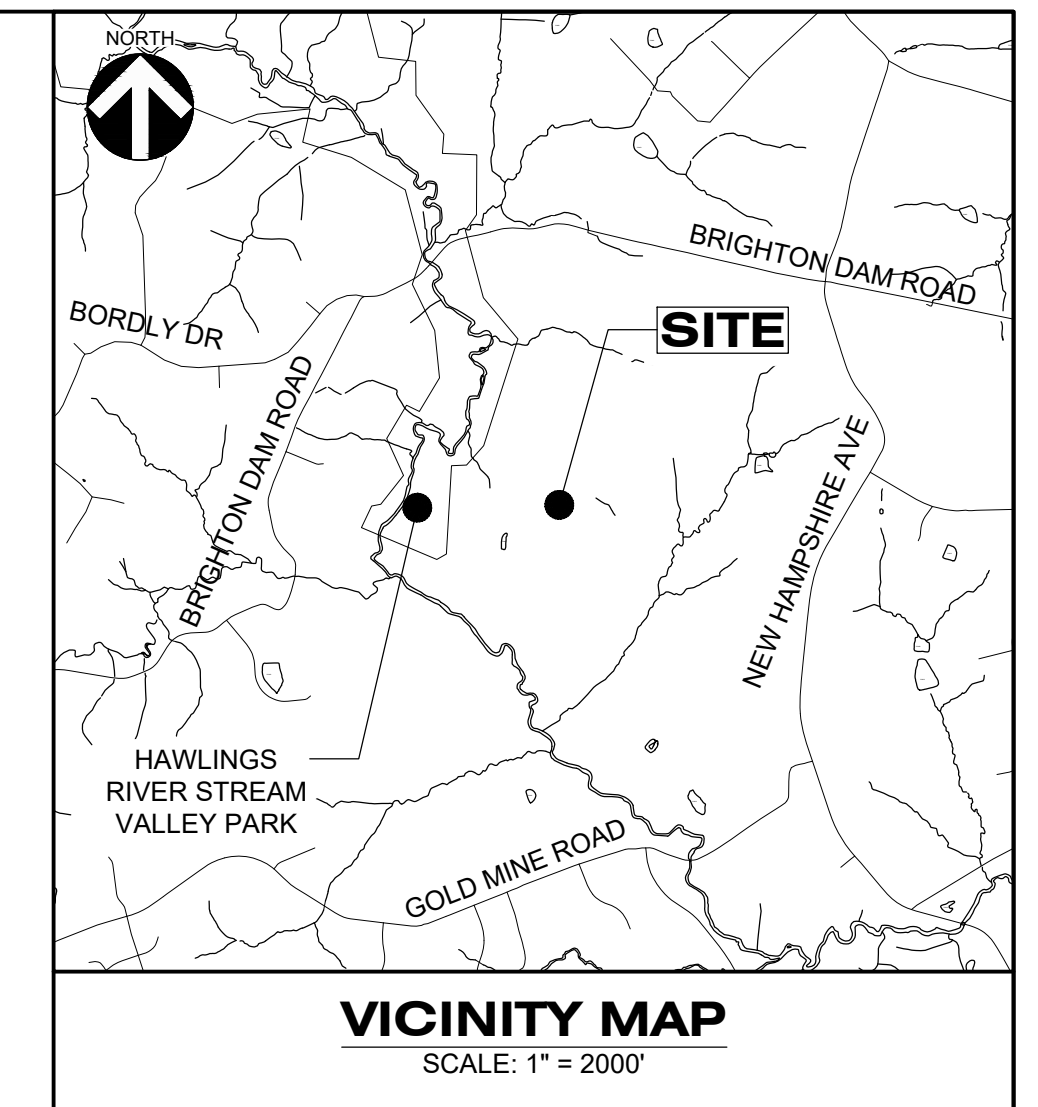
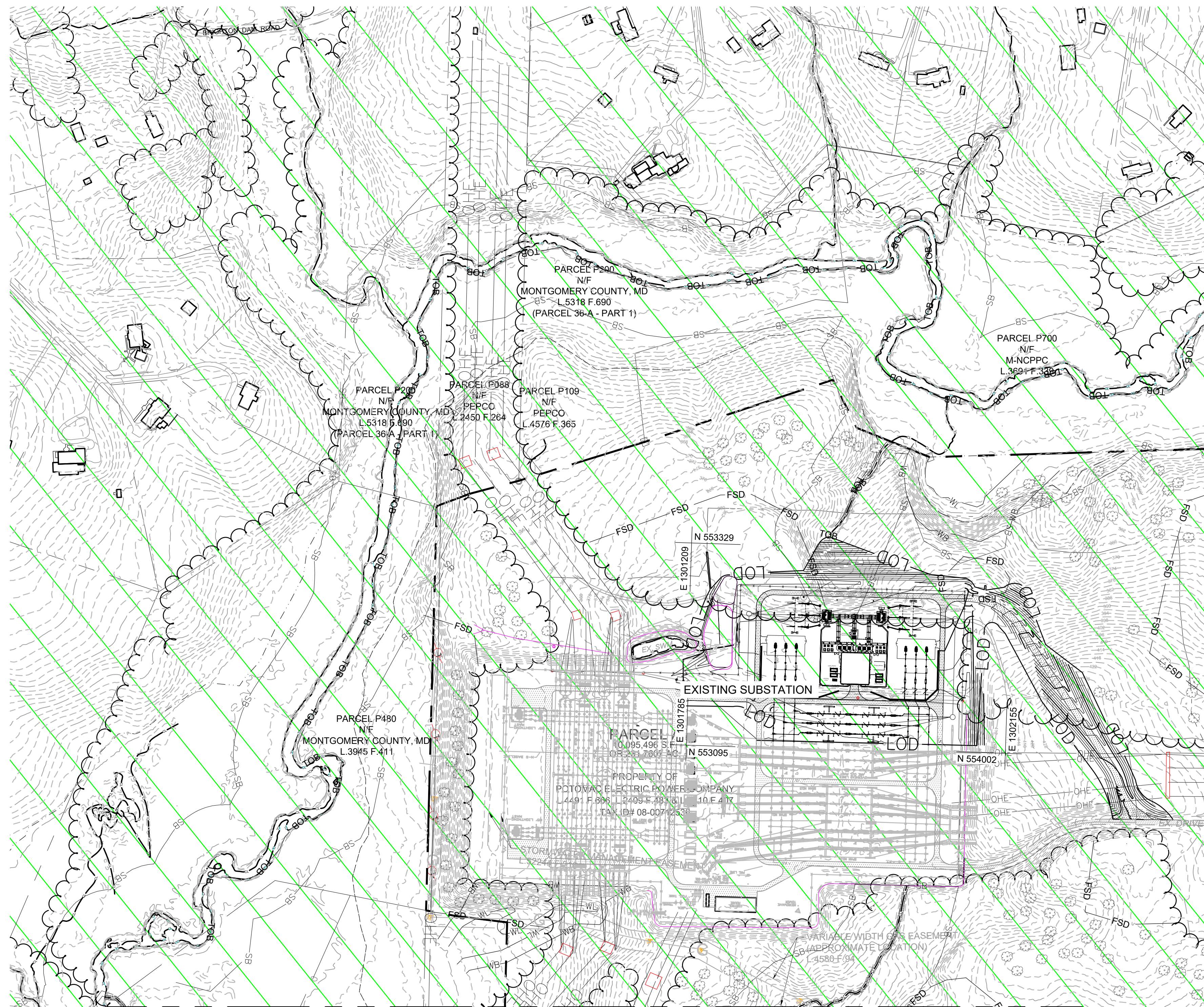


# Attachment A



### LEGEND

- EXISTING ROAD
- EXISTING BUILDING
- EXISTING SUBJECT PROPERTY BOUNDARY
- EXISTING ADJACENT PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- RURAL CLUSTER (RC)

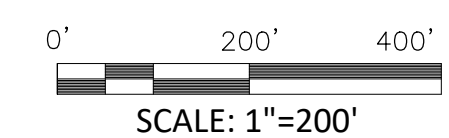
MATCHLINE SHEET 2 OF 4

MATCHLINE SHEET 3 OF 4

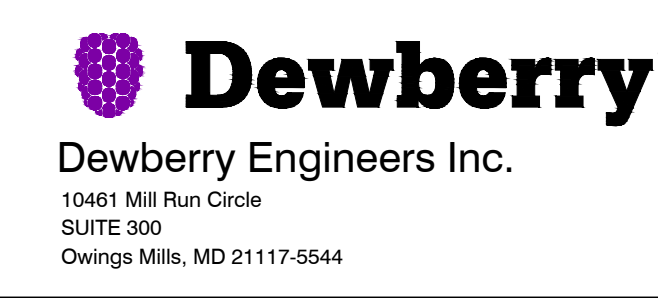
DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					



**Professional Certification**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 33959, Expiration Date: January 14, 2025.



**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MANS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.



**PEPCO RESPONSIBLE ENGINEER:**  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM

**DESIGN CONSULTANT:**  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

WR NO.

FDR NO.

