITAGE RESOURCES

6.2.2.1 CONSERVATION SITES

Existing Conditions

VDCR identified two CSs within the study area near Segment 2B—the Nokesville Diabase Flatwoods CS and Carriage Ford CS, described below (Figure 4.2.2-1).

Nokesville Diabase Flatwoods Conservation Site

The Nokesville Diabase Flatwoods CS encompasses 770 acres with a B4 ranking, indicating a site of moderate significance. The site is situated along and around Warrenton Road/Dumfries Road, between its intersections with Carriage Ford Road and Catlett Road. Approximately 734 acres (about 95 percent) of the CS remains forested, with clearings defined by roads, a railroad, residential areas, and the Company's existing transmission right-of-way. Tributaries of Slate Run and Cedar Creek are present on the site.

The species associated with this CS are American bluehearts (*Buchnera americana*), Stiff goldenrod (*Solidago rigida var. rigida*), and Hairy hedgenettle (*Stachys arenicola*). None of these species are federal- or state-listed. See the descriptions of the species preferred habitats provided in Table 6.2-1.

Carriage Ford Conservation Site

The Carriage Ford CS encompasses 69 acres with a B2 ranking, indicating a site of very high significance. The resource is situated along Cedar Run in the area along and between Daniels Dam Road and Belmont Grove Road. Approximately 20 acres (about 29 percent) of the site have been cleared or developed. The remaining land is mainly comprised of riparian forest along Cedar Run and its tributaries, though the vegetation is fragmented by roads.

The rare plant community associated with the Carriage Fords CS is Piedmont Mafic Barren. This plant community, known from scattered mafic outcrops in the northern and western Virginia Piedmont, is limited to exposed outcrops of diabase, metabasalt, amphibolite, and other mafic rocks. The small plant community occurs as a mosaic of lichen, moss mats, and herbs with scattered, stunted trees (VDCR 2024b).

Impact Assessment

The Company's existing Morrisville-Wishing Star Corridor along Segment 2B overlaps the eastern boundary of the Nokesville Diabase Flatwoods CS by up to approximately 70 feet (Figure 4.2.2-1) encompassing about 6.6 acres of the resource. The CS is adjacent to the west side of Lines #535/2114 and #569/2101 between Warrenton Road to the south and Nokesville Station to the north. As discussed in Section 1.3, approximately 65 feet of additional right-of-way are required on the east side of the existing transmission corridor, within which the new 500 kV line would be installed.

Because the overlap with the CS is limited to at most 70 feet along the western side of the existing corridor, all of which is cleared, and because the new transmission line would be installed within expanded right-of-way to the east, no new right-of-way would be required within the resource. Therefore, with adherence to applicable state/local erosion and sediment control and stormwater management standards, it is unlikely that Project construction or operation would impact the rare species associated with the CS.

Once the SCC approves the Project, Dominion would coordinate with state and federal agencies, as needed, to determine if surveys, construction TOYRs, or other measures are required to mitigate potential impacts on sensitive species, including those within the Nokesville Diabase Flatwoods CS.

Segment 2B is approximately 0.5 mile east of the Carriage Ford CS; therefore, no impact is anticipated on this site.

6.2.2.2 STREAM CONSERVATION SITES

Existing Conditions

VDCR identified three SCSs within the study area near Segment 2B—Elk Run Above Rt. 806 SCS, Slate Run SCS, and Kettle Run SCS, described below (Figure 4.2.2-1).

Elk Run Above Rt. 806 Stream Conservation Site

The Elk Run Above Rt. 806 SCS encompasses 703 acres along Elk Run and its tributaries with a biodiversity rating of B4, indicating a site of moderate significance. Most of the land within the SCS is cleared for agricultural use, with the remainder comprised of forested riparian corridor along Elk Run, Town Run, and their tributaries. The NHR associated with the SCS is an Aquatic Natural Community (NP-Middle Potomac-Anacostia-Occoquan Third Order Stream), designated in VCU's INSTAR database (VDCR 2024b). The Elk Run Above Rt. 806 SCS is situated in the area along and around Bristersburg Road between its intersections with Elk Run Road and Shenandoah Path. Segment 2B does not cross the SCS, passing about 0.7 mile to the east.

Slate Run Stream Conservation Site

The Slate Run SCS encompasses 412 acres of forested land along Slate Run with a biodiversity rating of B4, indicating a site of moderate significance. The SCS is situated along and around Nokesville Road, between its intersections with Fitzwater and Fauquier drives. Approximately 101 acres (about 25 percent) of the SCS have been cleared or are developed. The remainder is comprised of riparian forest along Slate Run and its tributaries, though the vegetation is fragmented by existing roads, railroads, and transmission lines. Like the Elk Run Above Rt. 806 SCS, the NHR associated with this SCS is an Aquatic Natural Community (NP-Middle Potomac-Anacostia-Occoquan Third Order Stream), designated in VCU's INSTAR database (VDCR 2024b). The Company's existing Morrisville-Wishing Star Corridor crosses two western branches of the SCS.

Kettle Run Stream Conservation Site

The Kettle Run SCS encompasses 1,064 acres along Kettle Run with a biodiversity rating of B3, indicating a site of high importance. The site is situated south of Vint Hill Road, north of Fitzwater Drive, and east of Lonesome Road. Approximately 638 acres (about 60 percent) of the SCS have been cleared or developed. The remaining land is mainly comprised of riparian forest along Kettle Run, South Run, and their tributaries, but the forest is fragmented by roads and transmission lines. The Company's existing Morrisville-Wishing Star Corridor crosses western branches of the SCS in five places.

Like the other SCSs, the NHR associated with Kettle Run SCS is an Aquatic Natural Community (NP-Middle Potomac-Anacostia-Occoquan Third Order Stream), designated in VCU's INSTAR database (VDCR 2024b). VCU has classified the streams within the Kettle Run SCS as Grade B (indicating relative regional significance), with a "Healthy" stream designation per the INSTAR VSS score. VDCR also indicated evidence that streams within the SCS contribute to high biological integrity at the watershed level (6th order), due to the presence of multiple native/non-native,

pollution-tolerant/intolerant and rare, threatened, or endangered fish and macroinvertebrate species (VDCR 2025b).

Impact Assessment

Table 6.3-2 summarizes the area of impact within each of the SCSs.

TABLE 6.2-3 STREAM CONSERVATION SITE CROSSINGS BY SEGMENT 2B

Stream Conservation Site	Units	Existing Right-of-Way	Expanded Right-of-Way	New Right-of-Way
Elk Run Above Rt. 806 SCS	Acres	0.0	0.0	0.0
Slate Run SCS	acres	12.2	3.2	0.6
Kettle Run SCS	acres	14.6	5.4	0.0

SCS = Stream Conservation Site

The expanded right-of-way required for Segment 2B crosses approximately 5.4 acres along five segments within the Kettle Run SCS and 3.2 acres along two segments within the Slate Run SCS, with the crossings adjacent to existing right-of-way. Segment 2B also requires an additional 0.6 acre of new right-of-way within the Slate Run SCS where the route diverges from the existing right-of-way to collocate along the eastern boundary of Nokesville Station.

The additional clearing required within each SCS represents a small fraction of each resource while collocation of the new infrastructure with the existing corridor and/or substation ensures there would be no new fragments within the riparian corridors crossed. The Project would span waterbodies within the SCSs but no instream work in Kettle Run, Slate Run, or their tributaries would be required. With adherence to applicable state/local erosion and sediment control and stormwater management standards, it is unlikely that Project construction or operation would impact the SCSs or their associated Aquatic Natural Communities.

Elk Run Above Rt. 806 SCS lies approximately 0.7 mile west of Segment 2B and would not be impacted by the Project.

6.2.2.3 ECOLOGICAL CORES

Existing Conditions

Table 6.2-4 lists the ecological cores crossed by Segment 2B while Figure 4.2.2-2 depicts each core relative to the Project.

TABLE 6.2-4 VDCR-MAPPED ECOLOGICAL CORES CROSSSED BY SEGMENT 2B

Ecological Core Rank	Ecological Core ID	Total Core Acreage	Total Acres of Expanded/New ROW Crossed	Total Acres of Existing ROW Crossed	Existing Condition
C1	NA	NA	NA	NA	NA



Ecological Core Rank	Ecological Core ID	Total Core Acreage	Total Acres of Expanded/New ROW Crossed	Total Acres of Existing ROW Crossed	Existing Condition
C2	NA	NA	NA	NA	NA
C3	38563	596	NA	3.0	Mostly forested
C4	38414	457	7.9	14.2	Partially forested and partially cleared with a solar farm in the southern portion and development to the north
	38985	257	NA	0.3	Mostly forested
C5	38304	85	0.8	<0.1	Forested
	38377	85	3.7	1.8	Mostly forested with Nokesville Station within the western boundary
	38477	42	NA	0.6	Forested
	38881	66	NA	0.1	Partially forested with the eastern third within the NVCJTA
	39911	100	1.6	2.8	Forested
	40219	91	NA	<0.1	Mostly forested
	37764	79	0.3	NA	Mostly unfragmented forest.
	40276	161	0.5	0.1	Forested

ROW = right-of-way, NA = not applicable

Impact Assessment

VDCR's review of the Project found that Segment 2B does not cross ecological cores with the higher C1 or C2 rankings (VDCR 2025b). The segment crosses cores with rankings of C3, C4, and C5, collectively encompassing about 37.7 acres. Of that total, about 23.0 acres are within existing right-of-way and 14.7 acres consists of expanded right-of-way.

There would be no impact on forest resources within the existing right-of-way, which Dominion maintains in an herbaceous cover or is otherwise cleared and maintained (e.g., in pasture or agricultural fields or roads and parking lots). The expanded right-of-way (14.7 acres) occurs in areas where a 65-foot-wide expansion of the existing corridor would be required. Forest resources would be impacted, but there would be no new fragmentation due to collocation with the existing right-of-way or other Dominion infrastructure.

6.2.3 PROTECTED SPECIES

6.2.3.1 FEDERAL- AND STATE-LISTED THREATENED AND ENDANGERED SPECIES

See Section 4.2.3 for a discussion of federal- and state-listed species with potential to occur in the study area, including Segment 2B.

Existing Conditions

Federal-Listed Species

The only federal-listed species with a confirmed presence near Segment 2B is the Yellow lance, identified in the WERMS database (VDWR 2026e). This species was documented in Kettle Run in 1998, east of Segment 2B, which crosses the waterbody approximately 0.5 mile south of Vint Hill Station.

State-Listed Species

The only state-listed species with a confirmed presence near Segment 2B is the Loggerhead shrike. As noted in Section 4.2.3, the Virginia Breeding Bird Atlas Survey recorded the presence of Loggerhead shrike in 1989 within the Nokesville, CE Atlas Quadrangle Block. The western boundary of the block intersects the eastern edge of the study area near Segment 2B. Additionally, VDCR's PSH modeling shows potential for Loggerhead shrike habitat within the study area, but no PSH for the species is crossed by the Project (VDCR 2024b). Figure 6.3.3-1 depicts PSH crossed by the routes.

Impact Assessment

Potential habitat exists for two species, Yellow lance and Loggerhead shrike, along or near Segment 2B. The VaFWIS and WERMS data, however, show that only the Yellow Lance has been confirmed within the study area or 2.0-mile radius of the study area boundary. To the degree that tree and vegetation clearing reduces shade along streambanks, Project activities could result in increased water temperatures within Kettle Run, which could adversely impact Yellow lance, if present. Because the presence of Yellow lance has been confirmed within the study area, and Segment 2B crosses Kettle Run, the Company would coordinate with VDCR to determine if surveys are warranted prior to construction. The Company additionally employs BMPs before, during, and after construction to control erosion and sediment runoff, prevent stream and groundwater flow changes, and reduce impacts on aquatic and riparian habitat.

Impacts on open areas that may provide habitat for the Loggerhead shrike would be limited to potential structure placement. Outside of structures, open space lands would continue to function as they had prior to construction. Therefore, the Project would have no impact on Loggerhead shrike.

After the Commission authorizes the Project, Dominion will coordinate with state and federal agencies as needed to determine if surveys, construction TOYRs, or other mitigation would be required to mitigate potential impacts on T&E species for the Project.

6.2.3.2 BALD EAGLE MANAGEMENT

Existing Conditions

The eagle nest nearest to Segment 2B was reported by a landowner approximately 0.4 mile east of the Segment 2B along Kettle Run. This nest is not recorded in the CCB database. The nearest nest recorded by the CCB is Nest ID PW9803, approximately 3.0 miles to the northwest. This nest was last observed to be occupied in 2004 (CCB 2022).

Impact Assessment

ERM did not identify any eagle nests within the 660-foot buffer of Segment 2B. If eagle nests are identified within 660 feet of the right-of-way approved by the SCC, Dominion would work with the VDWR and other appropriate agencies to minimize any impact on the species.

6.2.3.3 OTHER SPECIES OF INTEREST

Existing Conditions

Figure 4.2.3-1 shows diabase soils in the study area. The VDCR reviews of the Project found that Segment 2B crosses diabase soils associated with six of the rare plants identified in Section 4.2.3—Earleaf false foxglove (*Agalinis auriculata*), American bluehearts, Downy phlox (*Phlox pilosa*), Torrey's mountain-mint, Stiff goldenrod, and Hairy hedgenettle (VDCR 2025b). The only T&E species associated with diabase soils in this list is Torrey's mountain-mint, which is state-listed as threatened by the VWDR. Segment 2B crosses approximately 109.6 acres of diabase soils in the existing right-of-way and 28.5 acres of diabase soils in the expanded right-of-way.

Impact Assessment

Habitat requirements for the plant species identified typically include semi-open diabase glades and prairies. Due to the presence of forested land and history of agricultural use in the area, it is unlikely that the expanded right-of-way required for Segment 2B is suitable for these rare plant species. The existing right-of-way of Segment 2B, however, has been maintained with an herbaceous cover, so suitable habitat for these rare plant species could be present. During Project operations, vehicle movement associated with construction of the transmission line in open areas would temporarily impact herbaceous vegetation within the existing right-of-way.

Site-specific field investigations are necessary for detailed habitat and impact analyses. In suitable habitat types that meet specific habitat requirements for any of these rare plant species, VDCR recommends conducting detailed plant inventories and coordinating with VDCR biologists to minimize habitat impacts. If suitable habitat conditions for these species are identified within the Project footprint along Segment 2B, the Company will work with the VDCR and appropriate agencies to identify measures to minimize impacts on rare plants and/or rare plant habitat.

6.2.4 VEGETATION

6.2.4.1 EXISTING CONDITIONS

Local Vegetation Characteristics

The majority of Segment 2B is situated within the existing Dominion right-of-way, bordered on both sides by forested, agricultural, and/or developed (utility infrastructure and residential) land. The segment is within the Northern Piedmont physiographic province, described in Section 3.2.2.

Table 6.2-5 summarizes the extent of forested, agricultural, and open space (herbaceous) vegetation types crossed by the existing and expanded/new right-of-way for Segment 2B. Figure 4.1.2-1 depicts land use / land cover types, including forested areas, along the segment.

TABLE 6.2-5 ACREAGE OF VEGETATION TYPES CROSSED BY SEGMENT 2B

Vegetation Cover Type	Unit	Existing Right-of-Way	Expanded/New Right-of-Way
Agriculture	acres	0.0	29.9
Forest	acres	0.0	30.3
Open Space	acres	297.2	7.3
Total ^a	acres	297.2	67.5

Sources: VGIN Land Cover data with aerial photo interpretation by ERM (VGIN 2025)

^a Totals may not match the sum of the addends due to rounding.

Forest Conservation Values

Table 6.2-6 summarizes the area of FCV within the existing right-of-way as well as the expanded/new right-of-way for Segment 2B. While FCV values have been assigned to the area within the existing right-of-way, the corridor is maintained in herbaceous cover or is otherwise cleared.

TABLE 6.2-6 FOREST CONSERVATION VALUE ALONG SEGMENT 2B

Forest Conservation Value	Unit	Existing Right-of-Way	Expanded/New Right-of-Way
Average (1)	acres	17.3	2.6
Moderate (2)	acres	36.4	7.5
High (3)	acres	11.4	2.7
Very High (4)	acres	10.8	3.6
Outstanding (5)	acres	1.9	0.7
Total ^a	acres	77.8	17.0

^a The sum of the addends may not equal the totals due to rounding.

6.2.4.2 IMPACT ASSESSMENT

Potential impacts on herbaceous vegetation in the existing corridor could result from vehicle and equipment traffic, equipment staging, and installation of new structures. Disturbed areas would be re-vegetated and maintained in an herbaceous cover. Thus, there would be no impact on the 77.8 acres of existing right-of-way classified as FCV. About 17.0 acres of land classified as FCV would be required within new or expanded right-of-way along Segment 2B, including 3.6 acres classified as very high value and 0.7 acre classified as outstanding value. Trees would be cleared and the right-of-way maintained in herbaceous cover in these areas.

6.3 CULTURAL RESOURCES

6.3.1 ARCHAEOLOGICAL SITES AND FINDINGS

Crossings of archaeological sites are considered a routing constraint due to the potential for an electric transmission line to impact intact archaeological deposits, if present, because of tree clearing, transmission structure placement, or the use or movement of heavy equipment within a site. A confident and complete assessment of the integrity of each site would require archaeological field investigations. A survey would be completed in a subsequent phase of study for the Project along the routes certificated by the SCC.

Stantec identified twenty known archaeological sites within the rights-of-way of Segment 2B (Table 6.3-1).

TABLE 6.3-1 PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF SEGMENT 2B

Site Number	New or Existing/Expanded Right-of-Way	Description	NRHP Status
44FQ0107	Existing	Camp, Pre-Contact	Eligible
44FQ0111	Existing	Camp, Pre-Contact	Potentially Eligible
44FQ0112	Existing	Unknown, Pre-Contact	Unevaluated
44FQ0113	Existing	Unknown	Eligible
44PW0058	Existing	Ford, Unknown	Unevaluated
44PW0232	Existing	Camp, Pre-Contact	Not Eligible
44PW0233	Existing	Camp, Woodland	Not Eligible
44PW0548	Existing	Single Dwelling, Pre-Contact, 19 th Century	Potentially Eligible
44PW0549	Existing	Unknown, Woodland	Potentially Eligible
44PW0550	Expanded	Unknown, Pre-Contact	Potentially Eligible
44PW0551	Existing	Unknown, Pre-Contact	Potentially Eligible
44PW0552	Existing	Unknown, Pre-Contact	Potentially Eligible
44PW0553	Existing	Unknown, Pre-Contact	Potentially Eligible
44PW0554	Existing	Unknown, Early Woodland	Potentially Eligible
44PW0570	Existing	Unknown, Pre-Contact	Not Eligible
44PW0582	Existing	Cemetery, Unknown	Unevaluated

Site Number	New or Existing/Expanded Right-of-Way	Description	NRHP Status
44PW0586	Existing	Unknown, Historic	Potentially Eligible
44PW1753	Existing	Camp, Late Archaic	Not Eligible
44PW1754	Existing	Camp, Pre-Contact	Unevaluated
44PW1882	New	Single Dwelling, 20 th Century	Unevaluated

Source: VDHR 2026.

NRHP = National Register of Historic Places

6.3.2 ABOVEGROUND HISTORIC RESOURCES AND FINDINGS

This section presents information on known aboveground cultural resources near Segment 2B, using VDHR's tiered study area model described above. Figure 4.3.2-1 depicts the locations of resources relevant to Segment 2B. Attachment 2.I.1 of the DEQ Supplement, the Pre-application Report, provides a description, location, and impact assessment for each resource. None of the route alternatives would affect a National Historic Landmark; therefore, these resources are not further discussed.

Table 6.3-2 provides information on the considered resources within the VDHR study tiers for Segment 2B. As detailed in the Stage 1, Segment 2B would have a minimal impact on one resource (030-5161) and a moderate impact on two resources (030-5588 and 076-0019).

TABLE 6.3-2 ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR SEGMENT 2B

Buffer (miles)	Resource Category	Resource Number	Description	Impact
1.0 to 1.5	National Historic Landmarks	Not applicable	None identified	Not applicable
0.5 to 1.0	National Register Properties (Listed)	030-5161	Bristersburg Historic District	Minimal
0.0 to 0.5	National Register—Eligible	Not applicable	None identified	Not applicable
0.0 (within right-of-way)	National Register Properties (Listed)	076-0019	Pilgrim's Rest	Moderate
	National Register—Eligible	030-5588	Elk Run Rural Historic District	Moderate

Source: VDHR 2026.

VDHR = Virginia Department of Historic Resources

6.4 VISUAL RESOURCES

Appendix C provides more detailed information about existing visual conditions and visual impacts along Segment 2B.

6.4.1 EXISTING CONDITIONS

Segment 2B extends from the southeastern corner of Fauquier County into the southwest area of Prince William County. This area includes a mix of agricultural and rural residential areas interspersed with forested areas. The Project crosses two types of landscape units including 10 miles of route that crosses through Rural Agriculture and Residential Landscape Units and 0.3 mile of route that cross through Rural Residential Landscape Units. As noted and previously described in Segment 1, these landscape unit types share similar visual characteristics but are differentiated by the level of agricultural and low-density residential development (Appendix C).

There are several VSRs along Segment 2B including recreational resources and residential areas (Table 6.4-1). At these VSRs, the primary viewer groups, also listed in Table 6.4-1, are more aware of and sensitive to change in visual resource changes. In addition to the VSRs, there are several other areas along Segment 2B where the potential of viewing the Project would be greater given the proximity of these areas to the new transmission line. Table 6.4-2 lists these other areas.

TABLE 6.4-1 VISUALLY SENSITIVE RESOURCES AND USER GROUPS

VSR # and Name	VSR Description	Landscape Unit(s) ^c	Primary Viewer Group(s) ^a
Recreational Resources (see Section 4.1.7)			
1	Burnside Farms Seasonal flower and Christmas tree farm with events and market on the west side of Kettle Run Road, south of Patriot High School and Vint Hill Road	RAR	L, R
2	Lehigh Portland Park Forested park in Prince William County on the south side of Nokesville Road.	RAR	L, R
3	Nokesville Park Prince William County Park with playground, picnic area, athletic fields, and trails on the west side of Aden Road.	RAR	L, R
4	Virginia Scenic Byway SC-616N Designated Virginia Byway from Elk Ridge Road to Rte. 28 near Catlett in Fauquier County	RAR	L, R, M
5	Virginia Scenic Byway SC-806N (Fauquier County) Designated Virginia Byway from Elk Ridge Road to Rte. 28 near Catlett, Fauquier County.	RAR	L, R, M
Residential Areas and Subdivisions			
6	Belmont Farms Subdivision Subdivision of single-family homes on both sides of Belmont Farms Lane, south of Fitzwater Drive.	RAR	L
7	Bruce S Colvin Subdivision Subdivision of single-family homes on the west side of Carriage Ford Road, south of Warrenton Road. Located across from the Carriage Ford Subdivision	RR	L, M, W
8	Carriage Ford Road Residences Single-family homes on the north side of Rte. 607 (Carriage Ford Road), east of Elk Run Road; and single-family homes on the east side of Rte. 607, north of Hazlewood Drive.	RAR	L
9	Carriage Ford Subdivision Subdivision of single-family homes on the east side of Carriage Ford Road and the north side of Hazlewood Drive, south of Warrenton Road.	RR	L, M, W
10	Farmview Road Residences Single-family residences on both sides of the road, which is south of Rte. 28.	RAR	L
11	Fitzwater Drive Residences Single-family residences on both sides of the road west of Kettle Run Road.	RR	L

VSR # and Name	VSR Description	Landscape Unit(s) ^c	Primary Viewer Group(s) ^a
12 Flickinger and Hoke Subdivision	Subdivision of single-family homes on the west side of Reid Lane, north of Fitzwater Drive.	RAR	L, M, W
13 Hazlewood Drive Residences	Single-family residences on the south side of Hazlewood Drive. Directly south of the Carriage Ford Subdivision, south of Warrenton Road.	RR	L, M, W
14 Kelly Green Estates Subdivision	Subdivision of single-family homes on Kelly Green Way accessed on the east side of Lonesome Road, north of Fitzwater Drive.	RAR	L
15 Reid Lane Residences	Single-family homes on the west side of Reid Lane, south of Vint Hill Road, and south of Fitzwater Drive on the north side of Belmont Farms Subdivisions (VSR 6).	RAR	L

Sources: Fauquier County, Loudoun County, and Prince William County (Subdivisions).

N = North; Rte. = Virginia State Route; VSR = visually sensitive resource.

^a Viewer Groups (see Section 5.2.2.3): L = local area residents; M = motorists, commuters, and through travelers; R = recreationists; W = workers

^c Landscape Units (see Appendix C): RAR = Rural Agricultural & Residential; RR = Rural Residential



TABLE 6.4-2 AREAS OF POTENTIAL VISIBILITY ALONG SEGMENT 2B

Number and Name	Description	Landscape Unit(s) ^c	Primary Viewer Group(s) ^a
Educational Resources (Schools)			
1	Patriot High School Public high school for (Grades 9 through 12) on the west side of Kettle Run Road, south of Vint Hill Road. The campus includes athletic fields.	RAR	L, R
2	T. Clay Wood Elementary School Public elementary school (Kindergarten through 5th grade) with associated playground and athletic fields on the west side of Kettle Run Road south of Patriot High School.	RAR	L, R
Road Corridors			
3	Courthouse Road Two-lane, paved, and striped roadway running east-west with an AADT of approximately 1,300 vpd between Elk Run Road to the west and Brent Town Road to the east.	RAR	L, M, W
4	Elk Run Road Two-lane, paved, and striped roadway running north-south and AADT of approximately 3,000 vpd from Courthouse Road in the south to Laws Ford Road in the north, and AADT of approximately 3,700 vpd from Laws Ford Road to Catlett Road to the north.	RAR	L, M, W
5	Fitzwater Drive Two-lane, paved, and striped roadway running east-west with an AADT of approximately 2,300 vpd between Belmont Farm Lane to the west and Rt. 28 to the east.	RAR	L, M, W
6	Reid Lane Two-lane rural road of unpaved and paved segments and AADT of approximately 120 vpd heading north from Fitzwater Drive, and AADT of approximately 180 vpd along the northern portion from Vint Hill Road heading south.	RAR	L, M, W
7	Rte. 28 (Nokesville Road) Four-lane, divided, paved, and striped roadway running northeast-southwest with an AADT of approximately 19,000 vpd between Fitzwater Drive and Prince William Drive.	RAR	L, M, W
8	Sowego Road Two-lane, paved road running east-west between Elk Run Road to the west and Brent Town Road to the east. AADT is not available for this section of the road.	RAR	L, M, W
9	Vint Hill Road Two-lane, divided road with AADT of approximately 7,500 vpd between Silas Drive to the west and Schaeffer Lane to the east.	RAR	L, M, W
10	Warrenton Road Two-lane paved roadway with AADT of approximately 460 vpd between the Prince William/Fauquier County line to the west and Carriage Ford Road to the east.	RAR	L, M, W

Sources: VDOT 2024 (AADT data).

AADT = annual average daily traffic; Rte. = Virginia State Route; vpd = vehicles per day; VSR = visually sensitive resource.

^a Viewer Groups (see Section 5.2.2.3): L = local area residents; M = motorists, commuters, and through travelers; R = recreationists; W = workers

^b AADT includes total daily traffic volume—expressed as vehicles per day—in both directions.

^c Landscape Units (see Appendix C): RAR = Rural Agricultural & Residential; RR = Rural Residential

6.4.2 VISUAL IMPACT ASSESSMENT

KOPs 302 and 303 provide representative views of existing conditions, as well as simulated conditions with the proposed Project (Appendix C). KOP 302 is in a Rural Agricultural and Residential Landscape Unit while KOP 303 is in a Rural Residential Landscape Unit. The common visual characteristics in each of these landscape units are described for Segment 1 (Section 4.4) and in Appendix C.

In Segment 2B, there would be small changes to the existing visual resource conditions in both types of landscape units from the proposed Project. Specifically, changes in landforms and vegetation would be minor, if any, and the changes in the built environment would generally be small in both the Rural Agricultural and Residential and Rural Residential landscape units. The primary change in the built environment would be the change from lattice structures to monopoles within the existing cleared right-of-way. The new monopoles would appear as tall, solid, vertical structures with short horizontal cross arms connected by a series of thin, parallel, horizontal overhead lines that form gentle waves as they stretch between towers. The new monopole structures would be taller than the existing lattice structures, but they generally appear more compact, sleeker, and less complex. Similar to changes along other segments of the proposed Project, visual changes along Segment 2B would be most apparent in foreground views (less than 0.5 mile) and adjacent middle ground (0.5 to 2 miles) areas, especially in areas with few to no screening features.

Table 6.4-3 describes the Project's impact on visual resource conditions and indicates the anticipated degree of visual change (small, medium, large), viewer sensitivity (low, medium, high) to changes in visual resource conditions, and an overall impact rating for each VSR (negligible, minor, moderate, major) along Segment 2B. The degree of visual change and viewer sensitivity are based on the assessment of visual change and sensitivity at each KOP and within each landscape unit (see Appendix C).

Table 6.4-4 summarizes the anticipated visual resource impacts and provides a potential impact rating (major, moderate, minor, or negligible) for Segment 2B. The impact rating is based on VSRs, other areas of high visibility, changes in visual characteristics, and viewer sensitivity. Overall, Segment 2B would have negligible to moderate impacts on visual resources across both Rural Agriculture and Residential and Rural Residential Landscape Unit types.

TABLE 6.4-3 SUMMARY OF ANTICIPATED IMPACTS BY VISUALLY SENSITIVE RESOURCE

VSR # and Name	KOP #	Approximate Distance to Relevant Project Features	Summary of Impacts	Impact Assessment
Recreational Resources				
1	Burnside Farms	NA	Segment 2B: 0.2 mile west of Burnside Farms.	Burnside Farms is situated on an open parcel in a residential area west of Kettle Run Road. A densely vegetated forested area west of the farm screens views of the Project. Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Negligible
2	Lehigh Portland Park	NA	Segment 2B: 0.3 mile east of Lehigh Portland Park.	Lehigh Portland Park is a heavily forested park located south of Nokesville Road. The existing vegetation effectively screens views of the Project. Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Negligible
3	Nokesville Park	NA	Segment 2B: 0.7 mile west of Nokesville Park.	The park sits on a parcel of land with parking lots and athletic fields. Westward views (towards the Project) are effectively screened by surrounding forested areas. Degree of Visual Change: Small Viewer Sensitivity: Medium Overall Impact: Negligible to Minor

VSR # and Name	KOP #	Approximate Distance to Relevant Project Features	Summary of Impacts	Impact Assessment
Road Corridors				
4 Virginia Scenic Byway SC-616N (Fauquier County)	NA	Segment 2B: 1.4 miles east of the intersection of Virginia Scenic Byway SC-616N and Virginia Scenic Byway SC-806N.	Due to the distance from Project and vegetative screening, views towards the Project are effectively screened.	Degree of Visual Change: Small Viewer Sensitivity: Medium Overall Impact: Negligible
Residential Areas and Subdivisions				
5 Belmont Farms Residences	NA	Segment 2B: 200 feet east of Belmont Farms Residences.	Subdivision of single-family homes on the west side of Belmont Farms Lane. An existing treeline to the east extends the full length of the residential area and effectively screens views of the Project.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Negligible to Minor
6 Belmont Farms Subdivision	NA	Segment 2B: 0.2 mile east of Belmont Farms Subdivision.	Subdivision of single-family homes, south of Belmont Farms Residences, on both sides of Belmont Farms Lane. Distance from the Project and existing treelines on the east border of the subdivision screens views of the Project.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Negligible to Minor

VSR # and Name	KOP #	Approximate Distance to Relevant Project Features	Summary of Impacts	Impact Assessment
7 Bruce S Colvin Subdivision	NA	Segment 2B: crosses the southwestern portion of the subdivision 200 feet west of Carriage Ford Road.	The majority of homes in the subdivision of single-family homes along Carriage Ford Road would have full direct view of the Project. due to the open landscape and close distance. The Project would be prominent to dominant from these views.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Moderate to Major
8 Carriage Ford Road Residences	KOP 303	Segment 2B: crosses 0.3 mile through the western portion of the residential area along Carriage Ford Road.	Carriage Ford Road Residences is a rural residential area with pockets of open farm and pastureland. Views from the eastern portion of the residential area would likely be screened by vegetation and topography, but homes to the west could experience partial views of the Project.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Moderate
9 Carriage Ford Subdivision	NA	Segment 2B: 180 feet west of Carriage Ford Subdivision.	Homes in the southwestern portion of the subdivision along Carriage Ford Road would have direct views of the Project.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Moderate
10 Farmview Road Residences	NA	Segment 2B: crosses the western portion of the residences south of Nokesville Rd.	Planned vegetation clearing through the west side of the residential area would widen views of the Project for homes on the western portion of the residential area. Otherwise, the majority of views (views from residences to the east) would be screened by vegetation.	Degree of Visual Change: Medium Viewer Sensitivity: High Overall Impact: Moderate

VSR # and Name	KOP #	Approximate Distance to Relevant Project Features	Summary of Impacts	Impact Assessment
11 Fitzwater Drive Residences	NA	Segment 2B: crosses 0.4 mile of the residential area, south of Fitzwater Drive.	Single-family homes on both sides of the road west of Kettle Run Road. Minor vegetation clearing is planned through the west side of the residential area. Homes in the western portion of the area would have more open views of the Project, whereas homes to the east would have screened views due to existing vegetation.	Degree of Visual Change: Medium Viewer Sensitivity: High Overall Impact: Moderate
12 Flickinger and Hoke Subdivision	NA	Segment 2B: 200 feet east of Flickinger and Hoke Subdivision.	Subdivision of single-family homes on the west of Reid Lane. Dense vegetation bordering the east end of the subdivision screens the majority of views towards the Project.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Negligible
13 Hazlewood Drive Residences	KOP 303	Segment 2B: crosses the western portion of the residences approximately 0.2 mile south of Carriage Ford Road.	The route crosses a small portion of residential area to the west, and parallels Carriage Ford Road for approximately 0.1 mile. Residences and motorists along Carriage Ford Road would have direct views of the Project.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Moderate
14 Kelly Green Estates Subdivision	NA	Segment 2B: 0.1 mile east of Kelly Green Estates Subdivision.	Dense vegetation borders the east end of the subdivision of single-family homes located on the west of Reid Lane. The majority of views towards the Project are screened.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Minor

VSR # and Name	KOP #	Approximate Distance to Relevant Project Features	Summary of Impacts	Impact Assessment
15 Reid Lane Residences	NA	Segment 2B: 250 feet east of Reid Lane Residences.	Single-family homes on the east side of Reid Lane would be partially screened by existing vegetation. Views of the Project would be prominent from few homes in the eastern portion of the residential area.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Minor

KOP = key observation point; NA = not applicable; VSR = visually sensitive resource

TABLE 6.4-4 VISUAL RESOURCE IMPACT SUMMARY

Landscape Unit Type / Component	Impacted VSRs	Impacted Areas and Viewer Groups	Impacted Viewer Groups	Potential Impact Rating
Rural Agriculture and Residential / Segment 2B	1-15 Total: 15	<p>Road crossings:</p> <ul style="list-style-type: none"> Existing right-of-way—8 crossings <p>Sensitive VSRs (impacts > negligible):</p> <ul style="list-style-type: none"> Belmont Farms Residences (VSR 5) Belmont Farms Subdivision (VSR 6) Bruce S Colvin Subdivision (VSR 7) Carriage Ford Road Residences (VSR 8) Carriage Ford Subdivision (VSR 9) Farmview Road Residences (VSR 10) Fitzwater Drive Residences (VSR 11) Hazlewood Drive Residences (VSR 13) Kelly Green Estates Subdivision (VSR 14) Nokesville Park (VSR 3) Reid Lane Residences (VSR 15) 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Recreationists/ tourists Workers 	<p>Degree of Visual Change: Small</p> <p>Viewer Sensitivity: High</p> <p>Overall Rating: Negligible to Moderate</p>

Landscape Unit Type / Component	Impacted VSRs	Impacted Areas and Viewer Groups	Impacted Viewer Groups	Potential Impact Rating
Rural Residential / Segment 2B	VSRs 7 and 9 Total: 2	Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> • Bruce S Colvin Subdivision (VSR 7) • Carriage Ford Subdivision (VSR 9) 	<ul style="list-style-type: none"> • Residents • Motorists, commuters, through travelers 	Degree of Visual Change: Small Viewer Sensitivity: High Overall Rating: Negligible to Moderate

NA = not applicable; VSR = visually sensitive resource.

6.5 ENVIRONMENTAL JUSTICE

6.5.1 EXISTING CONDITIONS

Based on the EJ criteria thresholds, two of the four CBGs crossed by Segment 2B meet EJ criteria for populations of color and/or low-income communities (Figure 3.2.5-1). Table 6.5-1 provides population and demographic information for each of the CBGs crossed by Segment 2B.

6.5.2 IMPACT ASSESSMENT

Based on EJ criteria thresholds, Segment 2B would cross two potential EJ communities. As discussed below, impacts on views, property values, and health from construction activities are not anticipated to be significantly adverse. As such Segment 2B would not have overall significantly adverse impacts on potential EJ communities. Section 3.2.5 discusses impacts on EJ communities more broadly. The below analysis addresses Segment specific information.

Construction Activities

The primary noise receptors in the study area would be residents along Segment 2B. There are 41 residences within 500 feet of the Segment 2B Impact Centerline and 1 residence within 60 feet of the Impact Centerline. Construction will be temporary and occur during daylight hours. During operations, noise and visual conditions are expected to remain consistent with the current environment.

Visual Impacts

Section 6.4 assesses Segment 2B visual impacts. Because Segment 2B crosses two CBGs with sensitive populations and/or potential EJ communities, KOPs used in the analysis of visual impacts are representative of views in potential EJ communities. As detailed in Section 6.4.2, Segment 2B would have a small degree of visual change and the overall visual impact rating would be negligible to moderate.

Property Values and Health Impacts

There are 41 homes that are within 500 feet of the Segment 2B Impact Centerline. Section 3.2.5 addresses the effect of transmission lines on property values and health impacts.

TABLE 6.5-1 ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY SEGMENT 2B

Geography	Population	Total Populations of Color	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic or Latino	Low-Income Population	Limited English-Speaking Household
Virginia	8,657,499	41%	59%	18%	0.1%	7%	0.1%	0.5%	4%	11%	23%	3%
Fauquier County	73,935	24%	76%	6%	0.0%	2%	0.0%	0.5%	4%	12%	15%	2%
CT 9304.04 BG 2	1,646	15%	85%	3%	0.0%	0%	0.0%	0.0%	4%	7%	27%	0%
CT 9307.04 BG 3	1,464	15%	85%	5%	0.0%	1%	0.0%	0.0%	3%	7%	17%	0%
Prince William County	484,625	61%	39%	20%	0.1%	10%	0.1%	0.5%	5%	26%	17%	6%
CT 9013.05 BG 1	1,479	29%	71%	11%	0.0%	2%	0.0%	0.0%	3%	12%	38%	0%
CT 9014. 17 BG 1	1,906	35%	65%	11%	0.3%	7%	0.0%	0.0%	3%	13%	20%	0%

Sources: U.S. Census Bureau 2023a, 2023b, 2023c (Tables B03002, C17002, C16002); VADEQ 2025

CT = Census Tract; BG = Block Group

Gray shaded cells include reference population.

Blue shaded cells indicate populations of color including community of color is composed primarily of one of the groups listed in the VEJA definition of "population of color" or the analysis area has a greater percentage of a community of color than the state as a whole.

Yellow shaded cells indicate low-income populations.

6.6 GEOLOGICAL RESOURCES

6.6.1 EXISTING CONDITIONS

Segment 2B primarily encounters sedimentary bedrock belonging to the Newark Supergroup made up of sandstone, siltstone, and shale. There are intermittent intersections with a unit of diabase from the right-of-way's intersection with Warrenton Road and north for about 0.5 mile, and again from Nokesville Road to the terminus of the segment at the Vint Hill Substation, the unit runs parallel with the right-of-way (USGS 2005). There are no active mines or mineral resources within 0.25 mile of Segment 2B Impact Centerline (Virginia Energy 2024a,b).

6.6.2 IMPACT ASSESSMENT

Because there are no active permitted mining sites or inactive mineral resource prospects within 0.25 mile of Segment 2B Impact Centerline, Segment 2B will have no impact on mineral resources.

7. SEGMENT 3 RESOURCES AND IMPACTS

7.1 LAND USES

7.1.1 PUBLIC LANDS

7.1.1.1 EXISTING CONDITIONS

The Segment 3 Mainline, Gainesville alternatives, and/or Pageland alternatives cross or pass within 0.25 mile of 11 public land resources, discussed below (Tables 7.3-1, 7.3-2, and 7.3-3; Figure 1.6-1).

Segment 3 Mainline

County Lands

Broad Run Park

Broad Run Park, also referred to as Broad Run Linear Park, consists of forested riparian corridor extending for several miles along Broad Run, preserving and protecting natural resources along the waterbody and providing active recreational activities such as hiking, canoeing, and bird watching (Prince William County 2025; Prince William Trails and Streams Coalition 2025). Six of 13 planned miles of trails have been constructed to date through the park. The Company's existing Morrisville-Wishing Star right-of-way abuts and slightly overlaps the western boundary of the park, with less than 0.1 acre of County-owned land within the corridor.

Chris Yung Elementary School

Chris Yung Elementary is located at 12612 Fog Light Way just north of the intersection of University Boulevard and Devlin Road in Bristow. The school, whose campus spans approximately 21 acres, serves nearly 800 students from pre-kindergarten to fifth grade (US News 2025; PWC School Board; Chris Yung Elementary School). The parcel boundary for the school lies about 330 feet east/southeast of Dominion's existing transmission corridor. The campus contains the main

school building, parking area, and athletic fields. Surrounding lands are developed to the east and north and forest to the west and south.

Catharpin Recreational Park

Catharpin Recreational Park at 12500 Kyle Wilson Way in Catharpin is a complex of athletic fields encompassing about 115 acres (Prince William County 2025). It contains four soccer fields, five diamond fields, and parking and concession facilities. The Company's existing Morrisville-Wishing Star Corridor abuts and overlaps the western boundary of the park, encompassing about 6.8 acres of parkland within the right-of-way. There are no developed park facilities within the existing corridor.

Segment 3 Gainesville Alternative Route 1

Federal Lands

Manassas National Battlefield Park

Gainesville 1 passes within 0.25 mile of, but does not cross, MNPB, which preserves and protects about 5,100 acres associated with First Manassas, the first land battle of the Civil War, and Second Manassas, a major engagement resulting in nearly 22,000 casualties. An approximately 2.0-mile-long section of the Company's existing Morrisville-Wishing Star Corridor crosses MNPB north of I-66 along the western park boundary parallel to and east of Pageland Lane. The corridor passes through sections of the Manassas II battlefield referred to as Stuart's Hill and Brawner Farm, which were incorporated into MNPB in the 1980s (NPS 2009).

The Company's existing transmission lines predate the NPS acquisition of the Stuart's Hill and Brawner Farm areas. Originally about 0.3 mile east of Pageland Lane, the existing lines were moved by the Company to their current location in the park in 1998 (Figure 1.6-1). An Environmental Assessment from a previous Dominion upgrade project describes the relocation of the lines as follows:

When Brawner Farm and Stuart's Hill were included within the park boundary in 1985 and 1988, the [Dominion] transmission lines already existed, and the lines and right-of-way were therefore included within the new park boundary. The original 230 kV / 115 kV and 500 kV transmission configuration disrupted the historic line-of-sight between sites associated with General Lee and both wings of his army (on Stuart's Hill), General Longstreet (west and later east of Stuart's Hill), and General Jackson (north of the unfinished railroad), during the Battle of Second Manassas. Because of this disruption to the cultural landscape, the existing transmission lines were relocated to their current location (NPS 2009).

The Company operates its lines within the park under a 1996 Deed of Easement under which Dominion has "perpetual right, privilege and easement of right-of-way two hundred forty (240) feet in width to construct, operate, and maintain one or more line" within MNPB (NPS 2009). The Company states there are no restrictions in the easement that prohibit rebuilding the existing lines, installing new lines, or reconductoring the existing structures,.

The presence of the existing lines notwithstanding, NPS lands are among the highest risk land use constraints for transmission line routing because they preserve the most significant natural and cultural resources in the United States. The NPS mission is to preserve “unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations” (NPS 2024b). Transmission lines generally are not compatible with this mission. The existing lines are in the park because they predate NPS acquisition of that portion of the battlefield.

State Lands

Cushing Road Gainesville Commuter Lot

Gainesville 1 passes about 150 feet west of the Cushing Road Gainesville Commuter Lot, a VDOT-managed parking area for commuters at a public transportation hub along Cushing Road southeast of the intersection of Prince William Parkway and I-66. The lot contains bus loading and parking areas. The Company’s existing Morrisville-Wishing Star Corridor crosses both the parking and bus loading facilities.

Conway Robinson State Forest

Gainesville 1 passes about 0.2 mile east of Conway Robinson State Forest, a multi-use 440-acre forest north of US 29 near its intersection with I-66 (VDOF, 2025). The Conway Robinson State Forest is a wooded area with both pine and hardwood species, and is managed for demonstration of scientific forest management, research, wildlife habitat, watershed protection, biological diversity, and outdoor recreation such as hiking, hunting, horseback riding, and self-guided interpretive trails. The State Forest is managed by VDOF, but there are no regularly staffed facilities at the site (VDOF, 2025). The Company’s existing right-of-way does not cross the state forest.

County Lands

Prince William County Schools McCuin Transportation Center of Excellence

Gainesville 1 crosses this resource, a school bus parking and maintenance facility off Piney Branch Lane west of Hansen Farm Road, on a parcel owned and managed by the Prince William County School Board. The County’s Balls Ford Road Yard Waste Compost Facility is immediately adjacent to the east. Dominion’s existing Morrisville-Wishing Star Corridor crosses both undeveloped land and the bus parking area within the parcel.

Balls Ford Road Yard Waste Compost Facility

Gainesville 1 crosses this resource, a Board of Supervisors-managed public disposal facility for yard, food, and organic wastes located west of Hansen Farm Road and east of the McCuin Transportation Center. The parcel is mostly developed containing a parking area, office, and piles of waste materials. The Company’s existing Morrisville-Wishing Star Corridor crosses open land along the western edge of the parcel east of the material storage area.

Undeveloped Parcel

Gainesville 1 passes about 820 feet west of an undeveloped parcel (currently cleared with herbaceous cover) of Prince William County Board of Supervisors-owned land in the southeast corner at the intersection of Wellington and Hansen Farm roads. The Company's existing Morrisville-Wishing Star Corridor does not cross this resource.

Segment 3 Gainesville Alternative Route 2

Gainesville 2 crosses the McCuin Transportation Center and Balls Ford Recycling Facility and passes within 0.25 mile of, but does not cross, the Cushing Road Gainesville Commuter Lot, Conway Robinson State Forest, and MNBP. Each of these resources is described above.

Segment 3 Gainesville Alternative Route 3

Gainesville 3 passes within 0.25 mile of, but does not cross, the McCuin Transportation Center, Balls Ford Road Recycling Facility, University Boulevard Park & Ride, Conway Robinson State Forest, and MNBP. The University Boulevard Park & Ride is described below; the other resources are described above.

University Boulevard Park & Ride

Gainesville 3 passes about 150 feet west of the VDOT-managed University Boulevard Park & Ride along University Boulevard near its intersection with I-66. Like the Cushing Road Gainesville Commuter Lot, the site contains bus loading and parking facilities. The Company's existing Morrisville-Wishing Star Corridor does not cross this resource.

Segment 3 Pageland Alternative Route 1

Federal Lands

Pageland 1 passes within 0.25 mile of, but does not cross, MNBP, described above.

State Lands

Pageland 1 passes within 0.25 mile of, but does not cross, Conway Robinson State Forest, described above.

County Lands

Pageland 1 passes within 0.25 mile of one county-owned resource, Catharpin Recreational Park, described above.

Land Trusts

Pageland 1 passes within 0.25 mile of, but does not cross, two land parcels adjacent to MNBP owned by the ABT, a 501(c)(3) non-profit dedicated to purchasing and preserving historic battlefields across the U.S., including from the Civil War (American Battlefield Trust 2025). The organization acquires these sites with the intent of eventually donating the land to state or federal land managing agencies, such as the NPS, states, or counties, for public access and interpretation. Funding for land acquisitions is secured through federal, state, local, and private sources

(American Battlefield Trust 2025). The ABT also facilitates historical education opportunities through various events, outdoor classrooms, field trips, and sharing of their online library.

The Company's existing Morrisville-Wishing Star Corridor crosses one ABT-owned parcel east of Pageland Lane. Other than the existing right-of-way, the parcel is undeveloped, about half of which is forested with the remainder cleared and open. Based on review of recent aerial photography, the parcel also contains a home and outbuildings. While this parcel is not crossed by Pageland 1, its presence adjacent to the MNBP and acquisition through public funding does make it a routing constraint that is only crossed with consent of the landowner.

Segment 3 Pageland Alternative Route 2

Pageland 2 passes within 0.25 mile of, but does not cross, MNBP, Conway Robinson State Forest, and Catharpin Recreational Park, described above.

7.1.1.2 IMPACT ASSESSMENT

None of the Segment 3 Mainline, Gainesville, or Pageland routes cross Chris Yung Elementary School, Catharpin Recreational Park, MNBP, Cushing Road Gainesville Commuter Lot, Conway Robinson State Forest, the undeveloped parcel of Prince William County land, University Boulevard Park & Ride, or the ABT tract. Because no new or expanded right-of-way would be required, there would be no direct impact on these resources from the Project. An assessment of potential indirect impacts on recreational uses of public lands (such impacts from noise, dust, or traffic on recreational uses of MNBP) are addressed in Section 7.1.8. Impacts on historic resources, like the battlefields, are addressed in Section 7.3. Visual resource impacts are discussed in Section 7.4.