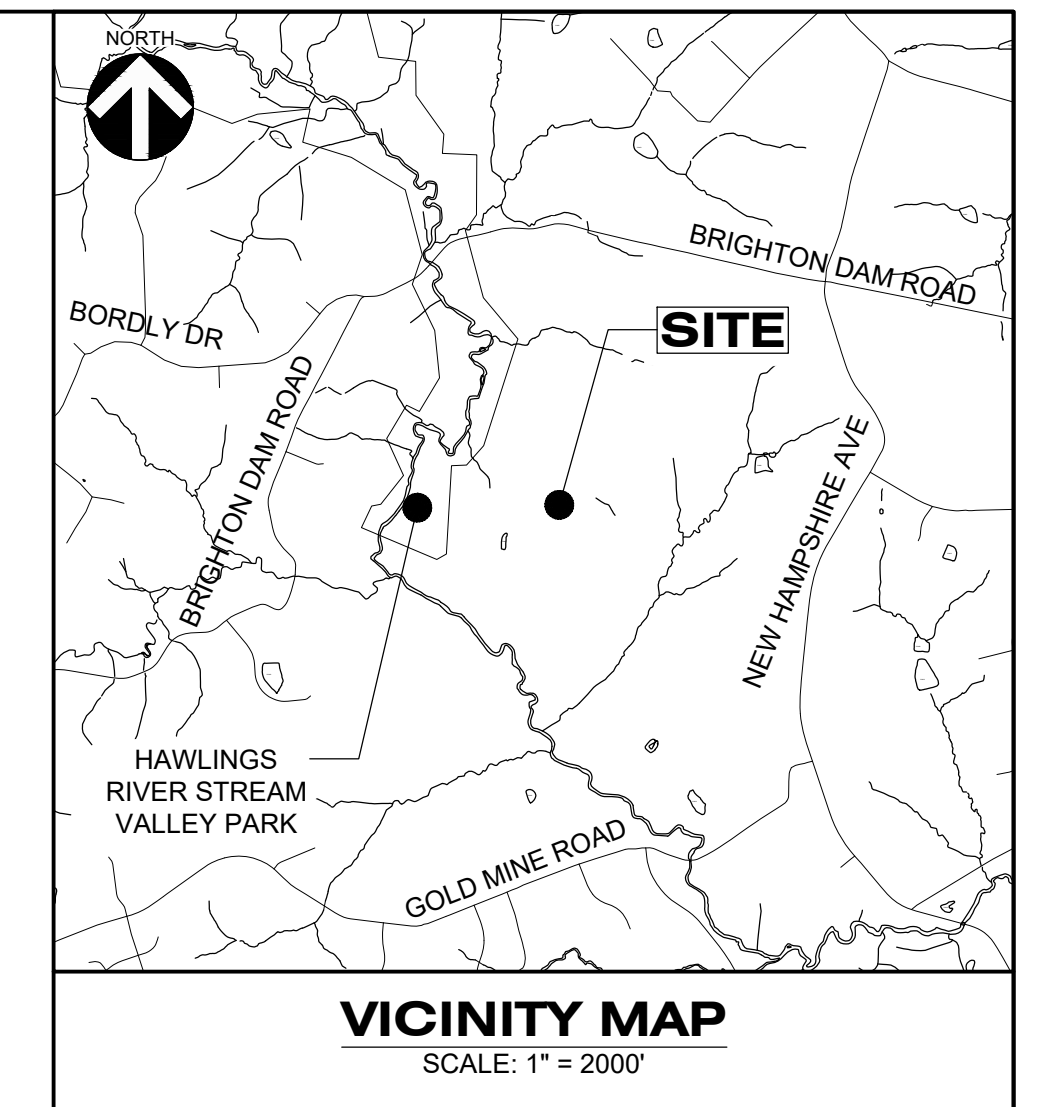
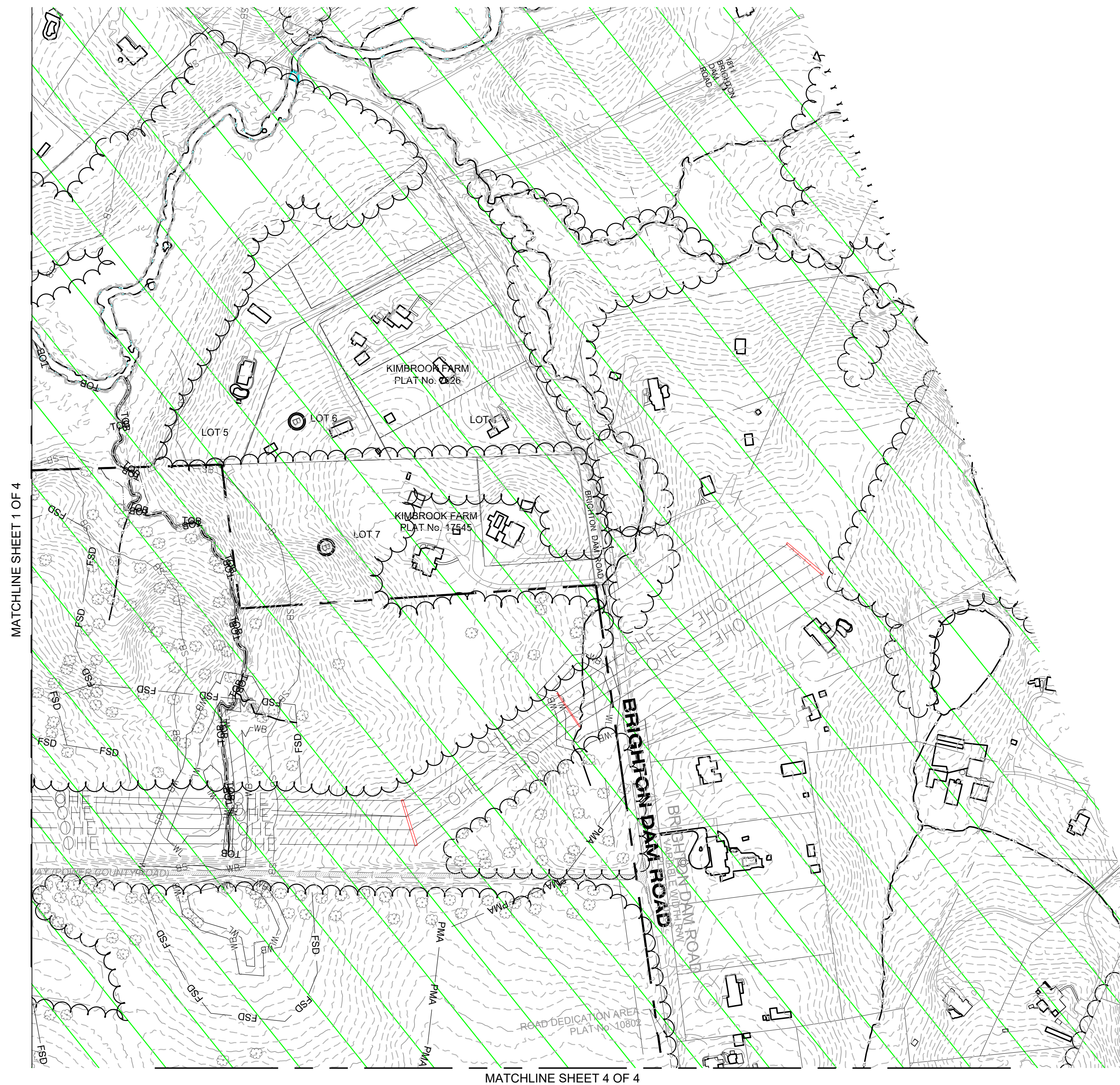
**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKVILLE, MD 20833**

**POTOMAC ELECTRIC POWER CO.**

SCALE	APPD	APPD	APPD
DATE			
DR. BY MB			
CHKD. LB			
INSP.			

**02-LOCAL**  
SHEET 1 OF 4

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB88)




**LEGEND**

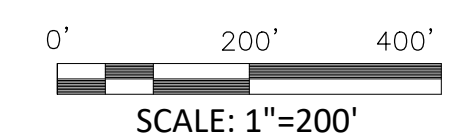
- EXISTING ROAD
- EXISTING BUILDING
- EXISTING SUBJECT PROPERTY BOUNDARY
- EXISTING ADJACENT PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- RURAL CLUSTER (RC)

MATCHLINE SHEET 1 OF 4



MATCHLINE SHEET 4 OF 4

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					

  
**Professional Certification**  
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2025.



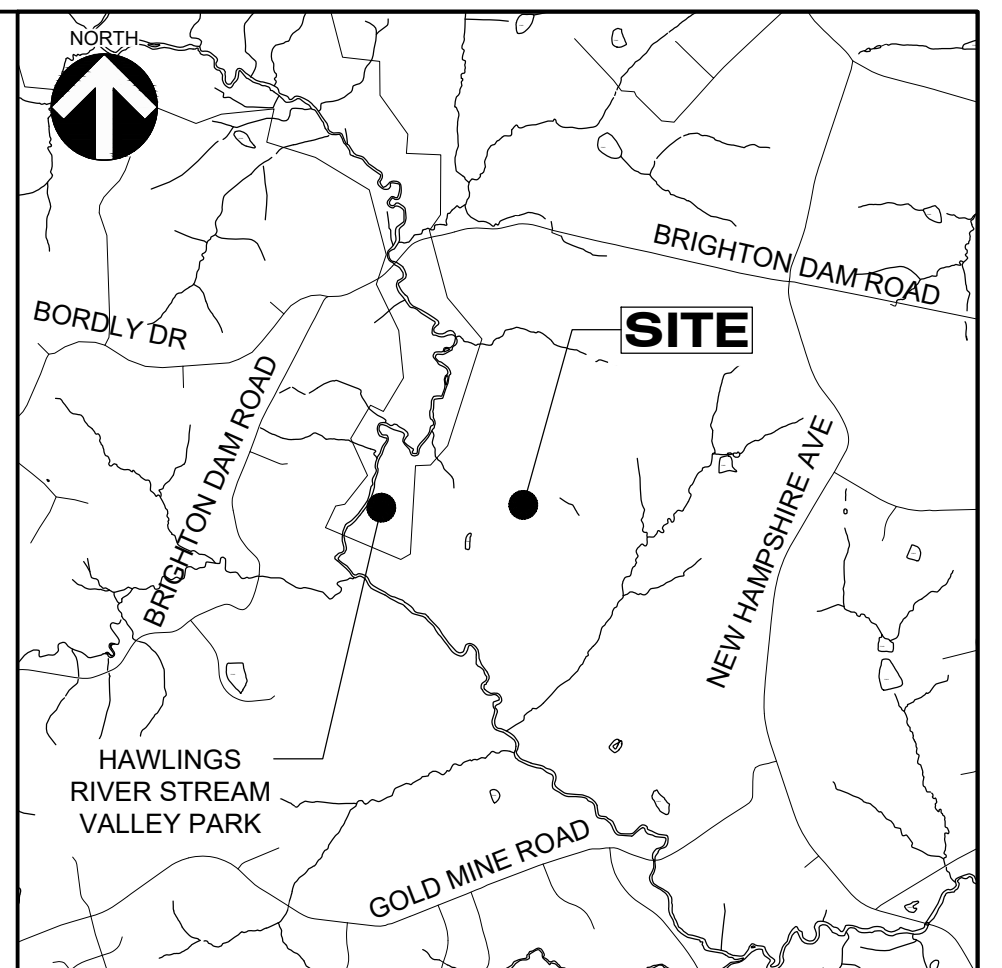
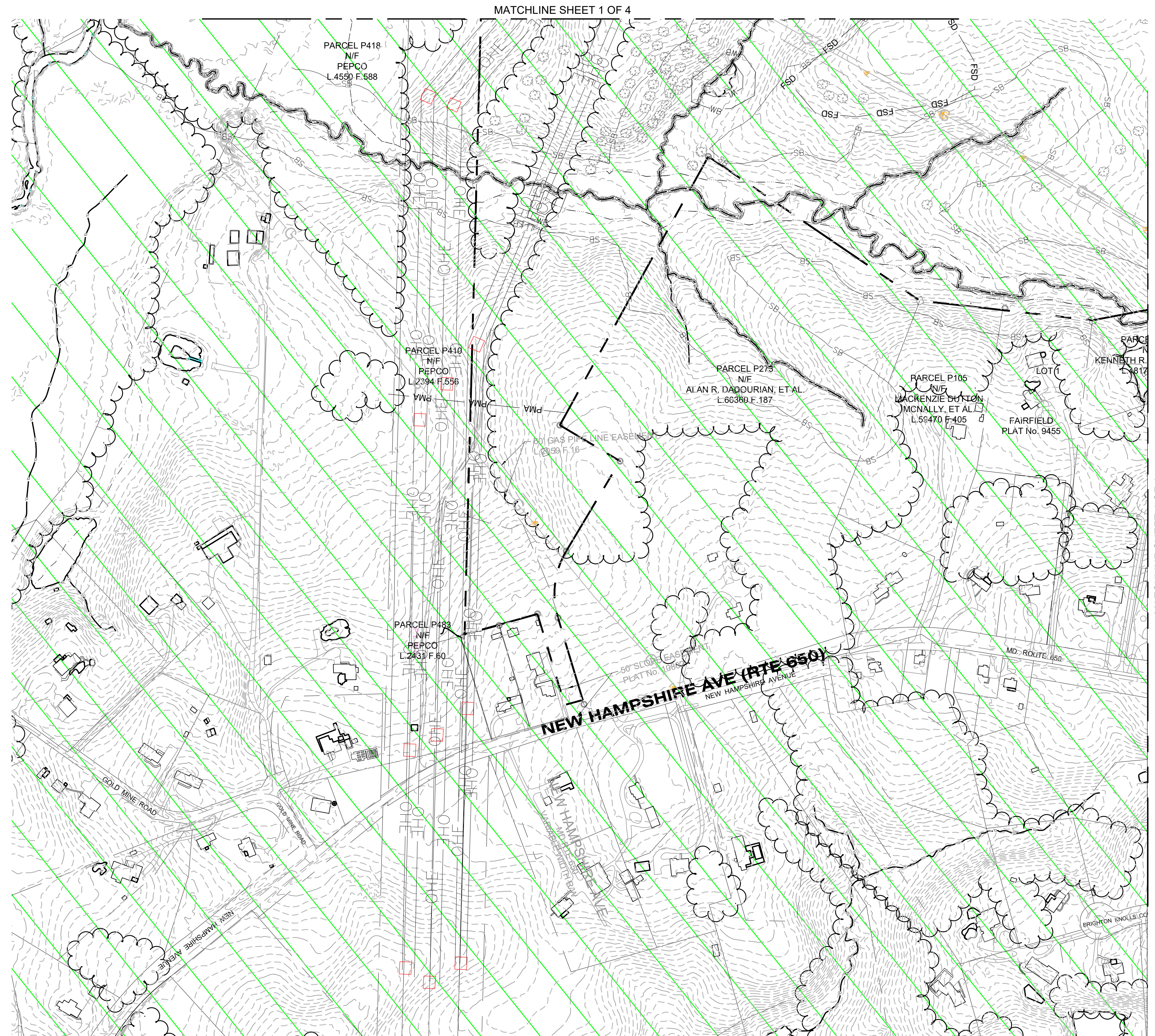
**NOTE**  
 FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
 48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
 INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MANS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.

  
 AN EXELON COMPANY  
  
 Dewberry Engineers Inc.  
 10461 Mill Run Circle  
 SUITE 300  
 Owings Mills, MD 21117-5544

PEPCO RESPONSIBLE ENGINEER:  
 701 9TH STREET NW  
 WASHINGTON, DC 20011  
 NAME: IBRAHIM KHATIB  
 PHONE: 703.226.9978  
 EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM  
 DESIGN CONSULTANT:  
 NAME: LISA R. BETZ, PE  
 PHONE: 410.645.1402  
 EMAIL: LBETZ@DEWBERRY.COM  
 TAX DIST.

<b>MR2025007 BRIGHTON SUBSTATION 1300 POWER COUNTY ROAD BROOKVILLE, MD 20833</b>			
<b>POTOMAC ELECTRIC POWER CO.</b>			
WR NO.	SCALE	APPD	APPD
FDR NO.	DATE		
	DR. BY: MB		
	CHKD: LB		
	INSP:		
<b>02-LOCAL</b> SHEET 2 OF 4			

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB88)



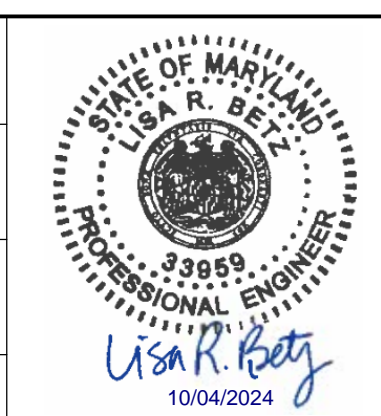
**VICINITY MAP**  
SCALE: 1" = 2000'

**LEGEND**

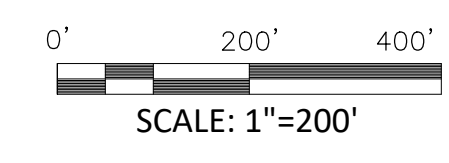
- EXISTING ROAD
- EXISTING BUILDING
- EXISTING SUBJECT PROPERTY BOUNDARY
- EXISTING ADJACENT PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- RURAL CLUSTER (RC)

MATCHLINE SHEET 4 OF 4

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					



**Professional Certification**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2025.



**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.



**Dewberry**  
Dewberry Engineers Inc.  
10461 Mill Run Circle  
SUITE 300  
Owings Mills, MD 21117-5544

PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM  
  
DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM  
  
TAX DIST.