The Segment 3 Mainline crosses the western edge of Broad Run Park. In this area, the Project would be limited to the Company's existing transmission corridor, with no additional right-of-way needed. Therefore, there would be no impact on existing land uses within the county land, which as noted above, is limited to less than 0.1 acre of existing right-of-way. An assessment of potential indirect impacts on recreational uses of Broad Run Park is provided in Section 7.1.8.

As noted above, the McCuin Transportation Center and Balls Ford Road Waste Compost Facility share a common boundary. The Company's existing Morrisville-Wishing Star Corridor follows the boundary across undeveloped land along the west edge of the compost facility and east edge of the transportation center. No additional right-of-way would be required for the Project in this area. Temporary construction impacts, such as noise, dust, and traffic, would not significantly impact uses of these properties, though portions of the bus parking lot may need to be closed temporarily during active construction. Dominion would coordinate with the Prince William County School Board regarding any required temporary closures in this area.

Conclusions Regarding the Gainesville and Pageland Alternatives

Gainesville 1, 2, and 3 avoid crossings of federal and state lands and most county lands in the area. The routes share a common alignment where they cross the McCuin Transportation Center and Balls Ford Road Yard Waste Compost Facility. Because the Project would be limited to the Company's existing corridor across these lands for all three alternatives, there would be no need

for additional right-of-way regardless of the route selected, and temporary construction impacts (e.g., noise, dust, and traffic) would be the same.

Pageland 1 and 2 each avoid the federal, state, county, and ABT land in the study area. Neither route would require new or additional right-of-way on these lands, and temporary construction impacts would be similar for each alternative though we note that Pageland 1 is closer to MNPB and Pageland 2 is closer to Conway Robinson State Forest.

TABLE 7.1-1 SEGMENT 3/GAINESVILLE ALTERNATIVES/PAGELAND ALTERNATIVES FEDERAL LANDS

Property	Description	County	Approximate Distance and Direction from Route Impact Centerline at Shortest Point	Crossing Length
Manassas National Battlefield Park	Civil War battlefields (First Manassas and Second Manassas)	Prince William	About 60 feet east of Gainesville 1 along Pageland Lane north of I-66 About 400 feet east of Gainesville 2, Gainesville 3, and Pageland 2 along Pageland Lane near its intersection with US 29 About 280 feet east of Pageland 1 near its intersection with Angelond Lane	NA

TABLE 7.1-2 SEGMENT 3/GAINESVILLE ALTERNATIVES/PAGELAND ALTERNATIVES STATE LANDS

Property Name	Description	County	Approximate Distance and Direction from Route Impact Centerline at Shortest Point	Crossing Length
Cushing Road Gainesville Commuter Lot	Park & ride commuter lot	Prince William	About 150 feet east of Gainesville 1 along Cushing Road	NA
Conway Robinson State Forest	Multi-use forest	Prince William	About 650 feet east of Gainesville 1 at the US 29 crossing About 130 to 140 feet north of Gainesville 2 and Gainesville 3 along US 29 About 870 feet west of Pageland 1 near the intersection of Pageland Lane and US 29 About 100 feet south of Pageland 2 along the northern boundary of the state forest	NA

Property Name	Description	County	Approximate Distance and Direction from Route Impact Centerline at Shortest Point	Crossing Length
University Boulevard Park & Ride Lot	Park & ride commuter lot	Prince William	Within about 180 feet of Gainesville 3 near the intersection of University Boulevard and I-66	NA

TABLE 7.1-3 SEGMENT 3/GAINESVILLE ALTERNATIVES/PAGELAND ALTERNATIVES LOCAL LANDS

Property Name	Description	County	Approximate Distance and Direction from Route Impact Centerline	Crossing Length
Broad Run Park	Park (riparian corridor with trails)	Prince William	Crossed by the Segment 3 Mainline along Broad Run between Weathersfield Drive to the north and Struthers Glen Court to the south	150 feet
NA	Undeveloped	Prince William	About 830 feet east of the Segment 3 Mainline, near the intersection of Wellington and Hansen Farm roads	NA
Chris Yung Elementary School	Elementary	Prince William	About 300 feet east of the Segment 3 Mainline along Fog Light Way	NA
McCuin Transportation Center of Excellence	Transportation office and school bus parking lot	Prince William	Crossed by Gainesville 1, 2, and 3 west of Piney Branch Lane	900 feet
Balls Ford Road Yard Waste Compost Facility	Composting facility	Prince William	Crossed by Gainesville 1, 2, and 3 near the intersection of Randolph Ridge Lane and Hansen Farm Road	900 feet
Catharpin Recreational Park	Sports complex	Prince William	About 300 feet east of Pageland 1 and 2 and about 250 feet southwest of the Segment 3 Mainline at the north end of the park west of Sanders Lane	NA

7.1.2 LAND USE AND LAND COVER

The land use and land cover types along the Segment 3 Mainline and Gainesville and Pageland alternatives are listed in Table 7.1-4 and depicted on Figure 4.1.2-1.

TABLE 7.1-4 LAND USE/LAND COVER CROSSED BY THE SEGMENT 3 ROUTES (ACRES)

Land Use/Land Cover ^a	Unit	Segment 3 Mainline	Gainesville 1	Gainesville 2	Gainesville 3	Pageland 1	Pageland 2
Total right-of-way ^b	Acres	309.6	34.7	41.0	43.7	61.9	67.3
Agricultural	Acres	16.0	0.0	0.0	0.0	19.3	23.7
Forested	Acres	23.8	23.0	32.3	30.6	30.0	39.0
Developed	Acres	0.9	3.7	2.5	2.3	1.1	0.7
Open Space	Acres	268.9	7.7	6.2	8.8	10.4	3.7
Open Water	Acres	0.0	0.3	0.0	0.2	1.0	0.2

^a Based on local and statewide data sets and aerial photo interpretation by ERM. Acreage includes the proposed new rights-of-way.

^b Totals may not match the sum of the addends due to rounding.

7.1.2.1 EXISTING CONDITIONS

Segment 3 Mainline

The Segment 3 Mainline requires 309.6 acres, of which 260.5 acres is within existing, maintained right-of-way in the Morrisville-Wishing Star Corridor. About 49.7 acres would consist of expanded right-of-way, with no new right-of-way needed. The predominant land use type in the segment is open space (about 86 percent of the total area), followed by forest (8 percent), agriculture (5 percent), and developed land (1 percent).

Gainesville Alternatives

Segment 3 Gainesville Alternative Route 1

This route requires 34.7 acres, of which 8.5 acres is within the Company's existing right-of-way and the remainder consists of new right-of-way. The predominant land use/cover type along the route is forest (79 percent), followed by open space (22 percent), developed land (11 percent), and open water (1 percent). The developed land mainly occurs along and near the crossing of the I-66 corridor.

Segment 3 Gainesville Alternative Route 2

Gainesville 2 requires 41.0 acres, of which 3.6 acres is within the Company's existing right-of-way and the remainder consists of new right-of-way. The predominant land use/cover type along the route is forest (66 percent), followed by open space (22 percent) and developed land (11 percent). The developed land mainly occurs along and near the crossing of the I-66 corridor.

Segment 3 Gainesville Alternative Route 3

Gainesville 3 requires 43.7 acres, all consisting of new right-of-way. The predominant land use/cover type along the route is forest (73 percent), followed by open space (21 percent), developed land (5 percent), and open water (1 percent). The developed land mainly occurs along and near the crossing of the I-66 corridor.

Pageland Alternatives

Segment 3 Pageland Alternative Route 1

Pageland 1 requires 61.9 acres of which 15.9 acres consists of expanded right-of-way and 46.0 acres consists of new right-of-way. The predominant land use/cover type along the route is forest (48 percent), followed by agriculture (31 percent), open space (18 percent), and developed land and open water (1 percent each). Much of the Pageland 2 is within the Digital Gateway planned development

Segment 3 Pageland Alternative Route 2

Pageland 1 requires 67.3 acres of which 2.8 acres consists of expanded right-of-way and 64.5 acres consists of new right-of-way. The predominant land use/cover type along the route is forest (58 percent), followed by agriculture (35 percent), open space (5 percent), and developed land and open water (1 percent or less each).

7.1.2.2 IMPACT ASSESSMENT

The primary impact of Segment 3 Mainline and Gainesville and Pageland alternative routes on land use/cover type would be the conversion of forested land to an herbaceous cover within expanded and/or new right-of-way due to regular maintenance during Project operations. Except for land directly beneath transmission structures, operation of the Project would not impact current uses of agricultural, open space, and developed lands or open water features. As noted elsewhere in this study, most agricultural activities are compatible with an electric transmission right-of-way. Lands currently in production would remain so unless removed by the owner for reasons unrelated to the Project.

Conclusions Regarding the Gainesville and Pageland Alternatives

While all three Gainesville routes would require new right-of-way, including in areas currently forested, review of aerial imagery and land use patterns in conjunction with zoning and planned developments (discussed in Sections 7.1.3 and 7.1.6) indicate the land is planned for future development and likely to be developed. While routing through this area would require new tree clearing, much of the area is likely to be cleared in the future as development continues along and near the I-66 corridor. Of the three routes, Gainesville 1 is the shortest alignment of the Gainesville routes, would require the least amount of new right-of-way and least amount of tree clearing, and crosses the most currently developed land.

Significant portions of both Pageland routes cross the Digital Gateway planned development discussed in Section 7.1.6. Should this planned development move forward, much of the area

crossed by the routes would be developed. Of the two routes, Pageland 1 is shorter, would require less new right-of-way and less tree clearing, and crosses the most currently developed land.

7.1.3 LAND USE PLANNING AND ZONING

7.1.3.1 EXISTING CONDITIONS

Table 7.1-5 lists and describes zoning districts within 0.25 mile of the Segment 3 Mainline Impact Centerline and Gainesville and Pageland alternatives Impact Centerlines in Prince William and Loudoun counties. Because Dominion intends to obtain a CPCN from the SCC, the Project would be exempt from zoning requirements.

TABLE 7.1-5 ZONING DISTRICTS WITHIN 0.25 MILE OF SEGMENT 3 MAINLINE AND GAINESVILLE AND PAGELAND ALTERNATIVES IMPACT CENTERLINES

Zoning District	Description and Allowed Uses
Prince William County	
Agricultural (A-1)	Encourages conservation of natural resources, including prime agricultural land, forest land, and/or open space as well as rural character preservation.
General Business District-1 (B-1)	Implements regional and general commercial land uses, such as community-scale retail, office, and institutional uses. Non-retail uses are only permitted within the district to complement and support retail purposes.
Convenience Business (B-3)	Provides areas for convenience goods and services.
Government Property-Federal	Uses include public facilities, structures, and parks owned and operated by a governmental body.
Heavy Industrial (M-1)	Permits heavy and intensive industrial processing, manufacturing and storage with limited retail and service uses.
Light Industrial (M-2)	Permits areas for research and development centers, light industrial manufacturing, warehousing, wholesaling, and related office and institutional uses.
Industrial/Transportation (M/T)	Heavy industrial uses, including those which generate considerable truck and/or heavy equipment traffic, or which require access to more than one mode of transportation.
Planned Business District (PBD)	Permits regional employment centers, offices, and flexible-use employment centers. Encourages development in areas served by a freeway or interstate highway or serviced by a minor arterial or greater designation roadway.
Planned Mixed Residential (PMR)	Promotes suburban residential development at varying densities to provide flexibility. Encourages the establishment of planned developments of ten or more contiguous acres.
Residential Planned Community (RPC)	Promotes residential development in planned developments of 500 contiguous acres or more under one ownership. Encourages a variety of housing accommodations and land uses compatible with planned communities such as school sites, parks, playgrounds, recreational areas, etc.
Residential-6 (R-6)	Limits residential development to six dwelling units per acre or less.

Zoning District	Description and Allowed Uses
Semi-Rural Residential (SR-5)	Provides for large lot single-family developments in a semi-rural setting.
Suburban Cluster Residential-2 (R-2C)	Limits residential development to clustered single-family dwellings at a density of approximately two dwelling units per acre or less.
Suburban Cluster Residential-4 (R-4C)	Limits residential development to clustered single-family dwellings at a density of approximately four dwelling units per acre or less.
Suburban Residential-4 (R-4)	Limits residential development to single-family dwellings at a low to moderate suburban density of four dwelling units per acre or less.

Loudoun County

Transitional Residential—3 (Lower Foley) (TR3LF)	Encourages low density development as a visual and spatial transition between suburban and rural areas. Establishes a minimum of 50% open space for compatibility with adjacent suburban development.
--	---

In addition to zoning districts, Segment 3 Mainline, Gainesville, and Pageland routes cross a portion of the Data Center Opportunity Zone Overlay District and two Special Planning Areas in Prince William County, and a portion of the Transition Large Lot Neighborhood place type (part of the Transition Policy Area) in Loudoun County. Descriptions of these areas are as follows:

- **Data Center Opportunity Zone Overlay District:** The Data Center Opportunity Zoning Overlay District includes areas throughout Prince William County, including west of the City of Manassas. It designates areas for promoting the development of data centers and advancing high-tech industry.
- **Special Planning Areas:** Prince William County Special Planning Areas are further divided into Activity Centers, Hamlets and Villages, Redevelopment Corridors, or specific Small Area Plans to emphasize certain priorities or respond to specific conditions in the County. Pageland 1 crosses the Prince William Digital Gateway special planning area along Pageland Lane. Pageland 1 and 2 cross a Hamlet special planning area near Sudley Road.
- **Transition Large Lot Neighborhood Place Type:** The Transition Large Lot Neighborhood Place Type encourages core uses such as large lot residential and clustered residential subdivisions, with public facilities permitted as a conditional use.

7.1.3.2 IMPACT ASSESSMENT

Segment 3 Mainline

Table 7.1-6 lists the area of each zoning district within the Segment 3 Mainline footprint. The agriculture district (A-1) accounts for about 35 percent of the segment; residential districts (PMR, RPC, R-2C, R-4, R-4C, R-6, and TR3LF) for about 28 percent; industrial districts (M/T, M-1, and M-2) for about 26 percent; and the business district (PBD) for about 10 percent. Approximately 35.9 acres of right-of-way (18.5 acres existing and 17.4 acres expanded) are within the Transition Large Lot Neighborhood Place Type. Approximately 48.7 acres of right-of-way (35.8 existing and 12.9 expanded) are within the Data Center Opportunity Zone overlay district. The Segment 3 Mainline conforms to the intended uses of the zoning districts crossed as well as the Data Center Opportunity Zone Overlay District and Transition Large Lot Neighborhood Place Type district.

TABLE 7.1-6 ZONING DISTRICTS CROSSED BY SEGMENT 3 MAINLINE

Zoning District	County	Unit	Segment 3 Mainline	
			Existing ROW	Expanded ROW
Agricultural (A-1)	Prince William	Miles	93.9	14.0
Industrial/ Transportation (M/T)	Prince William	Miles	1.2	0.0
Heavy Industrial (M-1)	Prince William	Miles	19.6	0.1
Light Industrial (M-2)	Prince William	Miles	45.5	13.3
Planned Business District (PBD)	Prince William	Miles	29.4	0.0
Planned Mixed Residential (PMR)	Prince William	Miles	0.3	0.4
Residential Planned Community (RPC)	Prince William	Miles	27.8	0.4
Suburban Residential Cluster-2 (R-2C)	Prince William	Miles	4.3	0.2
Suburban Residential-4 (R-4)	Prince William	Miles	7.4	0.9
Suburban Residential Cluster-4 (R-4C)	Prince William	Miles	4.7	0.1
Suburban Residential-6 (R-6)	Prince William	Miles	6.0	1.4
Transitional Residential-3 (Lower Foley) (TR3LF)	Loudoun	Miles	18.5	17.4

Gainesville Alternatives

Segment 3 Gainesville Alternative Route 1

Table 7.1-7 lists the area of each zoning district within the Gainesville alternatives, including Gainesville 1. Of these, the agricultural district accounts for about 57 percent of the route; the industrial districts (M/T, M-1, and M-2) for about 42 percent; and the business district (PBD) for about 1 percent. The right-of-way is within several overlay districts, namely the Data Center Opportunity Zone and the Highway Corridor overlay districts. Approximately 20.8 acres of new right-of-way are within the Data Center Opportunity Zone overlay district. Approximately 19.4 acres of new right-of-way are within the Highway Corridor overlay district. Approximately 7.6 acres of new right-of-way are within special planning areas, namely the Gainesville (6 acres) and Prince William Digital Gateway (1.6 acres).

Gainesville 1 conforms to the intended uses of the zoning districts, the Data Center Opportunity Zone and Highway Corridor overlay districts, and special planning areas crossed.

TABLE 7.1-7 ZONING DISTRICTS CROSSED BY GAINESVILLE ALTERNATIVES

Zoning District	Unit	Gainesville 1	Gainesville 2	Gainesville 3
Agricultural (A-1)	Acres	19.8	5.7	16.4
Planned Business District (PBD)	Acres	0.3	11.0	13.9

Zoning District	Unit	Gainesville 1	Gainesville 2	Gainesville 3
Convenience Business (B-3)	Acres	0.0	0.0	0.5
Industrial/Transportation (M/T)	Acres	1.5	0.0	1.5
Heavy Industrial (M-1)	Acres	5.4	17.1	16.9
Light Industrial (M-2)	Acres	7.5	7.3	7.3

Segment 3 Gainesville Alternative Route 2

Table 7.1-7 lists the area of each zoning district within Gainesville 2. Of these, the industrial districts (M-1 and M-2) account for about 59 percent of the route, the business district (PBD) for about 27 percent, and the agricultural district (A-1) for about 14 percent. The right-of-way is within several overlay districts. These overlay districts include the Data Center Opportunity Zone, where approximately 25.9 acres of new right-of-way are within this overlay district, and the Highway Corridor overlay district, where approximately 16.9 acres of new right-of-way are within this district. Approximately 14.7 acres of new right-of-way are within special planning areas, namely the Gainesville (13.1 acres) and Prince William Digital Gateway (1.6 acres). Gainesville 2 conforms to the intended uses of the zoning districts crossed, as well as the Data Center Opportunity Zone and Highway Corridor overlay districts and special planning areas crossed.

Segment 3 Gainesville Alternative Route 3

Table 7.1-7 lists the area of each zoning district within Gainesville 3. Of these, the industrial districts (M/T, M-1, and M-2) account for about 45 percent of the route; the agricultural district (A-1) for about 29 percent; and the business districts (PBD and B-3) for about 25 percent. The right-of-way is within several overlay districts. Approximately 23.1 acres of new right-of-way are within the Data Center Opportunity Zone overlay district. Approximately 19.7 acres of new right-of-way are within the Highway Corridor overlay district. Approximately 18.7 acres of new right-of-way are within special planning areas, namely the Gainesville (17.1 acres) and Prince William Digital Gateway (1.6 acres). Gainesville 3 conforms to the intended uses of the zoning districts crossed, as well as the Data Center Opportunity Zone and Highway Corridor overlay districts and special planning areas crossed.

Pageland Alternatives

Segment 3 Pageland Alternative Route 1

Table 7.1-8 lists the area of each zoning district within Pageland 1. Of these, the business districts (PBD and B-3) account for about 60 percent of the route; and the agricultural district (A-1) for about 40 percent. The right-of-way is within several overlay districts. Approximately 8.8 acres of right-of-way (0.6 expanded and 8.2 new) are within the Highway Corridor overlay district. Approximately 59.1 acres of right-of-way (13.1 expanded and 46 acres new) are within special planning areas (Catharpin—1.2 acres expanded, 3.8 acres new; Prince William Digital Gateway—11.9 acres expanded, 42.4 acres new). Approximately 4.9 acres of new right-of-way is within a

Hamlet special planning area. Pageland 1 will not impact the intended uses of the zoning districts or special planning areas crossed. Pageland 1 conforms to the intended uses of the Data Center Opportunity Zone and Highway Corridor overlay districts.

TABLE 7.1-8 ZONING DISTRICTS CROSSED BY PAGELAND ALTERNATIVES

Zoning District	Unit	Pageland 1			Pageland 2		
		Existing	Expanded	New	Existing	Expanded	New
Agricultural (A-1)	Acres	NA	4.9	20.3	NA	2.8	15.5
Planned Business District (PBD)	Acres	NA	11.1	25.4	NA	0.0	48.6
Convenience Business (B-3)	Acres	NA	0.0	0.4	NA	0.0	0.4

Segment 3 Pageland Alternative Route 2

Table 7.1-8 lists the area of each zoning district within Pageland 2. Of these, the agricultural district (A-1) account for about 71 percent of the route; for about 40 percent; and the business districts (PBD and B-3) for about 29 percent. The right-of-way is within overlay districts and special planning areas. Approximately 10.3 acres of new right-of-way are within the Highway Corridor overlay district. Approximately 65.8 acres of right-of-way (1.2 acres expanded and 64.6 acres new) are within special planning areas. These special planning areas are Catharpin (1.2 acres expanded and 7.5 acres new) and 57.1 acres of new-right-of-way within Prince William Digital Gateway. Approximately 8.4 acres of new right-of-way are within Hamlet special planning areas. Pageland 2 will not impact the intended uses of the zoning districts and special planning areas crossed. Pageland 2 conforms to the intended uses of the Highway Corridor overlay district.

7.1.4 RESIDENTIAL AREAS AND RESIDENCES

7.1.4.1 EXISTING CONDITIONS

Table 7.1-9 lists the number of existing residences within 100 feet, 250 feet, and 500 feet of the centerlines of the Segment 3 Mainline and Gainesville and Pageland alternatives, while Figure 4.1.4-1 depicts the locations of homes and neighborhoods along the segment/routes.

TABLE 7.1-9 DWELLINGS NEAR THE SEGMENT 3 MAINLINE AND GAINESVILLE AND PAGELAND ALTERNATIVES IMPACT CENTERLINES

Route Alternative	Dwellings within 100 Feet of Impact Centerline	Dwellings within 250 Feet of Impact Centerline	Dwellings within 500 Feet of Impact Centerline
Segment 3 Mainline	9	98	363
Gainesville 1	0	1	4



Route Alternative	Dwellings within 100 Feet of Impact Centerline	Dwellings within 250 Feet of Impact Centerline	Dwellings within 500 Feet of Impact Centerline
Gainesville 2	0	1	4
Gainesville 3	0	1	4
Pageland 1	0	8	30
Pageland 2	1	14	38

The dwelling counts in the Table 7.1-9 are inclusive, meaning the number of dwellings within 500 feet includes the dwellings within 100 and 250 feet.

As stated in Section 7.1.3, much of Pageland 1 and Pageland 2 are located within the planned Digital Gateway data center campus and have purchase agreements with the developers. If the data center project is allowed to develop, many of the existing dwellings along Pageland 1 and Pageland 2 will be removed and the land converted to industrial uses. While this report quantifies the number of existing dwellings as of January 2026, if the existing dwellings with purchase agreements with the data center developers are removed, then the number of dwellings near Pageland 1 would be reduced to 0 within 100 feet, 1 within 250 feet, and 6 within 500 feet of the Impact Centerline. In this data center development scenario, Pageland 2 would have the number of dwellings reduced to 0 within 100 feet, 4 within 250 feet, and 16 within 500 feet of Impact Centerline.

Segment 3 Mainline

Most dwellings along and near the Segment 3 Mainline are within defined communities. The dwellings largely consist of detached single-family homes, with some multi-family residences. The residential subdivisions crossed and within 500 feet of the Segment 3 Mainline Impact Centerline are listed below.

- Braemar
- Kingsbrooke
- Foxborough
- Catholics for Housing
- Pineborough Estates
- Forest Hills Estates
- Magnolia Meadows
- Boxwood Farms
- Olde South Estates

The highest densities occur in the subdivisions of Braemar, Kingsbrooke, and Foxborough, in the southern portion of the segment between Vint Hill Road and Linton Hall Road. Additional areas of dense residential development occur in Forest Hills Estates, Olde South Estates, and Boxwood Farms, in the area between Sudley Road and the Company's Loudoun Substation. None of the homes along the Segment 3 Mainline outside of the subdivisions would be within 60 feet of the existing or expanded right-of-way for the Project.

Gainesville Alternatives

The Gainesville Alternative routes generally cross developed or developing areas away from homes, and do not cross any residential subdivisions. All three routes pass within 500 feet of the same four homes where the routes intersect the Pageland alternatives, on the north side of US 29 east of the right-of-way, parallel to Pageland Lane.

Pageland Alternatives

Segment 3 Pageland Alternative Route 1

Pageland 1 Impact Centerline is within 500 feet of two residential subdivisions and rural lots, Dominique Estates, Haddonfield, and Sudley Mountain Estates. None of the homes along Pageland 1 outside of the subdivisions would be within 60 feet of the existing or expanded right-of-way for the Project.

Segment 3 Pageland Alternative Route 2

Pageland 2 is longer and crosses more subdivisions than Pageland 1 resulting in more homes near the route. Subdivisions crossed by or within 500 feet of the Pageland 2 Impact Centerline include Trappers Ridge, Haddonfield, Heritage Hunt, Dominique Estates, Old Field Estates, Catharpin Valley, and Catharpin Farms. None of the homes along Pageland 2 outside of defined subdivisions would be within 60 feet of the existing or expanded right-of-way for the Project.

7.1.4.2 IMPACT ASSESSMENT

Residents along and near the Segment 3 Mainline and Gainesville and Pageland alternatives could be impacted by construction noise, dust, or traffic, but these impacts would be short term and temporary, limited to the period of construction.

During operations, the change in the number, configuration, and heights of transmission structures, and in places an expansion of the right-of-way, along the Segment 3 Mainline would modify existing conditions. While this could expand the number of homes with views to transmission structures along the Segment 3 Mainline, the Morrisville-Wishing Star Corridor would continue to function as a transmission right-of-way consistent with existing conditions. Installation of transmission infrastructure along the Gainesville and Pageland alternative routes, in contrast, would modify existing conditions by introducing new infrastructure along greenfield routes. Visual impacts are addressed in Section 7.4.

Conclusions Regarding the Gainesville and Pageland Alternatives

Gainesville 1, 2, and 3 pass within 500 feet of the same four dwellings. Therefore, the number of nearby homes does not differentiate the three routes.

Because Pageland 2 crosses more subdivisions and passes near more homes than Pageland 1, more individual landowners could be impacted by the former than the latter. Pageland 2 impacts more homes in the current conditions as well as the potential data center development scenario described above. Because it closely follows Pageland Lane, however, Pageland 1 is closer to the Company's existing Morrisville-Wishing Star Corridor where the corridor crosses MNBP and could create views of multiple transmission line corridors on as many as 11 existing dwellings. In

addition, one home along Pageland 2 would be within 60 feet of the right-of-way compared to none for Pageland 1.

7.1.5 COMMERCIAL/INDUSTRIAL AREAS AND BUILDINGS

7.1.5.1 EXISTING CONDITIONS

Regarding commercial/industrial structures, ERM identified:

- One within 500 feet of the Segment 3 Mainline Impact Centerline;
- Nine, 20, and 15, respectively, within 500 feet of Gainesville 1, 2, and 3 Impact Centerlines; and
- Four and five, respectively within 500 feet of Pageland 1 and 2 Impact Centerlines.

The commercial/industrial structures include data centers, construction and landscaping companies, property maintenance services, freight and bus operations, media service providers, a veterinary care facility, warehouses, a gas station, and stores. The relatively high numbers of commercial and industrial buildings along the Gainesville alternatives are consistent with the zoning for this area.

7.1.5.2 PLANNED COMMERCIAL AND INDUSTRIAL DEVELOPMENT

Planned industrial and commercial developments are discussed in Section 7.1.6.

7.1.5.3 IMPACT ASSESSMENT

Temporary impacts on businesses are possible during construction due to noise, dust, and traffic, but these impacts would be short term, temporary, and limited to periods of active construction near the businesses. There would be no impact on the businesses during Project operations.

7.1.6 PLANNED DEVELOPMENTS

7.1.6.1 EXISTING CONDITIONS

Table 7.1-10 lists planned developments within 0.25 mile of the Segment 3 Mainline and Gainesville and Pageland alternatives Impact Centerlines, identifying the location, type, and status of each (as of December 2025). Figure 4.1.6-1 depicts the boundaries and proposed building footprints (where known) for the planned developments, which are described below. Planned recreational facilities, mainly trails, are discussed in Section 7.1.8.

TABLE 7.1-10 PLANNED DEVELOPMENTS WITHIN 0.25 MILE OF THE SEGMENT 3 MAINLINE AND GAINESVILLE AND PAGELAND ALTERNATIVES IMPACT CENTERLINES

Development Name	Development Type	Status	Approximate Distance to Project Facilities
Vint Hill Station	Electrical Substation	Under review	The Segment 3 Mainline crosses the northern portion of the site.
Hawthorne at Kettle Run	Residential	Rezoning request under review	The Segment 3 Mainline is about 0.1 mile west of the site boundary.
Greenhaven at Broad Run	Residential	Rezoning request under review	The Segment 3 Mainline crosses the eastern portion of the site.
Silver Bell	Residential	Rezoning request under review	The Segment 3 Mainline is about 0.2 mile east of the site boundary.
The Village at Broad Run	Residential	Rezoning request under review	The Segment 3 Mainline is about 0.1 mile east of site boundary.
Hunter Property	Data Center	Site plan under review	The Segment 3 Mainline is <0.1 mile east of the site boundary.
Devlin Technology Park	Data Center	Approved; pending construction	The Segment 3 Mainline crosses the western portion of the site.
Bristow Data Center	Data Center	Under construction	The Segment 3 Mainline crosses the western portion of the site. Gainesville 1, 2, and 3 cross the northwestern portion of the site.
Gainesville Technology Park	Commercial/Data Center	Site plan approved	The Segment 3 Mainline is about 160 feet east of the site boundary. Gainesville 2 crosses the northern portion of the site.

Development Name	Development Type	Status	Approximate Distance to Project Facilities
Pine Ridge & Arcite GA	Substation	Site plan under review	Gainesville 1, 2, and 3 cross the eastern portion of the site.
Piney Branch Parcel 1	Data Center	Site plan under review	Gainesville 1, 2, and 3 cross center and western portion of the site.
Balls Ford Road Crossing	Industrial/Manufacturing	Site plan under review	Gainesville 1, 2, and 3 are about 0.25 mile west of the site boundary.
Sharpless Data Center	Data Center	Site plan under review	Gainesville 1, 2, and 3 cross the eastern and northern portions of site.
University Business Park	Data Center	Rezoning under review	Gainesville 2 and 3 cross the northern portion of the site.
Gainesville East	Data Center	Special use permit to increase building height under review	Gainesville 2 and 3 are within about 0.25 mile north of the site boundary.
Gainesville Crossing Data Center	Data Center	Phase 1 construction complete; Phase 2 construction underway; Phase 3 site plan under review	Gainesville 2 and 3 cross the site.
Gainesville Crossing Firestone	Commercial	Special use permit under review	Gainesville 3 is <0.1 mile east of site boundary.
Gainesville Crossing Starbucks	Commercial	Special use permit under review	Gainesville 3 is about <0.1 mile east of site boundary.
Digital Gateway	Data Center	Rezoning previously approved then revoked; appeal of rezoning is pending	Pageland 1 and 2 cross the site.
Smith Crossing	Residential	Rezoning approved; site plan under review	Pageland 2 is about <0.1 mile east of site boundary

Development Name	Development Type	Status	Approximate Distance to Project Facilities
Dominion Energy Loudoun Panel Wiring Shop	Substation/Utility	Site plan under review Legislative land development application approved Engineering plan approved	The Segment 3 Mainline crosses the western portion of the site.

7.1.6.2 IMPACT ASSESSMENT

Eleven of the 20 planned developments listed in Table 7.1-11 are crossed by the Segment 3 Mainline and/or the Gainesville and Pageland alternatives. The area of existing, expanded, and new right-of-way within each developments by route is summarized in Table 7.1-9. There would be no impact on the planned developments not crossed by the Project.

TABLE 7.1-11 PLANNED DEVELOPMENT CROSSINGS (ACRES)

	Segment 3 Mainline		Gainesville Alternatives			Pageland Alternatives			
	Existing Right-of-Way	Expanded Right-of-Way	1	2	3	1	2		
	Existing Right-of-Way	Expanded Right-of-Way	New Right-of-Way	New Right-of-Way	New Right-of-Way	New Right-of-Way	Expanded Right-of-Way	New Right-of-Way	Expanded Right-of-Way
Vint Hill Substation	4.7	2.7	NA	NA	NA	NA	NA	NA	NA
Greenhaven at Broad Run	7.9	1.3	NA	NA	NA	NA	NA	NA	NA
Devlin Technology Park	27.8	8.8	NA	NA	NA	NA	NA	NA	NA
Bristow Data Center	14.1	0.6	NA	NA	NA	NA	NA	NA	NA
Gainesville Technology Park	<0.1	3.8	NA	NA	2.3	NA	NA	NA	NA
Piney Branch Data Center and Substation	5.1	NA	<0.1	NA	<0.1	NA	NA	NA	NA
Sharpless Data Center	NA	NA	4.9	13.2	10.2	NA	NA	NA	NA
University Business Park	NA	NA	NA	3.5	6.3	NA	NA	NA	NA
Gainesville Crossing Data Center	NA	NA	0.3	11.0	13.8	NA	NA	NA	NA
Digital Gateway	35.0	0.2	1.6	1.6	1.6	33.8	12.0	57.1	NA
Dominion Energy Loudoun Panel Wiring Shop	8.9	6.5	NA	NA	NA	NA	NA	NA	NA
Total ^a	103.6	23.9	6.9	29.3	34.3	33.8	12.0	57.1	0.0

^a Totals may not match the sum of the addends due to rounding.

Segment 3 Mainline

The Segment 3 Mainline crosses portions of the following six planned developments: Vint Hill Station, the Dominion Energy Loudoun Panel Wiring Shop, Devlin Technology Park, Bristow Data Center, Gainesville Technology Park, and Greenhaven at Broad Run.

Vint Hill Station

A description of this planned development is provided in Section 6.1.6. Dominion designed the Project to avoid conflicts with the development, which consists of an expansion and upgrade of an existing Company substation.

Greenhaven at Broad Run

Prince William County received a request from a developer to rezone approximately 120 acres from A-1 to PMR on September 25, 2025 (REZ2025-00009). The rezoning, if approved, would allow the developer to build 435 dwellings, including single-family detached, single-family attached units, and duplex units. The project is pending zoning approval. The schedule is unknown.

The Company's existing Morrisville-Wishing Star Corridor crosses the eastern portion of the site for approximately 0.2 mile. The nearest planned building is 35 feet west of the corridor (i.e., the developer is planning to construct a building within 60 feet of the Company's existing right-of-way). Some expanded right-of-way would be required on the east side of the existing corridor (opposite side from the planned buildings) partially overlapping a proposed berm, parking lot, and soccer field within the planned development. These uses would be compatible with the planned expansion of the right-of-way corridor.

Devlin Technology Park

Prince William County approved a request to rezone approximately 270 acres from PMR to M-2 to allow the development of a data center campus with associated electrical substations in November 2023 (REZ2022-00022). Litigation followed in December 2023, with the Virginia Court of Appeals upholding the rezoning approval in September 2025. The project is currently not under construction and the schedule is unknown.

The Company's existing Morrisville-Wishing Star Corridor crosses the western portion of the site for about 1.1 miles. The approved publicly available General Development Plan includes a "Data center building limit," proposed vegetative buffers, an area designated as "Possible Electrical Infrastructure", and a sound barrier, but does not include building footprints. Where the existing Morrisville-Wishing Star Corridor would be expanded by 65 feet to the east, the Segment 3 Mainline expanded right-of-way is approximately 415 feet from the "Data center building limit" at its closest point and therefore would not impact the data center buildings. The Segment 3 Mainline expanded right-of-way would impact portions of the vegetative buffers, the area designated as "Possible Electrical Infrastructure", and the sound barrier, however, as it overlaps portions of those areas on the site plan. While transmission lines are generally compatible with data center uses, plantings and permanent structures, such as a sound barrier or substation equipment, within the expanded right-of-way would need to comply with Dominion encroachment standards. Dominion would coordinate with the landowner throughout the Project to minimize potential impacts.

Bristow Data Center

This development consists of a new, 250,000-square-foot data center and associated Dominion substation (i.e., Devlin Substation (PUR-2025-00046), filed with the SCC on March 14, 2025). Construction of both is ongoing. The substation has a target in-service date of June 1, 2029.

The Segment 3 Mainline crosses about 0.5 mile along the western edge of the development in a northeast-southwest orientation. For most of the crossing, the Project would be limited to the Company's existing Morrisville-Wishing Star Corridor. The alignment avoids existing and proposed buildings on the parcel.

Gainesville Technology Park

Prince William County approved a site plan for four industrial, flex use, commercial/warehouse buildings in October 2022. The proponent completed clearing and grading within the northwestern portion of the site where the structures are planned to be built, but no other work on the site has occurred. The status of the Project is unknown.

The Company's existing Morrisville-Wishing Star Corridor crosses the site containing the planned development for approximately 0.4 mile. The corridor would be expanded by 85 feet to accommodate the Project. The crossing occurs outside the part of the site which has been graded and cleared, but within an area identified as "Future Pad Site 5 Acres" on the site plan. The intended use of the future pad is unknown. The Project would reduce the area available for the pad, should it be built, or limit uses within the pad, for example, to parking.

Dominion Energy Loudoun Panel Wiring Shop

Dominion submitted a site plan for a new approximately 72,000 square-foot wiring shop facility to Prince William County on May 16, 2025 (PLAT-2025-0139). The County approved an engineering plan (EPLAN-2023-0080) on July 19, 2025, and legislative land development application (LEGI-2023-0088) on September 26, 2025. The new building would include office space training rooms, indoor parts storage, conference rooms, breakrooms, lab facilities for electrical panel assembly, and a drop-in control enclosure assembly area. Two accessory structures on site would be used for parts storage. An above-ground fuel storage tank is also indicated on the site plan. The Company designed to the Project to be compatible with the planned development.

Gainesville Alternatives

Gainesville 1, 2, and/or 3 cross portions of the following five planned developments: Gainesville Technology Park, Piney Branch Parcel 1, Sharpless Data Center, Pine Ridge & Arcite Substation, University Business Park, and Gainesville Crossing Data Center.

Gainesville Technology Park

A description of this development is provided above for the Segment 3 Mainline. Gainesville 2 crosses the northern boundary of the site along the south side of Wellington Road for approximately 0.2 mile, about half of which crosses forested land and the other half part of the previously cleared area for the development. The latter crosses a planned parking area for Building A, which would be a compatible use with an electric transmission right-of-way, should

Gainesville Technology Park be completed. The crossing along the parcel boundary adjacent to Wellington Road minimizes impacts on developable space within the tract.

Piney Branch Data Center and Substation

Piney Branch Parcel 1 is a Heavy Industrial zoned parcel, and while there is no public information for site development available as of December 2025, the Company has coordinated with the developer and has received a delivery point request for this parcel. The developer shared preliminary plans, including building footprints, with the Company in July 2025. Gainesville 1 and 3 would cross approximately less than 0.1 acre of land on this parcel outside of the existing right-of-way along Piney Branch Lane, however, the Company will continue to coordinate with the developer to minimize impacts to the planned development within this small area. Based on the July 2025 footprint, either Gainesville 1 or 3 would not affect future site development.

Sharpless Data Center and Pine Ridge & Arcite Substation

Sharpless Data Center and Pine Ridge & Arcite Substations consist of a planned redevelopment of an Atlantic Research Corporation site located between Wellington Road and I-66. The site does not require rezoning for data centers. Preliminary plans submitted to the USACE for wetland permits in 2024 indicate the site would include four data centers and two substations (Virginia Marine Resources Commission 2023, U.S. Army Corps of Engineers Norfolk District 2023). The schedule for the project is unknown.

Gainesville 1 crosses the eastern boundary of the development adjacent to Piney Branch Lane, crossing a portion of a planned stormwater pond and the eastern boundary of the Arcite Substation pad, but would not impact the planned buildings. Gainesville 2 and 3 cross the site along its eastern boundary adjacent to Piney Branch Lane, then head northwest around the planned Arcite Substation pad, then follow the northern site boundary west along the south side of the Norfolk Southern Railway. Gainesville 2 and 3 cross planned stormwater facilities and access roads, which would be compatible with an electric transmission right-of-way, but do cross any planned buildings. The alignment adjacent to the road, future substation pad, and railroad minimizes impacts on developable space within the parcel.

University Business Park

The proponent of the planned University Business Park submitted a request to Prince William County in 2023 to rezone approximately 120 acres from M-1, Heavy Industrial without proffers to M-1, Heavy Industrial with proffers to increase the maximum floor area ratio and building height to allow for 3.8 million square feet of data center uses and a new substation. The site plan is currently under review.

Gainesville 2 crosses along the northern site boundary adjacent to the south side of the Norfolk Southern Railway for approximately 0.3 mile, before turning north to cross the railroad and I-66. Gainesville 3 initially follows the same alignment as Gainesville 2 but continues along the northern site boundary on the south side of the railroad for another 0.2 mile. It would then turn north and exit the property adjacent to University Boulevard. The alignment of both routes avoids building footprints and minimizes impacts on developable space.

Gainesville Crossing Data Center

The Gainesville Crossing Data Center project is a multi-phase plan to build five two-story data center buildings. Phase 1 (Building 1) was completed in May 2024. Phase 2 (Buildings 2 and 3) is under construction as of December 2025. Permitting for Phase 3 (Buildings 4 and 5) is ongoing. An updated site plan submitted by the proponent on June 14, 2024, is currently under review by Prince William County.

Gainesville 1 right-of-way crosses a small portion of the eastern site boundary (encompassing about 0.3 acre), passing about 150 feet east of the planned Building 4 footprint, outside the planned limits of disturbance. Therefore, this route would have no impact on the development.

Gainesville 2 bisects the site north-south, first passing between the planned footprint of Building 3 to the west and a substation (planned to be expanded) to the east, then passing west of the planned footprints of Buildings 4 and 5, then heading east along the south side of US 29 and off the parcel. The linear distance of the crossing is about 0.6 mile. The alignment intersects several site features, including a proposed tree conservation area, stormwater management infrastructure, and roads. Trees would not be allowed within the right-of-way. Coordination with the developer would be necessary to ensure no impact on the other planned infrastructure.

Gainesville 3 follows the western and northern boundaries of the development, first heading north along the east side of University Boulevard passing west of Buildings 2 and 1, then heading east along the south side of US 29 passing north of Building 1 and the planned footprint of Building 5, a length of about 0.8 mile. The route avoids existing and planned buildings but crosses landscape buffers along the site perimeter, which may require coordination with the developer.

Pageland Alternatives

Pageland 1 and 2 each cross one planned development: Digital Gateway.

Digital Gateway

Digital Gateway is a proposal to construct up to 23 million square feet of data centers across 37 buildings on approximately 2,100 acres of land. The project also includes expanding Pageland Lane from two to four lanes and encompasses planned open space and forested buffer areas around the buildings and other infrastructure. The project involves three separate rezoning cases—Digital Gateway North (REZ2022-00032), Digital Gateway South (REZ2022-00033), and Compass Campus 1 (REZ2022-00036)—which were approved on December 13, 2023. The approval changed the zoning from agriculture, which does not allow data centers, to planned business development, which does.

The rezoning approvals subsequently were overturned in a lawsuit filed by Prince William County residents. On August 7, 2025, the Prince William County Circuit Court ruled that the advertised notice provided by Prince William County for the rezoning application did not comply with state code and a county ordinance, thereby overturning the approvals and returning the zoning to agriculture. The developers and Prince William County then appealed the ruling to the Virginia Court of Appeals, resulting in a stay issued on October 28, 2025. The stay changed the zoning from agriculture back to planned business development, allowing work on the development to proceed. A final resolution is expected in 2026. Given the uncertainty of the resolution of the case

as of the writing of this report, ERM and the Company are treating Digital Gateway as a planned data center development.

Both Pageland 1 and 2 cross Digital Gateway parcels. Pageland 1 primarily crosses the eastern portion of the development, generally aligning with Pageland Lane, and utilizing the Company's existing Morrisville-Wishing Star Corridor as a routing opportunity north of MNBP and an ABT tract along the existing right-of-way. The route avoids planned building and substation sites and minimizes impacts to planned open space and tree conservation areas to the extent practicable. While there would be impacts to planned buffer areas, Pageland 1 would not prevent the development of the Digital Gateway Project.

Pageland 2 generally follows the western boundary of Digital Gateway, avoiding crossings of planned buildings and substation sites. Unlike Pageland 1, it does not collocate with the Pageland Lane or the Company's existing transmission corridor, instead following a greenfield alignment across the planned development through areas primarily planned for forest and open space buffers. Tree clearing along Pageland 2 would impact the amount of forested land buffer available to screen buildings within the development. Notwithstanding these impacts, Pageland 2 would not prevent development of the Digital Gateway Project.

Conclusions Regarding the Gainesville and Pageland Alternatives

Gainesville 1 would have the least impact on planned developments of the three Gainesville alternatives. It crosses the fewest planned developments overall and does so in areas that avoid planned future buildings and other incompatible infrastructure. Gainesville 2 and 3 are longer crossing more and longer sections of planned developments, including complicated crossings of the Gainesville Crossing Data Center near and around buildings. Gainesville 2 and 3 additionally would have greater impact on developable space with the parcels containing the planned developments.

Pageland 1 and 2 each cross the Digital Gateway planned development. Pageland 1 does so mainly along a parallel (though not adjacent) alignment to Pageland Lane, which parallels the Company's existing Morrisville-Wishing Star Corridor. Because Pageland 1 is shorter, it would have less impact on developable space within Digital Gateway, though neither route would impact planned buildings or substations. Pageland 2 would have greater impact on planned open space and forest buffers, which are planned to provide screening of the data centers and associated infrastructure from existing and planned homes to the west. Thus, in addition to creating its own visual impacts (addressed in Section 7.4 below), Pageland 2 could increase visual impacts from the data centers on residents to the west. One advantage of Pageland 2 is that it passes further from MNBP and the ABT tract than Pageland 1.

7.1.6.3 PLANNED RECREATIONAL DEVELOPMENTS

Table 7.1-12 identifies and describes planned recreational resources, all trails and greenways, crossed or near the Segment 3 Mainline and/or Gainesville and Pageland alternatives.

TABLE 7.1-12 PLANNED RECREATIONAL RESOURCES

Recreational Resource	Recreation Type	Approximate Distance to Project Facilities
Vint Hill Paved Shoulder	Planned paved shoulder from Rollins Ford Road to Fitzgerald Way	Crossed by the Segment 3 Mainline
Broad Run Greenway	Planned trails in Broad Run Linear Park	Crossed by and adjacent to the Segment 3 Mainline
Rocky Branch Greenway	Planned greenway from Bridlewood Rocky Branch Park to Broad Run Park	Crossed by the Segment 3 Mainline
PWC utility easement trail	Planned trails north of Broad Run Linear Park	Crossed by and adjacent to the Segment 3 Mainline
University Boulevard Shared Use Trail	Planned PWC Mobility Plan shared use trail along future extension of University Boulevard	Crossed by the Segment 3 Mainline
Wellington Road Shared Use Trail	Planned PWC Mobility Plan shared use trail from University Boulevard to Hornbaker Road	Crossed by the Segment 3 Mainline, Gainesville 2 and 3
Cushing Road Shared Use Trail	Planned PWC Mobility Plan shared use trail from Balls Ford Road to I-66	About 600 feet northwest of Gainesville 1
US-29 Shared Use Trail	Planned PWC Mobility Plan shared use trail from Fairfax County Line	Crossed by and along Gainesville 1, 2, and 3
US 29 Shared Use Trail	Planned PWC Mobility Plan shared use trail from Pageland Lane to John Marshall Highway	Crossed by Gainesville 1 About 200 feet north of Gainesville 2 and 3
Pageland Shared Use Trail	Planned PWC Mobility Plan shared use path along Manassas National Battlefield Park	Crossed by Pageland About 1,200 feet east of Pageland 2
Annie Snyder Connector Trail	Planned PWC Mobility Plan connector trail	About 200 feet west of Pageland 1 Crossed by Pageland 2
Little Bull Run Greenway	Planned PWC Mobility Plan greenway and open space from Catharpin Road to Pageland Lane	Crossed by Pageland 1 and 2
Catharpin Creek Greenway	Planned PWC Mobility Plan Greenway and open space from Catharpin Road to Little Bull Run Greenway	Crossed by Pageland 2
Civil War Preservation Trust Trail	Planned PWC Mobility Plan trail and open space connector	About 200 feet east of Pageland 1
PW Digital Gateway Trail	Planned PWC Mobility Plan trail and open space connector	Crossed by Pageland 1 and 2
Sudley Road Shared Use Trail	Planned PWC Mobility Plan shared use trail from US-15 to I-66	Crossed by Pageland 1

PWC = Prince William County.

The Project would not impact Prince William County's ability to construct the planned trails and greenways listed in Table 7.1-12 nor would it prevent use of these features, which would be compatible with an electric transmission right-of-way. Moreover, the trails and greenways are unlikely to be impacted by structure placement as the trails/greenways generally would be adjacent to linear features like roads or waterbodies and either within road rights-way or on public lands.

7.1.7 CONSERVATION EASEMENTS AND LANDS

7.1.7.1 EXISTING CONDITIONS

Segment 3 Mainline

ERM identified four RPAs in Prince William County and one River and Stream Corridor (RSCR) in Loudoun County crossed by the segment (Figure 4.1.7-1). A description of the RPA program is provided in Section 6.1.7. The RSCR program is described below.