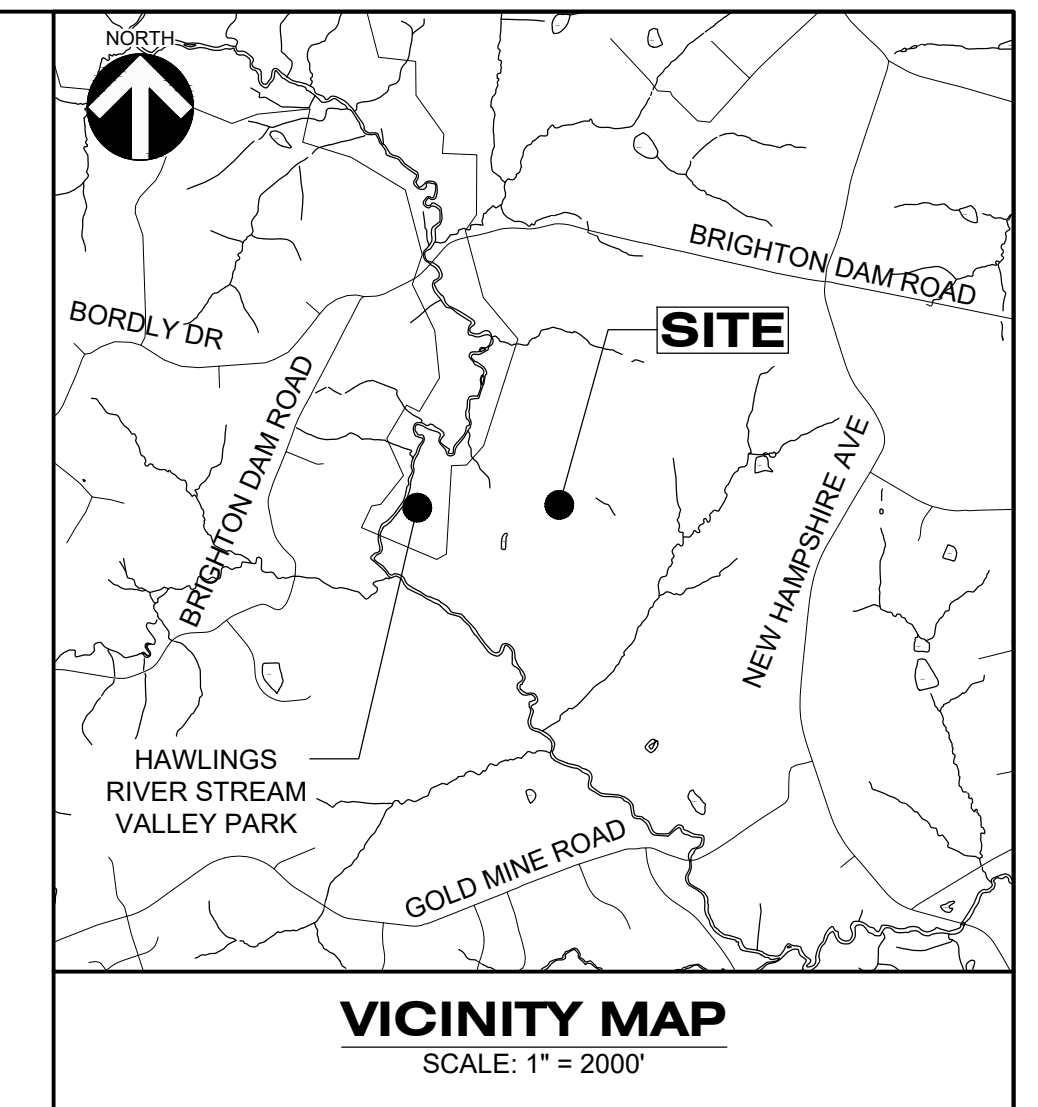
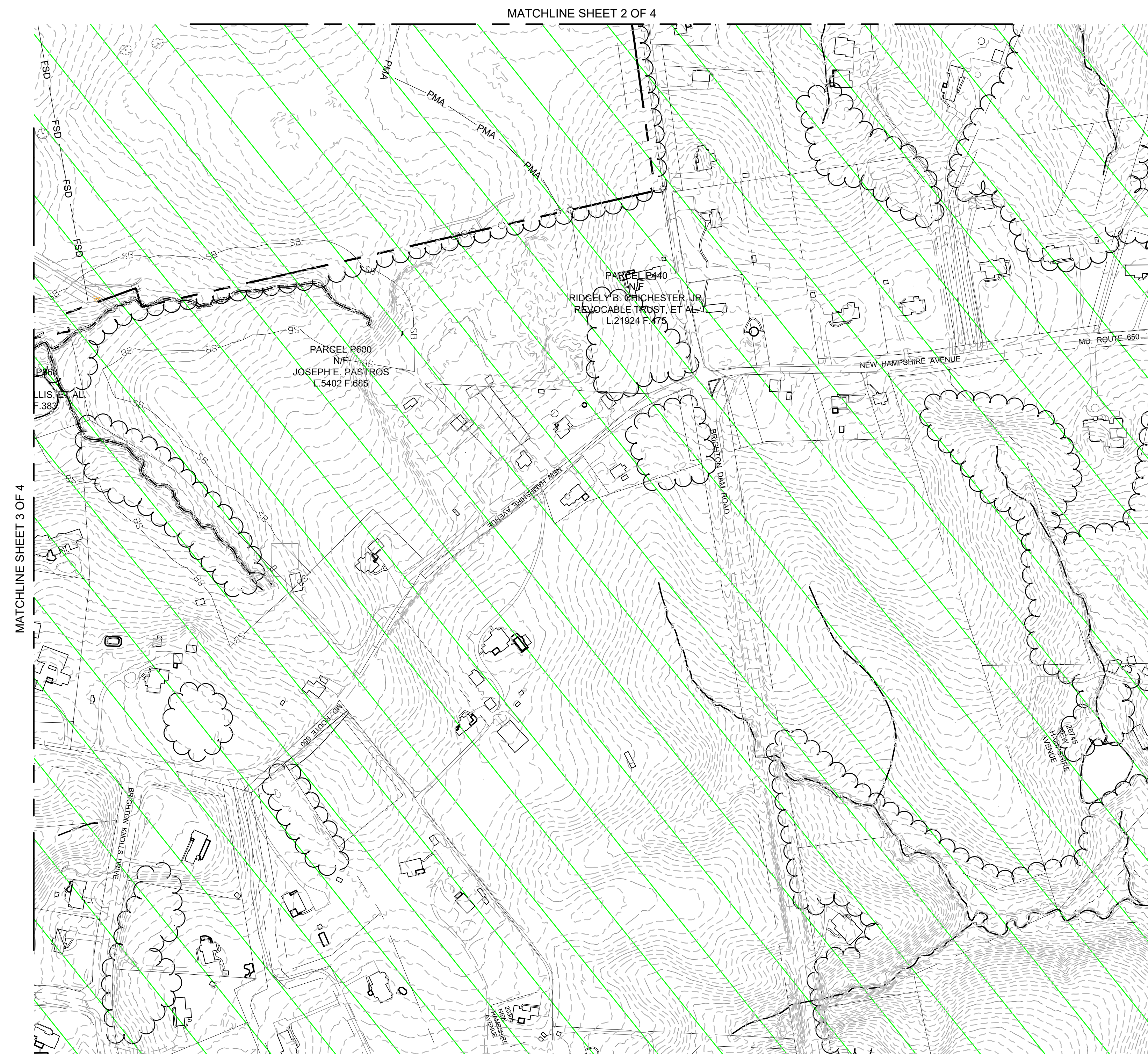
WR NO.	SCALE	APPD	APPD	APPD
FDR NO.	DATE			
	DR. BY MB			
	CHKD. LB			
	INSP.			

**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKVILLE, MD 20833**

**POTOMAC ELECTRIC POWER CO.**

**02-LOCAL**  
SHEET 3 OF 4

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB88)

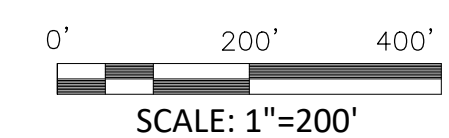


**LEGEND**

- EXISTING ROAD
- EXISTING BUILDING
- EXISTING SUBJECT PROPERTY BOUNDARY
- EXISTING ADJACENT PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- RURAL CLUSTER (RC)

MATCHLINE SHEET 3 OF 4

MATCHLINE SHEET 2 OF 4



**NOTE**  
FOR LOCATION OF UTILITIES CALL  
8-1-1 OR 1-800-257-7777  
OR LOG ON TO  
[www.call811.com](http://www.call811.com)  
<http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK  
IN THIS VICINITY

INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MANS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.

Dewberry Engineers Inc.  
10461 Mill Run Circle  
SUITE 300  
Owings Mills, MD 21117-5544

PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

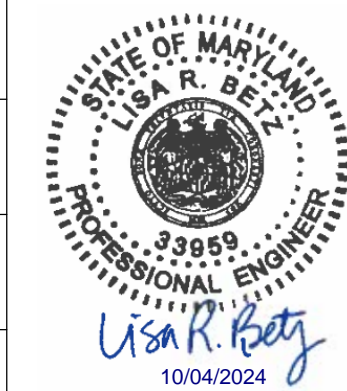
WR NO.

FDR NO.

**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKVILLE, MD 20833**

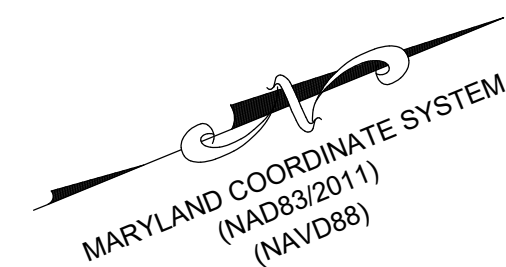
**POTOMAC ELECTRIC POWER CO.**

**02-LOCAL**  
SHEET 1 OF 1

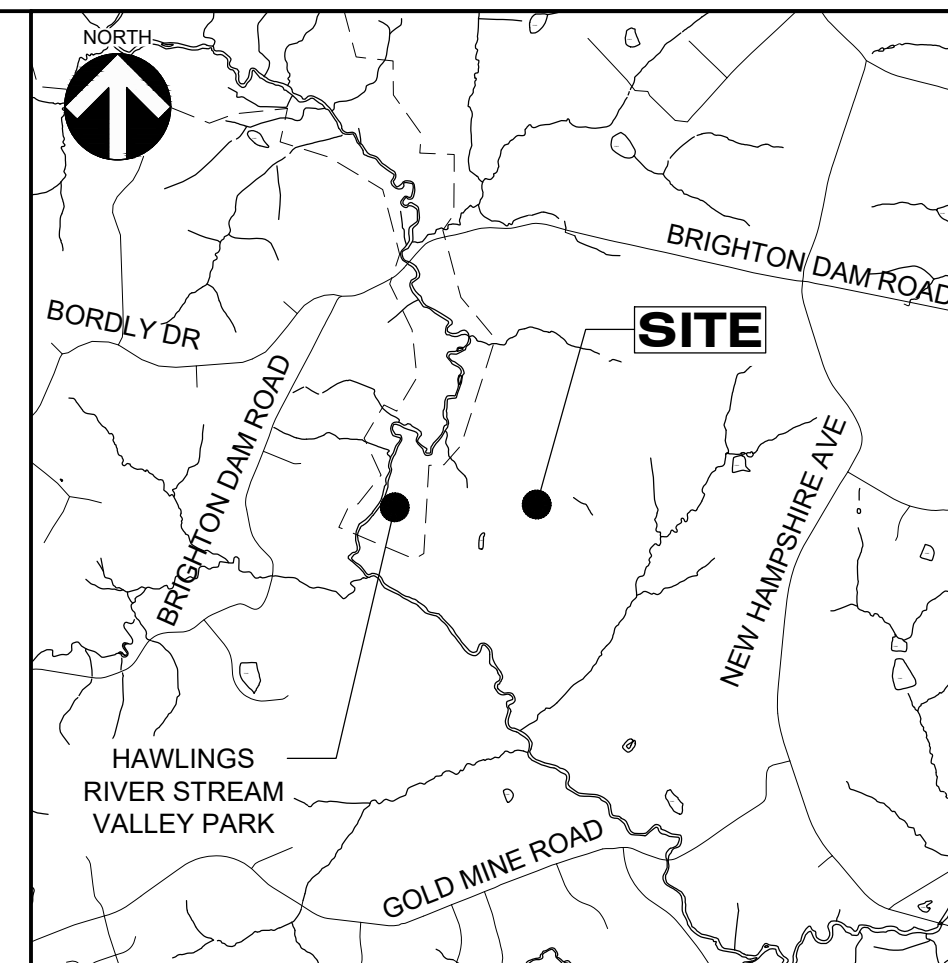


**Professional Certification**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2025.

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					



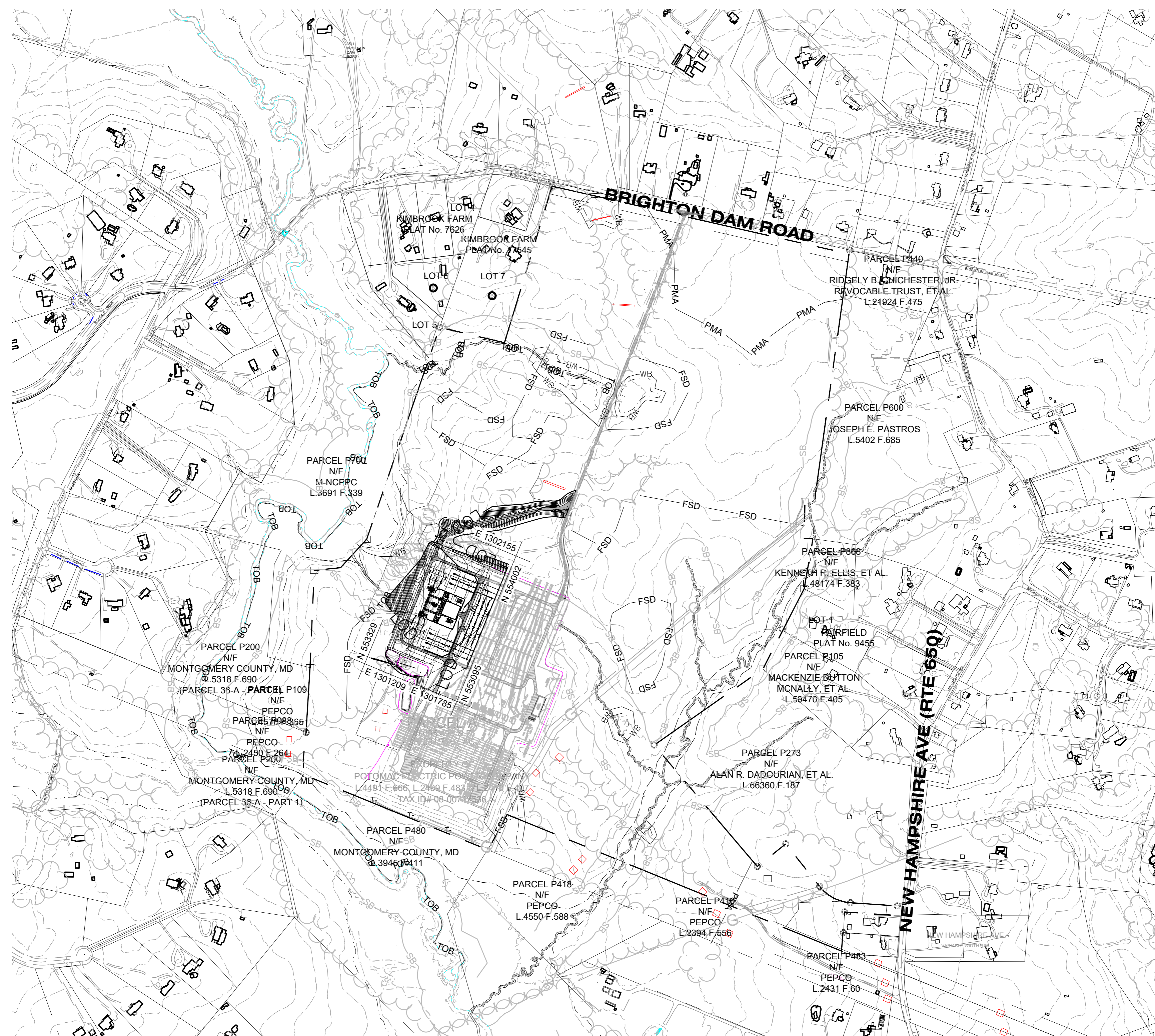
# BRIGHTON SUBSTATION STATCOM EXPANSION



**VICINITY MAP**  
SCALE: 1" = 2000'

## GENERAL NOTES:

- THE TAX IDENTIFICATION NUMBERS ASSOCIATED WITH THIS PLAN ARE: 00712536.
- SITE ADDRESS: 1300 BRIGHTON DAM ROAD, BROOKEVILLE, MD 20833
- OWNER NAME AND ADDRESS: POTOMAC ELECTRIC POWER COMPANY, 701 9TH STREET NW, WASHINGTON, D.C. 20068-0001
- TOTAL ACREAGE: 231.76 ACRES ±
- TAX MAP: JU123
- ZONING: RC (RURAL CLUSTER)
- WSSC GRID: 227NW02/228NW02
- ELECTION DISTRICT: 8
- COUNCILMAN DISTRICT: 7
- POLICE DISTRICT: 4D
- PROPERTY BOUNDARIES ON THIS PLAN SHOWN PER A BOUNDARY SURVEY PERFORMED BY DEWBERRY ENGINEERS, INC. IN MARCH AND APRIL 2024.
- THE TOPOGRAPHY SHOWN ON THIS PLAN IS FROM AN AERIAL SURVEY PERFORMED BY MCKENZIESNYDER, INC. ON MARCH 8, 2024 AND SUPPLEMENTED BY A FIELD SURVEY PERFORMED BY DEWBERRY ENGINEERS, INC. IN MARCH AND APRIL 2024, AS WELL AS READILY AVAILABLE GIS DATA FROM MONTGOMERY COUNTY. THIS DRAWING IS IN MARYLAND COORDINATE SYSTEM NAD83 (2011) HORIZONTAL DATUM AND NAVD88 VERTICAL DATUM.
- THE WETLAND AND STREAM INFORMATION ON THIS PLAN IS FROM A STUDY PREPARED BY ECO-SCIENCE PROFESSIONALS AND DATED APRIL 2024.
- THIS SITE IS LOCATED IN A TIER II CATCHMENT AREA AND CONTAINS A TIER II WATERBODY AS DEFINED IN COMAR 26.08.02.04. THIS SITE IS NOT LOCATED IN AN IMPAIRED WATER BODY WITH A TOTAL MAXIMUM DAILY LOAD (TMDL) ALLOCATED FOR SEDIMENT, WHICH ARE AFFORDED SPECIAL PROTECTION UNDER MARYLAND'S ANTI-DEGRADATION POLICY. ACCORDING TO MARYLAND DEPARTMENT OF THE ENVIRONMENT TIER II HIGH QUALITY WATERS (2022), THE WATERBODY HAS ASSIMILATIVE CAPACITY FOR NEW DEVELOPMENT.
- THIS SITE IS LOCATED WITHIN THE ROCKY GORGE DAM MDE 12 DIGIT WATERSHED 021311070942. THE WATERSHED USE IS CLASS IV.
- THIS SITE IS LOCATED WITHIN A STRONGHOLD WATERSHED AS ESTABLISHED BY THE MD DNR.
- FEMA FLOODPLAIN MAP PANELS #24031C0210D, #24031C0216D, AND #24031C0220D SHOW THAT 100 YEAR FLOODPLAIN EXISTS ON THE PROPERTY, BUT NOT WITHIN 100' OF THE ANTICIPATED LIMITS OF DISTURBANCE.
- THE PROPERTY IS NOT A REGISTERED HISTORIC SITE ACCORDING TO MONTGOMERY COUNTY DESIGNATED HISTORIC SITES AND DISTRICTS INTERACTIVE MAP.
- THIS PROPERTY IS WITHIN A PRIMARY MANAGEMENT AREA OF THE HAWLINGS RIVER, BUT IS NOT LOCATED WITHIN ANY SPECIAL PROTECTION AREAS.
- ALL DESIGNS WILL BE IN ACCORDANCE WITH MDE AND MC DPS.



## PROPERTY SUMMARY:

EXISTING IMPERVIOUS AREA: 919,098 SF (21.099 ACRES)  
% IMPERVIOUS AREA<sub>EX</sub>: 9.10%

PROPOSED IMPERVIOUS AREA: 1,181,272 SF (27.118 ACRES)  
% IMPERVIOUS AREA<sub>PR</sub>: 11.70%

## PROJECT SUMMARY:

SITE AREA (LOD): 547,638 SF (12.572 ACRES)

EXISTING IMPERVIOUS AREA: 100,560 SF (2.309 ACRES)  
% IMPERVIOUS AREA<sub>EX</sub>: 18.36%

PROPOSED IMPERVIOUS AREA: 264,782 SF (6.079 ACRES)  
% IMPERVIOUS AREA<sub>PR</sub>: 48.35%

## LEGEND:

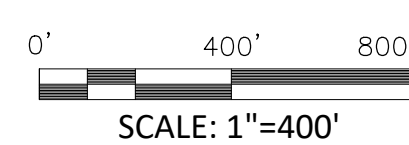
- EXISTING ROAD
- EXISTING BUILDING
- EXISTING SUBJECT PROPERTY LINE
- EXISTING ADJACENT PROPERTY LINE(S)
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING SPECIMEN TREE
- EXISTING FENCE
- EXISTING WETLAND
- EXISTING WETLAND BUFFER
- EXISTING 100-YR FLOODPLAIN
- EXISTING 25/150' STREAM BUFFER
- EXISTING SLOPE 15-25%
- EXISTING SLOPE >25%
- EXISTING REGULATED STREAM CENTERLINE
- PROPOSED ROAD
- PROPOSED CONTOURS
- POINT OF INTEREST
- PROPOSED DRAINAGE AREA

## SURVEY CONTROL

TRAVERSE NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
501	553147.8542	1301328.3140	388.7400	TRAVERSE
511	554579.4285	1301754.7610	373.9200	TRAVERSE
512	554423.8392	1302014.4960	418.2400	TRAVERSE
513	554244.8689	1302092.5480	429.7900	TRAVERSE
514	554369.6470	1302440.0750	428.5400	TRAVERSE
537	552787.6218	1302121.4090	380.3500	TRAVERSE
540	552981.2538	1301495.1430	379.89	TRAVERSE
600	554147.8575	1302380.7990	425.96	FLY
601	553928.9690	1302243.7970	41116	TRAVERSE
602	554120.3095	1301961.4880	409.71	TRAVERSE
603	554129.9123	1301683.4890	393.82	FLY
604	553976.4262	1301899.4220	393.78	TRAVERSE
605	553757.4096	1301788.9910	391.16	TRAVERSE
606	553537.8686	1301534.4850	389.75	TRAVERSE



**Professional Certification**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2025.



**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.



PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

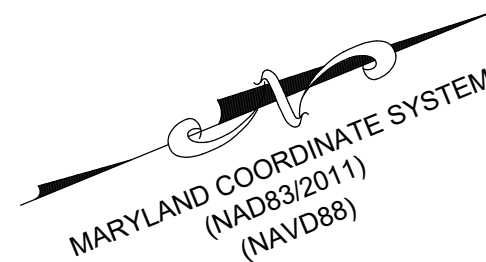
**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKEVILLE, MD 20833**

**POTOMAC ELECTRIC POWER CO.**

WR NO.	SCALE	APPD	APPD	APPD
FDR. NO.	DATE			
	DR. BY MB			
	CHKD. LB			
	INSP.			