Chesapeake Bay Preservation Areas

The Segment 3 Mainline crosses the Broad Run, Rocky Branch, Catamount Branch, and Bull Run RPAs, encompassing about 34.1 acres.

River and Stream Corridor Resources

While the Chesapeake Bay Preservation Act does not apply in Loudoun County, the County has implemented a similar program to protect waterbodies and the ecosystems they form. The RSCR was adopted as part of the Zoning Ordinance in 2023 as an overlay to encourage the preservation of aquatic features. The Segment 3 Mainline crosses the Bull Run RSCR, encompassing about 0.9 acre.

Gainesville Alternatives

No easements are present along or near the Gainesville alternatives. Gainesville 1 additionally avoids RPAs, while Gainesville 2 and 3 each cross RPAs associated with Broad Run and Bull Run, encompassing 1.0 acre and 2.1 acres, respectively.

Pageland Alternatives

Pageland 1 passes within 0.25 mile of a single Prince William County open space easement (Table 7.1-13) and crosses RPAs along Little Bull Run and Lick Branch, encompassing 6.2 acres. No easements are present along or near Pageland 2, which crosses RPAs along Catharpin Creek, Little Bull Run, and Lick Branch, encompassing 9.1 acres.

TABLE 7.1-13 EASEMENTS WITHIN 0.25 MILE OF SEGMENT 3 MAINLINE, GAINESVILLE ALTERNATIVES, AND PAGELAND ALTERNATIVES IMPACT CENTERLINES

Tax # or PIN ID Identifier	Easement Type	Management	Description	Approximate Distance and Direction to Segment	Right-of-Way Acreage Crossed
7598-07-8167	Open Space	PWC	Mostly forested; possibly historic in nature; 72 acres enrolled	About 30 feet southeast of Pageland 1	NA

7.1.7.2 IMPACT ASSESSMENT

There would be no direct impact on the open space easement near Pageland 1, which avoids the resource by 130 feet. Indirect impacts, such as construction noise, dust, and traffic, would be short term and temporary.

Of the 34.1 acres of RPA along the Segment 3 Mainline, 28.4 acres (83 percent) are within existing right-of-way while 5.0 acres (17 percent) would be expanded right-of-way. Similarly, of the 9.4 acres of RSCR along the Segment 3 Mainline, 6.3 acres (67 percent) are within existing right-of-way, and 3.1 acre (33 percent) would be expanded right-of-way. The Company’s use of existing right-of-way minimizes new impacts, such as forest fragmentation, within the resources.

The RPA crossings along Gainesville 2 and 3 and the Pageland 1 and 2 Alternatives occur along greenfield alignments and therefore represent new impacts on the applicable resources. As noted in Section 6.1.7, electric transmission lines regulated by the SCC are exempt from RPA permitting provided they comply with certain best management and erosion control practices. To minimize impacts, the Company would restore disturbed areas, maintain the right-of-way in an herbaceous cover, and implement and maintain erosion and sediment controls, consistent with the required practices.

Conclusions Regarding the Gainesville and Pageland Alternatives

Gainesville 1 avoids crossings of conservation easements and RPAs, whereas Gainesville 2 and 3 each cross RPAs. Of the latter, Gainesville 2 would impact less RPA than the former. Pageland 1 would impact less RPA than Pageland 2.

7.1.8 RECREATIONAL RESOURCES

7.1.8.1 EXISTING RECREATIONAL RESOURCES

The Segment 3 Mainline and/or Gainesville and Pageland alternatives Impact Centerlines cross or pass within 0.25 mile of 10 recreational resources, described below (Table 7.1-14; Figure 4.1.8-1).



TABLE 7.1-14 EXISTING RECREATIONAL RESOURCES

Recreational Resource	Recreation Type	Managing Agency	Approximate Distance and Direction from Route Alternative Impact Centerline	Crossing Length
Broad Run Park	Park (riparian corridor with trails)	PWC	Crossed by the Segment 3 Mainline along Broad Run between Weathersfield Drive to the north and Struthers Glen Court to the south	About 150 feet
Foxborough Community Center	Neighborhood recreational center	PWC	About 830 feet east of the Segment 3 Mainline at 12912 Hunting Cove Place	NA
Linton Hall Road Shared Use Trail	Shared use trail from Virginia Gateway to Nokesville Road	PWC	Crossed by the Segment 3 Mainline near the intersection of Linton Hall Road and Devlin Road	About 10 feet
Chris Yung Elementary School	Athletic fields	PWC	About 300 feet east of the Segment 3 Mainline along Fog Light Way	NA
Manassas National Battlefield Park	Civil War battlefields (First Manassas and Second Manassas)	NPS	About 60 feet east of Gainesville 1 along Pageland Lane north of I-66 About 400 feet east of Gainesville 2, Gainesville 3, and Pageland 2 along Pageland Lane near its intersection with US 29 About 280 feet east of Pageland 1 near its intersection with Angelond Lane	NA
University Boulevard Shared Use Trail	Shared use trail from US- 29 to Wellington Road	PWC	About 200 feet west of Gainesville 3	About 10 feet
Bull Run River	Potential scenic river	VDCR	Crossed by the Segment 3 Mainline	About 50 feet
Loudon County Trails	Trail	Loudoun County	Crossed by the Segment 3 Mainline approximately 0.3 miles south of Mosby Station	About 10 feet
Conway Robinson State Forest	State forest preserve	VDOF	About 650 feet east of Gainesville 1 at the US 29 crossing About 130 to 140 feet north of Gainesville 2 and Gainesville 3 along US 29 About 870 feet west of Pageland 1 near the intersection of Pageland Lane and US-29 About 100 feet south of Pageland 2 along the northern boundary of the state forest	NA

Recreational Resource	Recreation Type	Managing Agency	Approximate Distance and Direction from Route Alternative Impact Centerline	Crossing Length
Catharpin Recreational Park	Sports complex with four soccer fields and five diamond fields	PWC	About 250 feet southwest of the Segment 3 Mainline at the north end of the park west of Sanders Lane About 300 feet east of Pageland 1 and 2	NA

NA = Not Applicable; NPS = National Park Service; PWC = Prince William County; VDOF = Virginia Department of Forestry

Segment 3 Mainline

Broad Run Park

This Prince William County park, noted in Section 7.1.1, contains a variety of recreational features, including connective greenways and trails, blueways, playgrounds, and other passive amenities, encompassing 190 acres of natural areas along Broad Run stream (Prince William County Recreation Mapper 2025). The trail network extends across about 6.0 miles of park, crossing primary roads like Sudley Manor Drive and Linton Hall Road. The park is a staple recreational resource in the overall Manassas and Prince William County areas. A planned future 13-mile-long greenway (including existing trails) along Broad Run will connect several park sites in the area (Prince William Parks & Recreation 2025). As noted previously, the Company’s existing Morrisville-Wishing Star right-of-way abuts and slightly overlaps the western boundary of the park, with less than 0.1 acre of county-owned land within the corridor. Surrounding lands are mainly forested to the north, east, and south, and a mix of forest and residential lands to the west.

Foxborough Community Center

The Foxborough Community Center is a 2-acre neighborhood recreational center, featuring pools, a playground, and a court, located on Hunting Cove Place off Linton Hall Road. The existing Morrisville-Wishing Star Corridor passes about 830 feet west of the resource, with the intervening land consisting of a mix of forest and residences. The community center itself is within a residential subdivision.

Linton Hall Road Shared Use Trail

The Segment 3 Mainline crosses a county-maintained shared use path on the south side of Linton Hall Road. The Company’s existing Morrisville-Wishing Star Corridor crosses the trail with residential lands to the east and a forest to the west.

Chris Yung Elementary School

A description of this resource is provided in Section 7.1.1. The Company’s existing Morrisville-Wishing Star Corridor passes about 340 feet west of the parcel containing the campus with the intervening area mostly forested. The athletic fields at the school, which are on the eastern side of



the parcel, are about 790 feet east of the existing right-of-way. The area between the school and right-of-way is forested.

Catharpin Recreational Park

This resource is described in Section 7.3.1.1. As noted previously, the park contains multiple soccer and diamond fields as well as parking and concession facilities east and north of Kyle Wilson Way at its intersection with Sudley Road. The Company's existing transmission corridor abuts and partially overlaps an undeveloped portion of the parcel containing the park, encompassing about 6.8 acres. There are no developed recreational facilities within this portion of the park.

Potential Scenic River—Bull Run

Virginia's Scenic Rivers Program, created under the Virginia Scenic Rivers Act and managed by the VDCR, recognizes rivers that "possess outstanding scenic, recreational, historic and natural characteristics of statewide significance" (VDCR 2025c). State agencies additionally use the program a tool for assessing potential impacts on waterbodies in the program. VDCR has designated the Bull Run segment crossed by the existing Morrisville-Wishing Star Corridor as a "potential" scenic river, meaning it has been recommended for study to determine if it qualifies for designation, but does not currently carry a designation as a scenic river.

Bull Run, a tributary of the Occoquan River, is used for various recreational purposes, such as canoeing and kayaking (Paddling.org). The river serves as the border between Loudoun County and Prince William counties and passes through historically significant areas associated with the First Manassas and Second Manassas battles. The setting at the crossing is rural, with the Company's existing Loudoun/Mosby stations about 0.25 mile to the north.

Loudoun County Trail

The Segment 3 Mainline crosses a Loudoun County trail along the north bank of Bull Run. The trail is associated with a trail network between the north bank of the river and the Company's Loudoun/Mosby Stations. The trail is crossed by the Morrisville-Wishing Star Corridor. The setting is as described for the Bull Run potential scenic river.

Segment 3 Gainesville Alternative Route 1

Manassas National Battlefield Park

Gainesville 1 passes within 0.25 mile of, but does not cross MNBFP, described above in Section 7.1.1. On average, the park receives about 700,000 visitors a year. Developed facilities include visitor centers, parking areas, trails and paths, pull-offs, and interpretive signs. The main visitor center off Sudley Road has museum exhibits and a movie theater showing a film about the battles. The park offers a self-guided driving tour to key sites within the battlefields, a portion of which runs along Pageland Lane. The tour includes a stop at a satellite visitors center, the Stuart's Hill Visitors Center, off Pageland Lane as well as a separate parking area for a hiking trail to Brawner Farm. There are numerous hiking trails throughout the park with some designated for horseback riding. In total, the park contains over 40 miles of hiking trails which loop around key

areas of the battles. Other common recreational activities in the park include fishing and wildlife viewing (NPS 2021, 2024c). As previously discussed, an approximately 2.0-mile-long section of the Company's existing Morrisville-Wishing Star Corridor crosses MNBP north of I-66 along the western park boundary parallel to and east of Pageland Lane.

Conway Robinson State Forest

Gainesville 1 passes within 0.25 mile of, but does not cross, this resource, described in Section 7.1.1. Recreational uses of the state forest include hiking, cycling, horseback riding, wildlife viewing, picnicking, occasional lottery hunts, and scientific research. The park contains about 5.1 miles of trails (VDOT 2025a, 2025b). This resource is not crossed by the Company's existing transmission corridor.

Segment 3 Gainesville Alternative Route 2

Gainesville 2 passes within 0.25 mile of, but does not cross, MNBP and Conway Robinson State Forest, described above.

Segment 3 Gainesville Alternative Route 3

Gainesville 3 passes within 0.25 mile of, but does not cross, MNBP and Conway Robinson State Forest, described above. Gainesville 3 overlaps a shared us trail along the east side of University Boulevard, described below.

University Boulevard Shared Use Trail

This shared use follows University Boulevard between Wellington Road to the south and US 29 to the north. The setting is developed with data centers to the east and parking lots and a stormwater management pond to the west.

Segment 3 Pageland Alternative Route 1

Catharpin Recreational Park

Pageland 1 passes within 0.25 mile of, but does not cross, Catharpin Recreational Park, described above.

Segment 3 Pageland Alternative Route 2

Catharpin Recreational Park

Pageland 2 follows the same alignment as Pageland 1 where it passes within 0.25 mile of, but does not cross, Catharpin Recreational Park.

7.1.8.2 IMPACT ASSESSMENT

The Segment 3 Mainline crosses about 150 feet of Broad Run Park with less than 0.1 acre of parkland within the Company's existing right-of-way. Because the Project in this area would be confined to the existing corridor, no additional right-of-way within the park would be needed. Temporary impacts on recreational uses of the park could occur during construction due to noise, dust, and equipment traffic, but these would be temporary and limited to periods of active

construction. The change in the number and configuration of transmission structures within the existing corridor would have no permanent impact on recreational uses within the park.

At the Segment 3 Mainline crossing of Linton Hall Road, the Company's existing Morrisville-Wishing Star Corridor would be expanded by 65 feet to the east, where the proposed 500 kV Line #5008 would be installed. No structures are planned to be built within or immediately adjacent to the road right-of-way, inclusive of the trail. Construction impacts on use of the trail due to noise, dust, and equipment traffic are possible, as are closures or detours when moving equipment and materials across the road, but these would be temporary, short term, and limited to periods of active construction. There would be no impact on uses of the trail during Project operations.

The Segment 3 Mainline passes about 300 feet west of Chris Yung Elementary School. The athletic fields on the campus are on the opposite side of the main school building from the Company's existing transmission corridor. While construction activities could be audible or visible from the fields, they are unlikely to impact uses of the fields, which typically are inwardly focused on athletic activities. While the Project would expand the existing right-of-way 65 feet east and add an additional line, this would have no impact on use of the recreational areas of the campus.

The right-of-way for Gainesville 3 generally adjacent to (overlaps by less than 0.1 acre) a shared use path along University Boulevard in an industrial and developing area. No transmission structures would be installed on the trail. As with other trails, construction noise, dust, traffic, and detours are possible, but these would be temporary, short, term, and limited to periods of active construction. There would be no impact on use of the trail during Project operations.

Because none of the routes cross MNBP, the Project would not prevent access to or recreational uses of the park. User experience could be impacted by noise, dust, or traffic during construction, though the effects would be short and temporary, limited to periods of active construction. They also would be somewhat seasonal with the typical variation in monthly visits to MNBP. These temporary impacts would be similar for the Gainesville alternatives but greater for Pageland 1 than Pageland 2 given its closer proximity to the park.

The new Project infrastructure would be visible from within MNBP as discussed in Section 7.4. Views would be dependent from observer positions within the park relative to the routes. The impacts would be similar for Gainesville 1, 2, and 3, given that the three routes terminate north of US 29 just outside the park boundary, but greater for Gainesville 1 given that it passes closest to the resource. Similarly, the visual impacts would be greater for Pageland 1 than Pageland 2 given its closer proximity to the park. The change in setting due to the Project infrastructure could modify the user experience, though we note that the transmission lines in the Company's existing Morrisville-Wishing Star Corridor are visible from within the park and that the existing corridor would also likely be visible and closer to all locations within MNBP where Pageland 1 would also be visible.

The Gainesville and Pageland Alternative routes each pass within 0.25 mile of, but do not cross, Conway Robinson State Forest. Gainesville 2 and 3 pass nearer to the resource (within about 130 to 140 feet) than Gainesville 1 (within about 650 feet), with the former following an alignment along the south side of US 29 opposite the state forest, and the latter passing further east along Pageland Lane. Pageland 2 passes nearer to the resource than Pageland 1, with the

former following the eastern boundary of the state forest and the latter passing further east along Pageland Lane. Regardless of the routes selected, construction noise could be audible from within the resource, and traffic along US 29, which provides access to the state forest, could increase, but these impacts would be temporary and limited to the period of active construction. While the new transmission line would alter visual conditions in the vicinity, the dense forest vegetation within the state forest is expected to conceal most views towards the new infrastructure. Therefore, the new transmission line would have no permanent impact on recreational uses of the resource.

Pageland 1 and 2 follow a common alignment passing about 300 feet west of Catharpin Recreational Park. Regardless of the route selected, there would be no direct impact on recreational facilities within the resource, which lie hundreds of feet east. Construction activities could be audible or visible from the athletic fields, but any resulting impacts would be temporary, short term, limited to periods of active construction, and seasonal.

The Segment 3 Mainline crosses Bull Run and an adjacent Loudoun County trail on the north bank of the river. The Company's existing Morrisville-Wishing Star Corridor would be expanded by up to 100 feet where it crosses these features. Riparian corridor would be cleared within the expanded right-of-way, within which Line #5008 would be built. No transmission structures would be installed within or immediately adjacent to the river or adjacent trail. Construction impacts on use of the river or trail due to noise, dust, and equipment traffic are possible, as are closures or detours when moving equipment and materials within the right-of-way, but these would be temporary, short term, and limited to periods of active construction. There would be no impact on uses of the river/trail during Project operations.

The corridor expansion and addition of monopoles would change the viewshed at the Bull Run crossing, but the effect would be consistent with existing conditions. The expanded corridor would continue to function as an electric transmission right-of-way and would not prohibit recreational uses of the waterbody. The change in viewshed would not likely impact the river's eligibility for the scenic river program, should that be pursued by VDCR, given the presence of the existing right-of-way.

Conclusions Regarding the Gainesville and Pageland Alternatives

Given their proximity and the similar land use/cover types crossed, Gainesville 1, 2, and 3 would have similar impacts overall with the primary difference being the distances of the routes to Conway Robinson State Forest and MNBP. Gainesville 1 passes nearest to MNBP, while Gainesville 2 and 3 are closest to the state forest.

Pageland 1 passes nearer to MNBP than Pageland 2, as the former generally parallels Pageland Lane which follows the western boundary of the park. Pageland 1 passes within 200-400 feet of MNBP for approximately 0.3 mile whereas Pageland 2 is further west. Pageland 2 is closer to Conway Robinson State Forest, as it parallels a portion of the eastern boundary of this resource with Pageland 1 further east along Pageland Lane. As a result, Pageland 2 passes within 200 to 300 feet of the state forest boundary for about 0.5 mile.

Based on the above discussion, the Project is not expected to impact uses of MNBPs though the user experience could be affected by temporary construction noise, dust, or traffic or by visibility of the new transmission lines from within the park during operations, with the greatest visual impact from Pageland 1.

7.1.9 CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP

7.1.9.1 EXISTING CONDITIONS

ERM identified 20 cemeteries and one school—Chris Yung Elementary School—within 0.25 mile of the Segment 3 Mainline and Gainesville and Pageland alternatives Impact Centerlines. Additional review of the resources within 500 feet of the right-of-way edge were identified as follows:

- Five cemeteries and the school are along the Segment 3 Mainline, of which Gough Cemetery and Chris Yung Elementary are within 500 feet of the Segment 3 Mainline right-of-way.
- Four cemeteries are along Gainesville 1, of which Unknown 4 and Durkin Cemetery are within 500 feet of Gainesville 1 right-of-way.
- Five cemeteries are along Gainesville 2, of which Dunklin Cemetery is within 500 feet of Gainesville 2 right-of-way.
- Five cemeteries are along Gainesville 3, of which Dunklin Cemetery is within 500 feet of Gainesville 3 right-of-way.
- Nine cemeteries are along Pageland 1, of which a potential cemetery site, Marble Hill Enslaved Burial Ground, and Davis Cemetery are within 500 feet of Pageland 1 right-of-way.
- Two cemeteries are along Pageland 2, neither of which is within 500 feet of Pageland 2 right-of-way.

Table 7.1-15 provides descriptions of these resources, which are depicted in Figure 4.1.9-1. There are no places of worship within 0.25 mile of the various Segment 3 Project components Impact Centerlines.

TABLE 7.1-15 CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP WITHIN 0.25 MILE OF THE SEGMENT 3 MAINLINE, GAINESVILLE ALTERNATIVES, AND PAGELAND ALTERNATIVES IMPACT CENTERLINES

Name	Description	Approximate Distance and Direction from Route Right-of-way
Gough Cemetery (also known as Woodlawn Church Cemetery)	Identified on a USGS topographic map and in county data (PWC GIS 2025), this cemetery occupies a vegetated parcel owned by the Methodist Episcopal Church encompassing less than 0.1 acre on the south side of Vint Hill Road east of Reid Lane. The burial ground, which is inactive and appears to be unmaintained, contains two interments dating from 1934 and 1941 (findagrave.com 2025). No evidence of headstones is apparent on aerial imagery of the area due to dense vegetation around the site, but a Streetview image from Google Earth (2025) depicts a chain link fence along the northern boundary of the cemetery.	About 110 feet west of the Segment 3 Mainline right-of-way
Carrico Family Cemetery (also known as Haislip Hall)	Identified in county data (PWC GIS 2025) on findagrave.com (2025), this cemetery is within an undeveloped forested parcel encompassing about 0.5 acre on Weathersfield Drive in the Kingsbrook subdivision. The parcel is owned by the Kingsbrook Homeowners Association. While the size of the burial ground is not known, a photo on findagrave.com suggests it is relatively small, consisting of a fenced, maintained area with five headstones. The interments date between 1891 and 1913.	About 750 feet west of the Segment 3 Mainline right-of-way
Harris-Robinson Cemetery	Identified in county data (PWC 2025) on findagrave.com (2025), this cemetery occupies an approximately 0.1-acre forested parcel within the Foxborough subdivision, south of Scottish Hunt Lane. The parcel is owned by the Foxborough Phase One Homeowners Association. The cemetery is fenced and maintained with at least 11 interments dating from 1911 to 1995. There are no headstones visible on aerial imagery, but in a photograph on findagrave.com, the fence and several headstones are visible.	About 750 feet west of the Segment 3 Mainline right-of-way
Chris Yung Elementary School	Descriptions of this resource are provided in Sections 4.7.1. and 4.7.8.	About 300 feet east of the Segment 3 Mainline right-of-way
Rollins Cemetery	Identified through a USGS topographic map, findagrave.com (2025), and county data (PWC GIS 2025), this cemetery is within an approximately 0.5-acre parcel in an industrial area, north of Industrial Park Court. Headstones and fencing are visible on aerial imagery and shown in a photograph on findagrave.com. The cemetery contains at least 23 interments dating from 1869 to 1947.	About 1,240 feet east of Gainesville 2

Name	Description	Approximate Distance and Direction from Route Right-of-way
Unknown 4 ^a	ERM identified a cemetery in county data (PWC GIS 2025) east of the existing transmission line corridor, within an approximately 0.1-acre forested area in the middle of a parking lot, south of Randolph Ridge Lane. There is no record of a cemetery at this location on findagrave.com (2025) and no indication of headstones on examined aerial photography, but the site appears to have been intentionally avoided when the parcel was developed between 2006 and 2008. The number and dates of interments at the site are unknown.	About 330 feet east of Gainesville 1 right-of-way
Elliot-Vanderpool Cemetery	This cemetery, identified in county data (PWN GIS 2025) is within an approximately 0.2-acre fenced and partially vegetated area in the middle of a parking lot on a commercial/industrial parcel south of Randolph Ridge Lane and north of the Norfolk Southern Railroad. There is no clear indication of headstones on aerial imagery of the area due to tree cover, though the site appears to be fenced. Also, and like Unknown 4, the site appears to have been intentionally avoided when the property was developed. There is no record of a cemetery at this location on findagrave.com (2025). The number and dates of interments are unknown.	About 240 feet north of Gainesville 2 and Gainesville 3 rights-of-way
Monroe Family Cemetery	Identified on findagrave.com (2025), this cemetery is within a forested area between I-66 to the north and a ramp at the Prince William Parkway interchange to the south. While the size and dimensions are unknown, the cemetery is reported to contain four interments dating from 1878 to 1948. It is assumed to be a small family burial ground.	About 700 feet southwest of Gainesville 1 right-of-way About 915 feet north of Gainesville 2 and Gainesville 3 rights-of-way
Dunklin Cemetery	Identified on findagrave.com (2025), this site contains the grave of Timothy Lincoln Dunklin, who died at Second Manassas. The grave is within an approximately 6-acre parcel owned by the ABT, west of Pageland Lane and south of US 29. The cemetery is not visible on aerial imagery, but Google Earth (2025) identifies a "Dunklin Memorial" at the same location. A photo of the headstone is provided on findagrave.com.	About 90 feet east of Gainesville 1, 2 and 3 rights-of-way
Melbourne Cemetery (also called Marstellar Cemetery)	Identified in county data (PWC GIS 2025), the cemetery is within forest north of US 29 in Conway Robinson State Park. There is no indication of headstones on aerial imagery due to the cover. There is no record of a cemetery at this site on findagrave.com (2025). The number and dates of interments are unknown.	About 550 feet north of Gainesville 3 right-of-way

Name	Description	Approximate Distance and Direction from Route Right-of-way
Swart Family Cemetery	Identified on findagrave.com (2025) and in county data (PWC GIS 2025), the cemetery occupies less than 0.1 acre east of Pageland Lane and north of US 29 within MNB. The burial ground contains four interments dating between 1907 and 1959. The site is visible in area imagery and in a photo on findagrave.com which depicts the site enclosed by a stone fence.	About 800 feet east/northeast of Gainesville 1, Gainesville 2, Gainesville 3, Pageland 1, and Pageland 2 rights-of-way
Possible Cemetery	Prince William County data (PWC GIS 2025) identify a cemetery within a forested area east of Pageland Lane. The site was recorded based on oral tradition and an informant interview as the possible location of a mass burial associated with Second Manassas. No evidence of a mass grave or human remains was identified during archaeological surveys completed in 1993 and 2023 (Stanyard et al. 2023). There is no record of a cemetery at this location on findagrave.com (2025) and no indication of a cemetery on examined aerial photography.	About 15 feet northwest of Pageland 1 right-of-way About 475 feet northeast of Pageland 2 right-of-way
Phillips Cemetery	Prince William County (PWC 2025) data identify a cemetery within a forested area east of Pageland Lane, to the northeast of the intersection of Pageland and Angle Rod Road. Previous archaeological studies identified three burial shafts surrounded by a stone wall and a fourth unconfirmed but possible burial shaft at the site, all presumed to be from Civil War battles (Stanyard et al. 2023). There is no record of a cemetery at this location on findagrave.com (2025).	About 675 feet east Pageland 1 right-of-way
Cross Family Cemetery	Identified on findagrave.com (2025), the cemetery is south of General Trimbles Lane on a parcel owned by the ABT. The findagrave record indicates "30-40 graves were there at one time" but only five headstones are currently present, with interments dating from 1871 to 1923.	About 1,270 feet east of Pageland 1 right-of-way
Manuel-Pageland Cemetery	Identified in county data (PWC GIS 2025) in a forested area east of Haddonfield Lane, no evidence of headstones is apparent on aerial imagery due to vegetation around the site. There is no record of a cemetery at this location on findagrave.com (2025). The number and dates of interments are unknown.	About 1,200 feet west of Pageland 1 right-of-way
Haislip Family Cemetery	Identified on USGS maps and on findagrave.com (2025), this burial ground occupies about 0.1 acre within a rural area. The burial ground is unmaintained but fenced with at least seven interments dating from 1880 to 1940.	About 930 feet northwest of Pageland 1 right-of-way

Name	Description	Approximate Distance and Direction from Route Right-of-way
Pattie Cemetery	An unnamed cemetery was identified in county data (PWC GIS 2025) on a residential parcel. There is no clear indication of a burial ground on examined aerial photography, but the reported location is consistently depicted as small tree grove within an otherwise cleared area since at least 1989. Information in the VCRIS (2025) indicates the cemetery contains 11 to 25 burials. Burials with headstone inscriptions date from 1902 to 1927.	About 560 feet north/northeast of Pageland 1 right-of-way
Marble Hill Enslaved Burial Ground	This burial ground, documented in Prince William County data (PWC GIS 2025), contains interments of enslaved or formerly enslaved people at the Marble Hill Plantation in the 19 th century. The cemetery is believed to be near or adjacent to the west side of the Company's existing Morrisville-Wishing Star Corridor. When documented in 2001 by the county, the cemetery was described as measuring 40 feet by 40 feet, unmarked, overgrown, and "almost totally destroyed by groundhogs". The cemetery is believed to be the final resting place of Jennie Dean, a significant African American woman in local history. There are no known headstones at the site, which is expected for the type of cemetery. There is no record of a cemetery at this location on USGS maps or findagrave.com (2025). The number and dates of interments are unknown.	About 250 feet east of Pageland 1 right-of-way
Settle Cemetery	Identified through the VCRIS (2025), this cemetery consists of four graves in the middle of an agricultural field. The cemetery boundaries were delineated as part of a previous archaeological survey which removed plow zone to check for grave shafts and confirm the boundaries (Stanyard et al. 2023). There is no record of a cemetery at this location on findagrave.com (2025). The dates of interments are unknown.	About 885 feet east of Pageland 2 right-of-way
Davis Cemetery	Identified through the VCIRS, this cemetery occupies less than an acre in a forested are on the west side of the Company's existing Morrisville-Wishing Star Corridor. An archaeological survey documented surface depressions and upright and toppled fieldstones indicating nine burials. The cemetery is believed to be associated with African American owners in the 20 th century. The cemetery boundaries were confirmed via mechanical stripping of topsoil outside the cemetery boundaries. There is no record of the cemetery on findagrave.com (2025).	About 85 feet west of Pageland 1 right-of-way
McCuin Cemetery	This is a potential family cemetery in the northeast quarter of the intersection of Catamount Court and Sanders Lane, documented in Prince William County data (PWC GIS 2025). The site, which is currently heavily forested, is speculated to be a family cemetery based on an analysis of tree cover in aerial photos. No graves have been documented at the site.	About 625 feet west of the Segment 3 Mainline right-of-way

^a “Unknown 4” is the name identified in PWC GIS 2025.

7.1.9.2 IMPACT ASSESSMENT

There would be no direct impact on the 13 cemeteries greater than 500 feet from the Segment 3 Mainline and/or Gainesville and Pageland alternatives rights-of-way (i.e., the Carrico Family Cemetery, Harris-Robinson Cemetery, Rollins Cemetery, Monroe Cemetery, Melbourne Cemetery, Swart Family Cemetery, Phillips Cemetery, Cross Cemetery, Manuel-Pageland Cemetery, Haislip Cemetery, Pattie Cemetery, Settle Cemetery, and McCuin Cemetery). Indirect impacts, such as construction noise, dust, and traffic, if any, would be short term and temporary, though transmission structures and conductors could be visible from some cemeteries. The Project would not impact land uses at these resources.

Of the remainder, and like the above, there would be no direct impact on three cemeteries within 500 feet of the Segment 3 components rights-of-way (Gough Cemetery, Unknown 4, and Elliot-Vanderpool Cemetery). The change in the number and configuration of transmission structures and/or the right-of-way expansion required near these resources would not substantively change existing conditions, though rebuilt or new structures could be visible from within the cemeteries. Construction impacts, such as noise, dust, and traffic, would be short term and temporary. Our assessment regarding impacts on these resources is also based on the following:

- Gough Cemetery is on the opposite side of an existing access road into NOVEC’s Vint Hill Station from the Segment 3 Mainline. The setting includes this station as well as Dominion’s adjacent Vint Hill Station and associated electric transmission lines.
- Unknown 4 is in the middle of a parking lot within an industrialized area on the opposite side of the Company’s existing transmission corridor from Gainesville 1. The setting is industrial.
- Elliot-Vanderpool Cemetery is in the middle of a parking lot on a commercially developed parcel on the opposite side of the Norfolk Southern Railroad from Gainesville 2 and 3. The setting is highly developed.

Of the remaining cemeteries, Dunklin Cemetery is on a parcel owned by the ABT, south of US 29 and west of Pageland Lane. A survey completed in 2001 recorded the following inscription on the monument at the site: “T.L. Dunklin, Company E 4th Texas Regt., born Aberdeen Miss. March 25, 1841, fell Second Battle of Manassas, Aug 30, 1862 defending his country” (Historic Prince William 2001a). The cemetery condition was listed as “good” when recorded in 2001, though current aerial imagery and field reconnaissance indicate the site is overgrown and unmaintained. Construction on any of the Gainesville alternatives could result in visual impacts despite the approximately 125 feet of forest that would remain between the Project and site. This would not impact visits to the site, should they occur.

As noted in Table 7.1-15, a possible mass grave associated with the Civil War is recorded in county data near Pageland 1, with the right-of-way within 15 feet of the reported boundary. No evidence of burials was found at the site during previous archaeological investigations, including stripping of topsoil to search for grave shafts (Stanyard et al. 2023). No evidence of human remains has been reported at the site. If Pageland 1 is selected for the Project, the Company’s archaeological consultant would survey the right-of-way in this area to verify the absence of burials.

The boundaries of the Marble Hill Enslaved Burial Ground are unconfirmed. When recorded by the County in 2001, the cemetery was reported to measure 40 by 40 feet in a heavily overgrown area in otherwise open or agricultural lands. The burial ground is believed to be the resting place of Jennie Dean, an important person in county history (Historic Prince William 2001b and Prince William County Historical Commission 2022). Best available data indicates that the cemetery is on the west side of the Company's existing Morrisville-Wishing Star Corridor. In this area, Company's proposed new 500 kV Line would be built in an expanded corridor on the west side of the right-of-way, or about 305 feet from the reported cemetery. Given the absence of a well-defined boundary, however, the location of graves in the area, if any, is uncertain. If Pageland 1 is selected for the Project, the Company's archaeological consultant would survey the right-of-way in this area to verify the absence of burials.

Marble Hill Enslaved Burial Ground is located at the end of Marble Hill Lane on the former Marble Hill plantation, owned by the Cushing and Newman families. Mount Calvary Baptist Church, which is over 0.7 mile east of Pageland 1, served as an important cornerstone of freedman society in the area following the end of the Civil War and is related to Jennie Dean, named woman of the century and the founder of the Manassas Industrial School, along with five churches in the area. Dean is also affiliated with the Marble Hill Slave Cemetery, located approximately 250 feet east of Pageland 1, as she and her family were enslaved at Marble Hill plantation. Groundhogs have significantly disturbed the cemetery, and the number of burials is unknown, though the location is documented (Historic Prince William 2001b and Prince William County Historical Commission 2022).

Where Segment 3 passes near Chris Yung Elementary School, the Project would require the installation of a new 500 kV line within a 65-foot-wide expanded right-of-way adjacent to the east side of the Company's Morrisville-Wishing Star Corridor. The Project would clear trees in the expanded corridor, but post-construction, a 270-foot-wide forested buffer would remain, screening views from the school to the west. The only change in the vicinity of the school would be the addition of transmission structures and conductors in the expanded right-of-way. While some of these could be visible from parts of the campus, the setting already includes existing transmission infrastructure. Construction impacts, such as dust, noise, and traffic, are possible, but these would be short term, temporary, and dependent on season. Dominion would coordinate with the school ahead of construction to minimize temporary impacts on outdoor or special activities.

Conclusions Regarding the Gainesville and Pageland Alternatives

Gainesville 1, 2, and 3 generally avoid passing within 500 feet of cemeteries. Each route would pass near Dunklin Cemetery, resulting in the same impacts.

While both Pageland alternatives generally avoid cemeteries, there are more burial grounds near Pageland 1 than Pageland 2, which is farther from the main sections of the First and Second Manassas battlefields. Pageland 1 passes near the Marble Hill Enslaved Burial Ground, which is reported to be on the opposite side of the Company's existing corridor from the expansion proposed for the Project. No construction is planned to occur within the existing right-of-way in this area.

7.1.10 TRANSPORTATION INFRASTRUCTURE

7.1.10.1 EXISTING TRANSPORTATION INFRASTRUCTURE

The road network in the study area includes a variety of functional classifications identified by Prince William County in the 2040 Comprehensive Plan (PWC 2022). The functional classifications identify the purposes and intended characteristics of roads and the right-of-way necessary to accommodate traffic volumes and trip types.

I-66 was identified as an Interstate, Prince William Parkway (Rte. 234)(Prince William Parkway) and US 29 as principal arterials; Vint Hill Road, Linton Hall Road, Wellington Road, University Boulevard, and Pageland Lane as minor arterials, and other roads in the study area are primarily local roads. (PWC 2022)

In addition, one railroad, the Norfolk Southern Railway, runs east-west for approximately three miles in the midsection of the study area for Segment 3, approximately 0.5 mile south of I-66 where Gainesville 1 crosses and about 200 feet south where Gainesville 2 and 3 cross. No other railroads or Metrorail lines are in the study area.

Figure 4.1.10-1 shows the existing and planned transportation infrastructure crossed by the Project.

7.1.10.2 PLANNED TRANSPORTATION PROJECTS

ERM reviewed VDOT's Six-Year Improvement Program (VDOT, 2025), Prince William County Comprehensive Plan (PWC, 2022), Prince William County Current Mobility Projects (PWC, 2025c) and mapping (PWC, 2025d) to identify planned road projects in the study area. After additional consultation with VDOT in the fall and winter of 2025, ERM also became aware of the VTrans2040 Multimodal Transportation Plan (VDOT 2018). The subsections below describe planned road construction and transportation improvement projects within 0.25 mile of the Segment 3 Mainline, Gainesville Alternatives, and Pageland Alternatives Impact Centerlines based on these various sources listed above.

Segment G2 Corridor

Through coordination with VDOT and review of the VTrans2040 Multimodal Transportation Plan: Corridors of Statewide Significance Needs Assessment, ERM identified a planned transportation project, referred to as the Segment G2 Corridor. This Segment G2 Corridor encompasses Rte. 234, Rte. 659, Northstar Boulevard, and a conceptual Bi-County Parkway. Segment G2 extends from I-66 north to Rte. 7, serving both Prince William and Loudoun Counties. With construction of the conceptual Bi-County Parkway, Segment G2 is intended to provide a connection for passenger and freight movement to Dulles International Airport, I-66, and I-95. The corridor is also designed to support local commuter traffic and strengthen connectivity between rapidly growing communities such as Ashburn, Brambleton, and Manassas (VDOT 2018). The conceptual corridor is crossed by the Segment 3 Mainline, Gainesville, and Pageland routes.

Although development of this corridor is identified in the VTrans 2040 transportation plan (VDOT 2018), these improvements are not listed as current mobility projects by Prince William County (PWC 2025c, PWC 2025d) or in the VDOT Six-Year Improvement Program (VDOT 2022), and no

source of funding or potential construction timelines have been identified. Ongoing communication with VDOT has also not identified any potential construction timelines or plans developed beyond initial conceptual designs.

University Boulevard Extension (Devlin Road to Wellington Road)

This project will complete University Boulevard from the existing intersection at Devlin Road on a new alignment, connecting with the 2-lane section of University Boulevard at Wellington Road (PWC 2025b). Per the Prince William County Current Mobility Projects, Design-Build Contract Execution begins July 2026 and ends Fall 2028.

Devlin Road Widening

This project will include widening Devlin Road (Route 621) from University Boulevard to Jennell Drive, approximately 0.6 mile. The proposed roadway will consist of a four lane divided road with a pedestrian sidewalk and a shared use path, and a new traffic signal will be installed at the intersection of Devlin Road and Fog Light Way/ Pike Branch Way. The Board of County Supervisors approved the contract award on October 28, 2025 and the preconstruction meeting is scheduled for November 10, 2025. Construction was scheduled start in late 2025 and is projected to end in Spring of 2028 (PWC 2025d).

Pageland Lane

This project includes widening Pageland Lane to four lanes between Sudley Road and US 29, where Pageland Lane is considered minor arterial, as well as between US 29 and I-66, where Pageland Lane borders MNBPs as a Collector Road. This project is part of the planned Digital Gateway data center development. Status of this project is dependent on development of Digital Gateway. Ongoing work includes creating construction plans to upgrade Pageland Lane, developing detailed plans for the extensive open space and trail network the project promised to build, and coordinating with utility providers to extend service to the area (InsideNoVa 2025).

Prince William County 2040 Comprehensive plan

The following planned transportation projects are listed in the Prince William County 2040 Comprehensive plan. However, they are not listed as "current" mobility projects by Prince William County and no current construction progress was identified. (PWC 2022a).

- Wellington Road: This project includes widening Wellington Road to four-lanes from University Boulevard to Godwin Drive.
- Vint Hill Road: This project includes widening Vint Hill Road to four-lanes from Rollins Ford Road to Nokesville Road.
- Prince William Parkway: This project would include increasing the number of lanes for Prince William Parkway from two lanes to four lanes between I-66 and Nokesville Road.
- US-29: This project includes increasing the number of lanes of US-29 from four lanes to six lanes from Pageland Lane to Linton Hall Road.

7.1.10.3 IMPACT ASSESSMENT

Table 7.1-16 and Table 7.1-17 summarize the number and details of the existing and future road crossings and road collocation for each route alternative. Project construction could result in temporary road closures and possible increased traffic. These impacts would end after construction is complete. Dominion would coordinate with the county and VDOT in cases where construction activities require temporary road closures. Table 7.1-17 lists the roads crossed by each route alternative.

TABLE 7.1-16 ROAD INFRASTRUCTURE IMPACTS BY THE SEGMENT 3 ROUTE ALTERNATIVES

	Unit	Segment 3 Mainline	Gainesville Alternatives			Pageland Alternatives	
			1	2	3	1	2
Existing road crossings	number	5	8	6	6	3	5
Future road crossings ^a	number	1	1	1	1	0	0
Existing road collocation	miles	0	0.7	0.9	1.0	1.4	0.1
Future road collocation ^a	miles	0	0.7	0	0	1.9	0.1

^a Based on publicly available information described in Section 7.1.10.2 as of November 2025

TABLE 7.1-17 ROADS CROSSED BY SEGMENT 3 ROUTE ALTERNATIVES

Road Name	Route Alternative	Lanes at Crossing	Functional Classification	Crossing Type
Existing Roads				
Vint Hill Road	Segment 3 Mainline	2	Minor Arterial	Perpendicular
Tartan Hills Parkway	Segment 3 Mainline	2	Local	Perpendicular
Linton Hall Road	Segment 3 Mainline	4	Minor Arterial	Perpendicular
Catamount Court	Segment 3 Mainline	2	Local	Perpendicular
Boxwood Farms Drive	Segment 3 Mainline	2	Local	Perpendicular
Wellington Road	Gainesville 1	4	Minor Arterial	Perpendicular
	Gainesville 2	4		Perpendicular
	Gainesville 3	4		Perpendicular
Piney Branch Lane	Gainesville 1	2	Local	Perpendicular



Road Name	Route Alternative	Lanes at Crossing	Functional Classification	Crossing Type
	Gainesville 2	2		Angled
	Gainesville 3	2		Perpendicular
Norfolk Southern Railway	Gainesville 1	NA	Railroad	Perpendicular
	Gainesville 2	NA		Perpendicular
	Gainesville 3	NA		Perpendicular
Rt. 234 (Prince William Parkway)	Gainesville 1	2	Principal Arterial	Perpendicular
	Gainesville 2	2		Perpendicular
Randolph Ridge Lane	Gainesville 1	2	Local	Perpendicular
	Gainesville 2	2		Perpendicular
I-66	Gainesville 1	8	Interstate	Perpendicular
	Gainesville 2	8		Perpendicular
	Gainesville 3	8		Perpendicular
US 29	Gainesville 1	4	Principal Arterial	Perpendicular
	Gainesville 2	4		Perpendicular
	Gainesville 3	4		Perpendicular
Artemus Road	Pageland 1	2	Local	Perpendicular
	Pageland 2	2		Perpendicular
Pageland Lane	Pageland 1	4	Minor Arterial	Angled
	Pageland 2	4		Perpendicular
Sudley Road	Pageland 1	4	Minor Arterial	Perpendicular
	Pageland 2	4		Perpendicular
Thornton Drive	Pageland 2	2	Local	Perpendicular
Saddle Ridge Road	Pageland 2	2	Local	Perpendicular

Planned Roads

University Boulevard Extension	Segment 3 Mainline	4	Minor Arterial	Perpendicular
Segment G2 Corridor (from VTrans2040 Plan)	Gainesville 1	unknown	unknown	unknown
	Gainesville 2	unknown		unknown
	Gainesville 3	unknown		unknown

Rt. = Virginia state route; US = US

VDOT guidelines indicate a preference for perpendicular road crossings, which reduce the distance spanned and the visual impacts of a crossing. VDOT also prefers that transmission structures are



placed outside their rights-of-way to avoid conflicts with future road improvements. The route alternatives include perpendicular road crossings where possible. In some cases, perpendicular crossings are not possible, due to constraints associated with existing or planned development, collocation with existing transmission line crossings, natural resources, and landowner preferences for routes that follow parcel boundaries. Dominion would install the Project's transmission structures outside of existing and planned road rights-of-way.

Segment 3 Mainline

The Segment 3 Mainline crosses five existing roads—two minor arterials and three local roads—as well as one planned minor arterial expansion. It is located approximately 0.3 mile east of Devlin Road, where the Devlin Road Widening project will increase the roadway width for a length of about 0.6 mile. Upon completion, the expanded right-of-way will be within roughly 0.25 mile of the Segment 3 Mainline but will not intersect it. The Segment 3 Mainline will perpendicularly cross the planned University Boulevard Extension approximately 0.9 mile south of its intersection with Wellington Road. The Segment 3 Mainline utilizes existing transmission line right-of-way, minimizing the need for new corridor development and avoiding additional impacts to transportation infrastructure.

Segment 3 Gainesville Alternative Route 1

Gainesville 1 has two railroad crossings and eight road crossings across one interstate, two principal arterials, one minor arterial, and two local. Gainesville 1 collocates along Pageland Lane for 0.3 mile, Piney Branch Lane for 0.3 mile, and Wellington Road for 0.1 mile. Gainesville 1 would not permanently impact the functionality of these roads. Gainesville 1 would likely cross the conceptual Segment G2 Corridor project, but specific impacts on that conceptual roadway are unknown and would need to be determined through additional coordination with VDOT.

Segment 3 Gainesville Alternative Route 2

Gainesville 2 has three railroad crossings and six road crossings across one interstate, two principal arterials, one minor arterial, and one local, and includes perpendicular road crossings where possible. Gainesville 2 collocates along US-29 for 0.2 mile, Piney Branch Lane for 0.3 mile, Wellington Road for 0.3 mile, and along the Norfolk Southern Railway for 0.9 mile. Gainesville 2 would likely cross the conceptual Segment G2 Corridor project, but specific impacts on that conceptual roadway are unknown and would need to be determined through additional coordination with VDOT.

Segment 3 Gainesville Alternative Route 3

Gainesville 3 has three railroad crossings and six road crossings across an interstate, principal arterial, minor arterial, and local—and includes perpendicular road crossings where possible. Gainesville 3 collocates with US 29 for 0.5 miles, University Boulevard for 0.4 miles, Wellington Road for 0.1 miles, and along the Norfolk Southern Railway for 1.1 miles. Gainesville 3 would likely cross the conceptual Segment G2 Corridor project, but specific impacts on that conceptual roadway are unknown and would need to be determined through additional coordination with VDOT.

Gainesville Alternatives Conclusion

The three Gainesville alternatives differ in both road crossings and collocation with existing infrastructure. Gainesville 1 includes the most collocation with local roads, such as Prince William Parkway and Pageland Lane, totaling 3.3 miles including planned roads. Gainesville 2 and Gainesville 3 share collocation with the Norfolk Southern Railway and US 29, with railroad segments of 0.90 mile and 1.10 miles, respectively, and overall collocation of 2.07 miles for Gainesville 2 and 2.12 miles for Gainesville 3 including existing and planned roads. All three routes also collocate along Piney Branch Lane and cross I-66 at different locations, utilizing perpendicular crossings where feasible to minimize impacts. Notably, Gainesville 3 crosses I-66 east of the University Boulevard overpass. The three Gainesville alternatives would likely cross the conceptual Segment G2 Corridor project, but specific impacts on that conceptual roadway are unknown and would need to be determined through additional coordination with VDOT. While the number of road crossings varies slightly, the routes generally intersect a similar range of major corridors, with Gainesville 3 offering the greatest overall collocation along existing transportation corridors.

Segment 3 Pageland Alternative Route 1

Pageland 1 crosses three roads—one local and two minor arterials—incorporating perpendicular crossings where feasible to minimize impacts. The route collocates along Pageland Lane for approximately 1.4 miles north of its intersection with US 29. With the planned realignment of Pageland Lane, this collocation will extend an additional 1.9 miles, resulting in a total of 3.3 miles of collocation. Pageland 1 would likely cross the conceptual Segment G2 Corridor project, but specific impacts on that conceptual roadway are unknown and would need to be determined through additional coordination with VDOT. Pageland 1 would not permanently impact the functionality of these roads.

Segment 3 Pageland Alternative Route 2

Pageland 2 crosses five roads: two minor arterials and three local roads. It collocates along Pageland Lane for only 0.06 mile after the intersection with US 29. Future development of Pageland Lane would add another 0.06 mile of collocation, bringing the total to 0.12 mile. Pageland 2 would likely cross the conceptual Segment G2 Corridor project, but specific impacts on that conceptual roadway are unknown and would need to be determined through additional coordination with VDOT. Pageland 2 would not permanently impact the functionality of these roads.

Pageland Alternatives Conclusion

Overall, While the number of road crossings varies slightly, Pageland 1 offers greater collocation with existing and planned infrastructure at 3.31 miles compared to just 0.12 mile for Pageland 2. Both alternatives feature a similar number of road crossings and share a common diagonal crossing of Sudley Road due to land use constraints and existing development north of Sudley Road. Both alternatives would likely cross the conceptual Segment G2 Corridor project, but specific impacts on that conceptual roadway are unknown and would need to be determined

through additional coordination with VDOT. Neither alternative would permanently impact the functionality of these roads.

7.1.11 AIRPORTS AND HELIPORTS

Based on a review of FAA resources, 2 public, 7 private airports and 6 private heliports, as depicted on Figure 3.2.1-1, are located within 10 nm of any portion of Segment 3. A summary of anticipated impacts associated with each facility based on FAA regulations and standard obstruction analysis is presented in Table 7.1-18 and described in the impact section below.