**MR-01**  
SHEET 1 OF 2

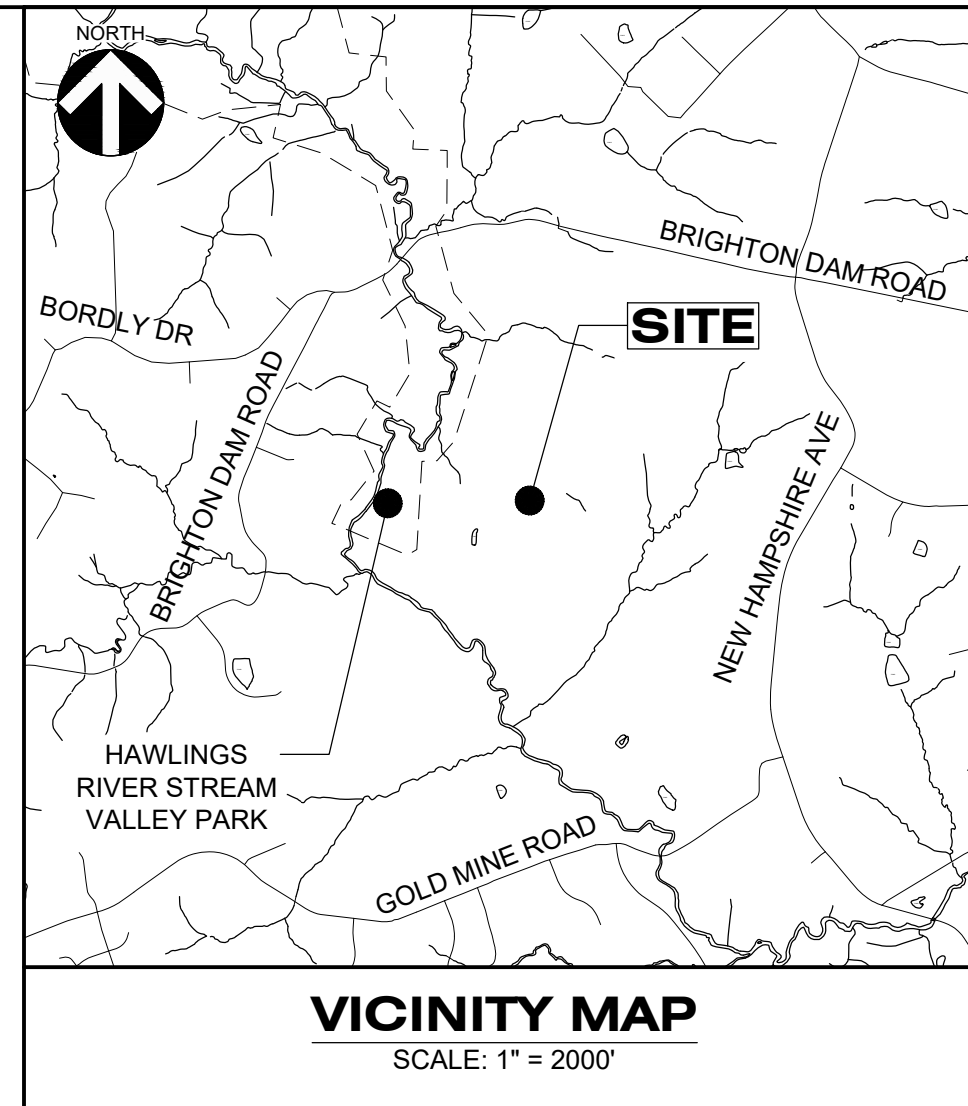
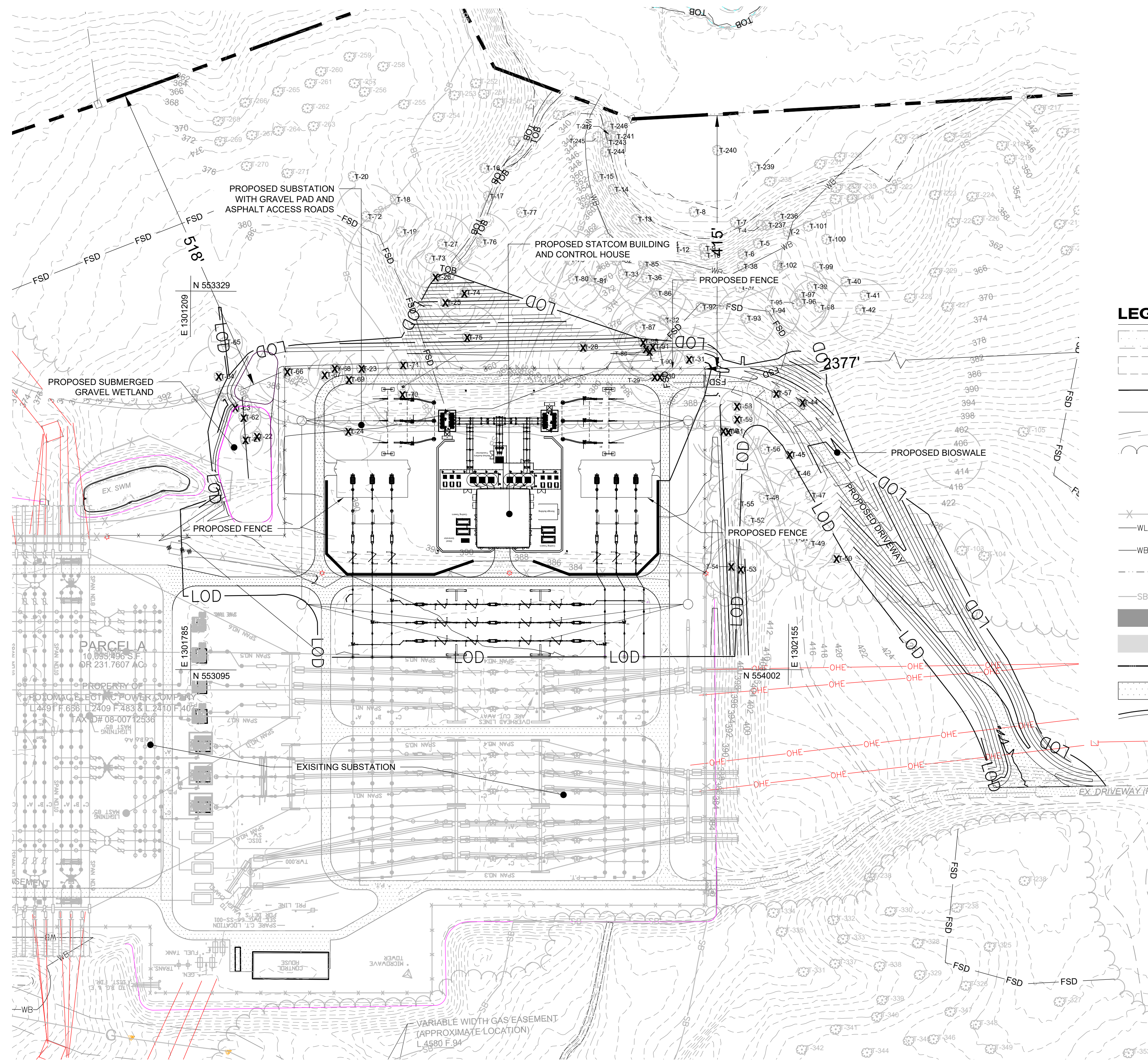
DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					



**CHAPTER 59 MONTGOMERY COUNTY ZONING ORDINANCE, TABLE 4.3.4**

**RC ZONE, STANDARD METHOD DEVELOPMENT STANDARDS**

	REQUIRED	PROPOSED
<b>1. LOT AND DENSITY</b>	DETACHED HOUSE OR A BUILDING FOR A CULTURAL INSTITUTION, RELIGIOUS ASSEMBLY, PUBLIC USE, OR A CONDITIONAL USE ALLOWED IN THE ZONE	
<b>LOT</b>		
LOT AREA (MIN)	5 ACRES	231.8 ACRES
LOT WIDTH AT FRONT BUILDING LINE (MIN)	300'	1,902'
LOT WIDTH AT FRONT LOT LINE (MIN)	300'	2,493'
DENSITY (MAX)		
DENSITY (UNITS/ACRE)	1/5	2/231
COVERAGE (MAX)		
LOT	10%	70.6%
<b>2. PLACEMENT</b>		
<b>PRINCIPAL BUILDING SETBACKS (MIN)</b>		
FRONT SETBACK	50'	N/A
SIDE STREET SETBACK	50'	N/A
SIDE SETBACK	20'	N/A
REAR SETBACK	35'	N/A
<b>ACCESSORY STRUCTURE SETBACKS (MIN)</b>		
FRONT SETBACK	80'	2,000' +
SIDE STREET SETBACK	50'	N/A
SIDE SETBACK	15'	600' +
REAR SETBACK	15'	1,200' +
<b>SPECIFICATIONS FOR PRINCIPAL BUILDING AND ACCESSORY STRUCTURE SETBACKS (MIN)</b>		
A. THE FRONT SETBACK AND SIDE STREET SETBACK MUST CONSIST OF ANY SCENIC SETBACK RECOMMENDED BY A MASTER PLAN OR 50 FEET, WHICHEVER IS GREATER.		
B. ANY ACCESSORY BUILDING OR STRUCTURE USED FOR THE HOUSING, SHELTER, OR SALE OF ANIMALS OR FOWL OTHER THAN A HOUSEHOLD PET MUST BE A MINIMUM OF 25' FROM A LOT LINE AND A MINIMUM OF 100' FROM A DWELLING ON ANOTHER LOT.		
C. ANY ACCESSORY STRUCTURE USED FOR THE HOUSING, SHELTER, OR SALE OF ANIMALS OR FOWL OTHER THAN A HOUSEHOLD PET MUST BE A MINIMUM OF 25' FROM LOT LINE AND A MINIMUM OF 100' FROM A DWELLING ON ANOTHER LOT.		
D. IN ADDITION TO THE FRONT SETBACK MINIMUM, AND ACCESSORY STRUCTURE ON A RESIDENTIAL LOT MUST BE LOCATED BEHIND THE REAR BUILDING LINE OF THE PRINCIPAL BUILDING.		
E. THE MAXIMUM FOOTPRINT OF AN ACCESSORY BUILDING ON A LOT WHERE THE MAIN BUILDING IS A DETACHED HOUSE IS 50% OF THE FOOTPRINT OF THE MAIN BUILDING. BUILDINGS FOR AN AGRICULTURAL USE ARE EXEMPT FROM THIS SIZE RESTRICTION.		
<b>3. HEIGHT</b>		
<b>HEIGHT (MAX)</b>		
PRINCIPAL BUILDING	50'	N/A
ACCESSORY STRUCTURE	50'	20'
<b>4. FORM</b>		
<b>ALLOWED BUILDING ELEMENTS</b>		
GALLERY/AWNING	N/A	NO
PORCH/STOOP	YES	NO
BALCONY	YES	NO
BUILDINGS USED FOR AGRICULTURE ASSOCIATED WITH FARMING		
A. A BUILDING USED FOR AGRICULTURE ASSOCIATED WITH FARMING MUST SATISFY THE STANDARDS OF AN ACCESSORY STRUCTURE, EXCEPT A BUILDING USED FOR AGRICULTURE IS EXEMPT FROM THE HEIGHT REQUIREMENTS UNDER SECTION 4.3.4.B.3.		