TABLE 7.1-18 AIRPORTS AND HELIPORTS LOCATED WITHIN 10 NAUTICAL MILES OF SEGMENT 3

Airport/Heliport Name	FAA ID	Distance and Direction ^a	Runways and Approach Classifications ^b	14 CFR Part 77 Applicability ^c	Anticipated Project Impact Determination ^d
Public Use Facilities Subject to 14 CFR Part 77					
Manassas Regional Airport	HEF	3.6 nm E	16L[PIR] / 34R[C] 16R[C] / 34L[B(V)]	Applicable	Surface overlap, Potential Obstruction, Notification anticipated
Washington Dulles International Airport	IAD	5.7 nm NE	01L[PIR] / 19R[PIR] 01C[PIR] / 19C[PIR] 01R[PIR] / 19L[PIR] 12[PIR] / 30[B(V)]	Applicable	No impact, No 14 CFR Part 77 surface overlap
Private Use Facilities					
Skyview Airport	51VA	2.3 nm SW	09/27	NA, No IAP	No Impact
UVA Health/ Haymarket Medical Center Heliport	45VA	2.6 nm W	Helipad	NA, No IAP	No Impact
Stonesprings Heliport	6VG4	2.8 nm N	Helipad	NA, No IAP	No Impact
Valley View Airport	8VA9	3.0 nm SE	02[A(V)] / 20[A(V)]	NA, No IAP	No Impact
Glascok Heliport	98VA	3.1 nm N	Helipad	NA, No IAP	No Impact
UVA Health/Prince William Medical Center Heliport	27VA	3.9 nm E	Helipad	NA, No IAP	No Impact
Maples Field Airport	VG57	7.6 nm S	04[A(V)] / 22[A(V)]	NA, No IAP	No Impact
Goose Hunt Farm Airport	3VA5	8.4 nm N	17/35	NA, No IAP	No Impact
Walnut Hill Airport	58VA	8.6 nm S	18/36	NA, No IAP	No Impact
Inova Fair Oaks Hospital Heliport	74VA	8.6 nm E	Helipad	NA, No IAP	No Impact
Fairfax County Police Heliport	26VA	8.9 nm E	Helipad	NA, No IAP	No Impact
Hickory Tree Farm Airport	VA79	9.2 nm W	North/South	NA, No IAP	No Impact
Horse Feathers Airport	53VA	9.8 nm SW	18/36	NA, No IAP	No Impact

FAA = Federal Aviation Administration; NA = not applicable; OE/AAA = Obstruction Evaluation/ Airport Airspace Analysis; IAP = FAA Approved Instrument Approach Procedure

^a Distance (nm) measurements and approximate direction (cardinal directions; N, NE, E, SE, S, SW, W, NW) were calculated via standard ArcGIS Geoprocessing tools (Near Analysis), utilizing route centerlines and established airport reference points retrieved from the FAA ADIP. ^bNearest



project facility' may refer to any point along a route centerline that is geographically nearest to the Established Airport Reference Point. Runways and airport property boundaries may be closer to a project component than calculated and presented in the above table.

^b Runway identification numbers and approach classifications were obtained via the FAA ADIP: <https://adip.faa.gov/agis/public/#/public>; Refer to Section 3.2.1.1.1 and Table 3.2.-3 for Approach Classification definitions.

^c Public airports and private facilities with at least one FAA approved IAP are subject to 14 CFR Part 77.

^d Impact determination based on the company's review of 14 CFR Part 77 regulations and airport imaginary surface modeling using standard GIS tools. Refer to impact assessment section for additional information.

7.1.11.1 IMPACT ASSESSMENT

Public Airports

Based on ERM's airport analysis, none of the Segment 3 components (including Segment 3 Mainline, Gainesville alternatives, or Pageland alternatives) overlap with or exceed any portion of the 14 CFR Part 77.19 defined imaginary surfaces of Dulles Airport; however, all structures associated with the Gainesville Alternative Routes and the Pageland Alternative Routes, as well as portions of the Segment 3 Mainline, overlap with imaginary surfaces associated with Manassas Regional Airport. Refer to Figure 3.2.1-3 for a visual representation and Table 3.2-3 for a description of the 14 CFR Part 77.19 defined imaginary surfaces for Manassas Regional Airport.

The Segment 3 components overlap with the Runway 16L extended approach surface (i.e., the area beyond 10,000 feet from the runway primary surface and within the additional 40,000 foot 40:1 slope area) and extended approach transitional surfaces (area extending 5,000 feet perpendicular to the approach surface at a 7:1 slope). The runway and primary surface elevation of Runway 16L is 192.2 feet AMSL, and ground elevations at proposed tower locations within this surface area are higher, ranging between 221 and 331 feet AMSL. Proposed towers within the approach surface range in distance between approximately 24,000 feet and 40,000 feet, and structures within the western transitional approach range from 21,000 to 24,000 feet, from runway 16L. At this distance, the minimum imaginary surface height and theoretical lowest tower height maximum, which would occur within the extended approach area just south of Wellington Road near Hansen Farm Road, is 742 feet AMSL. For all components of Segment 3, including the Mainline and Gainesville and Pageland alternatives, towers located both inside and outside of the approach would have a structure height range of 331 to 517 feet AMSL. For structures located within the approach, the structure height range is between 331 and 501 feet AMSL. As such, no towers associated with any routes are anticipated to penetrate Manassas Regional Airport's 14 CFR Part 77.19 defined imaginary surfaces.

No permanent structure heights within the approach will exceed 14 CFR Part 77.17 obstruction standards, and no component within this area will be located with the 20,000-foot 14 CFR Part 77.9 defined notification surface. However, based on the results of the OE/AAA prescreening review, the majority of the structures located within the extended approach area, regardless of route alternative, were flagged for FAA notification. As no imaginary surface or obstruction criteria is anticipated to be exceeded, it is likely that the notification request is a result of a potential or suspected TERPS surface conflict under 14 CFR Part 77.17(a)(3) or (4) (i.e., a minimum obstacle clearance exceedance).

ERM reviewed the FAA's DOF database (FAA, July 23, 2025), a database of existing FAA approved and charted obstacles, and found that existing obstacles within the extended approach and nearer to the runway than the majority of Segment 3 components range in height from 307 (OAS Code 51-070201) to 516 (OAS Code 51-002433) feet AMSL. In addition, existing Dominion-owned transmission towers in the Morrisville-Wishing Star Corridor between the airport and the Gainesville and Pageland alternatives, including heights of 142 feet AGL, or 460 feet AMSL, and are not mapped in the DOF database as charted obstacles. All Segment 3 Mainline and Route Alternatives structures would represent an increase in height compared to existing Dominion-

owned structures; however, based on this review, the Project is not anticipated to affect aeronautical navigation. The Company would provide surveyed tower location data to the FAA, and will work with the agency to ensure Project compliance with FAA requirements.

In addition, Dominion will use cranes to install the Project transmission structures. The typical maximum crane height needed for construction is approximately 35 feet above the structure height. The 500 kV structures along all components and alternatives of Segment 3 range in height from 102 to 197 feet above ground surface, with an average height of approximately 157 feet, including foundation reveal. Any temporary structure that will exceed 200 feet above ground surface will require notification to the FAA under 14 CFR Part 77.9 and could be considered a temporary impact to air navigation. However, as crane use is temporary in nature and would be utilized in discrete locations during phased construction, Dominion anticipates that the FAA will likely issue an "Exceeds But Okay" determination, as defined in FAA Order JO 7400.2R.7-1-3.b (FAA, n.d.-c), indicating that a temporary structure exceeds obstruction standards but does not result in a substantial adverse effect.

Dominion plans to submit notification to the FAA prior to construction for all temporary and permanent structures. Dominion will utilize FAA Form 7460-1—Notice of Proposed Construction or Alteration via the OE/AAA online portal to complete the notification. Notification will be completed after the SCC has approved a proposed route, during the permitting phase, and at least 45 days before the start of the proposed construction or the date an application for a construction permit is filed, whichever is earliest.

Private Airports

The FAA does not regulate private airports and heliports without at least one FAA approved IAP under 14 CFR Part 77; however, the location of private facilities in close proximity to proposed transmission line structures were reviewed to ensure potential safety hazards to private air navigation are mitigated. Based on ERM's review of private facilities within 10 nm of all Segment 3 components, no impacts to private air navigation are anticipated due to distance from the nearest facility. As such, no additional review of private facilities near Segment 3 is included in this report.

7.2 NATURAL RESOURCES

7.2.1 SURFACE WATERS

7.2.1.1 WATERSHEDS

The Segment 3 Mainline and Gainesville and Pageland alternatives are within the Potomac HUC 4-digit (0207) subregion, described above, and the Middle Potomac-Anacostia-Occoquan HUC 8-digit (02070010) watershed. The segment and alternatives are then split between two HUC 10-digit watersheds: Broad Run (0207001005) and Bull Run (0207001007), which divide the segment approximately along I-66 (Figure 4.2.1-1).

The southern portion of the Segment 3 Mainline and the southern portions of the Gainesville alternatives are within the Broad Run watershed. Waterbodies in this section include South Run, Kettle Run, Broad Run, Rocky Branch, Dawkins Branch, and associated tributaries. Surface waters

generally flow southeast into Kettle Run, west into Broad Run, and ultimately southwest into the Occoquan River.

The northern portion of the Segment 3 Mainline, the northern portion of the Gainesville alternatives, and the Pageland alternatives are within the Bull Run watershed. Waterbodies in this section include Youngs Branch, Little Bull Run, Lick Branch, Bull Run, Foley Branch, and their associated tributaries. Surface waters generally flow southeast into Bull Run, and ultimately into the Occoquan River.

7.2.1.2 WETLANDS

Existing Conditions

The Segment 3 Mainline requires an expansion of Dominion's existing Morrisville-Wishing Star Corridor, which is bordered on either side by forested, agricultural, or developed land, by between 10 feet and 150 feet for approximately 5.1 miles. For the remaining approximately 1.3 miles of the segment, the Project would be confined to Company's existing right-of-way. The Gainesville and Pageland alternatives would utilize entirely new and/or expanded right-of-way through forested and agricultural land or industrial along and around I-66.

Table 7.2-1 provides the areas in acres assigned high, medium-high, or medium probabilities of containing wetlands along the Segment 3 Mainline and Gainesville and Pageland alternatives. The Segment 3 Mainline encompasses about 63.7 acres of wetlands, while the Gainesville alternatives encompass 8.3, 10.6, and 13.9 acres, respectively, and the Pageland alternatives encompass 7.8 and 9.5 acres, respectively. Wetlands along the routes within the Company's existing Morrisville-Wishing Star Corridor are predominantly PEM, with PEM, PFO, and other types in the areas of expanded or new right-of-way. Wetlands along the segment and alternatives are associated with Broad Run, Rocky Branch, Youngs Branch, Little Bull Run, Bull Run, Lick Branch, and their associated tributaries. Wetlands within the Broad Run watershed generally flow southeast into Broad Run and its associated tributaries, while wetlands within the Bull Run watershed generally flow east into Bull Run and its associated tributaries.

Figure 4.2.1-1 depicts the watershed boundaries and NWI- and NHD-mapped surface waters. Maps depicting the identified aquatic resources and their probabilities are provided in Attachment 2.D.1 of the DEQ Supplement. Section 7.2.1.3 describes riverine and PUB features.

TABLE 7.2-1 ACREAGE OF HIGH, MEDIUM-HIGH, AND MEDIUM PROBABILITY WETLANDS AND WATERBODIES WITHIN THE SEGMENT 3 MAINLINE, GAINESVILLE ALTERNATIVES, AND PAGELAND ALTERNATIVES FOOTPRINTS

Surface Waters	Unit ^a	Segment 3 Mainline	Gainesville Alternatives			Pageland Alternatives	
			Gainesville 1	Gainesville 2	Gainesville 3	Pageland 1	Pageland 2
Total	Acres	63.7	8.3	10.6	13.9	7.8	9.6
Palustrine Forested	Acres	3.7	6.7	8.6	11.1	5.4	7.0
Palustrine Scrub-shrub	Acres	0.0	0.0	0.0	0.0	0.0	0.0
Palustrine Emergent	Acres	55.8	1.0	2.0	2.4	1.0	2.1
Palustrine Unconsolidated Bottom	Acres	0.6	0.5	<0.1	0.3	0.7	0.2
Riverine	Acres	3.6	0.1	<0.1	0.1	0.7	0.3

NA = Not applicable due to absence of a wetland type within the Project footprint

^a Values have been rounded to the tenths place; as a result, the totals may not reflect the sum of the addends. A value of <0.1 indicates that less than 0.05 but more than 0.0 acre of a wetland type is present.

Segment 3 Mainline

The Segment 3 Mainline encompasses approximately 63.7 acres of wetlands and waterbodies, the majority being PEM wetlands associated with Broad Run, Rocky Branch, Bull Run, and other associated perennial and intermittent tributaries and open waterbody features.

Segment 3 Gainesville Alternative Route 1

Gainesville 1 encompasses approximately 8.3 acres of wetlands and waterbodies, predominantly in forested areas, associated with Young's Branch and its perennial and intermittent tributaries. Large areas of PFO and PEM wetlands are concentrated around Young's Branch in the northern portion of Gainesville 1.

Segment 3 Gainesville Alternative Route 2

Gainesville 2 encompasses approximately 10.6 acres of wetlands and waterbodies, predominantly in forested areas, associated with Young's Branch, Little Bull Run, and their perennial and intermittent tributaries. Areas of PFO and PEM wetlands are concentrated around Young's Branch in the southern portion of Gainesville 2.

Segment 3 Gainesville Alternative Route 3

Gainesville 3 encompasses approximately 13.9 acres of wetlands and waterbodies, predominantly in forested areas, associated with Little Bull Run and its perennial and intermittent tributaries. Large areas of PFO and PEM wetlands are concentrated around tributaries of Little Bull Run in the northern portion of Gainesville 3.

Segment 3 Pageland Alternative Route 1

Pageland 1 encompasses approximately 7.8 acres of wetlands and waterbodies, located in forested and agricultural areas, in places adjacent to the Company's existing right-of-way. The wetlands are associated with Little Bull Run, Bull Run, and Lick Branch and their perennial and intermittent tributaries. Larger areas of PEM and PFO wetlands are concentrated around Little Bull Run and Lick Branch in the northern portion of Pageland 1 adjacent to the existing Morrisville-Wishing Star Corridor.

Segment 3 Pageland Alternative Route 2

Pageland 2 encompasses approximately 9.5 acres of wetlands and waterbodies, predominantly in forested areas, associated with Lick Branch and Little Bull Run and perennial and intermittent tributaries. Large areas of PFO and PEM wetlands are concentrated around Lick Branch in the northern portion and around Little Bull Run in the southern portion of Pageland 2.

Impact Assessment

The Segment 3 Mainline utilizes both existing and expanded right-of-way, whereas the Gainesville and Pageland alternatives utilize new right-of-way or a combination of new and expanded right-of-way. Permanent impacts on wetlands would include the conversion of PFO and PSS into PEM wetlands from clearing, as well as structure placement in new and expanded right-of-way where wetlands cannot be avoided. Within PEM wetlands, temporary impacts on surface vegetation

would result from vehicle and equipment traffic. Wetland impacts and mitigation measures are further described in Section 3.2.2.1.

Conclusions on the Gainesville and Pageland Alternatives

Based on the above, Gainesville 1 and Pageland 1 would have the least wetland impact overall and least impact on PFO wetland when compared with their respective alternative routes.

7.2.1.3 WATERBODIES

Existing Conditions

Table 7.2-2 lists the number of waterbody crossings for the Segment 3 Mainline and Gainesville and Pageland alternatives. Attachment 2.D.1 of the DEQ Supplement depicts waterbody crossing locations for each route.

TABLE 7.2-2 WATERBODIES CROSSED BY THE SEGMENT 3 MAINLINE, GAINESVILLE ALTERNATIVES, AND PAGELAND ALTERNATIVES

Waterbodies Crossed a	Segment 3 Mainline	Gainesville 1	Gainesville 2	Gainesville 3	Pageland 1	Pageland 2
Total Waterbodies Crossed	19	4	4	4	22	15
NHD-Mapped Perennial Streams/Rivers	10	0	0	0	5	3
NHD-Mapped Intermittent Streams/Rivers	3	2	2	2	11	6
NHD-Mapped Perennial Lakes/Ponds	0	1	0	1	5	0
Non-NHD Mapped Waterbodies ^b	6	1	2 ^c	1 ^c	1	6

Source: USGS 2025a.

NHD = National Hydrography Dataset

a Based on recent (2025) aerial imagery, a total of seven NHD-mapped waterbodies were identified as wetlands. These waterbodies are not included in the counts listed

b Identified via aerial imagery during desktop analysis using recent (2025) aerial imagery (VGIN 2025; Loudon County 2024; Prince William County 2025).

c These surface waters identified using aerial imagery were stormwater ponds rather than natural features.

Impact Assessment

As noted above, the Segment 3 Mainline utilizes both existing and expanded right-of-way, whereas the Gainesville and Pageland alternatives utilize new right-of-way or a combination of new and expanded right-of-way. Riparian vegetation would be cleared at waterbody crossings in new or expanded right-of-way, as summarized below. The amount of riparian buffer clearing is dependent on the angle of the crossing and the amount of forested vegetation adjacent to the crossing within the right-of-way, but riparian buffer along the stream lengths crossed by each route is used as an estimate to compare the alternative impacts on waterbodies.¹¹ Waterbody impacts are further described in Section 3.2.2.1.

Segment 3 Mainline

Based on the Wetland and Waterbody Desktop Study (Attachment 2.D.1 of the DEQ Supplement) methodology, the Segment 3 Mainline encompasses approximately 3.6 acres of riverine features and 0.6 acre of PUB open waterbody features. Segment 3 Mainline crosses 19 waterbodies (of which 13 are NHD-mapped). The segment crosses perennial Broad Run, Bull Run, Rocky Branch, Bull Run, and associated unnamed tributaries.

Segment 3 Gainesville Alternative Route 1

Gainesville 1 encompasses less than 0.1 acre of riverine features and 0.5 acre of PUB open waterbody features. Gainesville 1 crosses four waterbodies: two NHD-mapped intermittent tributaries (including Young's Branch), an NHD-mapped stormwater pond, and a stormwater pond identified using aerial imagery.

Based on recent aerial imagery, the Project would result in clearing of forested riparian buffer within the full width of the right-of-way (perpendicular crossing) around a crossing of Youngs Branch. The other NHD-mapped intermittent tributary appears to have been altered through development and stormwater management but will require tree clearing within about half of the right-of-way width where it is mapped.

Segment 3 Gainesville Alternative Route 2

Gainesville 2 encompasses less than 0.1 acre of riverine features and less than 0.1 acre of PUB open waterbody features. Gainesville 2 crosses four waterbodies: two NHD-mapped, intermittent tributaries, and two stormwater features identified using aerial imagery.

Based on recent aerial imagery, the Project would result in clearing of forested riparian buffer within the full width of the right-of-way (perpendicular crossing) around an intermittent crossing and about half of the width of the right-of-way of the same tributary at a second crossing.

Segment 3 Gainesville Alternative Route 3

Gainesville 3 encompasses approximately 0.1 acre of riverine features and 0.3 acre of PUB open waterbody features. This route crosses four waterbodies: two NHD-mapped intermittent

¹¹ Measurements are approximate and based on surface water lengths depicted in aerial imagery used to provide a general comparison of riparian buffer lost by each route. Field verification would be needed to evaluate the true lengths of waterbodies crossed by each route.

waterbodies, one NHD-mapped lake/pond, and one stormwater feature identified using aerial imagery.

Based on recent aerial imagery, the Project would result in clearing of forested riparian buffer along approximately 500 feet of length of an intermittent tributary passing on the west side of Gainesville 3, and around an intermittent tributary and associated lake/pond within a forested area on the south side of Lee Highway.

Segment 3 Pageland Alternative Route 1

Pageland 1 encompasses approximately 0.7 acre of riverine features and 0.7 acre of PUB open waterbody features. This route crosses 22 waterbodies (of which 21 are NHD-mapped). The route crosses perennial Little Bull Run (four times) and perennial Lick Branch, as well as associated unnamed tributaries and open waterbody features.

Based on recent aerial imagery, the Project would require riparian buffer clearing around the following waterbodies:

- Two lake/pond features associated with an intermittent tributary to Little Bull Run surrounded by agricultural land
- A small line of trees around an intermittent tributary to Little Bull Run
- The full 150-foot width of the right-of-way at a perpendicular crossing of Little Bull Run
- Approximately 500 stream feet of Little Bull Run along a curved section crossed by the right-of-way
- Approximately 90 stream feet each of two semi-perpendicular crossings of Little Bull Run
- Approximately 120 stream feet of a diagonal crossing of Lick Branch
- Approximately 600 stream feet of an intermittent tributary running within the right-of-way where Pageland 1 is collocated with existing right-of-way
- Approximately 100 stream feet of an intermittent tributary where Pageland 1 is collocated with existing right-of-way
- Approximately 160 stream feet of an unmapped riverine feature where Pageland 1 is collocated with existing right-of-way

Segment 3 Pageland Alternative Route 2

Pageland 2 encompasses approximately 0.3 acre of riverine features and 0.2 acre of PUB open waterbody features. This route crosses 15 waterbodies (of which nine are NHD-mapped). The route crosses Little Bull Run, Catharpin Creek, and Lick Branch, as well as associated unnamed tributaries and open waterbody features.

Based on recent aerial imagery, the Project would require riparian buffer clearing around the following waterbodies:

- The full 100-foot width of the right-of-way at a perpendicular crossings of an intermittent tributary to Little Bull Run, Little Bull Run, Catharpin Creek, and an intermittent tributary to Catharpin Creek, as well as two non-NHD-mapped riverine features

- Approximately 115 stream feet each at diagonal crossings of an intermittent tributary and two non-NHD-mapped riverine features
- Approximately 450 stream feet of a non-NHD-mapped riverine feature running within the right-of-way
- The full 100-foot width of the right-of-way at a perpendicular crossing of an intermittent tributary to Little Bull Run
- Approximately 140 stream feet of a curved section of Lick Branch
- Approximately 100 stream feet of an intermittent tributary where Pageland 2 is collocated with existing right-of-way (also crossed by Pageland 1)
- Approximately 160 stream feet of an unmapped riverine feature where Pageland 2 is collocated with existing right-of-way (also crossed by Pageland 1)

Conclusions Regarding the Gainesville and Pageland Alternatives

The Gainesville alternatives are generally similar to one another in the type and number of waterbodies crossed, each crossing two intermittent streams and a combination of stormwater ponds or natural open water features. Gainesville 1 and 2 both cross streams at a perpendicular angle and require clearing of riparian buffer along approximately 180 feet of stream length along the intermittent stream crossings. Gainesville 3 would require clearing along approximately 500 feet of stream length that crosses parallel within the right-of-way, as well as clearing around a lake/pond feature located within forest. Of the Gainesville alternatives, 1 and 2 would result in the least riparian buffer clearing along waterbodies.

Pageland 1 crosses seven more waterbodies than Pageland 2, with two more NHD-mapped perennial and five more intermittent streams, and five more lake/pond features, although of these four perennial streams and one pond are adjacent to the existing Morrisville-Wishing Star Corridor. Both routes cross through forested and agricultural areas, where riparian buffer protects against agricultural runoff into surface waters. Based on the above discussion, Pageland 1 would result in riparian buffer clearing along 130 more stream feet than Pageland 2, and riparian buffer clearing around two lake/pond features.

7.2.2 NATURAL HERITAGE RESOURCES

7.2.2.1 CONSERVATION SITES

Existing Conditions

The VDCR identified the following four CSs within the study area along and near the Segment 3 Mainline and/or the Gainesville and Pageland alternatives (VDCR 2024b, 2025b):

- Vulcan Gainesville Tract Conservation Site
- Manassas Diabase Uplands Conservation Site
- Bald Hill Conservation Site
- Sudley Springs Diabase Ridge Conservation Site

Descriptions of each CS are provided in the appropriate subsection below. Figure 4.2.2-1 depicts the locations of the sites. Descriptions of the habitat requirements of the species noted below are provided in Section 4.2.3.

Segment 3 Mainline

Vulcan Gainesville Tract Conservation Site

The Vulcan Gainesville Tract CS encompasses about 460 acres with a B3 ranking, indicating a site of high significance. The site is situated east of Linton Hall Road, northwest of Devlin Road, and southwest of Wellington Road. Approximately 67 acres (about 15 percent) of the site have been cleared or are currently developed. The remainder is mainly comprised of riparian forest fragmented by several roads with plans for future development.

The rare species associated with the Vulcan Gainesville Tract CS include Earleaf false foxglove, Torrey's mountain-mint, Hairy nutrush (*Scleria ciliata* var. *ciliata*), and Stiff goldenrod. Torrey's mountain-mint is state-listed as threatened by the VDWR.

The Company's existing right-of-way crosses about 0.8 mile of the CS along its eastern boundary, encompassing about 29.0 acres, all of which is cleared and maintained with herbaceous cover.

Gainesville Alternatives

Segment 3 Gainesville Alternative Route 1

Vulcan Gainesville Tract Conservation Site

Gainesville 1 passes about 0.1 mile northwest of the Vulcan Gainesville Tract CS, described above, near Wellington Road.

Bald Hill Conservation Site

The Bald Hill CS encompasses about 905 acres of land around Youngs Branch in the area along and around Sudley Road, between its intersections with Bulloch Drive and US 29. The CS has a ranking of B3, which indicates a site of high significance. Approximately 295 acres (about 33 percent) of the site have been cleared or are currently developed. The remainder is mainly comprised of forested riparian land along Youngs Branch, Dogans Branch, and their tributaries, although the forested land is fragmented by several roads.

The species associated with this CS are Henslow's sparrow (*Centronyx henslowii*), Appalachian quillwort (*Isoetes appalachiana*), and Hairy hedgenettle (*Stachys arenicola*). Henslow's sparrow is state-listed as threatened by the VDWR. The rare plant communities associated with the CS are Northern Hardpan Basic Oak—Hickory Forest and Piedmont Upland Depression Swamp (Pin Oak—Swamp White Oak Type).

Gainesville 1 passes about 1.1 miles west/southwest of the resource, which is west of Groveton Road in the MNBP.

Manassas Diabase Uplands Conservation Site

The Manassas Diabase Uplands CS encompasses about 868 acres of land in the area along and around US 29, between its intersections with Pageland Lane and Featherbed Lane, all within MNBP. The CS has a ranking of B3, indicating a site of high significance. Approximately 303 acres (about 35 percent) of the site have been cleared or developed. The remainder is mainly comprised of forest or grassland fragmented by several roads.

The species associated with the CS are Appalachian quillwort (*Isoetes appalachiana*), Hairy hedgenettle (*Stachys arenicola*), and Buffalo clover (*Trifolium reflexum*). None of these species are federal- or state-listed. The rare plant communities associated with the CS are Northern Hardpan Basic Oak—Hickory Forest and Piedmont Upland Depression Swamp (Pin Oak-Swamp White Oak Type).

Gainesville 1 passes about 0.3 mile west of the resource, which is within MNBP on the opposite side of Pageland Lane from the route.

Segment 3 Gainesville Alternative Route 2

Vulcan Gainesville Tract Conservation Site

Gainesville 2 crosses about 0.8 mile of the Vulcan Gainesville Tract CS, described above for the Segment 3 Mainline, along the south side of Wellington Road.

Bald Hill Conservation Site

Gainesville 2 passes about 1.2 miles southwest of this resource, described above for Gainesville 1.

Manassas Diabase Uplands Conservation Site

Gainesville 2 passes about 0.3 mile west of this CS, described above for Gainesville 1.

Segment 3 Gainesville Alternative Route 3

Vulcan Gainesville Tract Conservation Site

Gainesville 3 passes about 0.1 mile northwest of the Vulcan Gainesville Tract CS, described above, near Wellington Road.

Bald Hill Conservation Site

Gainesville 3 passes about 1.2 miles southwest of this resource, described above for Gainesville 1.

Manassas Diabase Uplands Conservation Site

Gainesville 3 passes about 0.3 west of this CS, described above for Gainesville 1.

Pageland Alternatives

Segment 3 Pageland Alternative Route 1

Manassas Diabase Uplands Conservation Site

Pageland 1 passes about 180 feet west of this CS, described above for Gainesville 1, on the opposite side of Pageland Lane.

Sudley Springs Diabase Ridge Conservation Site

The Sudley Springs Diabase Ridge CS encompasses about 352 acres of land in MNBP with a B3 ranking, indicating a site of high significance. The site is situated south of Little Bull Run and west of Manassas, with Featherbed Lane spanning the west side of the site. Approximately 36 acres (about 10 percent) of the site have been cleared or are developed. The remainder is mainly comprised of forested land.

The species associated with this CS is American bluehearts, which is neither federal- nor state-listed. The rare plant communities associated with the CS are Northern Hardpan Basic Oak—Hickory Forest and Piedmont Upland Depression Swamp (Pin Oak-Swamp White Oak Type).

Pageland 1 passes about 1.0 mile west of the Sudley Springs Diabase Ridge CS.

Segment 3 Pageland Alternative Route 2

Manassas Diabase Uplands Conservation Site

Pageland 2 passes about 0.2 west of this CS, described above for Gainesville 1.

Sudley Springs Diabase Ridge Conservation Site

Pageland 2 passes about 1.9 miles west of the Sudley Springs Diabase Ridge CS, described above for Pageland 1.

Impact Assessment

The Segment 3 Mainline crosses the Vulcan Gainesville Tract CS for about 0.8 mile with the existing right-of-way encompassing approximately 29.0 acres of the resource. The Project in this area requires an additional 65 feet, mostly on the east side of the existing corridor, but the expanded right-of-way transitions to the west side in the approach to Wellington Road. The Project would clear about 7.9 acres of trees within the expanded right-of-way where it crosses the CS, all adjacent to the Company's existing corridor.

Gainesville 2 crosses the northern edge of the Vulcan Gainesville Tract CS for about 0.1 mile, encompassing approximately 0.1 acre of land within the CS along the south side of Wellington Road. This area is currently a mixture of forested and cleared lands, but it would all be cleared for the Project.

The VDCR confirmed the presence of Hairy nutrush, Stiff goldenrod, and Torrey's mountain-mint within the Segment 3 Mainline footprint in both the existing and planned expanded right-of-way within the Vulcan Gainesville Tract CS (VDCR 2024b). Disturbance of any of these species' populations could result from clearing, installation of transmission structures, or vehicle and equipment movement in the right-of-way. These impacts would occur within the Company's existing corridor and expanded right-of-way along the Segment 3 Mainline. The expanded and new right-of-way established by the Project could create additional habitat to support these species as they occupy herbaceous habitats found in transmission rights-of-way, which would be a beneficial impact should it occur. For these reasons, the Project would not significantly impact the CS or its constituent resources.

None of the routes cross or pass within 1.0 mile of the Bald Spring CS, which is in MNBP. Therefore, this site would not be impacted by the Project.

None of the routes cross Manassas Diabase Uplands CS, which is in MNBP. Pageland 1 passes closest to the resource with about 180 feet of separation, but as noted, it is on the opposite side of Pageland Lane from the resource.

None of the routes pass within 1.0 mile of the Sudley Springs Diabase Ridge CS, which is in MNBP. Therefore, this site would not be impacted by the Project.

Once the Project is approved by the SCC, Dominion would coordinate with state and federal agencies, as needed, to determine if surveys, construction TOYRs, or other measures would be required to mitigate potential impacts on sensitive species, including those within the Vulcan Gainesville Tract CS.

Conclusions Regarding the Gainesville and Pageland Alternatives

Gainesville 2 crosses about 0.1 mile of the Vulcan Gaines Tract CS whereas Gainesville 1 crosses none, but the area crossed by the former is on the boundary of the resource adjacent to a road in an otherwise developing area. Gainesville 2 would not likely significantly impact sensitive resources within the resource, and as noted, could create new habitat for the constituent plant species of concern.

No CSs are crossed by the Pageland alternatives.

7.2.2.2 STREAM CONSERVATION SITES

Existing Conditions

VDCR identified the following SCSs within the study area along and near the Segment 3 Mainline and/or Gainesville and Pageland alternatives (VDCR 2024b, 2025b):

- Bull Run-Chestnut Lick Stream Conservation Site
- Bull Run Stream Conservation Site
- Catharpin Creek Above Rt. 676 Stream Conservation Site
- Youngs Branch Stream Conservation Site
- Kettle Run Stream Conservation Site

Descriptions of each SCS are provided below. Figure 4.2.2-1 depicts the locations of the sites.

Segment 3 Mainline

Kettle Run Stream Conservation Site

The Segment 3 Mainline originates within this resource, described above in Section 6.3.2, at the Company's existing Vint Hill Station, encompassing approximately 0.6 acre (less than 0.1 acre of which is within the existing right-of-way) of entirely developed or cleared land.

Bull Run Stream Conservation Site

The Bull Run SCS encompasses 620 acres of land with a B4 ranking, indicating a site of moderate significance. It lies along Bull Run and its tributaries in the area north of Sudley Road, east of Sanders Lane, and almost entirely west of Gum Spring Road. Approximately 153 acres (about 25 percent) of the site have been cleared or are developed. The remaining land is mainly comprised of forested riparian corridor around Bull Run and its tributaries, though the forest is fragmented by several existing roads and transmission lines.

The NHR associated with the SCS is an Aquatic Natural Community (NP-Middle Potomac-Anacostia-Occoquan Third Order Stream), designated in VCU's INSTAR database (VDCR 2024b). The stream is grade A, per the VCU-Center for Environmental Sciences, indicating its relative regional significance. The stream reach holds a "Healthy" stream designation per the INSTAR VSS score (VDCR 2024b, 2025b).

The Company's existing right-of-way crosses two segments of the SCS, with one measuring about 0.2 mile long and the other about 0.1 mile long. The two segments collectively encompass approximately 7.4 acres of the SCS with the proposed expanded right-of-way for the Project encompassing about 0.7 acre of the site.

Bull Run-Chestnut Lick Stream Conservation Site

The Bull Run-Chestnut Lick SCS encompasses about 2,615 acres of land along Bull Run and Chestnut Lick in the area east of James Madison Highway, between its intersections with Sudley Road and New Road. The SCS has a B2 rank, indicating a site of very high significance. Portions of the site have been cleared or are developed, specifically in the area near the Segment 3 Mainline. The remaining land is mainly comprised of riparian forest around Bull Run, Chestnut Lick, and their tributaries, though the forested land is fragmented by several existing roads and transmission lines.

The NHRs associated with the SCS are two Aquatic Natural Communities (NP-Middle Potomac-Anacostia-Occoquan Second Order Stream and NP-Middle Potomac-Anacostia-Occoquan Third Order Stream). The streams are grade A and A+, respectively, per the VCU-Center for Environmental Sciences, indicating their relative regional significance. The stream reaches hold "Exceptional" and "Healthy" stream designations, respectively, per the INSTAR VSS score (VDCR 2024b, 2025b).

The Company's existing right-of-way crosses about 0.1 mile of the resource, encompassing approximately 3.8 acres of the SCS, with the proposed expanded right-of-way encompassing another 1.2 acres of the site.

Gainesville Alternatives

Segment 3 Gainesville Alternative Route 1

Youngs Branch Stream Conservation Site

The Youngs Branch SCS encompasses about 710 acres of land along Youngs Branch, Dogans Branch, Chinn Branch, and their tributaries in the area along and around US 29, between its

intersections with Pageland Lane and Bull Run Post Office Road. The SCS has a B3 rank, indicating a site of high significance. Approximately 450 acres (about 63 percent) of the site have been cleared or are currently developed. The remaining land is comprised of riparian forest around the waterbodies associated with the SCS, though the forested land is fragmented by several existing roads and transmission lines.

The NHR associated with the SCS is an Aquatic Natural Community (NP-Middle Potomac-Anacostia-Occoquan Second Order Stream), designated in VCU's INSTAR database (VDCR 2024b). VCU has classified the streams within the Youngs Branch SCS as grade B (indicating relative regional significance), with a "Healthy" stream designation per the INSTAR VSS score (VDCR 2024b).

Gainesville 1 passes approximately 1.0 mile southwest of the site.

Segment 3 Gainesville Alternative Route 2

Youngs Branch Stream Conservation Site

Gainesville 2 passes approximately 1.0 mile southwest of the site, described above for Gainesville 1.

Segment 3 Gainesville Alternative Route 3

Youngs Branch Stream Conservation Site

Gainesville 3 passes approximately 1.0 mile southwest of the site, described above for Gainesville 1.

Pageland Alternatives

Segment 3 Pageland Alternative Route 1

Youngs Branch Stream Conservation Site

Pageland 1 passes approximately 0.8 mile west of the site, described above for Gainesville 1.

Bull Run Stream Conservation Site

North of Sudley Road, Pageland 1 crosses about 0.1 mile of this resource, described above for the Segment 3 Mainline. The right-of-way for the route encompasses approximately 1.6 acres of the SCS consisting of mostly open land with scattered trees alongside a forested area to the west. The right-of-way would fragment the western end of a branch of the SCS trees already are sparse in this area.

Segment 3 Pageland Alternative Route 2

Youngs Branch Stream Conservation Site

Pageland 2 passes approximately 1.0 mile west of the site, described above for Gainesville 1.

Bull Run Stream Conservation Site

Pageland 2 crosses about 0.1 mile of this resource, described above for the Segment 3 Mainline, along the same alignment as Pageland 1.

Catharpin Creek Above Rt. 676 Stream Conservation Site

The Catharpin Creek Above Rt. 676 SCS encompasses about 495 acres of land along Catharpin Creek and its tributaries with a biodiversity rating of B2, indicating a site of very high significance. The SCS is west of James Madison Highway, east of Pageland Lane, south of Angus Drive, and north of Chalfont Drive. Approximately 150 acres (about 30 percent) of the site have been cleared or are developed. The remainder is mainly comprised of riparian forest around Catharpin Creek and its tributaries, though the forested land is fragmented by several existing roads and residential areas.

The NHR associated with the SCS is an Aquatic Natural Community (NP-Middle Potomac-Anacostia-Occoquan Second Order Stream), designated in VCU’s INSTAR database (VDCR 2024b). VCU has classified the streams within the Catharpin Creek Above Rt. 676 SCS as grade B (indicating relative regional significance), with a “Healthy” stream designation per the INSTAR VSS score.

Pageland 2 passes approximately 0.2 mile east of the site.

Impact Assessment

Table 7.2-3 summarizes the areas of impact within the Segment 3 Mainline crossings of SCSs.

TABLE 7.2-3 STREAM CONSERVATION SITE CROSSINGS BY SEGMENT 3 MAINLINE

Stream Conservation Site	Units	Existing Right-of-Way	Expanded Right-of-Way
Kettle Run SCS	acres	<0.1	0.6
Bull Run SCS	acres	7.4	0.7
Bull Run-Chestnut Lick SCS	acres	3.8	1.2

Note: SCS = Stream Conservation Site

The Segment 3 Mainline crosses the Kettle Run SCS mostly within existing right-of-way at Vint Hill Station, where the area within the resource has been previously cleared. No additional clearing would be required within the SCS.

Approximately 0.7 acre of expanded right-of-way would be required for the Segment 3 Mainline along the western end of Bull Run SCS. Of this, approximately 0.3 acre is cleared of vegetation with the remainder forested. While clearing would be required in this area, because it is adjacent to the Company’s existing corridor at the west end of the site, there would be no new fragment of the resource due to the Project.

The expanded right-of-way required for the Segment 3 Mainline encompasses approximately 1.2 acres of the Bull Run-Chestnut Lick SCS south of the Mosby Station. Because this area is both adjacent to existing right-of-way and mostly cleared of vegetation, there would be no new fragment of the resource due to the Project.

The Project would span waterbodies with no instream work required in Kettle Run, Bull Run, Chestnut Lick, or their tributaries. Therefore, with adherence to applicable state/local erosion and

sediment control requirements and stormwater management laws and regulations, it is unlikely that Project construction or operation would impact the SCSs or associated Aquatic Natural Communities.

No SCSs are crossed by Gainesville 1, 2, or 3; therefore, none would be impacted regardless of which route is selected.

Pageland 1 and 2 each cross the Bull Run SCS along identical alignments, encompassing a sparsely vegetated area which would be cleared and maintained in an herbaceous cover for the Project. Impacts on the resource would be the same for either route.

Assuming the Project is certificated by the Commission, Dominion will coordinate with the VDCR regarding impacts to SCSs.

Conclusions Regarding the Gainesville and Pageland Alternatives

There would be no significant differences in impacts on SCSs between the Gainesville alternatives and the Pageland alternatives.

7.2.2.3 ECOLOGICAL CORES

Existing Conditions

Figure 4.2.2-2 depicts each core relative to the Project. Table 7.2-4 lists the ecological cores crossed by the Segment 3 Mainline.

TABLE 7.2-4 VDCR-MAPPED ECOLOGICAL CORES CROSSING BY SEGMENT 3 MAINLINE

Ecological Core Rank	Ecological Core ID	Total Core Acreage	Total Acres of Expanded/New ROW Crossed	Total Acres of Existing Right-of-way Crossed	Existing Condition	Location of Crossing within Core
C1	NA	NA	NA	NA	NA	NA
C2	NA	NA	NA	NA	NA	NA
C3	36864	603	1.9	2.8	Highly developed; future development planned for most of the remaining undeveloped/forested land.	Along the eastern boundary of the core, adjacent to existing right-of-way.
C4	NA	NA	NA	NA	NA	NA

Ecological Core Rank	Ecological Core ID	Total Core Acreage	Total Acres of Expanded/New ROW Crossed	Total Acres of Existing Right-of-way Crossed	Existing Condition	Location of Crossing within Core
C5	36865	310	9.2	11.2	Mostly forested but fragmented by small paths and cleared area; the northern portion is developed.	Along the western boundary of the core, adjacent to existing right-of-way.

ROW = right-of-way, NA = not applicable

Table 7.2-5 lists the ecological cores crossed by Gainesville 1.

TABLE 7.2-5 VDCR-MAPPED ECOLOGICAL CORES CROSSSED BY GAINESVILLE 1

Ecological Core Rank	Ecological Core ID	Total Core Acreage	Total Acres of Expanded/New ROW Crossed	Total Acres of Existing ROW Crossed	Existing Condition	Location of Crossing within Core
C1	NA	NA	NA	NA	NA	NA
C2	NA	NA	NA	NA	NA	NA
C3	NA	NA	NA	NA	NA	NA
C4	NA	NA	NA	NA	NA	NA
C5	36451	119	4.7	NA	Mostly developed and/or cleared.	Through a forested area within the eastern portion; the route borders the eastern boundary of the planned Gainesville Crossing Data Center development.

Notes: ROW = right-of-way, NA = not applicable

Table 7.2-6 lists the ecological cores crossed by Gainesville 2.

TABLE 7.2-6 VDCR-MAPPED ECOLOGICAL CORES CROSSED BY GAINESVILLE 2

Ecological Core Rank	Ecological Core ID	Total Core Acreage	Total Acres of Expanded/New ROW Crossed	Total Acres of Existing ROW Crossed	Existing Condition	Location of Crossing within Core
C1	NA	NA	NA	NA	NA	NA
C2	NA	NA	NA	NA	NA	NA
C3	36864	603	1.0	NA	Highly developed; future development planned for most of the remaining undeveloped/forested land.	Along northern boundary of core and Gainesville Tech Park planned development.
C4	NA	NA	NA	NA	NA	NA
C5	36451	119	8.7	NA	Mostly developed and/or cleared.	Through the center of the core in areas currently developed or planned for development (Gainesville Crossing Data Center).

Notes: ROW = right-of-way, NA = not applicable

Table 7.2-7 lists the ecological cores crossed by Gainesville 3.

TABLE 7.2-7 VDCR-MAPPED ECOLOGICAL CORES CROSSED BY GAINESVILLE 3

Ecological Core Rank	Ecological Core ID	Total Core Acreage	Total Acres of Expanded/New ROW Crossed	Total Acres of Existing ROW Crossed	Existing Condition	Location of Crossing within Core
C1	NA	NA	NA	NA	NA	NA
C2	NA	NA	NA	NA	NA	NA
C3	NA	NA	NA	NA	NA	NA
C4	NA	NA	NA	NA	NA	NA

Ecological Core Rank	Ecological Core ID	Total Core Acreage	Total Acres of Expanded/New ROW Crossed	Total Acres of Existing ROW Crossed	Existing Condition	Location of Crossing within Core
C5	36451	119	5.6	NA	Mostly developed and/or cleared.	Along the western and northern boundary of the core; the route collocates with existing/planned development and US- 29.

Notes: ROW = right-of-way, NA = not applicable

Table 7.2-8 lists the ecological cores crossed by Pageland 1.

TABLE 7.2-8 VDCR-MAPPED ECOLOGICAL CORES CROSS BY PAGELAND 1

Ecological Core Rank	Ecological Core ID	Total Core Acreage	Total Acres of Expanded/New ROW Crossed	Total Acres of Existing ROW Crossed	Existing Condition	Location of Crossing within Core
C1	NA	NA	NA	NA	NA	NA
C2	NA	NA	NA	NA	NA	NA
C3	NA	NA	NA	NA	NA	NA
C4	NA	NA	NA	NA	NA	NA
C5	35882	52	2.2	NA	Little Bull Run crosses the core, which is mostly forested; there is some clearing in the western portion.	Along the northwest boundary of the core through a planned development.

Notes: ROW = right-of-way, NA = not applicable

Table 7.2-9 lists the ecological cores crossed by Pageland 2.

TABLE 7.2-9 VDCR-MAPPED ECOLOGICAL CORES CROSS BY PAGELAND 2

Ecological Core Rank	Ecological Core ID	Total Core Acreage	Total Acres of Expanded/New ROW Crossed	Total Acres of Existing ROW Crossed	Existing Condition	Location of Crossing within Core
C1	NA	NA	NA	NA	NA	NA

Ecological Core Rank	Ecological Core ID	Total Core Acreage	Total Acres of Expanded/New ROW Crossed	Total Acres of Existing ROW Crossed	Existing Condition	Location of Crossing within Core
C2	NA	NA	NA	NA	NA	NA
C3	NA	NA	NA	NA	NA	NA
C4	36232	259	0.7	NA	Mostly forested with trails; managed timber in the southeastern portion.	Along the northern boundary of the core adjacent to a planned development.
C5	36139	54	5.7	NA	Little Bull Run and Catharpin Creek cross the core, which is mostly forested.	Crosses the center of the core through forested areas along Little Bull Run; within a planned development.
	35841	51	6.6	NA	Mostly forested; some clearing in the southern portion.	Fragments core through forested area; within a planned development.
	35588	46	3.8	NA	Mostly forested.	Fragments core through forested area; within a planned development.

Notes: ROW = right-of-way, NA = not applicable

Impact Assessment

Two cores are crossed by the Segment 3 Mainline as shown in Table 7.2-9. In each case, the crossing occurs along the boundary of the core adjacent to the Company’s existing Morrisville-Wishing Star Corridor. About 1.9 acres of forest within Core ID 36864 (C3 ranking) would be cleared adjacent to and west of the Company’s existing right-of-way where it would be expanded by 65 feet. This area is planned for future development which could remove trees regardless of the Project. Core ID 36865 is on the opposite side of the existing right-of-way from Core ID 36864. About 9.2 acres would be cleared adjacent to and east of the Company’s existing right-of-way where it would be expanded by 65 feet. Because the additional clearing in each core would occur adjacent to the existing corridor, there would be no new fragmentation impacts in these areas due to the Project.

Gainesville 1 crosses one core, ranked C5, encompassing about 4.7 acres of new right-of-way within the resource (Table 7.2-9). While the area along the route is forested, much of the core is already cleared and planned for future development, with the crossing occurring adjacent to the



east side of a planned data center. The alignment minimizes impacts on what would remain of forested vegetation within the core once the data center is built.

Gainesville 2 crosses two cores, one ranked C3 (ID 36864) and the other C5 (ID 36451), with the new right-of-way for the route encompassing about 1.0 acre of the former and 8.7 acres of the latter (Table 7.2-9). The crossing of the C3 core occurs in a partially forested and partially cleared area adjacent to Wellington Road on a tract planned for future development (Gainesville Tech Park). There would be no fragmentation of the core due to this alignment. The crossing of the C5 core occurs in areas which have been cleared for under-construction data centers or are currently forested but in areas planned for future development. The alignment minimizes impacts on what would remain of the forested vegetation within the core not otherwise impacted by data centers.

Gainesville 3 crosses one core, ranked C5, with the new right-of-way for the route encompassing about 5.6 acres, most of which is either developed, forested but adjacent to development, and/or due south of US-29 (Table 7.2-9). The route collocates with developed areas on the west side of the core and with the highway along the north boundary of the core. The alignment minimizes impacts on what would remain of the forested vegetation within the core not otherwise impacted by data centers.

Pageland 1 crosses one core, ranked C5, with the new right-of-way for the route encompassing 2.2 acres of forested land, all along the northern edge of the resource (Table 7.2-9). While tree clearing would be required, no new fragment would be created within the core due to this alignment. The crossing is within the boundaries of a planned development, which could clear trees in the same area as Pageland 1 if that project is permitted and built.

Pageland 2 crosses one C4 and three C5 ranked cores (Table 7.2-9). The crossing of the C4 core, which is mostly within Conway Robinson State Forest, occurs both within a planned development and along the northern edge of the resource. About 0.7 acre of the core would be impacted but this would occur in areas likely to be cleared by the data center developer, should that project be permitted and built.

Pageland 2 crosses Core ID 36139 in part along its southern edge and in part across its center, with the right-of-way for the route encompassing about 5.7 acres of forested land. The crossing is within, though largely on the periphery of, the planned development. Trees in this area could be cleared by the data center developer, should that project be permitted and built.