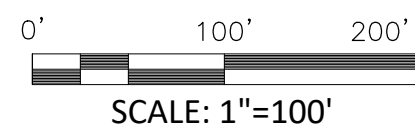
**LEGEND:**

	EXISTING ROAD
	EXISTING BUILDING
	EXISTING SUBJECT PROPERTY LINE
	EXISTING ADJACENT PROPERTY LINE(S)
	EXISTING CONTOURS
	EXISTING TREELINE
	EXISTING SPECIMEN TREE
	EXISTING FENCE
	EXISTING WETLAND
	EXISTING WETLAND BUFFER
	EXISTING 100-YR FLOODPLAIN
	EXISTING 25'/150' STREAM BUFFER
	EXISTING SLOPE 15-25%
	EXISTING SLOPE >25%
	EXISTING REGULATED STREAM CENTERLINE
	PROPOSED ROAD
	PROPOSED CONTOURS

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					



Professional Certification  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2025.



**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.



PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATI  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATI@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

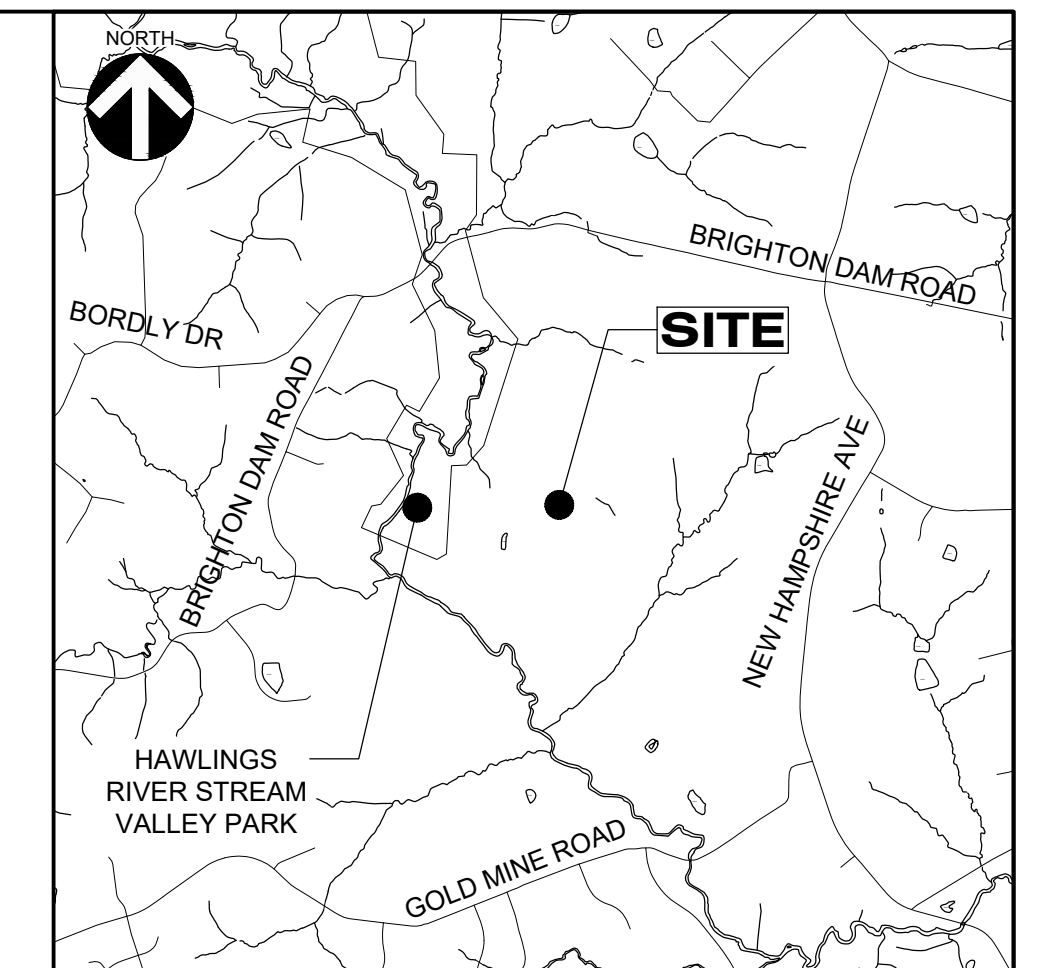
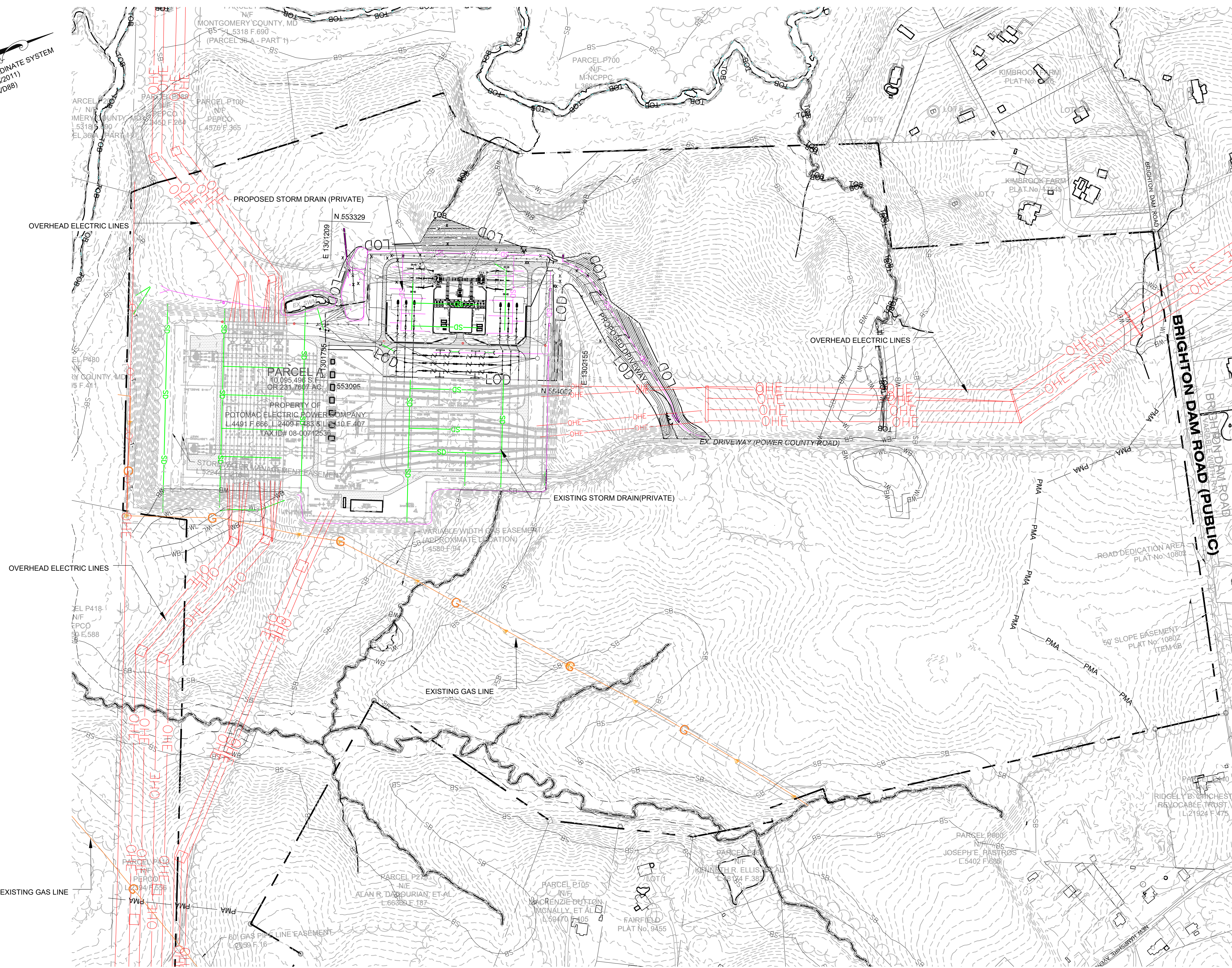
**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKEVILLE, MD 20833**

**POTOMAC ELECTRIC POWER CO.**

WR NO.	SCALE	APPD	APPD	APPD
FDR NO.	DATE			
	DR. BY MB			
	CHKD. LB			
	INSP.			