Pageland 2 bisects Core ID 35841, with the right-of-way for the route encompassing about 6.6 acres of forested land within the planned development. Trees in this area would be cleared by the data center developer, should that project be permitted and built. The alignment additionally would be adjacent to a planned future data center building within the resource if the planned development is built.

Pageland 2 bisects Core ID 35588, with the right-of-way for the route encompassing about 3.8 acres of forested land within the resource. Trees in this area would be cleared by the data center developer, should that project be permitted and built. The alignment additionally would be adjacent to a planned future data center building within the resource if the planned development is built.

Conclusions Regarding the Gainesville and Pageland Alternatives

Gainesville 1 would be the least impactful of the three Gainesville alternatives, affecting about 4.7 acres within one C5-ranked core. In contrast, Gainesville 2 would impact a combined 9.7 acres within one C3-ranked and one C5-ranked cores, while Gainesville 3 would impact about 5.7 acres within one C5-ranked core. These differences notwithstanding, the alignment of each route leverages existing and planned future developments to minimize impacts on resources, including ecological cores. While Gainesville 2 and 3 would have greater impacts overall on cores, the alignments cross areas that are previously disturbed and/or anticipated to be disturbed as development continues along the I-66 corridor crossed by the routes, thus minimizing the impacts of the Project.

Pageland 1 would impact 2.2 acres within one C5-ranked route, while Pageland 2 would impact a combined 16.8 acres within one C4-ranked and three C5-ranked cores. Both routes are within the planned development. The alignments avoid planned buildings within the development to limit impacts on future infrastructure, should it be built, as well as existing homes which are planned to be removed by the data center developer. These other constraints limit options for routing around cores, particularly for Pageland 2. If the planned development is built, impacts from Pageland 2 would be minimized because the alignment would be adjacent to the development once complete. If the planned development is not built, however, impacts along Pageland 2 would be substantially greater than those for Pageland 1, resulting in fragmentation within cores in addition to the greater tree clearing required for this option.

7.2.3 PROTECTED SPECIES

7.2.3.1 FEDERAL- AND STATE-LISTED THREATENED AND ENDANGERED SPECIES

See Section 4.2.3 for a discussion of federal- and state-listed species with potential to occur in the study area, including Segment 2B.

Federal-Listed Species

Segment 3 Mainline

The only federal-listed species with a confirmed presence near the Segment 3 Mainline is the Yellow lance, documented in the VaFWIS and WERMS databases (VDWR 2026d, 2026e). The species was observed in Broad Run in 1997, 1999, and 2004. The Segment 3 Mainline crosses Broad Run within existing right-of-way.

Gainesville Alternatives

There are no confirmed occurrences of federal-listed species present near Gainesville 1, 2, or 3 within the study area and/or within a 2.0-mile buffer around the study area.

Pageland Alternatives

Segment 3 Pageland Alternative Route 1

The only species with a proposed federal listing with a confirmed occurrence near Pageland 1 is the TCB, documented in the VaFWIS and WERMS databases (VDWR 2026d, 2026e). The TCB was

observed in 2003, approximately 1.5 miles east of the route, near the intersection of Sudley Road and Featherbed Road. VDWR's Northern Long-eared Bat, Tri-colored Bat, and Little Brown Bat Consultation Tool, however, does not document any occurrences of TCB summer habitat (i.e., maternity roosts), winter habitat (i.e., hibernacula), or roost trees within the route alternatives and within a 2.0-mile radius of the study area (VDWR 2026b).

Segment 3 Pageland Alternative Route 2

There are no confirmed occurrences of federal-listed species present near Pageland 2 within the study area and/or within a 2.0-mile buffer around the study area.

Impact Assessment

The Project would be confined to the Company's existing Morrisville-Wishing Star Corridor where the Segment 3 Mainline crosses Broad Run, and regardless, no instream construction activities would be required. Therefore, impacts are not anticipated on the Yellow lance. The Company would employ BMPs before, during, and after construction to control erosion and sediment runoff, prevent stream and groundwater flow changes, and reduce adverse impacts on aquatic and riparian habitat at the crossing.

There are no confirmed occurrences of federally listed species along or near the Gainesville alternatives or Pageland 2, and a confirmed occurrence of TCB near Pageland 1. There is likely habitat for bat species along Pageland 1 and 2, though none previously documented.

Assuming the Project is approved by the Commission, and regardless of the specific Gainesville or Pageland alternative selected, Dominion will coordinate with state and federal agencies as needed to determine if surveys, construction TOYRs, or other mitigation would be required for sensitive species.

Conclusions Regarding the Pageland Alternatives

While habitat may be present along Pageland 1 and 2, impacts on bat species would not occur for either route provided trees are cleared during the winter according to VDWR TOYRs. As noted, the Company would coordinate with state and federal agencies regarding impacts on sensitive species.

State-Listed Species

Segment 3 Mainline

Three state-listed species, the Brook floater, Torrey's mountain-mint, and Henslow's sparrow, have documented occurrences within the 2.0-mile search radius around the study area along the Segment 3 Mainline. Due to the documented occurrences of the Brook floater in Broad Run, this waterbody has been classified as T&E Waters. Broad Run crosses the study area south of Linton Hall Road and north of Vint Hill Road and is intersected by the Segment 3 Mainline.

The VDCR identified a documented occurrence of Torrey's mountain-mint in their November 2025 review of the Project adjacent to the Segment 3 Mainline, south of Wellington Road and north of Linton Hall Road (VDCR 2025b). The existing right-of-way in this area encompasses approximately 0.3 acre of the known location of the occurrence. The VaFWIS and WERMS databases confirmed

the presence of Henslow's sparrow within the study area, near the point where Segment 3 and Segment 4 intersect (VDWR 2026d, 2026e).

According to the VDCR's PSH modeling, the Segment 3 Mainline crosses potential habitat for Brook floater, Torrey's mountain-mint, and Henslow's sparrow (VDCR 2024b). Table 7.2-10 provides the PSH acreages crossed by the Segment 3 Mainline, while Figure 6.3.3-1 depicts the PSH for each species in the Project study area.

TABLE 7.2-10 ACREAGE OF PREDICTED SUITABLE HABITAT CROSSED BY SEGMENT 3 MAINLINE

Species	Unit	Existing Right-of-Way	Expanded Right-of-Way
Brook floater	acres	0.2	0.0
Henslow's sparrow	acres	30.2	0.0
Torrey's mountain-mint	acres	26.3	6.2

Gainesville Alternatives

There are no confirmed occurrences of state-listed species present near Gainesville 1, 2, or 3 within the study area and/or within a 2.0-mile buffer around the study area. According to the VDCR's PSH modeling, however, each route crosses potential habitat for the Henslow's sparrow (VDCR 2024b). Where all three Gainesville alternatives intersect to follow a common alignment in the approach to the Pageland alternatives, approximately 1.3 acres of PSH are crossed.

Pageland Alternatives

Segment 3 Pageland Alternative Route 1

Other than the TCB occurrence referenced above in the discussion on federal-listed species, there are no other confirmed occurrences of state-listed species present near Pageland 1 within the study area and/or within a 2.0-mile buffer around the study area. According to the VDCR's PSH modeling, however, the route crosses potential habitat for the Henslow's sparrow and Brook floater (VDCR 2024b). More specifically, it crosses approximately 4.4 acres of overlapping PSH for the Brook floater and Henslow's sparrow and about 42.6 acres of PSH for the Henslow's sparrow alone.

Segment 3 Pageland Alternative Route 2

There are no other confirmed occurrences of state-listed species present near Pageland 2 within the study area and/or within a 2.0-mile buffer around the study area. According to the VDCR's PSH modelling, however, the route crosses approximately 11.1 acres of potential habitat for the Henslow's sparrow (VDCR 2024b).

Impact Assessment

Because no additional right-of-way would be required for the portion of the Segment 3 Mainline crossing PSH for Brook floater or Henslow's sparrow, impacts are not anticipated on either species. The Company would employ BMPs before, during, and after construction to control erosion and sediment runoff, prevent stream and groundwater flow changes, and reduce adverse impacts on

aquatic and riparian habitat. Additionally, as noted previously, instream construction activities in Broad Run would not be required.

The confirmed occurrence locations of Torrey's mountain-mint are completely within the Company's existing right-of-way (0.3 acre). While the species could be impacted by structure placement or installation or by vehicle or equipment traffic, it is unlikely that these would permanently impact the species.

Each of the Gainesville alternatives crosses PSH for Henslow's sparrow in an area where the routes share a common alignment, encompassing about 1.3 acres (VDCR 2024b). Impacts on open areas that may provide habitat for the Henslow's sparrow would be limited to potential structure placement. Outside of structures, open space lands would continue to function as they had prior to construction. Therefore, the Project would have no impact on the Henslow's sparrow. Impacts would be the same regardless of the Gainesville alternative selected for the Project.

Pageland 2 crosses about 11.1 acres of PSH for Henslow's sparrow whereas Pageland 1 crosses approximately 4.4 acres of overlapping PSH for the Brook floater and Henslow's sparrow and about 42.6 acres of PSH for the Henslow's sparrow alone. This difference in PSH crossing could suggest that Pageland 1 would have a greater impact on the species than Pageland 2. However, impacts on the species are not likely for either route, as described above.

Regardless of the route selected for the Project, Dominion would coordinate with state and federal agencies as needed to determine if surveys, construction TOYRs, or other mitigation would be required for sensitive species.

Conclusions Regarding the Gainesville and Pageland Alternatives

Impacts on state-listed species would be similar for the three Gainesville alternatives, while impacts on state-listed species for Pageland 2 would be potentially greater than those for Pageland 1 due to additional crossing of PSH for Henslow's sparrow along the former.

7.2.3.2 BALD EAGLE MANAGEMENT

Segment 3 Mainline

The eagle nest nearest to the Segment 3 Mainline is a nest reported by a landowner approximately 1.1 miles southeast along Kettle Run. This nest is not recorded in the CCB database. The nest recorded by the CCB that is nearest to the Segment 3 Mainline is Nest ID PW9803, which is on the east side of Lake Manassas, approximately 2.3 miles to the west. The nest was last observed to be occupied in 2004 (CCB 2022).

Gainesville Alternatives

The eagle nest nearest to each Gainesville Alternative (Nest ID PW9803) is on the east side of Lake Manassas approximately 3.1 miles southwest of the routes. The nest was last observed to be occupied in 2004 (CCB 2022).

Pageland Alternatives

The eagle nest nearest to both Pageland alternatives (Nest ID PW9803) is on the east side of Lake Manassas and approximately 3.8 miles southwest of the routes. As noted above, the nest was last observed to be occupied in 2004 (CCB 2022).

Impact Assessment

ERM did not identify any eagle nests within the 660-foot buffer of the Segment 3 Mainline or the Gainesville and Pageland alternatives. If eagle nests are identified within 660 feet of the right-of-way approved by the SCC for the Project, Dominion would work with the VDWR and other appropriate agencies to minimize any impact on the species.

Conclusions Regarding the Gainesville and Pageland Alternatives

There are no known nests in proximity to either route.

7.2.3.3 OTHER SPECIES OF INTEREST

Segment 3 Mainline

The VDCR reviews of the Project found that the Segment 3 Mainline crosses the Vulcan Gainesville Tract Conservation Site, described in Section 7.2.2.1, which is associated with the following rare plant species: Earleaf false foxglove, Torrey's mountain-mint, Hairy nutrush, and Stiff goldenrod. Additionally, according to the VDCR review, there is potential for additional populations of Torrey's mountain-mint and several other rare plants associated with diabase soils (VDCR 2025b). Table 4.2-5 in Section 4.2.3.3 provides a list of rare plant species potentially found in the study area. The only T&E species associated with diabase soils in this list is Torrey's mountain-mint, which is state-listed as Threatened by the VWDR.

VDCR identified documented occurrences of Hairy nutrush, Stiff goldenrod, and Torrey's mountain-mint in their November 2025 review of the Project, with the occurrences located south of Wellington Road and north of Linton Hall Road, adjacent to the Segment 3 Mainline (VDCR 2025b).

Gainesville Alternatives

According to the VDCR review, there is potential for populations of Torrey's mountain-mint and several other rare plants associated with diabase soils to occur across each of the Gainesville Alternative (VDCR 2025b). The only T&E species associated with diabase soils in this list is Torrey's mountain-mint, which is state-listed as Threatened by the VWDR. New right-of-way across diabase soils associated with these plants is present along each route, as follows: 16.2 acres for Gainesville 1, 16.1 acres for Gainesville 2, and 23.5 acres for Gainesville 3. Additionally, the VDCR reviews of the Project found that Gainesville 2 crosses about 1.0 acre of the Vulcan Gainesville Tract Conservation Site, described in Section 7.2.2.1, which is associated with Earleaf false foxglove, Torrey's mountain-mint, Hairy nutrush, and Stiff goldenrod.

Pageland Alternatives

According to the VDCR review, there is potential for populations of Torrey's mountain-mint and several other rare plants associated with diabase soils to occur across each Pageland (VDCR 2025b). Approximately 2.8 acres of right-of-way across diabase soils associated with these plants is present along Pageland 1 while 7.8 acres is present along Pageland 2.

Impact Assessment

The Segment 3 Mainline crosses approximately 67.6 acres of diabase soils in the existing right-of-way and 8.7 acres in the expanded right-of-way. As mentioned in Section 7.2.3.1, VDCR's PSH model also found approximately 26.3 acres of existing right-of-way and 6.2 acres of expanded right-of-way within PSH for Torrey's mountain-mint PSH. Table 7.2-11 provides the Segment 3 Mainline crossing acreages of known locations of Hairy nutrush, Stiff goldenrod, and Torrey's mountain-mint.

TABLE 7.2-11 ACREAGE OF DOCUMENTED LOCATIONS CROSSED BY SEGMENT 3 MAINLINE

Species	Unit	Existing Right-of-Way	Expanded Right-of-Way
Hairy nutrush	acres	<0.1	<0.1
Stiff goldenrod	acres	7.0	0.5
Torrey's mountain-mint	acres	0.3	0.0

Habitat requirements for the plant species typically include semi-open diabase glades and prairies. Due to the presence of forested land and history of agricultural use in the area, it is unlikely that the expanded right-of-way required for the Segment 3 Mainline is suitable for these rare plant species. The existing right-of-way of the Segment 3 Mainline, however, has been maintained with an herbaceous cover, so suitable habitat for these rare plant species could be present in these areas. During Project operations, vehicle movement associated with construction of the transmission line in open areas would temporarily impact herbaceous vegetation within the right-of-way.

Site-specific field investigations are necessary for detailed habitat and impact analyses. In suitable habitat types that meet specific habitat requirements for any of these rare plant species, VDCR recommends conducting detailed plant inventories and coordinating with VDCR biologists to minimize habitat impacts. If suitable habitat conditions for these species are identified within the Project along the Segment 3 Mainline, the Company would work with the VDCR and appropriate agencies to minimize impacts on rare plants and/or rare plant habitat.

Conclusions Regarding the Gainesville and Pageland Alternatives

Gainesville 1 and 2 cross, and would therefore have similar impacts on, diabase soils supporting rare plant species; there is only a 0.1-acre difference between the two routes. Gainesville 3 would cross approximately 23.5 acres of diabase soils, so would have a greater impact than Gainesville 1 and 2. Of the Pageland alternatives, Pageland 1 crosses less diabase soils at 2.8 acres, whereas

Pageland 2 crosses 7.8 acres of diabase soils. Habitat requirements and potential impacts on these species are described above.

7.2.4 VEGETATION

7.2.4.1 EXISTING CONDITIONS

Local Vegetation Characteristics

Most of the Segment 3 Mainline is located within an existing maintained Dominion right-of-way, bordered on both sides by forested, agricultural, residential, and/or developed lands. The Gainesville and Pageland alternatives would each utilize new right-of-way passing through similar land use and cover type areas. The segment and alternatives are all within the Northern Piedmont physiographic province, described above in Section 3.2.2.4.

Table 7.2-12 summarizes the extent of vegetation types crossed by the Segment 3 Mainline. Figure 4.1.2-1 depicts land use / cover types, including forest, in the Project area.

TABLE 7.2-12 ACREAGE OF VEGETATION TYPES CROSSED BY SEGMENT 3 ROUTES

Vegetation Cover Type	Unit	Segment 3 Mainline		Gainesville 1	Gainesville 2	Gainesville 3	Pageland 1		Pageland 2	
		Existing Right-of-Way	Expanded Right-of-Way	New Right-of-Way	New Right-of-Way	New Right-of-Way	Expanded Right-of-Way	New Right-of-Way	Expanded Right-of-Way	New Right-of-Way
Agriculture	acres	0.0	15.9	0.0	0.0	0.0	4.8	14.6	1.0	22.7
Forested	acres	0.0	23.0	22.8	32.3	30.5	10.1	19.9	1.6	37.3
Open Space	acres	258.6	8.6	7.7	6.2	8.9	0.4	10.0	0.1	3.8
Total ^a	acres	258.6	47.5	30.6	38.6	39.4	15.3	44.5	2.7	63.8

Sources: VGIN Land Cover data with aerial photo interpretation by ERM (VGIN 2025)

^a Totals may not match the sum of the addends due to rounding.

Forest Conservation Values

Table 7.2-13 summarizes the area of FCV within the right-of-way for each alternative route. While FCV values have been assigned to the area within the existing right-of-way, the corridor is entirely cleared and maintained in herbaceous vegetation.

TABLE 7.2-13 FOREST CONSERVATION VALUE ALONG ROUTE ALTERNATIVES

FCV ^a	Unit	Segment 3 Mainline		Gainesville 1	Gainesville 2	Gainesville 3	Pageland 1		Pageland 2	
		Existing Right-of-Way	Expanded Right-of-Way				Expanded Right-of-Way	New Right-of-Way	Expanded Right-of-Way	New Right-of-Way
Average (1)	acres	64.8	14.3	7.9	15.2	14.3	4.8	3.5	1.7	17.5
Moderate (2)	acres	9.8	1.2	2.2	2.7	2.1	3.9	11.1	<0.1	14.1
High (3)	acres	0.0	0.0	5.2	7.4	2.3	0.0	0.9	0.0	2.0
Very High (4)	acres	0.0	<0.1	<0.1	0.5	2.3	0.0	0.0	0.0	0.0
Outstanding (5)	acres	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total ^b	acres	74.5	15.5	15.2	25.8	21.0	8.7	15.5	1.7	33.7

^a FCV = Forest Conservation Value

^b The sum of the addends may not equal the totals due to rounding.

7.2.4.2 IMPACT ASSESSMENT

The Segment 3 Mainline expansion would result in the permanent conversion of about 23.0 acres of forested land to herbaceous cover within the expanded right-of-way required for the Project. Most of the land with FCV designations in the expanded right-of-way (15.5 acres) is rated as average or moderate; less than 0.1 acre is rated as very high.

Of the three Gainesville alternatives, Gainesville 1 would require the smallest conversion of forested land to herbaceous cover within the new right-of-way at 22.8 acres. Gainesville 2 and 3 would impact 32.3 and 30.5 acres, respectively. Gainesville 1 similarly would impact less land with FCV designations than the other routes at 15.2 acres, compared with 25.8 acres for Gainesville 2 and 21.0 acres for Gainesville 3. Gainesville 2 and 3 each cross a greater amount of FCV land rated as very high (0.5 acre and 2.3 acres, respectively), whereas Gainesville 1 crosses less than 0.1 acre. The data collectively suggest Gainesville 1 would have less impact on forested resources overall and less impact on higher quality forest than Gainesville 2 or 3, which is consistent with the findings for ecological cores.

Pageland 1 requires less tree clearing than Pageland 2 by about 8.9 acres. Pageland 1 additionally crosses less land with FCV designations than Pageland 2 (24.2 acres vs 35.4 acres). The data suggest Pageland 2 would have less impact on forest resources than Pageland 2, which is consistent with the findings for ecological cores.

7.3 CULTURAL RESOURCES

7.3.1 ARCHAEOLOGICAL SITES AND FINDINGS

Crossings of archaeological sites are considered a routing constraint due to the potential for an electric transmission line to impact intact archaeological deposits, if present, because of tree clearing, transmission structure placement, or the use or movement of heavy equipment within a site. A confident and complete assessment of the integrity of each site would require archaeological field investigations. A survey would be completed in a subsequent phase of study for the Project along the routes certificated by the SCC.

7.3.1.1 SEGMENT 3 MAINLINE

Stantec identified thirteen known archaeological sites within the right-of-way of Segment 3 Mainline (Table 7.3-1).

TABLE 7.3-1 PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF SEGMENT 3 MAINLINE

Site Number	New or Existing/Expanded Right-of-Way	Description	NRHP Status
44LD0459	Existing	Va. ConGas Site 5, Historic/Unknown, Pre-Contact	Eligible
44PW0525	Existing	Unknown, Early Woodland, 18 th Century	Not Eligible

Site Number	New or Existing/Expanded Right-of-Way	Description	NRHP Status
44PW0541	Existing	Unknown, Pre-Contact	Unevaluated
44PW0542	Existing	Unknown, Pre-Contact	Unevaluated
44PW0543	Existing	Unknown, Pre-Contact	Not Eligible
44PW0544	Existing	Unknown, Pre-Contact	Potentially Eligible
44PW0546	Existing	Camp, Pre-Contact	Potentially Eligible
44PW0547	Existing	Unknown, Historic/Unknown, Pre-Contact	Potentially Eligible
44PW0577	Existing	Camp, Middle Archaic	Not Eligible
44PW0578	Existing	Camp, Pre-Contact	Unevaluated
44PW0592	Existing	Unknown, Pre-Contact	Eligible
44PW0732	Existing	Camp, Pre-Contact	Unevaluated
44PW2143	Existing	Artifact scatter, 19 th -20 th Century	Unevaluated

Source: VDHR 2026.

NRHP = National Register of Historic Places

7.3.1.2 GAINESVILLE ALTERNATIVES

Segment 3 Gainesville Alternative Route 1

Stantec identified one known archaeological site within the right-of-way of Gainesville 1 (Table 7.3-2).

TABLE 7.3-2 PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF GAINESVILLE 1

Site Number	New or Existing/Expanded Right-of-Way	Description	NRHP Status
44PW0623	New	Historic, Unknown	Potentially Eligible

Source: VDHR 2026.

NRHP = National Register of Historic Places

Segment 3 Gainesville Alternative Route 2

Stantec identified one known archaeological site within the right-of-way of Gainesville 2 (Table 7.3-3).

TABLE 7.3-3 PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF GAINESVILLE 2

Site Number	New or Existing/Expanded Right-of-Way	Description	NRHP Status
44PW1792	New	Farmstead	Unevaluated

Source: VDHR 2026.

NRHP = National Register of Historic Places

Segment 3 Gainesville Alternative Route 3

Stantec identified two known archaeological sites within the right-of-way of Gainesville 1 (Table 7.3-4).

TABLE 7.3-4 PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF GAINESVILLE 3

Site Number	New or Existing/Expanded Right-of-Way	Description	NRHP Status
44PW0575	New	Domestic, 19 th –20 th Century	Unevaluated
44PW1793	New	Outbuilding, 19 th Century	Unevaluated

Source: VDHR 2026.

NRHP = National Register of Historic Places

Gainesville Alternatives Conclusion

Based on the information above, Gainesville 1 and 2 would impact less archaeological sites than Gainesville 3 (one site versus two for Gainesville 3). However, the Gainesville Routes all entail new, greenfield right-of-way, so field surveys would be necessary to evaluate the resources, and if found eligible, determine that no proposed structures are located within the resource boundaries. A confident and complete assessment of the integrity of the site would require archaeological field investigations.

7.3.1.3 PAGELAND ALTERNATIVES

Segment 3 Pageland Alternative Route 1

Stantec identified one known archaeological site within the right-of-way of Pageland 1 (Table 7.3-5).

TABLE 7.3-5 PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF PAGELAND 1

Site Number	New or Existing/Expanded Right-of-Way	Description	NRHP Status
44PW0593	New	Grave/Burial, 19 th Century	Unevaluated

Source: VDHR 2026.

NRHP = National Register of Historic Places

Segment 3 Pageland Alternative Route 2

Stantec identified one known archaeological sites within the right-of-way of Pageland 2 (Table 7.3-6).

TABLE 7.3-6 PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF PAGELAND 2

Site Number	New or Existing/Expanded Right-of-Way	Description	NRHP Status
44PW2153	New	Domestic, late 19 th -20 th Century	Unevaluated

Source: VDHR 2026.

NRHP = National Register of Historic Places

Pageland Alternatives Conclusion

Based on the information above, the Pageland 1 and Pageland 2 would both impact one archaeological site. However, the transmission lines are new right-of-way in these areas so a survey would be necessary to evaluate the resource, and if found eligible, determine that no proposed structures are located within the resource boundary. A confident and complete assessment of the integrity of the site would require archaeological field investigations.

7.3.2 ABOVEGROUND HISTORIC RESOURCES AND FINDINGS

This section presents information on known aboveground cultural resources near each route alternative, using VDHR’s tiered study area model described above. Figure 4.3.2-1 depicts the locations of resources relevant to the routes. The Stage 1, which is included in Attachment 2.I.1 of the DEQ Supplement, provides a description, location, and impact assessment for each resource. None of the route alternatives would affect a National Historic Landmark; therefore, these resources are not further discussed.

7.3.2.1 SEGMENT 3 MAINLINE

Table 7.3-7 provides information on the considered resources within the VDHR study tiers for Segment 3 Mainline. As detailed in the Stage 1, Segment 3 Mainline would have a minimal impact on three resources (076-0179, 076-5036, and 076-5190).

TABLE 7.3-7 ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR SEGMENT 3 MAINLINE

Buffer (miles)	Resource Category	Resource Number	Description	Impact
1.0 to 1.5	National Historic Landmarks	Not applicable	None identified	Not applicable
0.5 to 1.0	National Register Properties (Listed)	Not applicable	None identified	Not applicable
0.0 to 0.5	National Register—Eligible	076-0179	Deseret	Minimal
0.0 (within right-of-way)	National Register—Eligible	076-5036	Bristoe Station Battlefield	Minimal
		076-5190	Battle of Gainesville, Second Battle of Manassas	Minimal

Source: VDHR 2026.

VDHR = Virginia Department of Historic Resources

7.3.2.2 GAINESVILLE ALTERNATIVES

Segment 3 Gainesville Alternative Route 1

Table 7.3-8 provides information on the considered resources within the VDHR study tiers for Gainesville 1. As detailed in the Stage 1, Gainesville 1 would have a minimal impact on three resources (076-0441, 076-5190, and 076-5989) and a moderate impact on one resource (076-0271).

TABLE 7.3-8 ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR GAINESVILLE 1

Buffer (miles)	Resource Category	Resource Number	Description	Impact
1.0 to 1.5	National Historic Landmarks	Not applicable	None identified	Not applicable
0.5 to 1.0	National Register Properties (Listed)	Not applicable	None identified	Not applicable
0.0 to 0.5	National Register—Eligible	076-0441	Swart Family Cemetery	Minimal
0.0 (within right-of-way)	National Register Properties (Listed)	076-0271	Manassas Battlefield Historic District	Moderate
	National Register—Eligible	076-5190	Battle of Gainesville, Second Battle of Manassas	Minimal
	National Register—Potentially Eligible	076-5989	Manassas Gap Railroad	Minimal

Source: VDHR 2026.

VDHR = Virginia Department of Historic Resources



Segment 3 Gainesville Alternative Route 2

Table 7.3-9 provides information on the considered resources within the VDHR study tiers for Gainesville 2. As detailed in the Stage 1, Gainesville 2 would have a minimal impact on three resources (076-0441, 076-5190, and 076-5989) and a moderate impact on one resource (076-0271).

TABLE 7.3-9 ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR GAINESVILLE 2

Buffer (miles)	Resource Category	Resource Number	Description	Impact
1.0 to 1.5	National Historic Landmarks	Not applicable	None identified	Not applicable
0.5 to 1.0	National Register Properties (Listed)	Not applicable	None identified	Not applicable
0.0 to 0.5	National Register—Eligible	076-0441	Swart Family Cemetery	Minimal
0.0 (within right-of-way)	National Register Properties (Listed)	076-0271	Manassas Battlefield Historic District	Moderate
	National Register—Eligible	076-5190	Battle of Gainesville, Second Battle of Manassas	Minimal
	National Register—Potentially Eligible	076-5989	Manassas Gap Railroad	Minimal

Source: VDHR 2026.

VDHR = Virginia Department of Historic Resources

Segment 3 Gainesville Alternative Route 3

Table 7.3-10 provides information on the considered resources within the VDHR study tiers for Gainesville 3. As detailed in the Stage 1, Gainesville 3 would have no impact on one resource (030-5152), a minimal impact on three resources (076-0441, 076-5190, and 076-5989) and a moderate impact on one resource (076-0271).

TABLE 7.3-10 ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR GAINESVILLE 3

Buffer (miles)	Resource Category	Resource Number	Description	Impact
1.0 to 1.5	National Historic Landmarks	Not applicable	None identified	Not applicable
0.5 to 1.0	National Register Properties (Listed)	Not applicable	None identified	Not applicable

Buffer (miles)	Resource Category	Resource Number	Description	Impact
	National Register—Eligible	030-5152	Buckland Mills Battlefield	None
0.0 to 0.5	National Register—Eligible	076-0441	Swart Family Cemetery	Minimal
0.0 (within right-of-way)	National Register Properties (Listed)	076-0271	Manassas Battlefield Historic District	Moderate
	National Register—Eligible	076-5190	Battle of Gainesville, Second Battle of Manassas	Minimal
	National Register—Potentially Eligible	076-5989	Manassas Gap Railroad	Minimal

Source: VDHR 2026.

VDHR = Virginia Department of Historic Resources

Gainesville Alternatives Conclusion

Based on the impacts described above as recommended by Stantec, all three Gainesville alternatives would have the same impacts on the resources, regardless of route chosen. Although Gainesville 3 includes one more tiered resource than Gainesville 1 or 2, the extra resource would have no impact from the route. A comparison of the route impacts are located in Table 7.3-11.

TABLE 7.3-11 COMPARISON OF PROJECT IMPACTS ON HISTORIC RESOURCES IN THE STUDY TIERS FOR EACH GAINESVILLE ROUTE

Route	Number of Considered Resources in Each Impact Category				
	No Impact	Minimal Impact	Moderate Impact	Severe Impact	Total
Gainesville 1	0	3	1	0	4
Gainesville 2	0	3	1	0	4
Gainesville 3	1	3	1	0	5

7.3.2.3 PAGELAND ALTERNATIVES

Segment 3 Pageland Alternative Route 1

Table 7.3-12 provides information on the considered resources within the VDHR study tiers for Pageland 1. As detailed in the Stage 1, Pageland 1 would have no impact on one resource (076-5036) a minimal impact on two resources (076-0441 and 076-0257), and a moderate impact on three resources (076-0138, 076-0271, and 076-5190).

TABLE 7.3-12 ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR PAGELAND 1

Buffer (miles)	Resource Category	Resource Number	Description	Impact
1.0 to 1.5	National Historic Landmarks	Not applicable	None identified	Not applicable
0.5 to 1.0	National Register Properties (Listed)	Not applicable	None identified	Not applicable
	National Register—Eligible	076-5036	Bristoe Station Battlefield	None
0.0 to 0.5	National Register—Eligible	076-0441	Swart Family Cemetery	Minimal
		076-0257	Brawner Farmstead	Minimal
0.0 (within right-of-way)	National Register Properties (Listed)	076-0271	Manassas Battlefield Historic District	Moderate
	National Register—Eligible	076-0138	Farm, 6308 Pageland Lane	Moderate
		076-5190	Battle of Gainesville, Second Battle of Manassas	Moderate

Source: VDHR 2026.

VDHR = Virginia Department of Historic Resources

Segment 3 Pageland Alternative Route 2

Table 7.3-13 provides information on the considered resources within the VDHR study tiers for Pageland 2. As detailed in the Stage 1, Pageland 2 would have a minimal impact on two resources (076-0138 and 076-0441), and a moderate impact on two resource (076-0271 and 076-5190).

TABLE 7.3-13 ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR PAGELAND 2

Buffer (miles)	Resource Category	Resource Number	Description	Impact
1.0 to 1.5	National Historic Landmarks	Not applicable	None identified	Not applicable
0.5 to 1.0	National Register Properties (Listed)	Not applicable	None identified	Not applicable
0.0 to 0.5	National Register—Eligible	076-0138	Farm, 6308 Pageland Lane	Minimal
		076-0441	Swart Family Cemetery	Minimal

Buffer (miles)	Resource Category	Resource Number	Description	Impact
0.0 (within right-of-way)	National Register Properties (Listed)	076-0271	Manassas Battlefield Historic District	Moderate
	National Register—Eligible	076-5190	Battle of Gainesville, Second Battle of Manassas	Moderate

Source: VDHR 2026.

VDHR = Virginia Department of Historic Resources

Pageland Alternatives Conclusion

Based on the impacts listed above, the Pageland 2 alternative is least impactful of the two Pageland alternatives as it has one less moderate impact. A comparison of the route impacts are located in Table 7.3-14.

TABLE 7.3-14 COMPARISON OF PROJECT IMPACTS ON HISTORIC RESOURCES IN THE STUDY TIERS FOR EACH PAGELAND ROUTE

Route	Number of Considered Resources in Each Impact Category				
	No Impact	Minimal Impact	Moderate Impact	Severe Impact	Total
Pageland 1	1	2	3	0	6
Pageland 2	0	2	2	0	4

7.4 VISUAL RESOURCES

Appendix C provides more detailed information about existing visual conditions and visual impacts.

7.4.1 EXISTING CONDITIONS

7.4.1.1 SEGMENT 3 MAINLINE

Segment 3 Mainline consists of two non-contiguous areas extending from the Vint Hill Station near the Fauquier County line to Wellington Road at the southern end of the Gainesville alternatives, and the area from north of the Pageland alternatives to an area near the Loudoun/Mosby Stations in Loudon County. The landscape along this segment transitions from the open and mixed agricultural and low-density residential landscapes of Segments 1 and 2 to higher density residential and commercial landscapes.. The Segment 3 Mainline is described here, while the Gainesville and Pageland alternatives are described in Sections 7.4.1.2 and 7.4.1.3, respectively.

The Segment 3 Mainline crosses several Landscape Units—Industrial/Commercial Landscape Units, Rural Agriculture and Residential Landscape Units, and Suburban Residential Landscape Units



(Table 3.2-6). Appendix C provides additional detail on the visual characteristics of these landscape unit types. Existing transmission infrastructure extends through all three of these landscape unit types and is often the tallest visible features in the area.

Table 7.4-1 describes the VSRs along Segment 3 Mainline. At these VSRs, the primary viewer groups (defined in Section 3.2.3 and listed in Table 7.4-1), are more aware of and sensitive to changes in visual resource conditions.

In addition to the VSRs, there are several other areas along Segment 3 Mainline (Table 7.4-2) where the potential to view the Project would be greater, due to the proximity of these areas to the new transmission line. While proximity does not guarantee visibility, closer viewpoints are more likely to have unobstructed views and greater viewer awareness of (but not necessarily higher viewer sensitivity to) the Project.

TABLE 7.4-1 SEGMENT 3 MAINLINE VISUALLY SENSITIVE RESOURCES

VSR # and Name	VSR Description	Landscape Unit(s) ^c	Primary Viewer Group(s) ^a
Recreational Resources (see Section 4.1.7)			
1	Broad Run Linear Park Prince William County Park that follows the Broad Run Stream Valley with multiple nature trails. The park connects to Victory Elementary School and crosses Linton Hall Road before extending west between several subdivisions and crossing Sudley Manor Drive.	SR	L, R
2	Catharpin Recreational Park (Blue Park) Local park with athletic fields and playground on the north side of Rte. 234 (Sudley Road).	RAR	L, R
3	Conway-Robinson State Forest A 440-acre forest with multi-use non-motorized use trails, a picnic shelter, and seasonal hunting on the north side of US-29 east of Heathcote Boulevard.	MNB	L, R
4	Four Hills Farm (Event Venue) Event venue with horse farm for outdoor and indoor events on the south side of Sudley Road.	RAR	L, R
5	Jiffy Lube Live Event venue with seating for 25,000+ people with a mix of reserved seating and lawn area general seating.	IC	L, R
6	Manassas National Battlefield Park National Park encompassing the location of two Civil War battlefields and including trails, roads, and picnic areas, bordered by Pageland Lane, I-66, Bull Run, and private property to the north. US-29 bisects the battlefield as it runs east-west, while Rte. 234 bisects the battlefield as it runs north-south.	MNB	L, R
Residential Areas and Subdivisions			
7	Amberleigh Station Subdivision Subdivision of single-family homes and townhomes on the north side of Linton Hall Road, southeast of Rollins Ford Road.	SR	L, M, W
8	Boxwood Farms Subdivision Subdivision of widely spaced single-family homes accessed from and on Boxwood Farms Road, on the east side of Sanders Lane.	RAR	L
9	Braemar Community Community of mixed single and multi-family residences east of Pioneer Drive, north of Vint Hill Road, west of the intersection of Vint Hill Road and Fitzgerald Way, and south of Linton Hall Road.	SR	L
10	Bridlewood Manor Subdivision Subdivision of single-family homes on the south side of Linton Hall Road, and south of the intersection of Devlin Road and Linton Hall Road.	SR	L

VSR # and Name	VSR Description	Landscape Unit(s) ^c	Primary Viewer Group(s) ^a
11 Catharpin Farms Estates Subdivision	Subdivision of single-family homes on Livia Drive, accessed on the west side of Pageland Lane.	RAR	L
12 Crossman Creek Subdivision	Subdivision of single-family homes on the east side of Devlin Road, south of the Sheffield Manor Subdivision. Located north of Linton Hall Road.	SR	L
13 Dominique Estates Subdivision	Subdivision of single-family homes along Dominique Estates Lane on the south side of Thornton Drive, west of Pageland Lane.	RAR	L
14 Foxborough Subdivision	Subdivision of single-family homes and townhomes on the south side of Linton Hall Road, east of Worthington Drive.	SR	L
15 Heathcote Commons Subdivision	Subdivision of townhomes on the south side of Heathcote Boulevard, east of Catharpin Road and north of I-66.	SR	L
16 Heritage Hunt Community	Gated, age-restricted (ages 55 and over) subdivision community of single-family homes, multi-family residences, and townhomes. Amenities include an 18-hole golf course and a country club for events and recreation opportunities. The community is on the north side of I-66 on the east side of Catharpin Road, bordering the west side of Conway Robinson State Forest.	SR	L, R
17 Kingsbrooke Community	Large community of single-family homes with multiple parks and recreation facilities, located south of Linton Hall Road along Worthington Drive, south of the Foxborough Subdivision mentioned above. The southern homes border the north side of Broad Run.	SR	L
18 Lanier Farms Subdivision	Subdivision of single-family homes with associated community recreation facilities, on both sides of Devlin Road, south of Jennel Drive.	SR	L
19 Linton Hall Manor Subdivision	Subdivision of single-family homes and townhomes on the south side of Linton Hall Road, west of Bridlewood Manor Subdivision.	SR	L
20 Lurette Road / Sanders Lane Residences	Single-family homes on both sides of Lurette Road/Sanders Lane.	RAR	L, M
21 Magnolia Meadows Subdivision	Subdivision of single-family homes with associated open space along both sides of Catamount Court, east of Sanders Lane.	RAR	L
22 Olde South Estates	Subdivision of single-family homes on Bridle Lane, accessed on the west side of Sanders Lane.	RAR	L

VSR # and Name	VSR Description	Landscape Unit(s) ^c	Primary Viewer Group(s) ^a
23	Pageland Lane Residences	RAR	L
24	Richland Estates Subdivision	RAR	L
25	Sheffield Manor Subdivision	SR	L, R
26	Sudley Mountain Neighborhood	RAR	L
27	Turning Leaf Estates Subdivision	SR	L
28	Victory Lakes Subdivision	SR	L, R

Sources: Fauquier County, Loudoun County, and Prince William County (Subdivisions).

Rte. = Virginia State Route; US = US; VSR = visually sensitive resource.

^a Viewer Groups (see Section 5.2.2.3): L = local area residents; M = motorists, commuters, and through travelers; R = recreationists; W = workers

^b AADT includes total daily traffic volume—expressed as vehicles per day—in both directions.

^c Landscape Units (see Appendix C): IC = Industrial/Commercial; MNB = Conway Robinson State Forest and Manassas National Battlefield Park; RAR = Rural Agricultural & Residential; RR = Rural Residential; SR = Suburban Residential

TABLE 7.4-2 AREAS OF POTENTIAL VISIBILITY ALONG SEGMENT 3 MAINLINE

Visibility Area Number and Name	Description	Landscape Unit(s) ^c	Primary Viewer Group(s) ^a
Educational Resources (Schools)			
1	Bristow Run Elementary School Public elementary school (Pre-Kindergarten through 5th grade) with associated playground and athletic fields on the west side of Worthington Drive, south of Linton Hall Road.	SR	L, R
2	Chris Yung Elementary School Public elementary school (Pre-Kindergarten through 5th grade) with associated playground and athletic fields on the west side of Devlin Road, south of Wellington Road.	SR	L, R
3	Marsteller Middle School Public middle school (6th through 8th grade) with associated athletic fields on the west side of Sudley Manor Drive, north of Vint Hill Road.	SR	L, R
Road Corridors^b			
4	Auburn Farm Road / Lurette Road / Sanders Lane Two-lane rural road with no shoulders and AADT of 1,600 vpd south of Bull Run (AADT is not available north of Bull Run).	RAR	L, M, W
5	Linton Hall Road Four-lane, divided roadway with occasional turn lanes and at-grade intersections, and with AADT of 20,000 to 25,000 vpd between Glenkirk Road and Rte. 28.	SR	L, M, W
6	Vint Hill Road Two-lane, divided road with AADT of 7,500 vpd between Silas Drive and Schaeffer Lane.	RAR	L, M, W
Areas of High Public Concentration			
7	Gainesville CDP 2023 population of 18,036	SR/IC/MNB	L, M, W

Sources: U.S. Census Bureau 2024 (population data); VDOT 2024 (AADT data).

AADT = annual average daily traffic; CDP = Census Designated Place; I = U.S. Interstate; Rte. = Virginia State Route; US = US; vpd = vehicles per day; VSR = visually sensitive resource.

^a Viewer Groups (see Section 5.2.2.3): L = local area residents; M = motorists, commuters, and through travelers; R = recreationists; W = workers

^b AADT includes total daily traffic volume—expressed as vehicles per day—in both directions.

7.4.1.2 GAINESVILLE ALTERNATIVES

All three Gainesville alternative routes primarily cross through an Industrial/Commercial Landscape Unit and then continue into or adjacent to the Conway Robinson State Forest and Manassas National Battlefield Park Landscape Unit. Gainesville 1 is the shortest and most direct alternative through this area, while Gainesville 2 and 3 are the longest. Table 7.4-3 summarizes the mileages for each Gainesville Alternative across each landscape unit.

TABLE 7.4-3 GAINESVILLE IMPACT CENTERLINE MILEAGE BY LANDSCAPE UNIT

Landscape Unit	Gainesville 1 (Miles)	Gainesville 2 (Miles)	Gainesville 3 (Miles)
Industrial / Commercial Landscape Unit	2.6	3.5	3.5
Conway Robinson State Forest and Manassas National Battlefield Park Landscape Unit	0.2	0.1	0.1
Total	2.8	3.6	3.6

The Conway Robinson State Forest and Manassas National Battlefield Park Landscape Unit includes two areas with special designations. The western portion of the unit (west of Pageland Lane) primarily includes Conway Robinson State Forest, a densely forested 440-acre area that is managed by the Virginia Department of Forestry. The eastern portion (east of Pageland Lane) encompasses Manassas National Battlefield Park, a Civil War battlefield that is managed by the National Park Service and is characterized by a mix of dense forest vegetation, and expansive grasslands. Both of these areas provide recreational opportunities. Due to the presence of these protected areas, the built environment in this landscape unit is visually subordinate to the natural environment and includes recreational development (e.g., trails, pathways, parking lots), historic buildings and cemeteries, adjacent areas of agricultural and low-density residential development, and roads. An existing transmission line corridor bisects this landscape unit from north to south generally parallel to and east of Pageland Lane.

Table 7.4-4 describes the VSRs along the Gainesville alternatives. At these VSRs, the primary viewer groups (defined in Section 3.2.3 and listed in Table 7.4-4), are more aware of and sensitive to changes in visual resource conditions. In addition to the VSRs, there are several other areas along the Gainesville Alternatives (Table 7.4-5) where the potential to view the Project would be greater, due to the proximity of these areas to the new transmission line.

TABLE 7.4-4 GAINESVILLE ALTERNATIVES VISUALLY SENSITIVE RESOURCES

VSR #	Name	VSR Description	Route(s) ^a	Landscape Unit(s) ^b	Primary Viewer Groups ^c
Recreational Resources (see Section 4.1.7)					
3	Conway-Robinson State Forest	A 440-acre forest with multi-use non-motorized use trails, a picnic shelter, and seasonal hunting on the north side of US-29 east of Heathcote Boulevard.	G1, G2, G3	MNB	L, R
5	Jiffy Lube Live	Event venue with seating for 25,000+ people with a mix of reserved seating and lawn area general seating.	G1, G2, G3	IC	L, R
6	Manassas National Battlefield Park	National Park encompassing the location of two Civil War battlefields and including trails, roads, and picnic areas, bordered by Pageland Lane, I-66, Bull Run, and private property to the north. US-29 bisects the battlefield as it runs east-west, while Rte. 234 bisects the battlefield as it runs north-south.	G1, G2, G3	MNB	L, R

I = U.S. Interstate; Rte. = Virginia State Route; US = US; VSR = visually sensitive resource.

^a Routes: G1 = Gainesville 1; G2 = Gainesville 2; G3 = Gainesville 3

^b Landscape Units (see Appendix C): IC = Industrial/Commercial; MNB = Conway Robinson State Forest and Manassas National Battlefield Park

^c Viewer Groups (see Section 3.2.3): L = local area residents; R = recreationists

TABLE 7.4-5 AREAS OF POTENTIAL VISIBILITY ALONG GAINESVILLE ALTERNATIVES

VSR #	Name	VSR Description	Route(s) ^a	Landscape Unit(s) ^b	Primary Viewer Groups ^c
Road Corridors^b					
1	Balls Ford Road/Devlin Road	Four-lane, divided road with at-grade intersections (no AADT available). The road is named Balls Ford Road north of Wellington Road and to Devlin Road south of Wellington Road.	G2, G3	IC	L, M, W

VSR #	Name	VSR Description	Route(s) ^a	Landscape Unit(s) ^b	Primary Viewer Groups ^c
2	I-66	Six-lane, controlled access, divided freeway with grade-separated interchanges with AADT of 116,000 to 119,000 vpd between US 29 and Rte. 234 (Sudley Road).	G1, G2, G3	IC	L, M, W
3	Rte. 234 Bypass (Prince William Parkway)	Four-lane, controlled access divided freeway with grade-separated interchanges and AADT of 46,000 vpd.	G1	IC	L, M, W
4	US-29	Four-lane divided highway with at-grade intersections and turning lanes and AADT of 18,000 vpd between I-66 and Pleasant Valley Road.	G1, G2, G3	IC/MNB	L, M, W
5	Wellington Road	Four-lane divided road with occasional turning lanes and AADT of 17,000 vpd between Hansen Farm Road and Sudley Manor Drive.	G1, G2, G3	IC	L, M, W
Areas of High Public Concentration					
6	Gainesville CDP	2023 population of 18,036	G1, G2, G3	SR/IC/MNB	L, M, W

Sources: U.S. Census Bureau 2024 (population data); VDOT 2024 (AADT data).

AADT = annual average daily traffic; CDP = Census Designated Place; I = U.S. Interstate; Rte. = Virginia State Route; US = US; vpd =vehicles per day; VSR = visually sensitive resource.

^a Routes: G1 = Gainesville 1; G2 = Gainesville 2; G3 = Gainesville 3

^b Landscape Units (see Appendix C): IC = Industrial/Commercial; MNB = Conway Robinson State Forest and Manassas National Battlefield Park;

RAR = Rural Agricultural & Residential; RR = Rural Residential; SR = Suburban Residential

^cViewer Groups (see Section 3.2.3): L = local area residents; M = motorists, commuters, and through-travelers; R = recreationists; W = workers



7.4.1.3 PAGELAND ALTERNATIVES

Both Pageland alternatives primarily cross a Rural Agriculture and Residential Landscape Unit and also a smaller portion of the Conway Robinson State Forest and Manassas National Battlefield Park Landscape Unit. Pageland 1 crosses 3.8 miles and Pageland 2 crosses 4.5 miles of a Rural Agriculture and Residential Landscape Unit. Both alternatives cross 0.7 mile of the Conway Robinson State Forest and Manassas National Battlefield Park Landscape Unit.

Table 7.4-6 describes the VSRs along the Pageland alternatives. At these VSRs, the primary viewer groups (defined in Section 3.2.3 and listed in Table 7.4-6), are more aware of and sensitive to changes in visual resource conditions. In addition to the VSRs, there are several other areas along the Gainesville alternatives (Table 7.4-7) where the potential to view the Project would be greater, due to the proximity of these areas to the new transmission line.

TABLE 7.4-6 PAGELAND ALTERNATIVES VISUALLY SENSITIVE RESOURCES

VSR #	Name	VSR Description	Route(s) ^a	Landscape Unit(s) ^b	Primary Viewer Groups ^c
Recreational Resources (see Section 4.1.7)					
2	Catharpin Recreational Park (Blue Park)	Local park with athletic fields and playground on the north side of Rte. 234 (Sudley Road).	P1, P2	RAR	L, R
3	Conway-Robinson State Forest	A 440-acre forest with multi-use non-motorized use trails, a picnic shelter, and seasonal hunting on the north side of US-29 east of Heathcote Boulevard.	P1, P2	MNB	L, R
4	Four Hills Farm (Event Venue)	Event venue with horse farm for outdoor and indoor events on the south side of Sudley Road.	P2	RAR	L, R
6	Manassas National Battlefield Park	National Park encompassing the location of two Civil War battlefields and including trails, roads, and picnic areas, bordered by Pageland Lane, I-66, Bull Run, and private property to the north. US-29 bisects the battlefield as it runs east-west, while Rte. 234 bisects the battlefield as it runs north-south.	P1, P2	MNB	L, R
Residential Areas and Subdivisions					
11	Catharpin Farms Estates Subdivision	Subdivision of single-family homes on Livia Drive, accessed on the west side of Pageland Lane.	P2	RAR	L
13	Dominique Estates Subdivision	Subdivision of single-family homes along Dominique Estates Lane on the south side of Thornton Drive, west of Pageland Lane.	P1, P2	RAR	L
16	Heritage Hunt Community	Gated, age-restricted (ages 55 and over) subdivision community of single-family homes, multi-family residences, and townhomes. Amenities include an 18-hole golf course and a country club for events and recreation opportunities. The community is on the north side of I-66 on the east side of Catharpin Road, bordering the west side of Conway Robinson State Forest.	P2	SR	L, R

VSR #	Name	VSR Description	Route(s) ^a	Landscape Unit(s) ^b	Primary Viewer Groups ^c
20	Lurette Road / Sanders Lane Residences	Single-family homes on both sides of Lurette Road/Sanders Lane.	P1, P2	RAR	L, M
21	Magnolia Meadows Subdivision	Subdivision of single-family homes with associated open space along both sides of Catamount Court, east of Sanders Lane.	P1, P2	RAR	L
23	Pageland Lane Residences	Single-family homes on both sides of Pageland Road, between Sudley Road to the north and Artemus Road to the south.	P1, P2	RAR	L
24	Richland Estates Subdivision	Subdivision of single-family homes on large lots on both sides of Richland Drive and Richgar Drive, on the west side of Aldie Road.	P1, P2	RAR	L
26	Sudley Mountain Neighborhood	Single-family homes along Robin Drive, Bobwhite Drive, and Bluebird Lane west of Gum Spring Road accessed on the south side of Sudley Road.	P1	RAR	L

Sources: Fauquier County, Loudoun County, and Prince William County (Subdivisions).

I = U.S. Interstate; Rte. = Virginia State Route; US = US; VSR = visually sensitive resource.

^a Routes: P1 = Pageland 1; P2 = Pageland 2

^b Landscape Units (see Appendix C): MNB = Conway Robinson State Forest and Manassas National Battlefield Park; RAR = Rural Agricultural & Residential

^c Viewer Groups (see Section 3.2.3): L = local area residents; M = motorists, commuters, and through-travelers; R = recreationists



TABLE 7.4-7 AREAS OF POTENTIAL VISIBILITY ALONG PAGELAND ALTERNATIVES

VSR #	Name	VSR Description	Route(s) ^a	Landscape Unit(s) ^b	Primary Viewer Groups ^c
Places of Worship and Cemeteries					
1	Greater Faith Tabernacle	Place of worship and associated cemetery on the northeast side of Sudley Road, east of Aldie Road.	P1	RAR	L
Road Corridors ^b					
2	Pageland Lane	Two-lane rural road with no shoulders and AADT of 5,700 vpd between Sudley Road and US-29.	P1, P2	MNB/RAR	L, M, W
3	Rte. 234 (Sudley Road)	Two-lane road with occasional turn lanes and AADT of 8,200 vpd between US 15 and Gum Spring Road.	P1, P2	RAR	L, M, W

Sources: U.S. Census Bureau 2024 (population data); VDOT 2024 (AADT data).

AADT = annual average daily traffic; Rte. = Virginia State Route; US = US; vpd = vehicles per day; VSR = visually sensitive resource.

^a Routes: P1 = Pageland 1; P2 = Pageland 2

^b Landscape Units (see Appendix C): MNB = Conway Robinson State Forest and Manassas National Battlefield Park; RAR = Rural Agricultural & Residential

^c Viewer Groups (see Section 3.2.3): L = local area residents; M = motorists, commuters, and through-travelers; W = workers

7.4.2 VISUAL IMPACT ASSESSMENT

Several KOPs along Segment 3 Mainline, Gainesville alternatives, and the Pageland alternatives—listed below—provide representative views of existing conditions and simulated conditions with the proposed Project.

- Segment 3 Mainline: KOPs 304 and 305
- Segment 3 Gainesville 1: KOPs 306 and 307
- Segment 3 Gainesville 2 and 3: KOPs 307 and 308
- Segment 3 Pageland 1: KOPs 309, 310, 311, 312, 315, and 316
- Segment 3 Pageland 2: KOPs 309, 313, 314, 315, and 316

Existing conditions and simulations from these KOPs are provided in Appendix C.

Tables 7.4-8, 7.4-9, and 7.4-10 describe the Project's impacts on visual resource conditions and indicates the anticipated degree of visual change, viewer sensitivity, and an overall impact rating for each VSR along Segment 3 Mainline, Gainesville alternatives, and Pageland alternatives. The degree of visual change and viewer sensitivity are based on the assessment of visual change and sensitivity at each KOP and within each landscape unit (see Appendix C).

7.4.2.1 SEGMENT 3 MAINLINE

Overall, Segment 3 Mainline would have negligible to moderate impacts on VSRs. Table 7.4-8 summarizes the anticipated visual impacts of Segment 3 Mainline by landscape unit, including an overall impact rating.

Except for small portions of Segment 3 Mainline—including a new right-of-way near the Loudoun/Mosby Substations—Segment 3 Mainline would be constructed within the existing right-of-way. The expanded and new right-of-way may require additional vegetation clearing and corresponding small changes in the forms and lines of the vegetation in this area. The removal of trees and other vegetation may also decrease the screening capacity of this vegetation and increase the potential visibility of the proposed Project from adjacent areas.

In addition to small changes in the visual characteristics of the vegetation along Segment 3 Mainline, the primary visual resource change would be the new monopoles that would replace the existing lattice structures. There would be no visual changes in areas where the Project would reuse existing lattice structures. As noted previously, the new monopoles would appear as tall, solid, cylindrical, vertical structures with short horizontal cross arms connected by a series of thin, parallel, horizontal overhead lines that stretch between towers. While the new monopole structures would be taller than the existing lattice structures, they generally appear more compact, sleeker, and less visually complex than the existing lattice structures, which have an open, angular, skeletal form with a larger physical footprint that makes them appear visually expansive and complex.

Considering potential visibility, viewer sensitivity, and anticipated changes in visual resource characteristics, Segment 3 Mainline would have minor impacts on visual resources across Rural Agriculture and Residential, Suburban Residential, and Industrial/Commercial Landscape Unit types.

TABLE 7.4-8 SEGMENT 3 MAINLINE—VISUAL RESOURCE IMPACT SUMMARY

Landscapes Unit Type / Component	Impacted VSRs	Impacted Areas	Impacted Viewer Groups	Potential Impact Rating
Rural Agriculture and Residential / Segment 3 Mainline	VSR 2, 8, 20, 21, 24 Total: 5	Road crossings: <ul style="list-style-type: none"> Existing right-of-way—5 crossings Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Rte. 705 Residences (VSR 24) Catharpin Recreational Park (VSR 2) Magnolia Meadows Subdivision (VSR 20) Boxwood Farms Subdivision (VSR 8) Olde South Estates Subdivision (VSR 21) 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Workers 	Degree of Visual Change: Small Viewer Sensitivity: High Overall Rating: Negligible to Minor
Suburban Residential / Segment 3 Mainline	VSR 1, 7, 9, 10, 12, 14, 17-19, 25, 27-28 Total: 12	Road crossings: <ul style="list-style-type: none"> Existing right-of-way—3 crossings Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Amberleigh Station Subdivision (VSR 7) Braemar Community (VSR 9) Broad Run Linear Park (VSR 1) Foxborough Subdivision (VSR 14) Kingsbrooke Community (VSR 17) Linton Hall Manor Subdivision (VSR 19) 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Recreationists/tourists Workers 	Degree of Visual Change: Small Viewer Sensitivity: High Overall Rating: Negligible to Minor
Industrial / Commercial / Segment 3 Mainline	VSR 5 Total: 1	Road crossings: <ul style="list-style-type: none"> New right-of-way—3 crossings 	<ul style="list-style-type: none"> Motorists, commuters, through travelers Workers 	Degree of Visual Change: Small Viewer Sensitivity: Medium Overall Rating:
Overall assessment of Segment 3 Mainline	VSR Total: 18	Road crossings: <ul style="list-style-type: none"> Existing right-of-way—8 crossings New right-of-way—3 crossings 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Recreationists/tourists Workers 	Degree of Visual Change: Small Viewer Sensitivity: High Overall Rating: Negligible to Minor

NA = not applicable; VSR = visually sensitive resource.



7.4.2.2 GAINESVILLE ALTERNATIVES

All three Gainesville alternatives would require new rights-of-way primarily through the Industrial/Commercial Landscape Unit, as well as a small portion of the Conway Robinson State Forest and Manassas National Battlefield Park Landscape Unit. In both units, the alternatives would be at least partially routed through forested areas. The removal of trees in these areas would result in localized changes to the forms and lines of the existing vegetation. The removal of trees and other vegetation may also decrease the screening capacity of the vegetation and increase the potential visibility of the Project from adjacent areas.

The three Gainesville alternatives would result in similar changes to the existing built environment in the Industrial/Commercial and Conway Robinson State Forest and Manassas National Battlefield Park landscape units. The visual characteristics of the new monopoles used for the alternatives would be the same as described for the Segment 3 Mainline. The new monopoles would be taller than the existing lattice and H-frame structures that currently cross portions of both landscape units and would potentially be visible from more adjacent areas. In areas where the existing lattice structures are re-used, there would be no changes in visual characteristics. Gainesville 3 would likely have the greatest extent of potential new visibility, because it parallels the largest extent of roads. Gainesville 1 parallels the smallest extent of roads and is located closest to existing transmission infrastructure in the area, which would help minimize potential visibility and changes in visual resource characteristics.

Viewer sensitivity and anticipated changes in visual resource characteristics would be similar across all three Gainesville alternatives. As such, each of the Gainesville alternatives would result in minor impacts on visual resources in both the Industrial/Commercial and Conway Robinson State Forest and Manassas National Battlefield Park Landscape Units.

TABLE 7.4-9 GAINESVILLE ALTERNATIVES—VISUAL RESOURCE IMPACT SUMMARY

Landscape Unit Type / Component	Impacted VSRs	Impacted Areas	Impacted Viewer Groups	Potential Impact Rating
Industrial / Commercial / Gainesville 1	VSR 5 Total: 1	Road crossings: • New right-of-way—3 crossings	<ul style="list-style-type: none"> Motorists, commuters, through travelers Workers 	Degree of Visual Change: Viewer Sensitivity: Overall Rating:
Industrial / Commercial / Gainesville 2	VSR 5 Total: 1	Road crossings: • New right-of-way—3 crossings	<ul style="list-style-type: none"> Motorists, commuters, through travelers Workers 	Degree of Visual Change: Viewer Sensitivity: Overall Rating:
Industrial / Commercial / Gainesville 3	VSR 5, 15 Total: 2	Road crossings: • New right-of-way—3 crossings	<ul style="list-style-type: none"> Motorists, commuters, through travelers Workers 	Degree of Visual Change: Viewer Sensitivity: Overall Rating:
Conway Robinson and Manassas National Battlefield Park / Gainesville 1	VSR 3 and 6 Total: 2	Road crossings: • New right-of-way—3 crossings Sensitive VSRs (impacts > negligible): • Conway-Robinson State Forest (VSR 3) • Manassas National Battlefield Park (VSR 6)	<ul style="list-style-type: none"> Motorists, commuters, through travelers Recreationists/ tourists Workers 	Degree of Visual Change: Viewer Sensitivity: Overall Rating:
Conway Robinson and Manassas National Battlefield Park / Gainesville 2	VSR 3 and 6 Total: 2	Road crossings: • New right-of-way—3 crossings Sensitive VSRs (impacts > negligible): • Conway-Robinson State Forest (VSR 3) • Manassas National Battlefield Park (VSR 6)	<ul style="list-style-type: none"> Motorists, commuters, through travelers Recreationists/ tourists Workers 	Degree of Visual Change: Viewer Sensitivity: Overall Rating:
Conway Robinson and Manassas National Battlefield Park / Gainesville 3	VSR 3 and 6 Total: 2	Road crossings: • New right-of-way—1 crossings Sensitive VSRs (impacts > negligible): • Conway-Robinson State Forest (VSR 3) • Manassas National Battlefield Park (VSR 6)	<ul style="list-style-type: none"> Motorists, commuters, through travelers Recreationists/ tourists Workers 	Degree of Visual Change: Viewer Sensitivity: Overall Rating:

Landscape Unit Type / Component	Impacted VSRs	Impacted Areas	Impacted Viewer Groups	Potential Impact Rating
Segment 3–Gainesville 1	VSR 3, 5, and 6 Total: 3	Road crossings: <ul style="list-style-type: none"> Existing right-of-way—8 crossings Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Conway Robinson State Forest (VSR 3) Manassas National Battlefield Park (VSR 6) 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Recreationists/tourists Workers 	Degree of Visual Change: Small Viewer Sensitivity: Medium Overall Rating: Minor
Segment 3–Gainesville 2	VSR 3, 5, and 6 Total: 3	Road crossings: <ul style="list-style-type: none"> Existing right-of-way—6 crossings Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Conway Robinson State Forest (VSR 3) Manassas National Battlefield Park (VSR 6) 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Recreationists/tourists Workers 	Degree of Visual Change: Small Viewer Sensitivity: Medium Overall Rating: Minor
Segment 3–Gainesville 3	VSR 3, 5, and 6 Total: 3	Road crossings: <ul style="list-style-type: none"> Existing right-of-way—6 crossings Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Conway Robinson State Forest (VSR 3) Manassas National Battlefield Park (VSR 6) 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Recreationists/tourists Workers 	Degree of Visual Change: Minor to Moderate Viewer Sensitivity: Medium Overall Rating: Minor

NA = not applicable; VSR = visually sensitive resource.

7.4.2.3 PAGELAND ALTERNATIVES

Like the Gainesville alternatives, the Pageland alternatives would require new and expanded rights-of-way. In the Conway Robinson State Forest and Manassas National Battlefield Park Landscape Unit, most of the new right-of-way would be through currently forested areas. The new clearings would create open, defined forms and straight lines that would be different than the forms and lines of the existing forest vegetation. The alternatives would also require new or expanded rights-of-way across open agricultural fields and through pockets of dense forest vegetation within the Rural Agriculture and Residential Landscape Unit. The northern portion of Pageland 1 parallels and would require an expansion of the existing transmission right-of-way. A very small section at the northern end of Pageland 2 would also parallel the existing transmission corridor right-of-way. The changes in visual characteristics would be most pronounced (compared to open fields) in forested areas along both alternatives, like the changes described for the Gainesville alternatives. The removal of trees and other vegetation to facilitate the new and expanded rights-of-way may also decrease the screening capacity of this vegetation and increase the potential visibility of the Project from adjacent areas.

Both Pageland alternatives would result in changes to the existing built environment. The visual characteristics of the new monopoles used for these alternatives would be the same as described for the Segment 3 Mainline. The new transmission line infrastructure would be the tallest constructed features on the landscape and would increase the overall level of development and corresponding visual character of the area. In the specific areas where H-frame structures may be used, there would be less visual change than in areas where monopoles would be installed. While the new H-frame structures would add additional tall, linear, repetitive forms, these structures would be similar to existing H-frame structures, and thus would not introduce new visual elements to the landscape. In general, because Pageland 1 parallels a longer segment of the existing transmission line corridor, the change in visual characteristics from the new transmission line would be smaller than Pageland 2. Pageland 2 would also be potentially visible from a larger number of adjacent VSRs and other areas with high potential visibility.

Due to differences between the two Pageland alternatives in potential visibility and the magnitude of visible changes, Pageland 1 would result in minor to moderate impacts while Pageland 2 would result in moderate impacts on visual resources, especially within the Rural Agriculture and Residential Landscape Unit. Both alternatives would result in moderate impacts on visual resources in the Conway Robinson State Forest and Manassas National Battlefield Park Landscape Unit.

TABLE 7.4-10 PAGELAND ALTERNATIVES—VISUAL RESOURCE IMPACT SUMMARY

Landscape Unit Type / Component	Impacted VSRs	Impacted Areas	Impacted Viewer Groups	Potential Impact Rating
Rural Agriculture and Residential / Pageland 1	VSR 2, 13, 22, 23, 24, 26 Total: 5	Road crossings: <ul style="list-style-type: none"> New right-of-way—4 crossings Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Pageland Lane Residences (VSR 22) Dominique Estates Subdivision (VSR 13) Sudley Mountain Estates Subdivision (VSR 26) Catharpin Recreational Park (VSR 2) Rte. 705 Residences (VSR 24) 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Recreationists/tourists Workers 	Degree of Visual Change: Small to Medium Viewer Sensitivity: High Overall Rating: Minor to Major
Rural Agriculture and Residential / Pageland 2	VSR 4, 11, 13, 23, 24 Total: 4	Road crossings: <ul style="list-style-type: none"> New right-of-way—4 crossings Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Dominique Estates Subdivision (VSR 13) Catharpin Farms Estates (VSR 11) Four Hills Farm Event Venue (VSR 4) Rte. 705 (Lurette Rd) Residences (VSR 24) 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Recreationists/tourists Workers 	Degree of Visual Change: Small to Medium Viewer Sensitivity: High Overall Rating: Minor to Major
Suburban Residential / Pageland 2	VSR 16	Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Heritage Hunt Community (VSR 16) 	<ul style="list-style-type: none"> Residents 	Degree of Visual Change: Small Viewer Sensitivity: High Overall Rating: Negligible to Minor
Conway Robinson and Manassas National Battlefield Park / Pageland 1	VSR 3, 6, and 22 Total: 3	Road crossings: <ul style="list-style-type: none"> New right-of-way—3 crossings Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Conway-Robinson State Forest (VSR 3) Manassas National Battlefield Park (VSR 6) Pageland Lane Residences (VSR 22) 	<ul style="list-style-type: none"> Motorists, commuters, through travelers Recreationists/tourists Workers 	Degree of Visual Change: Medium Viewer Sensitivity: High Overall Rating: Minor to Major



Landscape Unit Type / Component	Impacted VSRs	Impacted Areas	Impacted Viewer Groups	Potential Impact Rating
Conway Robinson and Manassas National Battlefield Park / Pageland 2	VSR 3, 6, and 22 Total: 3	Road crossings: <ul style="list-style-type: none"> New right-of-way—3 crossings Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Conway-Robinson State Forest (VSR 3) Manassas National Battlefield Park (VSR 6) Pageland Lane Residences (VSR 22) 	<ul style="list-style-type: none"> Motorists, commuters, through travelers Recreationists/tourists Workers 	Degree of Visual Change: Medium Viewer Sensitivity: High Overall Rating: Minor to Major
Segment 3–Pageland 1	VSR 2, 3, 6, 13, 22, 23, 24, and 26 Total: 8	Road crossings: <ul style="list-style-type: none"> Existing right-of-way—3 crossings Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Catharpin Recreational Park (Blue Park) (VSR 2) Conway Robinson State Forest (VSR 3) Dominique Estates Subdivision (VSR 13) Manassas National Battlefield Park (VSR 6) Pageland Lane Residences (VSR 22) Rte. 705 (Lurette Rd) Residences (VSR 24) Sudley Mountain Estates Subdivision (VSR 26) 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Recreationists/tourists Workers 	Degree of Visual Change: Small to medium Viewer Sensitivity: Medium to High Overall Rating: Minor to Moderate
Segment 3–Pageland 2	VSR 2, 4, 6, 11, 13, 16, 22 and 24 Total: 8	Road crossings: <ul style="list-style-type: none"> Existing right-of-way—5 crossings Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Catharpin Farms Estates Subdivision (VSR 11) Catharpin Recreational Park (Blue Park) (VSR 2) Conway Robinson State Forest (VSR 3) Dominique Estates Subdivision (VSR 13) Four Hills Farm (Event Venue) (VSR 4) Manassas National Battlefield Park (VSR 6) Pageland Lane Residences (VSR 22) 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Recreationists/tourists Workers 	Degree of Visual Change: Medium Viewer Sensitivity: Medium to High Overall Rating: Moderate

NA = not applicable; VSR = visually sensitive resource.

7.5 ENVIRONMENTAL JUSTICE

Tables 7.5-1 through 7.5-6 provide population and demographic information for each of the CBGs crossed by Segment 3 Mainline, Gainesville, and Pageland alternatives.

7.5.1 SEGMENT 3 MAINLINE

7.5.1.1 EXISTING CONDITIONS

Based on the EJ criteria thresholds identified in Section 3, all seven CBGs crossed by Segment 3 Mainline components meet EJ criteria (Figure 3.2.5-1). In CT 6118.13 BG 2, approximately 10 percent of the population is considered linguistically isolated, meaning they speak English less than “very well”. Census data suggest that the majority of these linguistically isolate households speak an Asian-Pacific language at home.

7.5.1.2 IMPACT ASSESSMENT

As discussed below, impacts on views, property values, and health from construction activities are not anticipated to be significantly adverse. As such Segment 3 mainline would not have overall significantly adverse impacts on potential EJ communities. Section 3.2.5 discusses impacts on EJ communities more broadly. The below analysis addresses Segment specific information.

Construction Activities

The primary noise receptors in the study area would be residents along Segment 3. There are 360 residences within 500 feet of Segment 3 Mainline Impact Centerline and 28 residences within 60 feet of the Impact Centerline. Construction will be temporary and occur during daylight hours. During operations, noise and visual conditions are expected to remain consistent with the current environment.

Visual Impacts

Section 7.4 assesses Segment 3 Mainline visual impacts. Because Segment 3 Mainline crosses CBGs with sensitive populations and/or potential EJ communities, KOPs used in the analysis of visual impacts are representative of views in potential EJ communities. As detailed in Section 7.4.2, Segment 3 Mainline would have a small degree of visual change on visual resources and the overall impact rating would be minor.

Property Values and Health Impacts

There are 363 homes that are within 500 feet of the Segment 3 Mainline Impact Centerline. Section 3.2.5 addresses the effect of transmission lines on property values and health impacts.

TABLE 7.5-1 ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY SEGMENT 3 MAINLINE

Geography	Population	Total Populations of Color	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic or Latino	Low-Income Population	Limited English-Speaking Household
Virginia	8,657,499	41%	59%	18%	0.1%	7%	0.1%	0.5%	4%	11%	23%	3%
Loudoun County	427,082	48%	52%	7%	0.1%	21%	0.1%	0.6%	5%	14%	9%	4%
CT 6118.13 BG 2	4,229	57%	43%	8%	0.0%	37%	0.0%	0.0%	8%	5%	5%	10%
Prince William County	484,625	61%	39%	20%	0.1%	10%	0.1%	0.5%	5%	26%	17%	6%
CT 9014.14 BG 1	2,387	20%	80%	7%	0.0%	3%	0.0%	0.0%	6%	3%	19%	0%
CT 9014.14 BG 3	1,763	39%	61%	10%	0.0%	5%	0.0%	0.0%	7%	16%	20%	0%
CT 9014.15 BG 1	1,245	40%	60%	8%	0.0%	3%	0.0%	0.0%	2%	26%	6%	0%
CT 9014.17 BG 1	1,906	35%	65%	11%	0.3%	7%	0.0%	0%	3%	13%	20%	0%
CT 9014.21 BG 3	2,340	52%	48%	26%	0.0%	10%	0.0%	0%	2%	15%	11%	6%
CT 9015.03 BG 2	1,573	27%	73%	3%	0.0%	2%	1.3%	2%	5%	14%	5%	0%

Sources: U.S. Census Bureau 2023a, 2023b, 2023c (Tables B03002, C17002, C16002), VADEQ 2025

CT = Census Tract; BG = Block Group

Gray shaded cells include reference population.

Blue shaded cells indicate populations of color including community of color is composed primarily of one of the groups listed in the VEJA definition of "population of color" or the analysis area has a greater percentage of a community of color than the state as a whole.

Purple shading indicates linguistically isolated populations.

TABLE 7.5-2 ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY GAINESVILLE 1

Geography	Population	Total Populations of Color	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic or Latino	Low-Income Population	Limited English-Speaking Household
Virginia	8,657,499	41%	59%	18%	0.1%	7%	0.1%	0.5%	4%	11%	23%	3%
Prince William County	484,625	61%	39%	20%	0.1%	10%	0.1%	0.5%	5%	26%	17%	6%
CT 9014.18 BG 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CT 9014.21 BG 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CT 9015.03 BG 4	569	18%	82%	1%	0.0%	4%	0.0%	0.0%	6%	7%	34%	0%
CT 9015.04 BG 1	647	24%	76%	14%	0.0%	0%	0.0%	0.0%	3%	7%	52%	0%
CT 9014.21 BG 3	2,340	52%	48%	26%	0.0%	10%	0.0%	0.0%	2%	15%	11%	6%

Sources: U.S. Census Bureau 2023a, 2023b, 2023c (Tables B03002, C17002, C16002), VADEQ 2025

CT = Census Tract; BG = Block Group; NA = no data available in the Census, zero permanent population

Gray shaded cells include reference population.

Blue shaded cells indicate populations of color including community of color is composed primarily of one of the groups listed in the VEJA definition of "population of color" or the analysis area has a greater percentage of a community of color than the state as a whole.

Purple shading indicates a linguistically isolated population.

Yellow shading indicates low-income populations.

TABLE 7.5-3 ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY GAINESVILLE 2

Geography	Population	Total Populations of Color	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic or Latino	Low-Income Population	Limited English-Speaking Household
Virginia	8,657,499	41%	59%	18%	0.1%	7%	0.1%	0.5%	4%	11%	23%	3%
Prince William County	484,625	61%	39%	20%	0.1%	10%	0.1%	0.5%	5%	26%	17%	6%
CT 9014.21 BG 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CT 9014.21 BG 3	2,340	52%	48%	26%	0.0%	10%	0.0%	0.0%	2%	15%	11%	6%
CT 9015.04 BG 1	647	24%	76%	14%	0.0%	0%	0.0%	0.0%	3%	7%	52%	0%

Sources: U.S. Census Bureau 2023a, 2023b, 2023c (Tables B03002, C17002, C16002), VADEQ 2025

CT = Census Tract; BG = Block Group; NA = no data available in the Census, no permanent population

Gray shaded cells include reference population.

Blue shaded cells indicate populations of color including community of color is composed primarily of one of the groups listed in the VEJA definition of "population of color" or the analysis area has a greater percentage of a community of color than the state as a whole.

Purple shading indicates linguistically isolated populations.

Yellow shading indicates low-income populations.

TABLE 7.5-4 ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY GAINESVILLE 3

Geography	Population	Total Populations of Color	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic or Latino	Low-Income Population	Limited English-Speaking Household
Virginia	8,657,499	41%	59%	18%	0.1%	7%	0.1%	0.5%	4%	11%	23%	3%
Prince William County	484,625	61%	39%	20%	0.1%	10%	0.1%	0.5%	5%	26%	17%	6%
CT 9014.21 BG 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CT 9014.21 BG 3	2,340	52%	48%	26%	0.0%	10%	0.0%	0.0%	2%	15%	11%	6%
CT 9015.04 BG 1	647	24%	76%	14%	0.0%	0%	0.0%	0.0%	3%	7%	52%	0%

Sources: U.S. Census Bureau 2023a, 2023b, 2023c (Tables B03002, C17002, C16002), VADEQ 2025

CT = Census Tract; BG = Block Group; NA = no data available in the Census, no permanent population

Gray shaded cells include reference population.

Blue shaded cells indicate populations of color including community of color is composed primarily of one of the groups listed in the VEJA definition of "population of color" or the analysis area has a greater percentage of a community of color than the state as a whole.

Purple shading indicates linguistically isolated populations.

Yellow shading indicates low-income populations.

TABLE 7.5-5 ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY PAGELAND 1

Geography	Population	Total Populations of Color	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic or Latino	Low-Income Population	Limited English-Speaking Household
Virginia	8,657,499	41%	59%	18%	0.1%	7%	0.1%	0.5%	4%	11%	23%	3%
Prince William County	484,625	61%	39%	20%	0.1%	10%	0.1%	0.5%	5%	26%	17%	6%
CT 9015.03 BG 4	569	18%	82%	1%	0.0%	4%	0.0%	0.0%	6%	7%	34%	0%
CT 9015.04 BG 1	647	24%	76%	14%	0.0%	0%	0.0%	0.0%	3%	7%	52%	0%
CT 9015.03 BG 2	1,573	27%	73%	3%	0.0%	2%	1.3%	1.7%	5%	14%	5%	0%

Sources: U.S. Census Bureau 2023a, 2023b, 2023c (Tables B03002, C17002, C16002), VADEQ 2025

CT = Census Tract; BG = Block Group

Gray shaded cells include reference population.

Blue shaded cells indicate populations of color including community of color is composed primarily of one of the groups listed in the VEJA definition of "population of color" or the analysis area has a greater percentage of a community of color than the state as a whole.

Yellow shading indicates low-income populations.

TABLE 7.5-6 ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS CROSSED BY PAGELAND 2

Geography	Population	Total Populations of Color	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic or Latino	Low-Income Population	Limited English-Speaking Household
Virginia	8,657,499	41%	59%	18%	0.1%	7%	0.1%	0.5%	4%	11%	23%	3%
Prince William County	484,625	61%	39%	20%	0.1%	10%	0.1%	0.5%	5%	26%	17%	6%
CT 9015.03 BG 4	569	18%	82%	1%	0.0%	4%	0.0%	0.0%	6%	7%	34%	0%
CT 9015.04 BG 1	647	24%	76%	14%	0.0%	0%	0.0%	0.0%	3%	7%	52%	0%
CT 9015.04 BG 2	848	16%	84%	11%	0.0%	5%	0.0%	0.0%	0%	0%	15%	3%
CT 9015.03 BG 2	1,573	27%	73%	3%	0.0%	2%	1.3%	1.7%	5%	14%	5%	0%

Sources: U.S. Census Bureau 2023a, 2023b, 2023c (Tables B03002, C17002, C16002), VADEQ 2025

CT = Census Tract; BG = Block Group

Gray shaded cells include reference population.

Blue shaded cells indicate populations of color including community of color is composed primarily of one of the groups listed in the VEJA definition of "population of color" or the analysis area has a greater percentage of a community of color than the state as a whole.

Yellow shading indicates low-income populations.

7.5.2 GAINESVILLE ALTERNATIVES

7.5.2.1 SEGMENT 3 GAINESVILLE ALTERNATIVE ROUTE 1

Gainesville 1 crosses three CBGs that are considered EJ communities and two CBGs that do not have a permanent population. There are four residences within 500 feet of the Gainesville 1 Impact Centerline. Thus, while the CBGs containing people crossed are all EJ communities, the route is mostly sited away from residential areas.

7.5.2.2 SEGMENT 3 GAINESVILLE ALTERNATIVE ROUTE 2

Gainesville 2 crosses two CBGs that are EJ communities and one CBG that does not have a permanent population. There are four dwellings within 500 feet of Gainesville 2 Impact Centerline, indicating that the route is mostly sited away from residential areas.

7.5.2.3 SEGMENT 3 GAINESVILLE ALTERNATIVE ROUTE 3

Gainesville 3 crosses two CBGs that are EJ communities and one CBG that does not have a permanent population. There are four dwellings within 500 feet of Gainesville 3 Impact Centerline, indicating that the route is mostly sited away from residential areas.

7.5.2.4 GAINESVILLE ALTERNATIVES CONCLUSION

Based on the impacts described above, all three Gainesville alternatives would have a similar impact from an EJ perspective. Although Gainesville 1 crosses one additional CBG than Gainesville 2 and 3, all three routes are located generally within industrial areas and away from residential dwellings.

7.5.3 PAGELAND ALTERNATIVES

7.5.3.1 SEGMENT 3 PAGELAND ALTERNATIVE ROUTE 1

All three CBGs crossed by Pageland 1 are EJ communities. There are 30 residences within 500 feet of the Pageland 1 Impact Centerline.

7.5.3.2 SEGMENT 3 PAGELAND ALTERNATIVE ROUTE 2

Three of the four CBGs crossed by Pageland 2 are EJ communities. There are 38 residences within 500 feet of the Pageland 2 Impact Centerline.

7.5.3.3 PAGELAND ALTERNATIVES CONCLUSION

Based on the impacts described above, the differences between the two Pageland alternatives are minimal, from an EJ perspective. Pageland 1 is marginally less impactful, due to the smaller number of residences within 500 feet of the Impact Centerline.

7.6 GEOLOGICAL RESOURCES

7.6.1 SEGMENT 3 MAINLINE

Segment 3 Mainline primarily follows a diabase deposit with the right-of-way encountering sedimentary bedrock 0.2 miles north of Vint Hill Road belonging to the Newark Supergroup,

mainly comprised of sandstone, siltstone, and shale, until approximately the right-of-way intersection with Lint Hill Road. The northern portion of the Segment 3 Mainline encounters sedimentary bedrock belonging to the Newark Supergroup primarily comprised of sandstone, siltstone, and shale for its entirety (USGS 2005).

7.6.2 GAINESVILLE ALTERNATIVES

7.6.2.1 SEGMENT 3 GAINESVILLE ALTERNATIVE ROUTE 1

Gainesville 1 primarily encounters a deposit of diabase with two brief intersections of sedimentary bedrock mainly comprised of sandstone, siltstone, and shale from the Newark Supergroup from the right-of-way intersection with Piney Branch Lane for 700 feet, and again at the intersection with US 29 (USGS 2005).

7.6.2.2 SEGMENT 3 GAINESVILLE ALTERNATIVE ROUTE 2

Gainesville 2 primarily encounters a deposit of diabase with two brief intersections of sedimentary bedrock mainly comprised of sandstone, siltstone, and shale from the Newark Supergroup from the intersection of Wellington Road and Piney Branch Lane for 0.7 mile, and again at 0.2 mile north of I-66 (USGS 2005).

7.6.2.3 SEGMENT 3 GAINESVILLE ALTERNATIVE ROUTE 3

Gainesville 3 primarily encounters a deposit of diabase with two brief intersections of sedimentary bedrock mainly comprised of sandstone, siltstone, and shale from the Newark Supergroup from the right of way crossing of Piney Branch Lane until 400 feet south of the Norfolk Southern Railway, and again at 0.4 mile along US 29 preceding the right-of-way crossing of the highway (USGS 2005).

7.6.3 PAGELAND ALTERNATIVES

7.6.3.1 SEGMENT 3 PAGELAND ALTERNATIVE ROUTE 1

Pageland 1 primarily intersects with sedimentary bedrock composed of siltstone and shale from the Newark Supergroup with one intersection with underlying bedrock of diabase for approximately 0.2 mile perpendicularly of Little Bull Run (USGS 2005).

7.6.3.2 SEGMENT 3 PAGELAND ALTERNATIVE ROUTE 2

The Pageland 2 Alternative primarily intersects with sedimentary bedrock composed of siltstone and shale from the Newark Supergroup with intermittent intersections with underlying bedrock of diabase (USGS 2005).

7.6.4 MINERAL RESOURCES

7.6.4.1 EXISTING CONDITIONS

There are no active mines within 0.25 mile of the Segment 3 Mainline or the Gainesville or Pageland alternatives Impact Centerlines. The closest active permitted mine is 1.3 miles east of

Pageland 1, while the closest inactive mine is 1.1 miles east of Pageland 1 (Virginia Energy 2024b).

The Manassas Quarry is an active mine operated by Vulcan Materials Company; the mine is 2.8 miles east of the Segment 3 Mainline. The nearest inactive mineral resource prospect of shale and clay is 1.0 miles southeast of the Segment 3 Mainline right-of-way off Linton Hall Road.

One active mine permit is 1.3 miles east of the Pageland 1, 2.0 miles east of the Pageland 2 at the Bull Run Plant operated by the Luck Stone Corporation. The nearest inactive mineral resources are also at this site (Virginia Energy 2024a,b).

7.6.4.2 IMPACT ASSESSMENT

Because there are no active permitted mining sites or inactive mineral resource prospects within 0.25 mile of the routes Impact Centerlines, the Segment 3 Mainline, Gainesville, and Pageland alternatives would have no impact on mineral resources. Pageland 1 is closest of these routes to active permitted mining sites, but would have no impact on mineral resources

8. SEGMENT 4 RESOURCES AND IMPACTS

8.1 LAND USES

8.1.1 PUBLIC LANDS

8.1.1.1 EXISTING CONDITIONS

Segment 4 crosses or passes within 0.25 mile of six public land resources, described below (Tables 8.1-1 and 8.1-2; Figure 4.1.1-1).

State Lands

VDOT Arcola Area Headquarters

ERM identified a state-owned parcel near Segment 4, the VDOT Arcola Area Head Quarters, an equipment and material storage site. The approximately 8.0-acre parcel is west of the segment on the north side of US 50 at 41880 Little River Turnpike in Aldie. Nearly the entire parcel is developed. The Company's existing Morrisville-Wishing Star Corridor crosses a vacant area in the southeast corner of the VDOT parcel just north of the highway.

County Lands

Pinebrook Elementary School

Pinebrook Elementary School occupies the parcel at 25480 Mindful Court in Aldie near the primary intersection of Braddock and Gum Spring roads. The school, whose campus encompasses approximately 20 acres, serves around 700 students between pre-kindergarten and fifth grade (VDOE 2025). The entire parcel is developed containing the school building, parking areas, and athletic fields. The Company's existing transmission corridor passes about 825 feet west of the campus. Surrounding lands are largely residential.

Byrne's Ridge Park

This resource, containing nearly 26 acres, features a playground, three soccer fields, three diamond fields, and concession and parking facilities (Loudoun County 2025). It is located at 24915 Mineral Springs Circle in Stone Ridge west of the intersection of Stone Springs Boulevard, Mineral Springs Circle, and Greenstone Drive. The Company's existing Morrisville-Wishing Star Corridor passes about 80 feet west of (essentially abuts) the park.

Undeveloped Parcel

About 0.5 mile of the Company's existing transmission corridor crosses undeveloped county-owned land between Tall Cedars Parkway to the south and US 50 to the north. South of Millstream Drive, the county land consists of a narrow band of undeveloped land between the transmission lines to the west and residential development to the east. North of Millstream Drive, the county-owned land is broader, crossing Broad Run in the area east of Northstar Boulevard and south of US 50.

Arcola Elementary School

Arcola Elementary School lies approximately 820 feet east of the Company's existing transmission line. The 20-acre campus is located at 41740 Tall Cedars Parkway in Aldie at the intersection of Northstar Boulevard and Tall Cedars Parkway. The school serves about 750 students ranging from pre-kindergarten to fifth grade (VDOE 2025).

Dulles South Stone Ridge II Park and Ride

The Dulles South Stone Ridge II Park and Ride encompasses about 5.6 acres of parking and bus loading facilities at 24281 Millstream Drive in Aldie, east of Northstar Boulevard and south of Little River Turnpike. The Company's existing transmission corridor partially overlaps an undeveloped portion of the parcel by about 435 feet.

TABLE 8.1-1 SEGMENT 4 STATE LANDS

Property	Description	County	Approximate Distance and Direction from Segment 4 Impact Centerline	Crossing Length
VDOT Arcola Area Head Quarters	Equipment and material storage site	Loudoun	Crossed by Segment 4 near the intersection of Tall Cedars Parkway and Northstar Boulevard	575 feet

TABLE 8.1-2 SEGMENT 4 COUNTY LANDS

Property	Description	County	Approximate Distance and Direction from Segment 4 Impact Centerline	Crossing Length
Pinebrook Elementary School	Elementary school	Loudoun	About 825 feet east of Segment 4 near the intersection of Summerall Drive and Mindful Court	NA
Byrne's Ridge Park	Park (athletic fields)	Loudoun	About 80 feet east of Segment 4 near the intersection of Tall Cedars Parkway and Stone Springs Boulevard	NA
Arcola Elementary School	Elementary school	Loudoun	About 820 feet west of Segment 4 near the intersection of Northstar Boulevard and Tall Cedars Parkway	NA
NA	Undeveloped	Loudoun	Crossed by Segment 4 between Tall Cedars Parkway to the south and US 50 to the north	0.5 mile
Dulles South Stone Ridge II Park and Ride	Dulles South Stone Ridge II Park and Ride	Loudoun	Crossed by Segment 4 near the intersection of Millstream Drive and Stone Carver Drive	430 feet

NA = Not Applicable

8.1.1.2 IMPACT ASSESSMENT

Of the public lands listed in Tables 8.1-1 and 8.1-2, Pinebrook Elementary School and Arcola Elementary School are greater than 500 feet from the Segment 4 Impact Centerline. No public lands associated with the schools would be impacted by the Project and construction impacts are

unlikely given the distance and existing development between the Company's existing Morrisville-Wishing Star Corridor and the schools. Byrne's Ridge Park is nearer to Segment 4, but no public land is crossed in this area. Assessments of potential indirect impacts on recreational uses of the park and schools are provided in Sections 8.1.8 and 8.1.9, respectively.

While Segment 4 crosses the VDOT Arcola Area Headquarters and an undeveloped county-owned parcel, in each case Project activities would be limited to the Company's existing transmission corridor in these areas. The change in the configuration and number of structures within the existing corridor would not change land uses at these crossings, which would continue to be used as electric transmission rights-of-way.

8.1.2 LAND USE AND LAND COVER

8.1.2.1 EXISTING CONDITIONS

The predominant land use/cover type along Segment 4 is open space (98 percent), consistent with its current use as right-of-way (Table 8.1-3 and Figure 4.1.2-1).

TABLE 8.1-3 LAND USE/LAND COVER CROSSED BY SEGMENT 4 (ACRES)

Land Use/Land Cover ^a	Unit	Segment 4
Total right-of-way ^b	Acres	143.2
Agricultural	Acres	0.6
Forested	Acres	2.2
Developed	Acres	0.0
Open Space	Acres	140.4
Open Water	Acres	0.0

^a Based on VGIN 2025 and aerial photo interpretation by ERM.

^b Land use/land cover acreage the totals may not match the sum of the addends due to rounding.

8.1.2.2 IMPACT ASSESSMENT

Segment 4 requires 143.2 acres of right-of-way, of which 137.3 acres consists of open space within existing right-of-way. About 5.9 acres of expanded right-of-way would be needed crossing 2.2 acres of forest and 0.6 acre of agricultural land. There would be no impact on lands uses and cover types in the existing right-of-way, which would remain a transmission line corridor. Agricultural uses would be unaffected and would continue to remain in production (unless removed by the landowner for reasons unrelated to the Project). The primary impact of Segment 4 on land use/cover would be the conversion of forested land to an herbaceous cover within the expanded right-of-way during Project operations.

8.1.3 LAND USE PLANNING AND ZONING

8.1.3.1 EXISTING CONDITIONS

Table 8.1-4 lists and describes the zoning districts within 0.25 mile of Segment 4 Impact Centerline (Figure 3.2.1-1). Because Dominion would obtain a CPCN from the SCC, the Project

would be exempt from zoning requirements. This section provides information on zoning districts to assess general land use compatibility with the Project. Zoning is not further analyzed in this report.

TABLE 8.1-4 ZONING DISTRICTS WITHIN 0.25 MILE OF SEGMENT 4 IMPACT CENTERLINE

Zoning District	Description and Allowed Uses
Loudoun County	
Commercial/Light Industry	Accommodates a mix of similar and compatible office and industrial uses as well as supportive commercial retail and service uses. Prohibits manufacturing uses such as distillation of coal and wood, fertilizer manufacturing, and petroleum refining, among others.
General Business	Legacy zoning district. Retains existing areas established for general destination business uses to serve residents and other businesses in the vicinity.
General Industry	Intended for industrial uses incompatible with residential uses.
Industrial Park	Intended for office, light production, flex space, and warehousing uses, including startups and established businesses. Limits uses that may produce excessive noise or air pollutants that would be more compatible with the General Industry zoning district.
Planned Development Housing-3	Allows a variety of single-family and multi-family housing types as well as supporting nonresidential uses. PD-H3 limits housing development to three dwelling units per acre.
Planned Development Housing-4	Legacy zoning district. Allows a variety of single-family and multi-family housing types as well as supporting nonresidential uses. PD-H3 limits housing development to four dwelling units per acre.
Single Family Residential-1	Limits residential development to low density single-family detached residences on lots of 40,000 square feet or more.
Single Family Residential-2	Limits residential development to low-to-moderate density single-family detached and attached residences on lots of 20,000 square feet or more.
Transitional Residential-3 Lower Foley	Encourages low density development as a visual and spatial transition between suburban and rural areas. Establishes a minimum of 50% open space for compatibility with adjacent suburban development.
Transitional Residential-10	Encourages low density development as a visual and spatial transition between suburban and rural areas. Protects drinking water resources through a 300-foot buffer along Bull Run, Goose Creek, the Goose Creek Reservoir, and the Beaverdam Reservoir by establishing a minimum of 70% open space.

Segment 4 crosses portions of several place types in Loudoun County, namely the Suburban Employment, Suburban Mixed-Use, Suburban Neighborhood, and Transition Large Lot Neighborhood place types, described as follows:

- **Suburban Employment Place Type:** This place type provides opportunities for office, production, flex space, and warehousing uses, as well as other uses that do not generate excessive noise or air pollution or require outdoor storage. The Company’s existing Morrisville-



Wishing Star Corridor crosses about 17.4 acres of this place type, with about 3.1 acres within expanded right-of-way.

- **Suburban Mixed-Use Place Type:** This place type encourages a compact, pedestrian-oriented environment with a mix of residential commercial, cultural, entertainment, and recreational uses. The Company's existing right-of-way crosses about 17.9 acres of this place type.
- **Suburban Neighborhood Place Type:** This place type designates predominantly residential uses on medium to large lots, including accessory residential units. Uses also include retail and service for adjacent neighborhoods. The existing Morrisville-Wishing Star Corridor right-of-way encompasses about 56.8 acres of the place type, with about 2.3 acres within expanded right-of-way.
- **Transition Large Lot Neighborhood Place Type:** This place type encourages core uses such as large lot residential and clustered residential subdivisions with public facilities permitted as a conditional use. The Company's existing corridor crosses about 45.2 acres of the place type, with approximately 0.6 acre within expanded right-of-way.

8.1.3.2 IMPACT ASSESSMENT

Segment 4 crosses/encompasses parts of 10 zoning districts as depicted in Figure 3.2.1-1 and listed in Table 8.1-5. About 67 percent of the segment is within residential districts, with 32 percent within industrial districts and less than 1 percent within a business district. The number of homes along the segment (discussed in Section 8.1.4) is consistent with the zoning. Additionally, the Project is consistent with the intended land uses (data centers and industrial development) of the place types crossed.

TABLE 8.1-5 ZONING DISTRICTS CROSSED BY SEGMENT 4

Zoning District	Unit	Segment 4	
		Existing ROW	Expanded ROW
Commercial/Light Industry (CLI)	acres	0.0	0.0
General Business (GB)	acres	1.6	0.0
General Industry (GI)	acres	1.2	0.0
Industrial Park (IP)	acres	38.9	5.2
Planned Development Housing-3 (PDH3)	acres	0.2	0.0
Planned Development Housing-4 (PDH4)	acres	59.7	0.0
Single Family Residential-1 (R1)	acres	0.5	0.0
Single Family Residential-2 (R2)	acres	12.6	0.1
Transitional Residential-1 (Lower Foley; TR1LF)	acres	0.5	0.0
Transitional Residential-3 (Lower Foley; TR3LF)	acres	22.1	0.6

8.1.4 RESIDENTIAL AREAS AND RESIDENCES

8.1.4.1 EXISTING CONDITIONS

Table 8.1-6 lists the number of residences within 100 feet, 250 feet, and 500 feet of the Segment 4 Impact Centerline, while Figure 4.1.4-1 depicts the locations of homes and neighborhoods along the Project segments.

TABLE 8.1-6 DWELLINGS NEAR SEGMENT 4 IMPACT CENTERLINE

Route Alternative	Dwellings within 100 Feet of Impact Centerline	Dwellings within 250 Feet of Impact Centerline	Dwellings within 500 Feet of Impact Centerline
Segment 4	39	310	909

The dwellings within 500 feet of the Impact Centerline largely consist of detached single-family homes, with some multi-family residences, all within residentially zoned districts. Subdivisions crossed by or within 500 feet of the route include

- Stone Ridge
- Loudoun Crossing
- Kirkpatrick Farms
- The Grange at Willowsford
- Westridge
- Evergreen Meadows
- Greenfield Crossing
- Stratshire Crossing

The highest residential densities generally occur in the subdivisions of Stone Ridge and Kirkpatrick Farms, from 0.7 mile north of Loudoun Station to US 50. All dwellings within 500 feet of Segment 4 Impact Centerline are also within 500 feet of the existing Morrisville-Wishing Star Corridor.

8.1.4.2 PLANNED RESIDENTIAL AREAS

There are no planned residential areas or residences within 500 feet of Segment 4 Impact Centerline.

8.1.4.3 IMPACT ASSESSMENT

Residents along and near Segment 4 could be impacted by construction noise, dust, or traffic, but this would be short term and temporary, limited to the period of construction. During operations, the change in the number, configuration, and heights of transmission structures, and in places an expansion of the right-of-way, along Segment 4 would modify existing conditions. While this could expand the number of homes with views to transmission structures, the Morrisville-Wishing Star Corridor would continue to function as a transmission right-of-way consistent with existing conditions.

8.1.5 COMMERCIAL/INDUSTRIAL AREAS AND BUILDINGS

8.1.5.1 EXISTING CONDITIONS

Commercial and industrial areas and buildings are present primarily in the southern study area for Segment 4 and include retail/mixed use areas and commercial businesses. The General Industry, Industrial Park, Office Park, Commercial Center-Community Center and Planned Development-Commercial Highway zoning districts (see Section 8.1.3) allow commercial or industrial land use by-right. Within the study area, these zoning districts are primarily zoned for residences; some commercial buildings are located within mixed residential zoned communities.

ERM identified 15 commercial buildings within 500 feet of the Segment 4 Impact Centerline, of which six are within 250 feet and two are within 60 feet. The buildings include self-storage facilities, an animal rehabilitation hospital, an urgent care facility, and HOA offices between Tall Cedars Parkway and Little River Turnpike parallel to the existing Morrisville-Wishing Star Corridor. Figure 4.1.5-1 depicts the locations of commercial and industrial areas within 0.25 mile of Segment 4 Impact Centerline.

8.1.5.2 PLANNED COMMERCIAL AND INDUSTRIAL DEVELOPMENT

ERM identified 14 publicly announced planned commercial and industrial developments within 0.25 mile of Segment 4 Impact Centerline. These are discussed in Section 8.1.6.

8.1.5.3 IMPACT ASSESSMENT

Temporary impacts on businesses are possible during construction due to noise, dust, and traffic, but these impacts would be short term, temporary, and limited to periods of active construction near the businesses. There would be no impact on the businesses during Project operations.

8.1.6 PLANNED DEVELOPMENTS

8.1.6.1 EXISTING CONDITIONS

Table 8.1-7 lists planned developments within 0.25 mile of Segment 4 Impact Centerline, identifying the location, type, and status of each (as of December 2025). Figure 4.1.6-1 depicts the planned development parcels and proposed building footprints (where known) for the developments. Section 8.1.6.2 provides additional information about those planned developments crossed by the Project. No planned recreational developments were identified within 0.25 mile of Segment 4 Impact Centerline.

TABLE 8.1-7 PLANNED DEVELOPMENTS WITHIN 0.25 MILE OF SEGMENT 4 IMPACT CENTERLINE

Development Name	Development Type	Status	Approximate Distance to Project Facilities
Dominion Energy Loudoun Panel Wiring Shop	Substation/Utility	Site plan under review Legislative land development application approved Engineering plan approved	Segment 4 is 0.2 mile east of the site boundary.
Encompass Health Expansion	Hospital	Approved; under construction	Segment 4 is <0.1 mile east of the site boundary.
NOVEC South Fork Substation and Dominion Reed Farm Station	Electrical Substation	Engineering plan and plat under review	Segment 4 crosses the western portion of the site.
INOVA Health Systems Phase 1	Data Center	Site plan approved	Segment 4 is <0.1 mile west of the site boundary.
IAD 12 & 13	Data Center	Approved, under construction	Segment 4 is <0.1 mile east of the site boundary.
Yondr-Tarring	Data Center	Special exception permit under review	Segment 4 is 0.1 mile west of site boundary.
Project Allegro North Campus—Building A	Data Center	Engineering plan under review	Segment 4 is <0.1 mile west of the site boundary.

8.1.6.2 IMPACT ASSESSMENT

Segment 4 crosses one planned development, the NOVEC South Fork and Dominion Reed Farm Station. In March 2025, a legislative land application was approved allowing NOVEC to construct the South Fork Station (LEGI-2023-0109), with an adjacent Dominion Reed Farm Station. Aerial imagery indicates initial site activities are underway. An additional site plan was submitted by NOVEC on August 9, 2024 (EPLAN-2024-0109) and is under review.

Segment 4 crosses the western portion of the site in a north-south orientation for approximately 0.1 mile, and a portion of expanded right-of-way will be needed on this site to interconnect the Company's Reed Farm Station to the existing corridor. The existing right-of-way currently occupies approximately 2.3 acres of the development parcel, and the proposed expansion will encompass an additional 0.6 acre. Segment 4 will interconnect with the Reed Farm Station, and the alignment does not interfere with South Fork Station operation or development.

8.1.7 CONSERVATION EASEMENTS AND LANDS

8.1.7.1 EXISTING CONDITIONS

ERM identified five conservation easements within 0.25 mile of Segment 4 Impact Centerline, one of which is crossed (Table 8.1-8 and Figure 4.1.7-1). Two of the resources are Loudoun County open space easements and three are easements managed by a non-profit land trust, the ODLC, described below. The segment also crosses RSCRs.

Loudoun County Open Space

Loudoun County uses open space easements established under Virginia's Open-Space Land Act to protect natural resources and/or open space. Easements establish limitations on future development with the land remaining in private ownership. In many instances, open space easements are managed by land trusts, like NVCT or ODLC.

Old Dominion Land Conservancy

The ODLC aims to protect land and water for future generations and to educate the public on the importance of conservation. To date, it has preserved over 21,000 acres through leadership and guidance in promoting easements. Like the NVCT, the ODLC works with landowners to develop and implement land use controls to protect the land from future development. For enrolled properties, the program includes an annual monitoring process by ODLC to confirm the land is maintained in accordance with the easement (Old Dominion Land Conservancy 2025).

River and Stream Corridor Resources

A description of this program is provided in Section 7.1.7. Segment 4 crosses approximately 5.1 acres of these RSCR associated with the Broad Run and Bull Run systems.

TABLE 8.1-8 CONSERVATION EASEMENTS WITHIN 0.25 MILE OF SEGMENT 4 IMPACT CENTERLINE

Tax # or PIN ID Identifier	Easement Type	Management	Description	Approximate Distance and Direction to Segment	Right-of-Way Acreage Crossed
249296798000	Open Space	Loudoun County BOS	Band of about 3.9 acres of county-owned open (herbaceous) land west of the Company's existing corridor and east of Kinsale Place in the Kilpatrick Farms development	Within 190 feet of Segment 4	NA
203465297000, 203461210000	Open Space	ODLC	Approximately 8.9 acres of developed land containing NOVEC and Dominion transmission facilities, including a NOVEC substation; it's unclear what, if anything, the easement protects; it is possible the terms of the easement were changed when the substation was constructed in 2025	Crossed by Segment 4	1.0 acres existing right-of-way
202152240000	Open Space	ODLC	About 23.2 acres of a mix of forested and open land south of Lenah Run between residential developments to the east along Paddock Gate Place and to the west along Heather Meadow Drive	Within 870 feet of Segment 4	NA
202282993000	Open Space	Loudoun County BOS	Approximately 5.1 acres of forested land abutting the west side of Dominion's existing corridor with Lenah Run immediately north	Adjacent to but not crossed by the segment for about 0.2 mile	NA

BOS = Board of Supervisors; NA = not applicable; ODLC = Old Dominion Land Conservancy

8.1.7.2 IMPACT ASSESSMENT

Segment 4 crosses one ODLC easement and passes adjacent to a Loudoun County easement, as discussed further below. The other easements—one ODLC and one Loudoun County—are near to but not crossed by the segment. No additional right-of-way would be required within these two

easements. Impacts due to construction noise, dust, and traffic would be short term and temporary.

The ODLC easement crossed by the segment is entirely developed, containing both Dominion and NOVEC transmission facilities, including a NOVEC substation. Regardless, the Project would be limited to the Company's existing corridor along Segment 4, within which Dominion has the right to maintain existing and install new transmission lines. No new right-of-way would be required. Post-construction, the change in the configuration and number of structures within the existing corridor would not impact land uses. There would be no permanent impact on the resource, and construction impacts, like dust, noise, and traffic, would be short term and temporary.

Similarly, there would be no permanent impact on the County easement adjacent to the Company's existing corridor, within which the Project would be contained. The change in the configuration and number of transmission structures would not modify land use in the area. There would be no permanent impacts, and construction impacts, like noise, dust, and traffic, would be short term and temporary, though adjacent to the easement.

The crossings of RSCRs along Segment 4 all occur with the Company's existing Morrisville-Wishing Star Corridor, thereby avoiding new impacts, such as fragmentation, within the resources. To further minimize impacts, the Company would restore disturbed areas, maintain the right-of-way in an herbaceous cover, and implement and maintain erosion and sediment controls.

8.1.8 RECREATIONAL RESOURCES

8.1.8.1 EXISTING CONDITIONS

The Segment 4 Impact Centerline crosses or passes within 0.25 mile of 28 recreational resources, consisting of 27 trails and one park, described below (Figure 4.1.8-1).

Loudoun County Trails

ERM identified the following 27 shared-use, paved trails, primarily along roads, within 0.25 mile of the Segment 4 component of the Project. Five of those trails are crossed by Segment 4:

- A trail trending east/west between Bright Court to the east and Jennifer Val Court to the west, on land owned by Kirkpatrick Farms Community Association Inc., crossed by the Company's existing transmission corridor.
- A trail heading east/west along the south side of Braddock Road, on land owned by Kirkpatrick Farms Community Association Inc., crossed by the Company's existing transmission corridor.
- A trail trending east/west between Feldspar Place to the east and Beardgrass Place to the west, on land owned by Stone Ridge Association Inc., across the Company's existing corridor.
- A trail trending east/west on the north side of Tall Cedars Parkway across the Company's existing transmission corridor.
- A trail trending east/west along Broad Run on county-owned land south of U.S. Route 50, across the Company's existing corridor.

The trails provide pedestrian/cyclist connections between the various residential developments in the area.

Byrne's Ridge Park

This resource, described in Section 8.1.1, lies about 90 feet east of the Company's existing Morrisville-Wishing Star Corridor in an otherwise residential area on the west side of Stone Springs Boulevard.

8.1.8.2 IMPACT ASSESSMENT

Five of the 27 shared-use, paved trails within 0.25 mile are crossed by the Segment 4 Impact Centerline. Of the remainder, which are near to but not crossed by the segment, Project construction activities could be visible or audible, but these impacts would be temporary, localized, limited to periods of active construction, and would not otherwise prohibit use of the trails. The reconfiguration and addition of transmission structures within the right-of-way could alter existing viewsheds from nearby trails, but the impact would be minor and consistent with existing conditions. The Project would not result in a change in land use conditions at any of these trails.

Of the five trails which are crossed, use of the trails would be impacted by construction noise, dust, and traffic, and temporary closures of the trails and/or temporary detours around the right-of-way could be required when materials and equipment are moved across roads. Dominion would coordinate with the County and appropriate landowner regarding the timing and duration of any required trail closures or detours to mitigate impacts on users. The reconfiguration and addition of transmission structures within the Company's right-of-way could alter existing viewsheds from trails, but the impact would be minor and consistent with existing conditions. There would be no impact on use of the trails during Project operations.

The Company's existing Morrisville-Wishing Star Corridor passes within 100 feet of Byrnes Ridge Park. Depending on scheduling, construction activities could be audible or visible from the athletic fields. The temporary nature of the impact applies both to season and the scheduling of practices and games, as construction activities typically occur during working hours and use of fields for formal recreation activities tends to be in the late afternoon and evenings. Any resulting impact would be temporary, limited to the period of active construction. The reconfiguration and addition of transmission structures within the Company's right-of-way would alter existing viewsheds from the park, but the impact would be minor and consistent with existing conditions. There would be no impact on use of the park during Project operations.

8.1.9 CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP

8.1.9.1 EXISTING CONDITIONS

ERM identified one cemetery, two public schools, and one private daycare center/school within 0.25 mile of Segment 4 Impact Centerline, none of which are crossed. Additional review of the resources within 500 feet of the right-of-way edge are described in Table 8.1-9 and are depicted on Figure 4.1.9-1. There are no places of worship within 0.25 mile of Segment 4 Impact Centerline.

TABLE 8.1-9 CEMETERIES, SCHOOLS, AND PLACES OF WORSHIP WITHIN 0.25 MILE OF SEGMENT 4 IMPACT CENTERLINE

Name	Description	Approximate Distance and Direction from Route Right-of-Way ^a
Foley Family Cemetery	Identified on a USGS topographic map and findagrave.com (2025), this cemetery, located behind (to the east of) Jennifer Val Court in the Kirkpatrick Farms subdivision, occupies about 0.2 acre of forested land in an otherwise open (herbaceous) area between the subdivision to the west and the Company's existing transmission corridor to the east. The site contains at least 14 burials ranging in date from 1765 to 1883. At least one and possibly two headstones are visible on examined aerial photography of the cemetery, though findagrave.com contains photos of multiple headstones. There doesn't appear to be a fence around the cemetery. The forested area which appears to define the cemetery abuts the Company's existing transmission right-of-way.	Adjacent to existing Morrisville-Wishing Star Corridor)
Pinebrook Elementary School	This resource is a public elementary school on an approximately 20.2-acre parcel on Mindful Court. The campus contains the school building, parking lot, playground areas, and athletic fields. Surrounding areas are residential.	About 840 feet west of the Segment 4 right-of-way
Merit School Learning Center at Kirkpatrick	This is a daycare and private school for ages three to 12, located northwest of the intersection of Braddock Road and Supreme Drive. The parcel includes the childcare/school building, parking lot, playground areas, and athletic fields. Surrounding areas are residential.	About 780 feet east of the Segment 4 right-of-way
Arcola Elementary School	This is a public elementary school on an approximately 20.7-acre parcel on the north side of Tall Cedars Parkway west of Millstream Drive. The parcel includes the school building, parking lot, playground areas, and athletic fields. There are forested parcels to the north and east, but surrounding lands are primarily residential.	About 740 feet west of the Segment 4 right-of-way
Aldie KinderCare	This resource is a private daycare on an approximately 3.2-acre parcel west of the intersection of Millstream Drive and Tall Cedars Parkway. The parcel includes the daycare building, parking lot, and playground areas. Surrounding areas are residential and commercial.	About 180 feet west of the Segment 4 right-of-way

8.1.9.2 IMPACT ASSESSMENT

Of the resources listed in Table 8.1-9, three—Pine Brook Elementary School, Merit School Learning Center at Kirkpatrick, and Arcola Elementary School—are greater than 500 feet from the Segment 4 right-of-way. There would be no direct impact on these resources, and indirect impacts, such as construction noise, dust, and traffic, if any, would be short term and temporary. The Project would be limited to the Company's existing Morrisville-Wishing Star Corridor along the segment. The change in the configuration and number of transmission structures within the existing right-of-way would not substantively alter existing conditions at and around these resources, though the new transmission structures and conductors could be visible from within the campuses or cemetery. The Project would not impact land uses at these resources.

The Project would be limited to the Company's Morrisville-Wishing Star Corridor where Segment 4 passes near Aldie KinderCare. Construction impacts, such as dust, noise, and traffic, are possible, but these would be short term and temporary, limited to periods of active construction. The change in the number and configuration of transmission structures in the existing right-of-way during Project operations would not impact uses of the daycare center. Post-construction conditions would be similar to existing conditions as the right-of-way would continue to be used as an electric transmission corridor.

The Foley Family Cemetery is immediately adjacent to the Company's existing right-of-way. The cemetery boundaries are indicated on aerial photography from the 1960s to the present based on its overgrown condition relative to surrounding lands, which are open or developed. Given the early date of the interments and the absence of a fence at the site, it is possible additional unmarked burials could be present. There are two existing lattice structures near the cemetery, one about 100 feet and the other 180 feet to the east/southeast of the burial ground. These structures would be demolished and replaced in the same approximate location with a set of three monopoles. Given the proximity of the cemetery to the existing right-of-way and nearby transmission structures, as well as the absence of a fence demarcating the boundaries, additional research and field surveys are recommended to verify the cemetery boundaries. Pre-construction marking of the cemetery boundaries also is recommended. The surveys would be completed as part of the permitting phase of the Project once authorized by the Commission.

8.1.10 TRANSPORTATION INFRASTRUCTURE

8.1.10.1 EXISTING TRANSPORTATION INFRASTRUCTURE

Segment 4 crosses seven roads (Table 8.1-10 and Figure 4.1.10-1).

TABLE 8.1-10 ROADS CROSSED BY SEGMENT 4

Road Name	Lanes at Crossing	Functional Classification	Crossing Type
Summerall Drive	2	Local	Perpendicular
Braddock Road	4	Major Collector	Perpendicular
Tall Cedars Parkway	4	Minor Collector	Perpendicular
Millstream Drive	4	Local	Perpendicular
Little River Turnpike	4	Minor Arterial	Perpendicular
Racefield Lane	2	Local	Perpendicular
Northstar Boulevard	4	Minor Arterial	Angled

8.1.10.2 PLANNED TRANSPORTATION PROJECTS

ERM reviewed VDOT's Six-Year Improvement Program (VDOT 2022) and Loudoun County data (Loudoun County 2023c) to identify planned road projects in the study area, identifying two near Segment 4.

Dulles West Boulevard—Northstar Boulevard to Arcola Boulevard

This road project consists of a planned four-lane median divided roadway between Northstar Boulevard and Arcola Boulevard. The road would consist of a four-lane median divided facility with 10-foot-wide shared use paths on either side. The project would also include three signalized intersections at Stone Springs Boulevard, Arcola Boulevard, and Northstar Boulevard, also requiring utility relocations, two new stormwater facilities, and two major culvert crossings. Funding for the project includes local sources and regional Northern Virginia Transportation Authority (NVTA) funds. Construction is expected to begin in Fall 2026 (Loudoun County 2025). The project is about 245 feet west of Segment 4 at its closest point.

Foley Branch Boulevard

This road project consists of a planned new, two-lane road from Ticonderoga Road to Auburn Farm Road (Loudoun County 2023c). The road, if built, would cross the Company's existing Morrisville-Wishing Star Corridor near the Loudoun/Mosby Stations.

8.1.10.3 IMPACT ASSESSMENT

Project construction would cause noise, dust, and traffic at road crossings and roads near Segment 4, but these impacts would be short term and temporary. Temporary road closures could be required when needed to move material and equipment across roads. Dominion would coordinate with the County and VDOT in cases where construction activities require temporary closures or detours to mitigate impacts. The only permanent change at road crossings would be in the number and configuration of transmission structures within the corridor, but no structures would be placed within existing road rights-of-way.

Visual impacts at road crossings are addressed in Section 6.4.

There would be no impact on the Dulles West Boulevard Lane Expansion, which Segment 4 does not cross. There would be no conflict between the Project and the planned Foley Branch Boulevard, should the road be built.

8.1.11 AIRPORTS AND HELIPORTS

Based on a review of FAA resources, 2 public, 3 private airports and 9 private heliports, as depicted on Figure 3.2.1-1, are located within 10 nm of Segment 4. A summary of anticipated impacts associated with each facility based on FAA regulations and standard obstruction analysis is presented in Table 8.1-11 and described in the impact section below.

TABLE 8.1-11 AIRPORTS AND HELIPORTS LOCATED WITHIN 10 NAUTICAL MILES OF SEGMENT 4

Airport/Heliport Name	FAA ID	Distance and Direction ^a	Runways and Approach Classifications ^b	14 CFR Part 77 Applicability ^c	Anticipated Project Impact Determination ^d
Public Use Facilities Subject to 14 CFR Part 77					
Washington Dulles International Airport	IAD	4.2 nm E	01L[PIR] / 19R[PIR] 01C[PIR] / 19C[PIR] 01R[PIR] / 19L[PIR] 12[PIR] / 30[B(V)]	Applicable	Surface overlap, Potential Obstruction, Notification anticipated
Leesburg Executive Airport	JYO	7.2 nm N	17[PIR] / 35[B(V)]	Applicable	No impact, No 14 CFR Part 77 surface overlap
Private Use Facilities					
Glascock Heliport	98VA	0.5 nm E	Helipad	Not Applicable, No IAP	No Impact, Facility Closed Indefinitely
Stonesprings Heliport	6VG4	0.6 nm E	Helipad	Not Applicable, No IAP	No Impact
Goose Hunt Farm Airport	3VA5	5.5 nm NW	17/35	Not Applicable, No IAP	No Impact
UVA Health/ Haymarket Medical Center Heliport	45VA	5.8 nm SW	Helipad	Not Applicable, No IAP	No Impact
Inova Loudoun Hospital Heliport	34VA	7.7 nm NE	Helipad	Not Applicable, No IAP	No Impact
UVA Health/Prince William Medical Center Heliport	27VA	8.6 nm SE	Helipad	Not Applicable, No IAP	No Impact
Inova Fair Oaks Hospital Heliport	74VA	8.7 nm E	Helipad	Not Applicable, No IAP	No Impact
Reston Hospital Center Heliport	43VA	8.7 nm E	Helipad	Not Applicable, No IAP	No Impact
Hickory Tree Farm Airport	VA79	9.0 nm W	North/South	Not Applicable, No IAP	No Impact
Egypt Farms Heliport	4VA0	9.1 nm NW	Helipad	Not Applicable, No IAP	No Impact
Walnut Hill Airport	58VA	9.3 nm E	18/36	Not Applicable, No IAP	No Impact
Fairfax County Police Heliport	26VA	0.5 nm E	Helipad	Not Applicable, No IAP	No Impact

FAA = Federal Aviation Administration; OE/AAA = Obstruction Evaluation/ Airport Airspace Analysis; IAP = FAA Approved Instrument Approach Procedure

^a Distance (nm) measurements and approximate direction (cardinal directions; N, NE, E, SE, S, SW, W, NW) were calculated via standard ArcGIS Geoprocessing tools (Near Analysis), utilizing route centerlines and established airport reference points retrieved from the FAA ADIP. 'Nearest project facility' may refer to any point along a route centerline that is geographically nearest to the Established Airport Reference Point. Runways and airport property boundaries may be closer to a project component than calculated and presented in the above table.

^b Runway identification numbers and approach classifications were obtained via the FAA ADIP: <https://adip.faa.gov/agis/public/#/public>; Refer to Section 3.2.1.1.1 and Table 3.2-3 for Approach Classification definitions.

^c Public airports and private facilities with at least one FAA approved IAP are subject to 14 CFR Part 77.

^d Impact determination based on the company's review of 14 CFR Part 77 regulations and airport imaginary surface modeling using standard GIS tools. Refer to impact assessment section for additional information.

8.1.11.1 IMPACT ASSESSMENT

Based on ERM's airport analysis, none of the Segment 4 components will overlap with or exceed any portion of the 14 CFR Part 77.19 defined imaginary surfaces of Leesburg Executive Airport; however, the Wishing Star Station and several structures overlap with imaginary surfaces associated with Washington Dulles International Airport. Refer to Figure 3.2.1-3 for a visual representation and Table 3.2.-4 for a description of the 14 CFR Part 77.19 defined imaginary surfaces for Dulles Airport.

Wishing Star Station and Segment 4 structures overlap with Runway 12's extended approach surface (i.e., the area beyond 10,000 feet from the runway primary surface and within the additional 40,000 foot 40:1 slope area) and extended approach transitional surfaces (area extending 5,000 feet perpendicular to the approach surface at a 7:1 slope). The runway and primary surface elevation of Runway 12 is 309.9 feet AMSL, and ground elevations at proposed tower locations within this surface area are similar on average, ranging between 272 and 356 feet AMSL. Proposed towers within the approach surface range in distance between approximately 17,100 feet and 17,300 feet, and structures within the southern transitional approach range from 17,200 to 18,000 feet, from Runway 12.

At this distance, the minimum imaginary surface height is 687 feet AMSL, which would occur within the extended approach area just north of the Northstar Boulevard and Dulles West Boulevard intersection. Towers located both inside and outside of the approach would have a structure height range of 378 to 517 feet AMSL. For structures located within the approach, the structure height range is between 378 and 508 feet AMSL. As such, none of the towers are anticipated to penetrate Washington Dulles International Airport's 14 CFR Part 77.19 defined imaginary surfaces.

No permanent structure heights will exceed 14 CFR Part 77.17 obstruction standards; however, many of the towers within the approach and to the south are within the 20,000-foot 14 CFR Part 77.9 defined notification surface. Based on the results of the OE/AAA prescreening review, all towers along Segment 4 between Wishing Star Station and the segment terminus at Mosby Station were flagged for FAA notification. As no imaginary surface or obstruction criteria is anticipated to be exceeded, it is likely that the notification request is a result of a potential or suspected TERPS surface conflict under 14 CFR Part 77.17(a)(3) or (4) (i.e., a potential minimum obstacle clearance exceedance).

ERM reviewed the FAA's DOF database (FAA, July 23, 2025), and found that many of Dominion's existing transmission towers within the Project right-of-way north of Tall Cedar Parkway are charted by the FAA as existing obstacles. Existing Dominion owned towers that are mapped in the DOF database in the Segment 4 right-of-way and that overlap with the imaginary surfaces of Dulles Airport range in height from 394 to 497 feet AMSL. In contrast, proposed structures in this section would range between 378 and 508 feet AMSL, representing a maximum height increase of 11 feet AMSL. Existing towers are noted to have not required lighting. In general, the proposed towers would represent an increase in height compared to existing towers in the area; however, based on this review, the Project is not anticipated to affect aeronautical navigation. During formal

FAA notification, the Company would provide surveyed tower location data to the FAA, and will work with the agency to ensure Project compliance with FAA requirements.

In addition, Dominion will use cranes to install the Project's transmission structures. The typical maximum crane height needed for construction is approximately 35 feet above the structure height. The 500 kV structures along Segment 4 range in height from 162 to 197 feet above ground surface, with an average height of approximately 177 feet, including foundation reveal. Any temporary structure that will exceed 200 feet above ground surface will require notification to the FAA under 14 CFR Part 77.9 and could be considered a temporary impact to air navigation. However, as crane use is temporary in nature and would be utilized in discrete locations during phased construction, Dominion anticipates that the FAA will likely issue an "Exceeds But Okay" determination, as defined in FAA Order JO 7400.2R.7-1-3.b (FAA, n.d.-c), indicating that a temporary structure exceeds obstruction standards but does not result in a substantial adverse effect.

Lastly, Dominion has previously been notified by Dulles Airport officials that a new runway may be constructed south of, and in parallel with, Runway 12/30. As the runway has yet to be constructed, no impacts are anticipated; however, the Company is aware that the FAA may take future runway designs into account when reviewing structures for air navigation obstructions.

Dominion plans to submit notification to the FAA prior to construction for all temporary and permanent structures. Dominion will utilize FAA Form 7460-1—Notice of Proposed Construction or Alteration via the OE/AAA online portal to complete the notification. Notification will be completed after the SCC has approved a proposed route, during the permitting phase, and at least 45 days before the start of the proposed construction or the date an application for a construction permit is filed, whichever is earliest.

Private Airports

The FAA does not regulate private airports and heliports without at least one FAA approved IAP under 14 CFR Part 77; however, the Company does review the location of private facilities in close proximity to proposed transmission line structures to ensure potential safety hazards to private air navigation are mitigated.

The nearest private facilities to Segment 4 are Stonesprings Heliport (6VG4) and Glascock Heliport (98VA). Glascock Heliport appears in some FAA datasets; however, this facility has been noted as "Indefinitely Closed" by the FAA. Stonesprings Heliport is located at StoneSprings Hospital Center at 24440 Stone Springs Blvd, Dulles, VA. The helipad is located approximately 3,500 feet east of Segment 4. As Segment 4 structures will be collocated with existing transmission line structures, no new impacts to the facility are anticipated; however, Dominion plans to notify the heliport owner of the tower height increases to aid with their air navigation procedures.

No other private facilities are close enough to Segment 4 to be potentially impacted. As such, no additional review of private facilities near Segment 4 is required.

8.2 NATURAL RESOURCES

8.2.1 SURFACE WATERS

8.2.1.1 WATERSHEDS

Segment 4 is within the Potomac HUC 4-digit (0207) subregion, described above, and splits north-to-south into two smaller HUC 8-digit watersheds—the Middle Potomac-Catoctin (02070008) and Middle Potomac-Anacostia-Occoquan (02070010)—approximately at Byrne’s Ridge Park (USGS 2023) (Figure 4.2.1-1). The south portion of Segment 4 is in the Middle Potomac-Anacostia-Occoquan watershed. Waterbodies in this section include Bull Run, Foley Branch, Elklick Run, and their associated tributaries, as well as open water features. Surface waters flow generally southeast into Bull Run, then after leaving the watershed, flow into the Occoquan Reservoir and eventually the Potomac River.

The north portion of Segment 4 is in the Middle Potomac-Catoctin watershed. Waterbodies in this section include South Fork Broad Run, Lenah Run, Broad Run, and associated tributaries, as well as open water features. Surface waters generally flow northeast into Broad Run, which continues north until it empties into the Potomac River.

8.2.1.2 Wetlands

Existing Conditions

The majority of Segment 4 is within the Company’s existing Morrisville-Wishing Star Corridor, bordered on both sides by forest or residential lands, with small areas of expanded right-of-way required where Segment 4 connects with Segment 3 to the south and with Wishing Star Station to the north.

Table 8.2-1 provides the areas in acres assigned high, medium-high, or medium probabilities of containing wetlands along Segment 4 (see also the Wetland and Waterbody Desktop Study in Attachment 2.D.1 of the DEQ Supplement). The segment encompasses approximately 20.6 acres of wetlands and waterbodies, the majority being PEM wetlands associated with perennial Broad Run, South Fork Broad Run, Bull Run, Lenah Run, Foley Branch, Elklick Run, and associated tributaries. Large areas of PEM wetlands are concentrated around these waterbodies. Wetlands within the Middle Potomac-Catoctin watershed in the north portion of Segment 4 generally flow northeast into Broad Run and its associated tributaries, while wetlands within the Middle Potomac-Anacostia-Occoquan watershed to the south generally flow southeast into Bull Run and its associated tributaries.

Maps depicting the identified aquatic resources and their probabilities of occurrence are provided in Attachment 2.D.1 of the DEQ Supplement. Impacts to waterbodies (riverine and PUB features) are described in Section 8.2.1.3.

TABLE 8.2-1 ACREAGE OF HIGH, MEDIUM-HIGH, AND MEDIUM PROBABILITY WETLANDS AND WATERBODIES WITHIN THE SEGMENT 4 FOOTPRINT

Surface Waters	Segment 4 acres ^a
Total	20.6
Palustrine Forested	<0.1
Palustrine Scrub-shrub	NA
Palustrine Emergent	18.9
Palustrine Unconsolidated Bottom	1.2
Riverine	0.4

NA = Not applicable due to absence of a wetland type within the Project footprint

^a Values have been rounded to the tenths place; as a result, the totals may not reflect the sum of the addends. A value of <0.1 indicates that less than 0.05 but more than 0.0 acre of a wetland type is present.

Impact Assessment

As noted previously, Segment 4 is almost entirely within the Company's existing transmission corridor with areas of expanded right-of-way where the segment connects with Segment 3 to the south and Wishing Star Station to the north. Less than 0.1 acre of PFO would be converted to PEM wetland due to clearing for the Project. Within PEM wetlands, temporary impacts on surface vegetation would result from vehicle and equipment traffic. Permanent impacts would occur where transmission structures are installed in wetlands, if unavoidable. Wetland impacts and mitigation measures are further described in Section 3.2.2.1.

8.2.1.3 WATERBODIES

Existing Conditions

Table 8.2-2 lists the number of and type of waterbody crossings for Segment 4. Based on the Wetland and Waterbody Desktop Study (Attachment 2.D.1 of the DEQ Supplement) methodology, the segment encompasses approximately 0.4 acre of riverine features and 1.2 acres of PUB open waterbody features. Segment 4 crosses 11 waterbodies (of which eight are NHD-mapped). Attachment 2.D.1 of the DEQ Supplement depicts waterbody crossing locations for the Project. Segment 4 crosses perennial South Fork Broad Run, unnamed perennial and intermittent tributaries, and open waterbody features.

TABLE 8.2-2 WATERBODIES CROSSED BY SEGMENT 4

Waterbodies Crossed ^a	Segment 4 count
Total Waterbodies Crossed	11
NHD-mapped perennial streams/rivers	2
NHD-mapped intermittent streams/rivers	5

Waterbodies Crossed ^a	Segment 4 count
NHD-mapped perennial lakes/ponds	1
Non-NHD-mapped waterbodies ^b	3

Source: USGS 2025a

NHD = National Hydrography Dataset

^a Based on recent (2025) aerial imagery, one NHD-mapped perennial stream and two NHD-mapped intermittent streams were identified as PEM wetlands.

^b Identified via aerial imagery during desktop analysis using recent (2025) aerial imagery (VGIN 2025; Loudon County 2024).

Impact Assessment

As noted above, Segment 4 is mostly located within the Company’s existing Morrisville-Wishing Star Corridor, which is cleared of trees. Clearing of riparian buffer would occur in an expanded right-of-way area south of Wishing Star Station, which could impact an adjacent tributary of Broad Run. See also the discussion of waterbody impacts in Section 3.2.2.

8.2.2 NATURAL HERITAGE RESOURCES

8.2.2.1 CONSERVATION SITES

Existing Conditions

VDCR identified one CS within the study area near Segment 4—the Route 705 Prairie CS, described below. Figure 4.2.2-1 depicts the locations of CSs along the Project.

The Route 705 Prairie CS encompasses about 25 acres of land with a B5 ranking, indicating a site of general interest/open space significance. The site is situated in the area north of Grassland Grove Drive and west of Northstar Boulevard, with Lightridge Farm Road intersecting the east portion of the site. Approximately 3.0 acres (about 12 percent) of the site have been cleared or are developed. The remaining land is mainly comprised of forest, fragmented by existing roads in the eastern site area. The species associated with the CS is American bluehearts, which is neither federal- nor or state-listed. See the description of this species in Section 4.2.3. Segment 4 is approximately 0.6 mile east of the CS.

Impact Assessment

Due to the distance from the Route 705 Prairie CS, there would not impact on the resource from construction and operation of the Project along Segment 4.

8.2.2.2 STREAM CONSERVATION SITES

Existing Conditions and Impact Assessment

VDCR identified one SCS within the study area near Segment 4—the Bull Run–Chestnut Lick SCS, described in Section 7.2.2. Segment 4 passes approximately 0.4 mile east of the resource. Due to the distance from the SCS, there would not impact on the resource from construction and operation of the Project along Segment 4.



8.2.2.3 ECOLOGICAL CORES

Existing Conditions and Impact Assessment

No ecological cores are crossed by Segment 4; therefore, no such resources would be impacted by the Project along this segment.

8.2.3 PROTECTED SPECIES

8.2.3.1 FEDERAL- AND STATE-LISTED THREATENED AND ENDANGERED SPECIES

See Section 4.2.3 for a discussion of federal- and state-listed species with potential to occur in the study area, including Segment 2B.

Existing Conditions

Federal-Listed Species

The only species with a proposed federal listing with a confirmed occurrence near Segment 4 is the TCB, identified in the VaFWIS and WERMS databases (VDWR 2026d, 2026e). The species was observed in 2022, approximately 2.5 miles east of Segment 4 in the area west of Dulles Airport and east of Loudoun County Parkway. VDWR's Northern Long-eared Bat, Tri-colored Bat, and Little Brown Bat Consultation Tool, however, does not document any occurrences of TCB summer habitat (i.e., maternity roosts), winter habitat (i.e., hibernacula), or roost trees within the study area and a 2.0-mile radius of the study area (VDWR 2026b).

State-Listed Species

Other than the TCB occurrence noted above, Henslow's sparrow is the only other state-listed species with a documented occurrence within the 2.0-mile search radius around the study area for Segment 4. The VaFWIS and WERMS databases confirmed the presence of Henslow's sparrow within the study area, approximately 1.0 mile east of where Segment 3 and Segment 4 intersect (VDWR 2026d, 2026e).

Impact Assessment

While summer foraging habitat for the TCB is likely present in the vicinity, the Segment 4 component of the Project would be limited almost entirely to the Company's existing Morrisville-Wishing Star Corridor. The only forest clearing anticipated for the segment is a small, approximately 2.0-acre area of expanded right-of-way adjacent to Northstar Boulevard. No impacts on the bat species are anticipated for any route alternative if trees are cleared during the winter according to VDWR TOYRs.

Impacts on open areas that may provide habitat for the Henslow's sparrow would be limited to structure placement and installation. Post-construction, and outside of transmission structures, there would be no change in land use or cover conditions within the maintained right-of-way. Therefore, the Project would have no impact on the Henslow's sparrow along Segment 4.

Assuming the Project is approved by the Commission, Dominion would coordinate with state and federal agencies as needed to determine if surveys, construction TOYRs, or other mitigation would be required.

8.2.3.2 BALD EAGLE MANAGEMENT

Existing Conditions

The eagle nest nearest to Segment 4 (Nest ID PW2101) is northwest of the intersection of Mountain Road and Loudoun Drive approximately 4.6 miles west of the segment. The nest was last observed to be occupied in 2021 (CCB 2022).

Impact Assessment

ERM did not identify any eagle nests within the 660-foot buffer of Segment 4. If eagle nests are identified within 660 feet of the right-of-way approved by the SCC, Dominion would work with the VDWR and other appropriate agencies to identify measures to minimize any impact on the species.

8.2.3.3 OTHER SPECIES OF INTEREST

Existing Conditions

Refer to Section 4.2.3 for an overview of the rare plant species that could potentially be found within the study area. According to the VDCR review, there is potential for several rare plants associated with diabase soils to occur within the Segment 4 footprint (VDCR 2025b). The existing right-of-way of Segment 4 crosses approximately 38.3 acres of diabase soils. The only T&E species associated with diabase soils in this list is Torrey's mountain-mint, which is state-listed as Threatened by the VWDR.

Impact Assessment

Although the Company's existing corridor along Segment 4 crosses diabase soils, no new right-of-way would be required in these areas. Habitat requirements for the plant species identified typically include semi-open diabase glades and prairies. The existing right-of-way of Segment 4 has been maintained with an herbaceous cover, so suitable habitat for these rare plant species could be present. Vehicle movement associated with construction of the transmission line in the existing right-of-way would temporarily impact herbaceous vegetation, but post-construction, disturbed areas would be restored to pre-construction conditions.

Site-specific field investigations are necessary for detailed habitat and impact analyses. In suitable habitat types that meet specific habitat requirements for any of these rare plant species, VDCR recommends conducting detailed plant inventories and coordinating with VDCR biologists to minimize habitat impacts. If suitable habitat conditions for these species are identified within the Project along Segment 4, the Company would work with the VDCR and appropriate regulatory agencies to identify measures to minimize impacts on rare plants and/or rare plant habitat.

8.2.4 VEGETATION

8.2.4.1 EXISTING CONDITIONS

Local Vegetation Characteristics

The majority of Segment 4 is situated within Dominion’s existing right-of-way, which is bordered on both sides by forested, agricultural, and/or developed (utility infrastructure and residential) land. Segment 4 is situated entirely within the Northern Piedmont physiographic province, described above in Section 3.2.2.4.

Table 8.2-3 summarizes the extent of forested, agricultural, and open space (herbaceous) vegetation within Segment 4. Figure 4.1.2-1 depicts land use / land cover types, including forested areas, along the routes.

TABLE 8.2-3 ACREAGE OF VEGETATION TYPES CROSSED BY SEGMENT 4

Vegetation Cover Type	Units	Existing Right-of-Way	Expanded Right-of-Way
Agriculture	acres	0.0	0.6
Forest	acres	0.0	2.2
Open Space	acres	137.3	2.2
Total ^a	acres	137.3	5.9

Sources: VGIN Land Cover data with aerial photo interpretation by ERM (VGIN 2025)

^a Totals may not match the sum of the addends due to rounding.

Forest Conservation Values

Table 8.2-4 summarizes the area of FCV within the right-of-way for Segment 4. While FCV values have been assigned to the area within the existing right-of-way, the corridor is entirely cleared and maintained in herbaceous vegetation.

TABLE 8.2-4 FOREST CONSERVATION VALUE ALONG SEGMENT 4

Forest Conservation Value	Unit	Existing Right-of-Way	Expanded Right-of-Way
Average (1)	acres	25.0	2.3
Moderate (2)	acres	3.8	0.4
High (3)	acres	0.0	0.0
Very High (4)	acres	0.0	0.0
Outstanding (5)	acres	0.0	0.0
Total ^a	acres	28.8	2.7

^a The sum of the addends may not equal the totals due to rounding.

8.2.4.2 IMPACT ASSESSMENT

Because Segment 4 would be confined almost entirely to the Company’s existing right-of-way, only about 2.2 acres of tree clearing would be required along the segment. It is evident that non-forested land is categorized with the FCV-ranking because the total FCV area of expanded right-of-way (2.7 acres) is greater than the amount of expanded right-of-way categorized by the land use / land cover types (2.2 acres). Regardless, the cleared area would be entirely adjacent to existing right-of-way, which avoids fragmentation.

8.3 CULTURAL RESOURCES

8.3.1 ARCHAEOLOGICAL SITES AND FINDINGS

Crossings of archaeological sites are considered a routing constraint due to the potential for an electric transmission line to impact intact archaeological deposits, if present, because of tree clearing, transmission structure placement, or the use or movement of heavy equipment within a site. A confident and complete assessment of the integrity of each site would require archaeological field investigations. A survey would be completed in a subsequent phase of study for the Project along the routes certificated by the SCC.

Stantec identified two known archaeological sites within the right-of-way of Segment 4 (Table 8.3-1).

TABLE 8.3-1 PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES IN THE RIGHTS-OF-WAY OF SEGMENT 4

Site Number	New or Existing/Expanded Right-of-Way	Description	NRHP Status
44LD1280	Existing	Railroad bed, 19 th century	Eligible
44LD1357	Existing	Single dwelling, 20 th century	Unevaluated

Source: VDHR 2026.

NRHP = National Register of Historic Places

8.3.2 ABOVEGROUND HISTORIC RESOURCES AND FINDINGS

This section presents information on known aboveground cultural resources near Segment 4, using VDHR’s tiered study area model previously described. Figure 4.3.2-1 depicts the locations of resources relevant to the routes. Attachment 2.I.1 of the DEQ Supplement, the Stage 1, provides a description, location, and impact assessment for each resource. Segment 4 would not affect a National Historic Landmark; therefore, these resources are not further discussed.

Table 8.3-2 provides information on the considered resources within VDHR study tiers for Segment 4. As detailed in the Stage 1, Segment 4 would have no impact on one resource (076-0179) and a minimal impact on one resource (053-0982).

TABLE 8.3-2 ABOVEGROUND HISTORIC RESOURCES IN THE VDHR STUDY TIERS FOR SEGMENT 4

Buffer (miles)	Resource Category	Resource Number	Description	Impact
1.0 to 1.5	National Historic Landmarks	Not applicable	None identified	Not applicable
0.5 to 1.0	National Register Properties (Listed)	053-0982	Arcola Community Center	Minimal
0.0 to 0.5	National Register—Eligible	076-0179	Deseret	None
0.0 (within right-of-way)	National Register—Eligible	Not applicable	None identified	Not applicable

Source: VDHR 2026.

VDHR = Virginia Department of Historic Resources

8.4 VISUAL RESOURCES

Appendix C provides more detailed information about existing visual conditions and visual impacts along Segment 4.

8.4.1 EXISTING CONDITIONS

Segment 4 is within southeastern Loudon County. This area is primarily characterized by suburban development including residential and commercial areas. A small portion (0.7 mile) of the southern end of this segment crosses open agricultural fields near the Loudon/Mosby Stations within a Rural Agriculture and Residential Landscape Unit. The remaining 3.7 miles of this segment passes through a Suburban Residential Landscape Unit.

Table 8.4-1 describes the VSRs along Segment 4, including recreational resources and residential areas. At these VSRs, the primary viewer groups (defined in Section 3.2.3 and listed in Table 8.4-1), are more aware of and sensitive to changes in visual resource conditions.

In addition to the VSRs, there are several other areas along Segment 4 (Table 8.4-2) where the potential to view the Project would be greater, due to the proximity of these areas to the new transmission line. These other areas are listed in. While proximity does not guarantee visibility, closer viewpoints are more likely to have unobstructed views and greater viewer awareness of (but not necessarily higher viewer sensitivity to) the Project.

TABLE 8.4-1 SEGMENT 4 VISUALLY SENSITIVE RESOURCES AND VIEWER GROUPS

VSR # and Name	VSR Description	Landscape Unit(s) ^a	Primary Viewer Group(s) ^b
Recreational Resources (see Section 8.1.8)			
1	Byrne's Ridge Park	Local park with athletic fields, picnic areas, and paved trails on the west side of Mineral Springs Circle.	SR L, R
2	Hal and Berni Hanson Regional Park	Loudoun County Park with Nature Center, Trails, Athletic Fields, Fishing, Picnic Areas, Playgrounds, Splash Pad, and other amenities on both sides of Evergreen Mills Road, southeast of Brambleton Middle School.	SR L, R
3	Meadow Glen Park	Local park with playground, picnic areas, paved trails, and a pond for fishing/recreation on the north side of Conejo Way, west of Northstar Boulevard.	SR L, R
Residential Areas and Subdivisions			
4	Briarfield Estates Subdivision	Subdivision of single-family homes on the west side of Bishop Meade Place, southwest of Arcola Mills Drive.	SR L, M, W
5	Evergreen Meadows Subdivision	Subdivision of single-family homes on the north side of Hiddenwood Lane, east of Northstar Boulevard, bordering the south side of Briarfield Estates Subdivision.	SR L
6	Kirkpatrick Farms Community	Large community of several subdivisions of single-family homes, condominiums, and townhomes on the north and south sides of Braddock Road between Summerall Drive and Northstar Boulevard.	SR L
7	Lenah Mill Subdivision	Subdivision of single-family homes with multiple parks and recreation facilities, including an amphitheater, golf course, and lake located west of Northstar Boulevard between US 50 and Braddock Road.	SR L
8	Stone Ridge Community	Large community of several subdivisions of single-family homes, multi-family homes, and townhouses with multiple recreation facilities, trails, dog parks, hospitals, schools/daycares, and commercial areas. The community is on both sides of US 50, east of Lenah Mill Subdivision and west of Pinebrook Road.	SR L
9	Virginia Manor Subdivision	Community of several subdivisions of single-family homes, condominiums, and townhomes with multiple parks, playgrounds, recreation facilities, dog parks, and trails. Located west of Northstar Boulevard, between US 50 and Braddock Road, bordering the Lenah Mill Subdivision.	SR L
10	Westridge Community Subdivision	Subdivision of single-family homes and townhomes, accessed on the east side of Northstar Boulevard, and the north side of Braddock Road.	SR L

VSR # and Name	VSR Description	Landscape Unit(s) ^a	Primary Viewer Group(s) ^b
11 Willowsford Community	Large community of single-family homes with parks, dog parks, and recreation facilities in multiple locations in Loudoun County. The Grange Subdivision is on the east side of Fleetwood Drive, south of Evergreen Mills Road. Greens South Subdivision is on the south side of Braddock Road, west of Ashburn Farm Road. The Grove Subdivision is on the north side of Braddock Road.	SR	L

Sources: Fauquier County, Loudoun County, and Prince William County (Subdivisions).

Rte. = Virginia State Route; U.S. = United States Highway; VSR = visually sensitive resource.

^a Landscape Units (see Appendix C): SR = Suburban Residential

^b Viewer Groups (see Section 3.2.3): L = local area residents; M = motorists, commuters, and through travelers; R = recreationists; W = workers

TABLE 8.4-2 SEGMENT 4 AREAS OF HIGH POTENTIAL VISIBILITY

Number and Name	Description	Landscape Unit(s) ^a	Primary Viewer Group(s) ^b
Educational Resources (Schools)			
1	Arcola Elementary School	Public elementary school (Kindergarten through 5th grade) with associated playground and athletic fields on the north side of Tall Cedars Parkway, east of Northstar Boulevard.	SR L, R
2	John Champe High School	Public high school (9th through 12th grade) with associated athletic fields on the south side of Sacred Mountain Street, west of Northstar Boulevard.	SR L, R
3	Goshen Post Elementary School	Public elementary school (Kindergarten through 5th grade) with associated playground and athletic fields on the west side of Goshen Road, west of Northstar Boulevard.	SR L, R
4	Gum Spring Middle School (Formerly Mercer Middle School)	Public middle school (6th through 8th grade) with associated athletic fields on the southeast side of the Mineral Springs Drive/Greenstone Drive intersection west of Gum Springs Road.	SR L, R
5	Primrose School of Aldie	Private school for childcare, Preschool, Kindergarten, and Before/After School Programs for Grade-school students with associated playgrounds on the north side of Kinsale Place, south of Braddock Road.	SR L, R
6	Merit School Learning Center at Kirkpatrick	Childcare from Infant to Junior Kindergarten, and Before/After School Programs for Grade-school students on the west side of Supreme Drive, north of Braddock Road.	SR L, R
7	Pinebrook Elementary School	Public elementary school (Kindergarten through 5th grade) with associated playground and athletic fields on the north side of Mindful Court, south of Braddock Road.	SR L, R
8	Buffalo Trail Elementary School	Public elementary school (Pre-Kindergarten through 5th grade) with associated playground and athletic fields on the west side of Gum Springs Road, south of Braddock Road.	SR L, R
Places of Worship & Cemeteries			
9	Corpus Christi Catholic Church	Place of Worship on the north side of Marwood Drive, west of Northstar Boulevard and south of US 50	SR L
10	Immanuel Mar Thomas Church	Place of Worship on the west side of Supreme Drive and north of Braddock Drive.	SR L

Number and Name	Description	Landscape Unit(s) ^a	Primary Viewer Group(s) ^b
Road Corridors			
11	US 50 (Little River Turnpike)	SR	L, M, W
12	Tall Cedars Parkway	SR	L, M, W
13	Braddock Road	SR	L, M, W
Areas of High Public Concentration			
14	Aldie CDP	SR	L, M, W
15	Ashburn CDP	SR	L, M, W
16	Chantilly CDP	SR	L, M, W
17	Stone Ridge CDP	SR	L, M, W

Sources: U.S. Census Bureau 2023 (population data); VDOT 2024 (AADT data).

AADT = annual average daily traffic; CDP = Census Designated Place; Rte. = Virginia State Route; U.S. = U.S. Route; vpd = vehicles per day; VSR = visually sensitive resource.

^a Landscape Units (see Appendix C): SR = Suburban Residential

^b Viewer Groups (see Section 3.2.3): L = local area residents; M = motorists, commuters, and through travelers; R = recreationists; W = workers

8.4.2 VISUAL IMPACT ASSESSMENT

To evaluate anticipated changes from the Project, ERM compared photographic simulations to existing visual resource conditions at representative locations within each landscape unit and along the different route segments (Appendix C). The only KOP located along Segment 4 is KOP 317, which is in a Suburban Residential Landscape Unit. Other KOPs, while not along this segment, provide representative views of the Project as it crosses Rural Agriculture and Residential Landscape Units (e.g., see KOPs 302 and 303). Existing conditions and simulations for KOP 317 and these other KOPs are provided in Appendix C.

Except for a small segment near the Wishing Star Station where some vegetation clearing would be required, Segment 4 would be constructed entirely within the existing right-of-way. As such, there would be few to no changes to existing landforms and vegetation along most of this segment. Similar to other segments, the anticipated changes in the built environment from the construction and installation of Segment 4 would primarily be centered on the change from lattice to monopole structures. The new monopoles would appear as tall, solid, cylindrical, vertical structures with short horizontal cross arms connected by a series of thin, parallel, horizontal overhead lines. The new monopoles would be taller but would generally appear more compact, sleeker, and less complex than the existing lattice structures.

Table 8.4-3 describe the Project's impacts on visual resource conditions and indicates the anticipated degree of visual change, viewer sensitivity, and an overall impact rating for each VSR along Segment 4. The degree of visual change and viewer sensitivity are based on the assessment of visual change and sensitivity at each KOP and within each landscape unit (see Appendix C).

Table 8.4-4 summarizes the anticipated visual impacts of Segment 4 by landscape unit, including an overall impact rating. The impact rating is based on VSRs, other areas of high visibility, changes in visual characteristics, and viewer sensitivity. Overall, because Segment 4 would be a wreck-and-rebuild, it would have minor to moderate impacts on the existing visual characteristics of the Suburban Residential and Rural Agriculture and Residential Landscape Units it crosses.

TABLE 8.4-3 SEGMENT 4: SUMMARY OF ANTICIPATED IMPACTS BY VISUALLY SENSITIVE RESOURCE AND KOP

VSR # and Name	KOP #	Approximate Distance to Relevant Project Features	Summary of Impacts	Impact Assessment
Recreational Resources				
1	Byrne's Ridge Park	NA	Segment 4: 200 feet west of the southwest corner of the athletic fields.	<p>Prominent or dominant views of the route. West-facing views (towards the route) are generally open with minimal vegetation screening.</p> <p>Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Minor to Moderate</p>
2	Hal and Berni Hanson Regional Park	NA	Segment 4: 0.7-mile south of the intersection of Evergreen Mills Road and Endeavor Drive.	<p>Existing vegetation, topography, and structures surrounding the park screen views of the route. Distance from the Project would limit visibility altogether.</p> <p>Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Negligible</p>
3	Meadow Glen Park	NA	Segment 4: 0.4-mile east of Northstar Boulevard and Conejo.	<p>Minimal to no visibility expected due to topography, vegetation, and other infrastructure.</p> <p>Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Negligible</p>

VSR # and Name	KOP #	Approximate Distance to Relevant Project Features	Summary of Impacts	Impact Assessment	
Residential Areas and Subdivisions					
4	Briarfield Estates Subdivision	NA	Segment 4: 0.2-mile west of the cul-de-sac on Cameron Parish Drive.	Dense woodland along the north boundary of the single-family subdivision would screen north-facing views. West-facing views would be more open with partial screening from vegetation and existing structures.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Minor
5	Evergreen Meadows Subdivision	NA	Segment 4: 200 feet west of the intersection of Briarfield Lane and Racefield Lane.	Within the subdivision, views are less open because of dense vegetation dispersed throughout the area. Generally, views along Hiddenwood Lane would be minimal to nonexistent. Partial west-facing views along Briarfield Lane would exist, especially in the southern portion of the subdivision where there is limited vegetation	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Minor
6	Kirkpatrick Farms Community	NA	Segment 4: crosses 1.1 miles of the western portion of the VSR, 0.2 mile northwest of the intersection of Braddock Road and Summerall Drive.	The Project would be prominently visible where it crosses Braddock Road and Summerall Drive and from homes located along the east and west sides of the right-of-way. Existing residential structures and vegetation would provide screening from areas of the community situated farther away, but upper portions of Project Infrastructure may still be visible.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Minor

VSR # and Name	KOP #	Approximate Distance to Relevant Project Features	Summary of Impacts	Impact Assessment
7 Lenah Mill Subdivision	NA	Segment 4: 0.7 mile east of the intersection of Tarragon Leaf Drive and Striped Maple Drive.	Due to the distance from the Project, as well as intervening vegetation and structures, views from this VSR are expected to be minimal or nonexistent.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Negligible
8 Stone Ridge Community	317	Segment 4: crosses 1.5 miles through the VSR, 0.1 mile west of the intersection of Tall Cedars Parkway and Stone Carver Drive.	The Project would be prominently visible where it crosses Tall Cedars Parkway and Millstream Drive and from homes located along the east and west sides of the right-of-way. Existing residential structures and vegetation would likely screen the Project from areas of the community situated farther away, but upper portions of the Project infrastructure may be visible.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Minor to Moderate
9 Virginia Manor Subdivision	NA	Segment 4: 0.3 mile west of the cul-de-sac on Lilac Oaks Place.	Dense woodland and neighboring residential areas to the west of the VSR would screen west-facing views from the community. Minimal to no visibility of the route is expected.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Negligible to Minor

VSR # and Name	KOP #	Approximate Distance to Relevant Project Features	Summary of Impacts	Impact Assessment
10 Westridge Community Subdivision	NA	Segment 4: 500 feet east of the southeast corner of the VSR.	The Project would be visible above the treeline and through intermittent breaks in the vegetation.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Minor to Moderate
11 Willowsford Community	NA	Segment 4: crosses 0.5 mile of the eastern portion of the VSR, 0.1 mile east of the cul-de-sac on Weatherwane Place.	Segment 4 and the Wishing Star Station are located on the eastern border of the community in a forested area. Although vegetation screening borders the community, portions of the Project would likely be visible above the treelines. Views may be prominent from homes with close proximity to the right-of-way.	Degree of Visual Change: Small Viewer Sensitivity: High Overall Impact: Minor

GM = Golden-Mars Routes; CDP = Census Designated Place; I-95 = Interstate 95; KOP = key observation point; NA = not applicable; Rt. = Virginia State Route; US = U.S. Route; VSR = visually sensitive resource.

TABLE 8.4-4 VISUAL RESOURCE IMPACT SUMMARY

Landscape Unit Type / Component	Impacted VSRs	Impacted Areas and Viewer Groups	Impacted Viewer Groups	Potential Impact Rating
Rural Agriculture and Residential / Segment 4	9 Total: 1	Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Virginia Manor Subdivision (VSR 9) 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers Workers 	Degree of Visual Change: Small Viewer Sensitivity: High Overall Rating: Minor



Landscape Unit Type / Component	Impacted VSRs	Impacted Areas and Viewer Groups	Impacted Viewer Groups	Potential Impact Rating
Suburban Residential / Segment 4	1-11 Total: 11	Road crossings: <ul style="list-style-type: none"> Existing right-of-way—8 crossings Sensitive VSRs (impacts > negligible): <ul style="list-style-type: none"> Byrne’s Ridge Park (VSR 1) Briarfield Estates Subdivision (VSR 4) Evergreen Meadows Subdivision (VSR 5) Kirkpatrick Farms Subdivision (VSR 6) Stone Ridge Community (VSR 8) Virginia Manor Subdivision (VSR 9) Westridge Community Subdivision (VSR 10) Willowsford Community (VSR 11) 	<ul style="list-style-type: none"> Residents Motorists, commuters, through travelers/ Recreationists/ tourists Workers 	Degree of Visual Change: Small Viewer Sensitivity: High Overall Rating: Minor

NA = not applicable; VSR = visually sensitive resource.

8.5 ENVIRONMENTAL JUSTICE

8.5.1 EXISTING CONDITIONS

Based on the EJ criteria thresholds for race, ethnicity, income, and limited English-speaking households described in Section 3.2.5, all four CBGs crossed by Segment 4 meet EJ criteria (Figure 4.5.2-1). Table 8.5-1 provides population and demographic information for each of the CBGs crossed Segment 4.

Segment 4 starts between the Loudoun/Mosby Stations, crosses through four CBGs, and terminates at the Wishing Star Station in Loudoun County. Populations near the southern and northern portions of Segment 4 contain potential communities of color with households of limited English-speaking ability. Within communities of color, the predominant non-White race is Asian; with all CBGs crossed by Segment 4 have Asian with populations that are between three to five times the Virginia state average.

One CBG at the northern terminus of the route has a Hispanic or Latino population that is almost double the state average. Both CBGs have households of limited English-speaking ability greater than the state average. The remaining CBGs between the beginning and the end of Segment 4 contain populations of color greater than the Virginia state average and none of the CBGs have low-income communities or communities with limited English-speaking ability greater than the Virginia state average.

8.5.2 IMPACT ASSESSMENT

As discussed below, impacts on views, property values, and health from construction activities are not anticipated to be significantly adverse, as such Segment 4 would not have overall significantly adverse impacts on potential EJ communities. Section 3.2.5 discusses impacts to environmental justice communities more broadly. The below analysis addresses Segment 4-specific information.

Construction Activities

The primary noise receptors in the study area would be residents along Segment 4. There are 909 residences within 500 feet of Segment 4 Impact Centerline, but they are all within 500 feet of the existing transmission line corridor. Construction will be temporary and occur during daylight hours. During operations, noise and visual conditions are expected to remain consistent with the current environment.

Visual Impacts

Section 8.4 assesses Segment 4 visual impacts. Because Segment 4 crosses CBGs with sensitive populations and/or potential EJ communities, KOPs used in the analysis of visual impacts are representative of views in potential EJ communities. As detailed in Section 8.4.2, Segment 4 would have a small degree of visual change and the overall impact rating on visual resources would be minor.

Property Values and Health Impacts

There are 909 homes that are within 500 feet of Segment 4, although they are all within 500 feet of the existing corridor. Section 3.5.2 addresses the effect of transmission lines on property values and health impacts.

TABLE 8.5-1 ENVIRONMENTAL JUSTICE INDICATORS FOR CBGS WITHIN 1 MILE OF SEGMENT 4

Geography	Population	Total Populations of Color	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic or Latino	Low-Income Population	Limited English-Speaking Household
Virginia	8,657,499	41%	59%	18%	0.1%	7%	0.1%	0.5%	4%	11%	23%	3%
Loudoun County	427,082	48%	52%	7%	0.0%	21%	0%	1%	5%	14%	4%	4%
CT1809 BG1	3,175	48%	52%	8%	0.0%	24%	0.0%	0%	9%	6%	10%	0%
CT 1811 BG3	3,055	62%	38%	28%	1.0%	22%	0.0%	0%	2%	10%	24%	0%
CT1812 BG2	1,951	69%	31%	7%	0.0%	38%	0.0%	0%	3%	21%	27%	8%
CT1813 BG2	4,229	57%	43%	8%	0.0%	37%	0.0%	0%	8%	5%	5%	10%

Sources: U.S. Census Bureau 2023a, 2023b, 2023c (Tables B03002, C17002, C16002)

CT = Census Tract; BG = Block Group

Bold font indicates the CBG is crossed by a route or route variation.

Gray shaded cells include reference population.

Blue shaded cells indicate populations of color including community of color is composed primarily of one of the groups listed in the VEJA definition of "population of color" or the analysis area has a greater percentage of a community of color than the state as a whole.

Yellow shaded cells indicate low-income populations.

Purple shaded cells indicate populations with language barriers.

8.6 GEOLOGICAL RESOURCES

8.6.1 EXISTING CONDITIONS

Segment 4 primarily encounters sedimentary bedrock belonging to the Newark Supergroup made up of shale and siltstone. There is one intersection with a unit of diabase from near the right-of-way intersection with Summerall Drive to Tall Cedars Parkway. (USGS 2005).

8.6.1.1 MINERAL RESOURCES

There are no active mines within 0.25 mile of Segment 4 Impact Centerline. The closest active permitted mine is operated by Chantilly Crushed Stone, Inc. and is approximately 3.3 miles east of the right-of-way on Tanner Lane off US 50. The closest inactive mine resource site is at the same site. (Virginia Energy 2024a,b).

8.6.2 IMPACT ASSESSMENT

Because there are no active permitted mining sites or inactive mineral resource prospects within 0.25 mile of the Segment 4 Impact Centerline, it will have no impact on mineral resources.

9. SUMMARY AND CONCLUSIONS

The Project requires the installation of the new 500 kV Line #5008 from the existing Morrisville Station in Fauquier County to the existing Wishing Star Station in Loudoun County and the new 230 kV Line #2464 from Morrisville Station to the future Anderson Branch Station in Fauquier County. Once operational, the Project would ensure continued grid reliability while meeting future load growth within the NOVA load area. The Project would maximize use of the Company's existing Morrisville-Wishing Star Corridor by combining a wreck and rebuild of existing facilities and installation of the new lines primarily within existing or expanded right-of-way. New right-of-way away from the existing corridor is only needed where constraints are present on one or both sides of the corridor.

The Company retained ERM to review the Morrisville-Wishing Star Corridor and adjacent areas for constraints, identify areas where constraints prevent expansion of the corridor, and identify alternative routes around those constraints. ERM identified constraints meeting this criteria along each Project segment, including conservation and restrictive easements, wetland mitigation banks, public lands, dwellings, and planned developments. For Segments 1, 2A, 2B, and 4 in their entirety and the portions of Segment 3 referred to as the Segment 3 Mainline, the Company developed engineering solutions to limit the Project to existing and/or adjacent expanded right-of-way. Alternative routes developed by ERM for these areas subsequently were eliminated from further consideration for the Project (as discussed in Section 1.5).

An engineering solution could not be developed for the section of the Company's existing Morrisville-Wishing Star Corridor crossing MNBP that would avoid the schedule and permitting risks associated with crossing the MNBP. Both the wreck and rebuild and corridor expansion scenarios would require the Company to obtain new land rights from the NPS, requiring Project review by NPS under NEPA, thereby creating significant permitting uncertainty and risk. An expansion of the existing right-of-way would require additional tree clearing and surface disturbance within the park, resulting in direct physical impacts as well as changes in existing viewshed conditions from within the park. ERM therefore identified and evaluated alternatives around the MNBP.

The process of identifying feasible alternatives for Segment 3 was complicated by a myriad of nearby and adjacent constraints. These include developed and developing industrial and commercial lands along and around the I-66 corridor, Conway Robinson State Forest, lands held by the ABT, easements, homes, and the Digital Gateway planned development, which if built would modify land use conditions in the area between MNBP to the east and Conway Robinson State Forest to the west. The Gainesville alternatives extend from the intersection of the Company's existing Morrisville-Wishing Star Corridor with Wellington Road north across the I-66 corridor to the intersection of the existing right-of-way with US 29. From there, the Pageland alternatives extend north to a point north of Sudley Road, passing west of MNBP.

Of the three Gainesville routes, Gainesville 1 is about 0.9 mile shorter and would require about 6.6 acres and 7.5 acres less new right-of-way than Gainesville 2 or 3, respectively, with a higher percentage of the route adjacent to existing electric transmission lines. While each route crosses similar industrial and developing lands, Gainesville 1 would have the least impact on planned



developments. Gainesville 1 additionally would impact 9.3 acres and 7.6 acres less forested land including 1.9 acres and 4.4 acres less forested wetlands than Gainesville 1 and 2, respectively. While not crossing MNBP, Gainesville 1 would primarily utilize H-frame structures similar in height and appearance to the existing transmission line structures within the Morrisville-Wishing Star Corridor across MNBP to minimize new visual impacts on the park. Other impacts would be similar for the three Gainesville alternatives, including the few number of homes along each. For all these reasons, the Company recommends Gainesville 1 as the Proposed Route for the Project within the Gainesville section of Segment 3. We additionally note that Gainesville 1 is the preferred option of Prince William County staff, as indicated to ERM and the Company during reoccurring monthly meetings between Dominion and County Staff.

Pageland 1 and 2 each avoid MNBP and would be compatible with either the existing rural residential conditions crossed by the routes or with the planned Digital Gateway development, should it be built. Pageland 1 is about 1.0 mile shorter and would require about 5.4 acres less right-of-way with a higher percentage adjacent to existing transmission lines when compared to Pageland 2. Pageland 1 would impact 8.9 acres less forested land including 1.6 acres less forested wetland than Pageland 2. There are 8, 6 and 1 fewer dwellings within 100 feet, 250 feet, and 500 feet, respectively, of the Pageland 1 Impact Centerline compared with Pageland 2. Impacts on most other resources would be similar for the two Pageland routes.

Like Gainesville 1, Pageland 1 would primarily utilize H-frame structures within 0.5 mile of MNBP similar in height and appearance to the existing structures within the Morrisville-Wishing Star Corridor within the park. This would minimize new visual impacts on the park in the areas where the route passes nearest to the resource. While either alternative would result in new visual impacts, because Pageland 1 parallels a longer segment of the existing transmission line corridor, the change in visual characteristics overall from the new greenfield transmission line would be smaller than Pageland 2. The latter also would also be potentially visible from a larger number of adjacent VSRs and other areas with high potential visibility. Pageland 1 would have greater visual impact on historic resources, including the Second Manassas battlefield, as Pageland 2 is further from the main areas where fighting occurred.

Pageland 1 and 2 each cross the Digital Gateway planned development. Should this development be built, the existing rural residential land between MNBP to the east and Conway Robinson State Forest to the west would be converted to industrial land, which is compatible with an electric transmission right-of-way. While Pageland 1 passes nearer to MNBP, more of this route than Pageland 2 passes through the center of the development, aligning with building footprints and future planned infrastructure. Pageland 2 is on the western periphery of the development between the future data centers to the east and residential subdivisions to the west. This would result in greater visual impacts on residential areas west of the Project than Pageland 1, even when considering the changes in land use and visual impacts due to Digital Gateway.

For all the reasons discussed above, the Company recommends Pageland 1 as the Proposed Route for the Project within the Pageland section of Segment 3. We additionally note that Pageland 1 is the preferred option by Prince William County staff, as stated during reoccurring monthly meetings with the Company.

Accordingly, along with the corridor optimization's use of existing and adjacent expanded right-of-way along Segment 1, 2A, 2B, and 4, the Company selected the Segment 3 Mainline, Gainesville 1, and Pageland 1 as the Proposed Route. These routes meet the Project purpose and need while avoiding or reasonably minimizing adverse impacts to the greatest extent reasonably practicable on the scenic assets, historic and cultural resources, and environment of the area concerned. A summary table quantifying the predicted end-to-end impacts of the Project for the Proposed Route as here recommended is included in Appendix B.

REFERENCES

- Anderson, O.C., J. Williamson, and A. Wohl. 2017. "The Effect of High-Voltage Overhead Transmission Lines on Property Values: A Review of the Literature Since 2010." *The Appraisal Journal*, Summer 2017: 179–193.
- American Battlefield Trust. 2025. Our Work. Accessed December 2025. <https://www.battlefields.org/our-work>
- BLM (Bureau of Land Management). 1984. Manual 8400—Visual Resource Management. Department of the Interior. Washington, D.C. Accessed December 2025. https://blmwyomingvisual.anl.gov/docs/BLM_VRM_8400.pdf
- CCB (Center for Conservation Biology). 2022. Eagle Nest Locator. Accessed January 2026. <https://ccbbirds.org/what-we-do/research/species-of-concern/virginia-eagles/nest-locator/>.
- Commonwealth of Virginia. 2025. Code of Virginia: Agricultural and Forestal District Act. Accessed December 2025. <https://law.lis.virginia.gov/vacodepopularnames/agricultural-and-forestal-districts-act/>
- Data Center Dynamics. 2025. Judge rules zoning for PW Digital Gateway data center campus in Virginia voided. Accessed November 2025. <https://www.datacenterdynamics.com/en/news/judge-rules-zoning-for-pw-digital-gateway-data-center-campus-in-virginia-voided/>
- Evergreen Environmental, LLC. 2025. Virginia Mitigation Bank Development and Asset Management. Accessed November 2025. <https://www.evergreenenv.com/vaprojects.htm>
- ESRI (Environmental Systems Research Institute, Inc.), Maxar, Earthstar Geographics, and the GIS User Community. 2025. World Elevation Terrain. Accessed October 2025. <https://elevation.arcgis.com/arcgis/rest/services/WorldElevation/Terrain/ImageServer>.
- FHWA (Federal Highway Administration). 2015. Guidelines for the Visual Impact Assessment of Highway Projects. US Department of Transportation. Washington, D.C. Accessed December 2025. https://www.environment.fhwa.dot.gov/env_topics/other_topics/VIA_Guidelines_for_Highway_Projects.aspx.
- FAA (Federal Aviation Administration). No date-a. Circle Search for Airports. Accessed December 2025. <https://oeaaa.faa.gov/oeaaa/external/searchAction.jsp?action=showCircleSearchAirportsForm>.
- FAA. No date-b. Airport Data and Information Portal. Accessed December 2025. <https://adip.faa.gov/agis/public/#/public>.
- FAA. No date-c. FAA Order JO 7400.2—Procedures for Handling Airspace Matters. Accessed December 2025. https://www.faa.gov/air_traffic/publications/atpubs/pham_html/.
- FAA. No Date-d. Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) Pre-Screening Tool. Accessed December 2025. <https://oeaaa.faa.gov/oeaaa/oe3a/main/#/noticePrescreen>.
- FAA. July 23, 2025. Digital Obstacle File (DOF). Accessed July 23, 2025. https://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/dof/.
- Fauquier County Government. 2023. Fauquier County Comprehensive Plan. Fauquier County, Virginia. Accessed October 2025.

<https://www.fauquiercounty.gov/government/departments-a-g/community-development/comprehensive-plan>.

Fauquier County Government. 2024. Fauquier County Zoning Ordinance. Fauquier County, Virginia. Accessed October 2025.

<https://www.fauquiercounty.gov/government/departments-a-g/community-development/codes-ordinances/zoning-ordinance>.

Fauquier County Government. 2025a. Fauquier County Virginia GIS Portal. Accessed December 2025. <https://experience.arcgis.com/experience/29fdcaa0f36e453bbc97f269228e9ce2>

Fauquier County Government. 2025b. Community Development—Planning. Fauquier County, Virginia. Accessed December 2025.

Fauquier County Government. No date. Application Tracking Map. Accessed December 2025.

<https://fauquiergis.maps.arcgis.com/apps/webappviewer/index.html?id=3905ece5d712477fab2799b46e9715f5>

Fauquier County Department of Agricultural Development. 2025. Conservation Easements. Purchase of Development Rights. Accessed November 2025.

<https://www.fauquierag.com/purchase-of-development-rights/>

Fauquier County Planning Department. 2025. Agricultural and Forestal District Program. Accessed November 2025.

<https://www.fauquiercounty.gov/home/showpublisheddocument/42161/638569945518700000>

Fauquier County School Board. 2025. Mary Walker Elementary School. Accessed December 2025.

<https://mwe.fcps1.org>

Find a Grave. 2025. World's largest gravesite collection. Accessed December 2025.

<https://www.findagrave.com/>.

Google Earth LLC. 2025. Google Earth Pro, Version 7.3.6. Aerial Imagery in Virginia. Accessed October 2025.

Historic Prince William. 2001a. Dunklin Cemetery Register Form. Accessed December 2025.

<https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fhistoricprincewilliam.org%2Fpwcvirginia%2Fdocuments%2FDunklin.doc&wdOrigin=BROWSELINK>

Historic Prince William. 2001b. Marble Hill Slave Cemetery Register Form. Accessed December 2025.

<https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fhistoricprincewilliam.org%2Fpwcvirginia%2Fdocuments%2FMarbleHillSlave.doc&wdOrigin=BROWSELINK>

ICES (International Committee on Electromagnetic Safety). 2019. IEEE Standard for Safety Levels with Respect to Human Exposure to Electromagnetic Fields 0 to 300 GHz. IEEE Std C95.1-2019. New York, NY.

ICNIRP (International Commission on Non-ionizing Radiation Protection). 2010. Guidelines for Limiting Exposure to Time-varying Electric and Magnetic Fields (1 Hz to 100 kHz). Health Phys, 99: 818.

InsideNOVA. 2025. PW Digital Gateway Data Center Construction Can Continue after Court's Stay in Oak Valley Case. Accessed November 2025.

https://www.insidenova.com/news/politics/pw-digital-gateway-data-center-construction-can-continue-after-courts-stay-in-oak-valley-case/article_0b033321-540b-43b0-b8db-4fa1fd1ead38.html

- Jackson, T., and J. Pitts. 2010. "The Effects of Electric Transmission Lines on Property Values: A Literature Review." *Journal of Real Estate Literature*, 18(2): 239–259.
- Kingsbrooke. 2025. Kingsbrooke HOA. Accessed October 2025.
<https://kingsbrooke.connectresident.com/>
- Loudoun County. 2023a. Loudoun County 2019 General Plan. Accessed October 2025.
loudoun.gov/DocumentCenter/View/152285/General-Plan---Combined-with-small-maps-bookmarked.
- Loudoun County. 2023b. Loudoun County Zoning Ordinance. Accessed October 2025.
<https://online.encodeplus.com/regs/loudouncounty-va-crosswalk/doc-viewer.aspx#secid--1>
- Loudoun County. 2023c. "Loudoun County 2019 Countywide Transportation Plan." Amended February 7, 2023. Accessed December 2025.
<https://www.loudoun.gov/DocumentCenter/View/152287/CTP---Combined-with-small-maps-bookmarked>.
- Loudoun County. 2023. Capital Improvement Program Sidewalks, Signals, and Traffic Calming . Accessed October 2025. <https://www.loudoun.gov/DocumentCenter/View/173827/10c---Sidewalks-Signals-and-Traffic-Calming-PDF>
- Loudoun County. 2024. Loudoun County Aerial Archive. Accessed November 2025.
<https://logis.loudoun.gov/archive/>.
- Loudoun County. 2024. Residential Communities Interactive Map. Accessed October 2025.
<https://www.loudoun.gov/communitiesmap>
- Loudoun County. 2025a. Electrical Infrastructure Comprehensive Plan Amendment. Accessed December 2025. <https://www.loudoun.gov/DocumentCenter/View/217503/Attachment-1-Clean-Policies-10-21-25?bidId=>.
- Loudoun County. 2025b. Loudoun County GeoHub. Accessed December 2025. <https://geohub-loudoungis.opendata.arcgis.com/>
- Loudoun County. 2025c. Existing & Approved Development Mapping Tool. Accessed October 2025.
<https://www.loudoun.gov/3905/Existing-Potential-Development-Tool-EPD>
- Loudoun County. 2025a. Dulles West Boulevard—Northstar Blvd. to Arcola Blvd. Accessed October 2025. <https://www.loudoun.gov/5514/Dulles-West-Blvd-Northstar-Blvd-to-Arcol>
- Loudoun County. 2025d. Planning and Zoning. Accessed December 2025.
<https://www.loudoun.gov/123/Planning-Zoning>
- Loudoun County. No date-a FAQs. Accessed December 2025.
<https://www.loudoun.gov/FAQ.aspx?QID=822>
- Loudoun County. No date-b. River and Stream Corridor Resources. Accessed December 2025.
<https://www.loudoun.gov/DocumentCenter/View/215260/River-and-Stream-Resource-Corridor-Flyer>
- Loudoun County. No date-c. Loudoun County Land MARC. Accessed December 2025.
<https://loudouncountyvaeg.tylerhost.net/prod/selfservice#/home>
- Loudoun County Parks, Recreation and Community Services. Byrne's Ridge Park. Accessed December 2025. <https://www.loudoun.gov/Facilities/Facility/Details/Byrnes-Ridge-25>
- Metropolitan Washington Council of Governments. 2024. March 2024 Public Comment Opportunity Draft Regionally Significant for Air Quality Project Details: Nokesville Road (VA 28)

- Widening: Fauquier County Line to Fitzwater Drive (VA 652). Accessed October 2025. https://www.mwcoq.org/assets/1/6/VA_NokesvilleRd_CE2045.pdf
- NCED (National Conservation Easements Database). 2025. NCED: National Conservation Easement Database. Accessed January 2025. <https://www.natureserve.org/projects/nced-national-conservation-easement-database>.
- National Scenic Byway Foundation. 2025. Byways in Virginia. Accessed October 2025. [Virginia—National Scenic Byway Foundation](#)
- NatureServe. 2024. NatureServe Global Conservation Status Ranks. Accessed December 2024. <https://explorer.natureserve.org/AboutTheData/DataTypes/ConservationStatusCategories>.
- Nellis Group. 2025. Exploring Braemar A Bristow, Virginia Community. Accessed October 2025. <https://www.nellisgroup.com/Braemar>
- NPS (National Park Service). 2009. Environmental Assessment, Dominion Virginia Power Transmission Upgrade, Manassas National Battlefield Park. Accessed September 2024. <https://parkplanning.nps.gov/document.cfm?parkID=191&projectID=23714&documentID=26365>
- NPS. 2024a. American Battlefield Protection Program. Accessed November 2025. <https://www.nps.gov/orgs/2287/battlefield-boundaries-map.htm>
- NPS. 2024b. Manassas National Battlefield Park. Accessed October 2025. <https://www.nps.gov/mana/index.htm>.
- NVCT (Northern Virginia Conservation Trust). 2025. Conservation Easements. Accessed November 2025. <https://www.nvct.org/what-is-a-conservation-easement>.
- Paddling.org. Bull Run in Virginia. Accessed November 2025. <https://paddling.com/paddle/trips/bull-run-virginia-2>
- Prince William Conservation Alliance. 2015. Proposed Scenic Byway Information for Aden Road (646) to Joplin Road (619). Accessed October 2025. <https://www.pwconserve.org/issues/scenicbyways/Aden%20Road%20to%20Joplin%20Road%20Scenic%20Byway%20Proposal.pdf>
- Prince William Conservation Alliance. No date. Prince William County's Land Conservation Challenge. Accessed December 2025. <https://www.pwconserve.org/issues/openspace/background.htm>
- Prince William County Geospatial Technology Services, Department of Information Technology. 2023. Imagery/AerialCatalog. Map service. Prince William County, VA. Accessed October 2025. <https://gisweb.pwcva.gov/arcgis/rest/services/Imagery/AerialCatalog/MapServer>.
- Prince William County Government. 2020. Parks, Recreation & Open Space Master Plan. Accessed December 2025. [https://www.pwcva.gov/assets/documents/park/DPRT%20Master%20Plan%20\(Adopted%2010.06.2020\).pdf](https://www.pwcva.gov/assets/documents/park/DPRT%20Master%20Plan%20(Adopted%2010.06.2020).pdf)
- Prince William County Government. 2022a. Prince William County Comprehensive Plan. Prince William County, Virginia. Accessed October 2025. <https://www.pwcva.gov/department/planning-office/prince-william-county-comprehensive-plan/>
- Prince William County Government. 2022b. Prince William County 2040 Comprehensive Plan Long-Range Land Use Map. Prince William County, Virginia. Accessed December 2025.

<https://pwcgov.maps.arcgis.com/apps/webappviewer/index.html?id=99eacf857d9346dd9c65b5c3affe5b7e#>.

Prince William County Government. 2024. Parks and Recreation Department, Broad Run Greenway Alignment. Accessed October 2025. [https://www.pwcva.gov/assets/2024-01/Broad Run Greenway Concept Plan%20%282%29.jpg](https://www.pwcva.gov/assets/2024-01/Broad%20Run%20Greenway%20Concept%20Plan%20%282%29.jpg).

Prince William County Government. 2025a. Prince William County, Virginia Code of Ordinances, Chapter 23—Zoning. Accessed October 2025. [https://library.municode.com/va/prince william county/codes/code of ordinances?nodeId=CH32ZO](https://library.municode.com/va/prince%20william%20county/codes/code%20of%20ordinances?nodeId=CH32ZO)

Prince William County Government. 2025b. GIS County Mapper. Accessed November 2025. <https://gisweb.pwcva.gov/webapps/countymapper/>

Prince William County Government. 2025c. Prince William County GIS Data Portal: Subdivisions. Accessed October 2025. <https://gisdata-pwcgov.opendata.arcgis.com/datasets/PWCGOV::subdivisions/explore?location=38.732575%2C-77.467240%2C10.89>

Prince William County Government. 2025c. Prince William County Development Services ePortal. Accessed December 2025. <https://egcss.pwcgov.org/SelfService#/home>

Prince William County Government. 2025e. University Boulevard Extension Public Information Meeting. Accessed October 2025. <https://www.pwcva.gov/assets/2025-08/University%20Blvd%20Ext%20PIM%20Presentation.pdf>

Prince William County Government. 2025f. Current Road Projects. Accessed October 2025. <https://www.pwcva.gov/department/transportation/current-road-projects/>

Prince William County Government. 2025g. Prince William County Department of Transportation—Mobility Projects. Accessed October 2025. <https://pwcgov.maps.arcgis.com/apps/webappviewer/index.html?id=e12ef5af57114d40875a30c228722e87>

Prince William County Government. 2025. Recreation Mapper. Accessed October 2025. <https://pwcgov.maps.arcgis.com/apps/Shortlist/index.html?appid=7d835aaf7d4c419bb93358856c43677c>.

Prince William County Government. 2025. Public Safety Training Center. Accessed December 2025. <https://pwcva.gov/department/fire-rescue/public-safety-training-center>

Prince William County Government. No date-a Parks & Recreation. Primary Greenway Corridors. Accessed November 2025. <https://www.pwcva.gov/department/parks-recreation/prince-william-county-greenways/>

Prince William County Government. No date-b Parks & Recreation. Catharpin Recreational Park. Accessed November 2025. <https://www.pwcva.gov/department/parks-recreation/catharpin-recreational-park/>

Prince William County Historical Commission. 2022. African American History of Jennie Dean's Homeplace. Accessed December 2025. <https://www.pwcva.gov/assets/2022-10/Jennie%20Dean%20PW%20Gateway%20Final.pdf>

Prince William County Trails and Streams Coalition. 2024. Showcasing PWC Parks—Broad Run Linear Park. Accessed November 2025. <https://www.pwtsc.org/2024/07/showcasing-pwc-parks-broad-run-linear-park/>

Rextag. 2025. Power and Renewables GIS Database. Accessed January 2025. <https://rextag.com/>

- SCENIHR (Scientific Committee on Emerging and Newly Identified Health Risks). 2009. Health Effects of Exposure to EMF. Brussels, Belgium: European Commission. Accessed November 2025. https://ec.europa.eu/health/scientific_committees/emerging/docs/scenihr_o_041.pdf.
- SCENIHR. 2015. Opinion on Potential Health Effects of Exposure to Electromagnetic Fields (EMF). Brussels, Belgium: European Commission. Accessed November 2025. https://ec.europa.eu/health/scientific_committees/emerging/docs/scenihr_o_041.pdf.
- Sequoia Management. 2025. Sequoia Management: Residential Property—Profile. Accessed October 2025. <https://www.sequoiamanagement.com/residential-property-services/foxborough-hoa/>
- SSM (Swedish Radiation Safety Authority). 2015. Research 2015:19. Recent Research on EMF and Health Risk—Tenth report from SSM’s Scientific Council on Electromagnetic Fields. Stockholm, Sweden.
- SSM. 2016. Research 2016:15. Recent Research on EMF and Health Risk—Eleventh report from SSM’s Scientific Council on Electromagnetic Fields, 2016. Including Thirteen years of electromagnetic field research monitored by SSM’s Scientific Council on EMF and health: How has the evidence changed over time? Stockholm, Sweden.
- SSM. 2018. Research 2018:09. Recent Research on EMF and Health Risk—Twelfth report from SSM’s Scientific Council on Electromagnetic Fields, 2017. Stockholm, Sweden.
- SSM. 2019. Research 2019:08. Recent Research on EMF and Health Risk—Thirteenth Report from SSM’s Scientific Council on Electromagnetic Fields, 2018. Stockholm, Sweden.
- SSM. 2020. Research 2020:04. Recent Research on EMF and Health Risk—Fourteenth Report from SSM’s Scientific Council on Electromagnetic Fields, 2019. Stockholm, Sweden.
- SSM. 2021. Research 2021:08. Recent Research on EMF and Health Risk—Fifteenth report from SSM’s Scientific Council on Electromagnetic Fields, 2020. Stockholm, Sweden.
- SSM. 2022. Research 2022:16. Recent Research on EMF and Health Risk—Sixteenth report from SSM’s Scientific Council on Electromagnetic Fields, 2021. Stockholm, Sweden.
- Stanyard, W., L. Thomas, and J. Holland. 2023. Cemetery Investigations QTS Manassas Digital Gateway, Prince William County, Virginia. ERM, Duluth.
- Stone Ridge Association, Inc. 2024. Stone Ridge Association, Inc. Homeowner Welcome Package. Accessed October 2025. <https://stoneridgehoa.org/wp-content/uploads/2024/02/2024-Welcome-Package-Homeowners.pdf>
- U.S. Army Corps of Engineers Norfolk District. 2023. Public Notice: NAO-2019-00517-TREC. Accessed December 2025. <https://www.nao.usace.army.mil/Media/Public-Notices/Article/3581330/nao-2019-00517-trec/>.
- U.S. Census Bureau. 2024a. *American Community Survey 5year Estimates Census Data (2019–2023)*. File No. B03002, Hispanic or Latino Origin by Race. Accessed December 2025. [https://data.census.gov/cedsci/.-year Estimates Census Data \(201](https://data.census.gov/cedsci/.-year Estimates Census Data (201)
- U.S. Census Bureau. 2024b. *American Community Survey 5year Estimates Census Data (2019–2023)*. File No. C17002, Ratio of Income to Poverty Level in the Past 12 Months. Accessed December 2025. [https://data.census.gov/cedsci/.-year Estimates Census Data \(201](https://data.census.gov/cedsci/.-year Estimates Census Data (201)
- U.S. Census Bureau. 2024c. *American Community Survey 5year Estimates Census Data (2019–2023)*. File No. C16002, Household Language by Household Limited English Speaking

- Status. Accessed December 2025. [https://data.census.gov/cedsci/.-year Estimates Census Data \(201](https://data.census.gov/cedsci/.-year Estimates Census Data (201)
- U.S. Census Bureau. 2024d. *American Community Survey 5year Estimates Census Data (2019–2023)*. File No. B15002, Sex by Educational Attainment for the Population 25 Years and Over. Accessed December 2025. [https://data.census.gov/cedsci/.-year Estimates Census Data \(201](https://data.census.gov/cedsci/.-year Estimates Census Data (201)
- U.S. Census Bureau. 2024e. *American Community Survey 5year Estimates Census Data (2019–2023)*. File No. B01001, Sex by Age. Accessed December 2025. [https://data.census.gov/cedsci/.-year Estimates Census Data \(201](https://data.census.gov/cedsci/.-year Estimates Census Data (201)
- USDA-NRCS (U.S. Department of Agriculture—Natural Resources Conservation Service). Soil Survey Geographic Data (SSURGO). 2025. Accessed October 2025. <https://www.nrcs.usda.gov/resources/data-and-reports/soil-survey-geographic-database-ssurgo>.
- USEPA (U.S. Environmental Protection Agency). 2025. Mitigation Banks under CWA Section 404. Accessed November 2025. [Mitigation Banks under CWA Section 404 | US EPA](#)
- USFS (U.S. Forest Service). 1995. *Landscape Aesthetics: A Handbook for Scenery Management*. Agricultural Handbook Number 701. U.S. Department of Agriculture. Washington, D.C. Accessed December 2025. [https://blmwyomingvisual.anl.gov/docs/Landscape%20Aesthetics%20\(AH-701\).pdf](https://blmwyomingvisual.anl.gov/docs/Landscape%20Aesthetics%20(AH-701).pdf)
- USFWS (U.S. Fish and Wildlife Service). No date. *Information for Planning and Consultation (IPaC)*. Online System. Accessed October 2025. <https://ecos.fws.gov/ipac/>.
- USFWS. 2013. Classification of Wetlands and Deepwater Habitats of the United States. Accessed December 2024. <https://www.fws.gov/program/national-wetlands-inventory/classification-codes>.
- USFWS. 2022. Tricolored Bat. Accessed December 2024. <https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus>.
- USFWS. 2025. National Wetlands Inventory. Accessed October 2025. <https://www.fws.gov/program/national-wetlands-inventory/wetlands-data>.
- USGS (U.S. Geological Survey). 2005. Preliminary integrated geologic map databases for the United States: Delaware, Maryland, New York, Pennsylvania, and Virginia. Accessed: March 2025. Retrieved from: <https://pubs.usgs.gov/of/2005/1325/#VA>
- USGS (U.S. Geological Survey). 2023. Boundary Descriptions and Names of Regions, Subregions, Accounting Units and Cataloging Units from the 1987 USGS Water-Supply Paper 2294. Accessed November 2025. https://water.usgs.gov/GIS/huc_name.html.
- USGS. 2025a. Topographic Maps. Accessed January 2025. <https://www.usgs.gov/programs/national-geospatial-program/topographic-maps>.
- USGS. 2025b. National Hydrography Dataset Plus High Resolution. Accessed November 2025. Retrieved from: <https://erm.maps.arcgis.com/home/item.html?id=f1f45a3ba37a4f03a5f48d7454e4b654>
- U.S. News. Chris Yung Elementary School. Accessed November 2025. <https://www.usnews.com/education/k12/virginia/chris-yung-elementary-212620>
- U.S. News. Mary Walter Elementary School. Accessed November 2025. <https://www.usnews.com/education/k12/virginia/mary-walter-elementary-218925>

- VADEQ (Virginia Department of Environmental Quality). 2025. *Virginia EJScreen+*. Environmental Justice. Accessed November 2025. <https://experience.arcgis.com/experience/9d59086932ef401d9cc10b6e1415bf67>
- Virginia Botanical Associates. 2026. Digital Atlas of the Virginia Flora. Accessed January 2026. <https://www.vaplantatlas.org/index.php?do=start&search=Search>.
- Virginia Department of Energy (Virginia Energy). 2024a. Geology Mineral Resources. Accessed: March 2025. Retrieved from: <https://energy.virginia.gov/webmaps/GeologyMineralResources/>
- Virginia Department of Energy (Virginia Energy). 2024b. Mineral Mining Map. Accessed: March 2025. Retrieved from: <https://energy.virginia.gov/webmaps/MineralMining/>
- Virginia Marine Resources Commission. 2023. Sharpless Data Center Joint Permit Application. Accessed December 2025. <https://webapps.mrc.virginia.gov/public/habitat/getADD.php?id=185157>
- VDCR (Virginia Department of Conservation and Recreation). 2018. 2018 Virginia Outdoors Plan Chapter 10 Scenic Resources. Accessed December 2025. <https://www.dcr.virginia.gov/recreational-planning/document/vopchapt10.pdf>
- VDCR. 2021a. Definitions of Abbreviations used on Natural Heritage Resource Lists. Accessed December 2025. <https://www.dcr.virginia.gov/natural-heritage/help>.
- VDCR. 2021b. Overview of the Physiography and Vegetation of Virginia. Accessed December 2025. <https://www.dcr.virginia.gov/natural-heritage/natural-communities/document/ncoverviewphys-veg.pdf>.
- VDCR. 2023a. Virginia Natural Landscape Assessment. Accessed December 2025. <https://www.dcr.virginia.gov/natural-heritage/vaconvisvnl>.
- VDCR. 2023b. Forest Conservation Value. Model last updated 2020. Accessed December 2025. <https://www.dcr.virginia.gov/natural-heritage/vaconvisforest>.
- VDCR. 2024. Project Review. Received July 18, 2024.
- VDCR. 2025a. *Virginia Natural Heritage Database Search*. Accessed December 2025. <https://vanhde.org/species-search>.
- VDCR. 2025b. Project Review. Received November 12, 2025.
- VDCR. 2025c. *Virginia Scenic Rivers Study Reports*. Accessed December 2025. <https://www.dcr.virginia.gov/recreational-planning/srstudies>
- VDCR. 2025d. Department of Conservation and Recreation's Virginia Conservation Lands Database. Accessed December 2025. <https://www.dcr.virginia.gov/natural-heritage/clinfo>.
- VDHR (Virginia Department of Historic Resources). 2008. Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia. Accessed June 2022. https://www.dhr.virginia.gov/wp-content/uploads/2018/08/DHR_Guidelines_for_Transmission_Line_Assessment.pdf.
- VDHR (Virginia Department of Historic Resources). 2026. Virginia Cultural Resources Information System. Accessed January 2026. <https://www.dhr.virginia.gov/programs/vcris/>.
- VDHR (Virginia Department of Historic Resources). 2025a. About DHR. Accessed November 2025. <https://www.dhr.virginia.gov/about/>

- VDHR. 2025b. Preservation Easements. Accessed November 2025. <https://dhr.virginia.gov/programs/easements/>.
- VDOE (Virginia Department of Education). 2025. Virginia School Quality Profiles. Accessed January 2026. <https://schoolquality.virginia.gov/schools/pinebrook-elementary#fndtn-desktopTabs-enrollment>
- VDOF (Virginia Department of Forestry). Forest Conservation Value. 2020. Accessed December 2025. [https://dof.virginia.gov/forest-management-health/forestland-conservation/#:~:text=The%20Forest%20Conservation%20Value%20\(FCV,value%20conservation%20forests%20across%20Virginia.](https://dof.virginia.gov/forest-management-health/forestland-conservation/#:~:text=The%20Forest%20Conservation%20Value%20(FCV,value%20conservation%20forests%20across%20Virginia.)
- VDOF (Virginia Department of Forestry). Conway Robinson State Forest. 2025. Accessed October 2025. <https://dof.virginia.gov/education-and-recreation/state-forests/virginia-state-forests/conway-robinson-memorial-state-forest/>.
- Virginia Department of Game and Inland Fisheries, Center for Conservation Biology at the College of William and Mary, and Virginia Commonwealth University. 2012. *Management of Bald Eagle Nests, Concentration Areas, and Communal Roosts in Virginia: A Guide for Landowners*. Accessed December 2025.
- VDOT. 2018. *VTrans2040 Multimodal Transportation Plan: Corridors of Statewide Significance Needs Assessment—North–South Corridor (G)*, pp. 20–28. Accessed December 2025. <https://vtrans.virginia.gov/archive/past-vtrans-plans>
- VDOT (Virginia Department of Transportation). 2022. Six-Year Improvement Program Projects. Accessed November 2025. <https://www.virginiaroads.org/maps/VDOT::syip-approved-projects-2/about>
- VDOT. 2024. *Traffic Counts*. Accessed January 2025. <https://www.vdot.virginia.gov/doing-business/technical-guidance-and-support/traffic-operations/traffic-counts/>
- VDOT. 2025. Virginia Byways. Accessed December 2025. <https://vdot.virginia.gov/travel-traffic/travelers/virginia-byways/>.
- VDWR. (Virginia Department of Wildlife Resources). 2021. *Virginia's 2021-2031 Wildlife Viewing Plan*. Accessed January 2026. <https://dwr.virginia.gov/wp-content/uploads/media/Virginia-Wildlife-Viewing-Plan.pdf>
- VDWR. 2025. *Virginia's 2025 Wildlife Action Plan*. Accessed January 2025. <https://dwr.virginia.gov/wildlife/wildlife-action-plan/wildlife-action-plan-2015/>.
- VDWR. 2026a. Battle for Virginia. Accessed January 2026. <https://dwr.virginia.gov/vbwt/piedmont-trail/pbv/>.
- VDWR. 2026b. Northern Long-eared Bat, Tri-colored Bat, and Little Brown Bat Consultation Tool. Accessed January 2026. <https://dwr.virginia.gov/wildlife/bats/northern-long-eared-bat-tri-colored-bat-and-little-brown-bat-consultation-tool/>.
- VDWR. 2026c. Virginia Bird and Wildlife Trail. Accessed January 2026. <https://dwr.virginia.gov/vbwt/>.
- VDWR. 2026d. *Virginia Fish and Wildlife Information Service*. Accessed January 2026. <https://services.dwr.virginia.gov/fwis/index.asp>.
- VDWR. 2026e. *Wildlife Environmental Review Map Service (WERMS)*. Accessed January 2026. <https://dwr.virginia.gov/gis/werms/>.

- VGIN, (Virginia Geographic Information Network). 2024a. *Virginia GIS Clearinghouse*. Accessed January 2025. <https://vgin.vdem.virginia.gov/pages/clearinghouse/>.
- VGIN. 2025. *Most Recent VBMP Imagery (WGS)*. Virginia Base Mapping Program, Map Service. Accessed January 2026. https://vginmaps.vdem.virginia.gov/arcgis/rest/services/VBMP_Imagery/MostRecentImage_WGS/MapServer.
- VOF (Virginia Outdoors Foundation). No date. Virginia Outdoors Foundation—Our Work. Accessed November 2025.
- WHO (World Health Organization). 2007. *WHO Research Agenda for Extremely Low Frequency Fields*. Accessed December 2025. <https://www.who.int/teams/environment-climate-change-and-health/radiation-and-health/non-ionizing/emf/research-agenda>.
- William and Mary Department of Geology. 2024. *Geology of Virginia*. Accessed November 2025. <http://geology.blogs.wm.edu/>.