**MR-02**  
SHEET 2 OF 2

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB88)



**VICINITY MAP**  
SCALE: 1" = 2000'

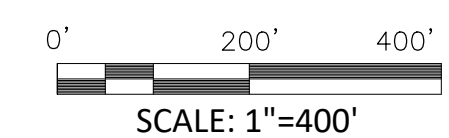
**LEGEND:**

- EXISTING ROAD
- EXISTING BUILDING
- EXISTING SUBJECT PROPERTY LINE
- EXISTING ADJACENT PROPERTY LINE(S)
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING SPECIMEN TREE
- EXISTING FENCE
- EXISTING WETLAND
- EXISTING WETLAND BUFFER
- EXISTING 100-YR FLOODPLAIN
- EXISTING OVERHEAD ELECTRIC
- EXISTING GAS
- EXISTING STORM
- PROPOSED STORM

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					



**Professional Certification**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2025.



**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.

**pepco**  
AN EXELON COMPANY

**Dewberry**  
Dewberry Engineers Inc.  
10461 Mill Run Circle  
SUITE 300  
Owings Mills, MD 21117-5544

PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

WR NO.

FDR NO.

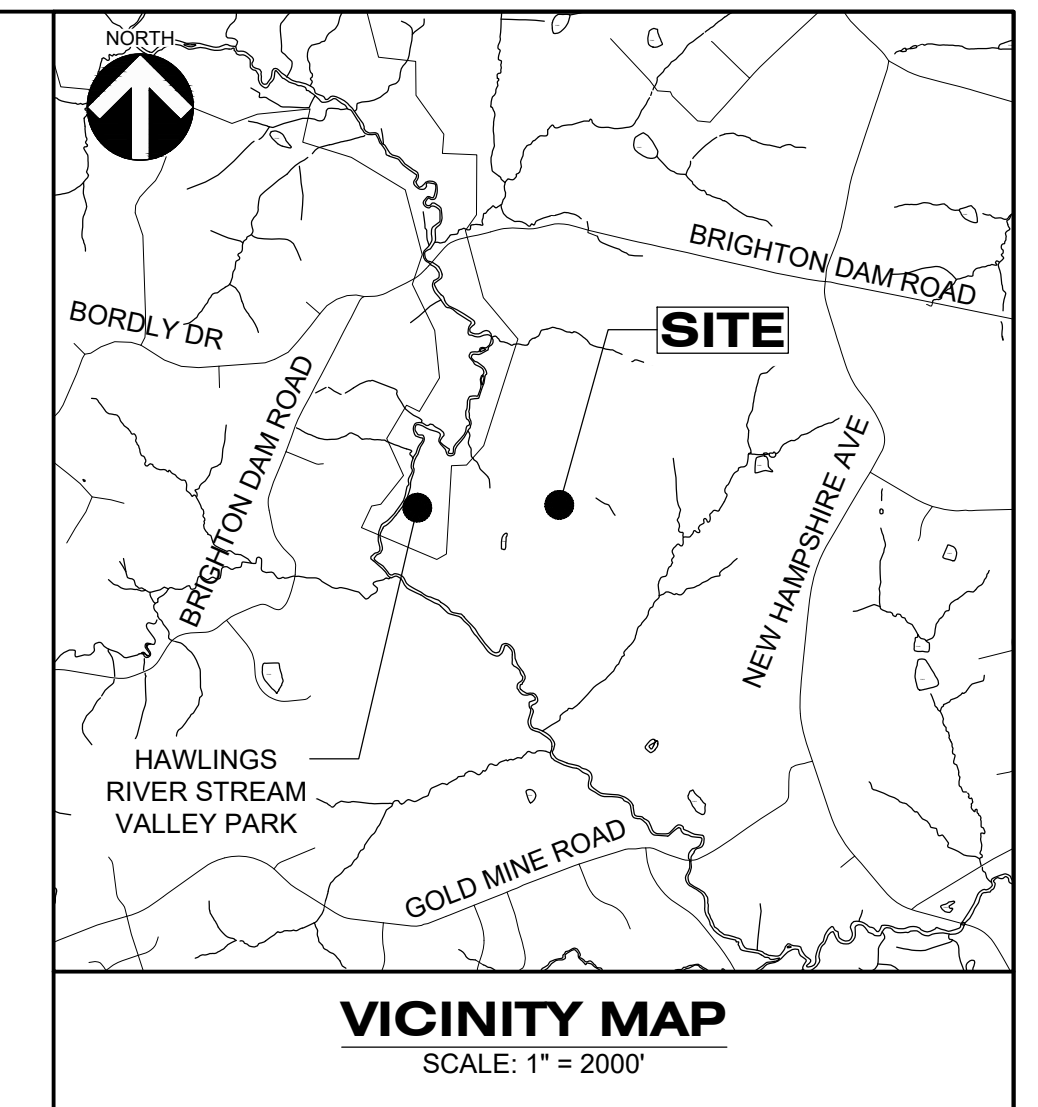
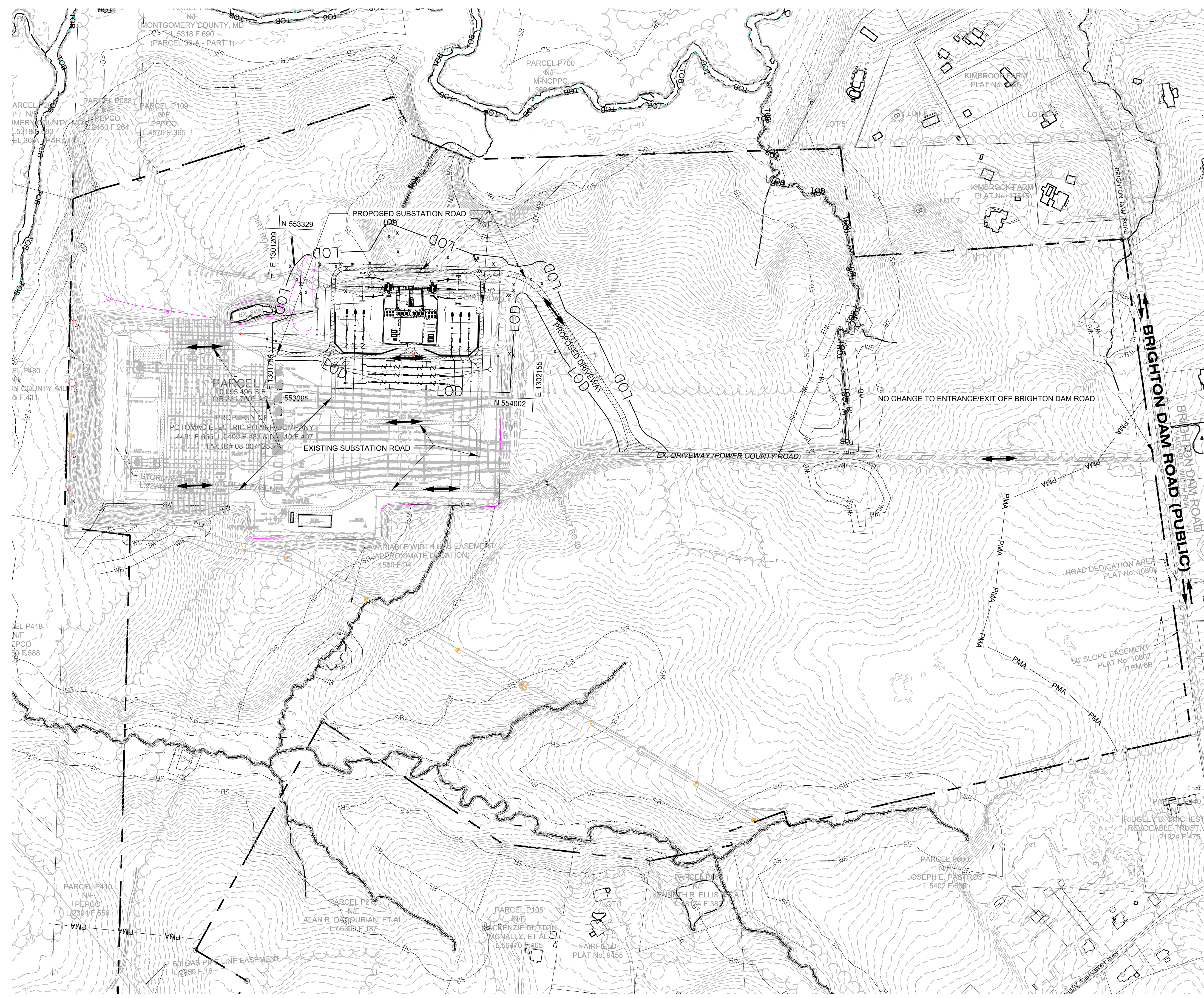
**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKVILLE, MD 20833**

**POTOMAC ELECTRIC POWER CO.**

SCALE	APPD	APPD	APPD
DATE			
DR. BY MB			
CHKD. LB			
INSP.			

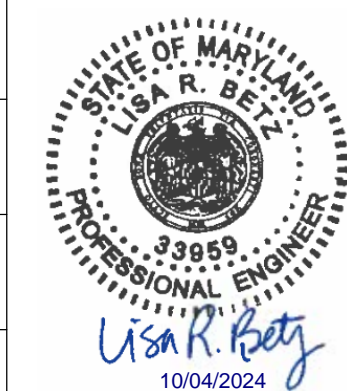
**04-UTIL**  
SHEET 1 OF 1

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB88)

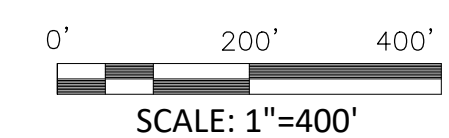


- LEGEND:**
- EXISTING ROAD
  - EXISTING BUILDING
  - EXISTING SUBJECT PROPERTY LINE
  - EXISTING ADJACENT PROPERTY LINE(S)
  - EXISTING CONTOURS
  - EXISTING TREELINE
  - EXISTING SPECIMEN TREE
  - EXISTING FENCE
  - EXISTING WETLAND
  - EXISTING WETLAND BUFFER
  - EXISTING 100-YR FLOODPLAIN
  - EXISTING 25/150' STREAM BUFFER
  - EXISTING SLOPE 15-25%
  - EXISTING SLOPE >25%
  - EXISTING REGULATED STREAM CENTERLINE
  - PROPOSED ROAD

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					



**Professional Certification**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2025.



**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY

INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.

PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

WR NO.

FDR NO.

**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKVILLE, MD 20833**

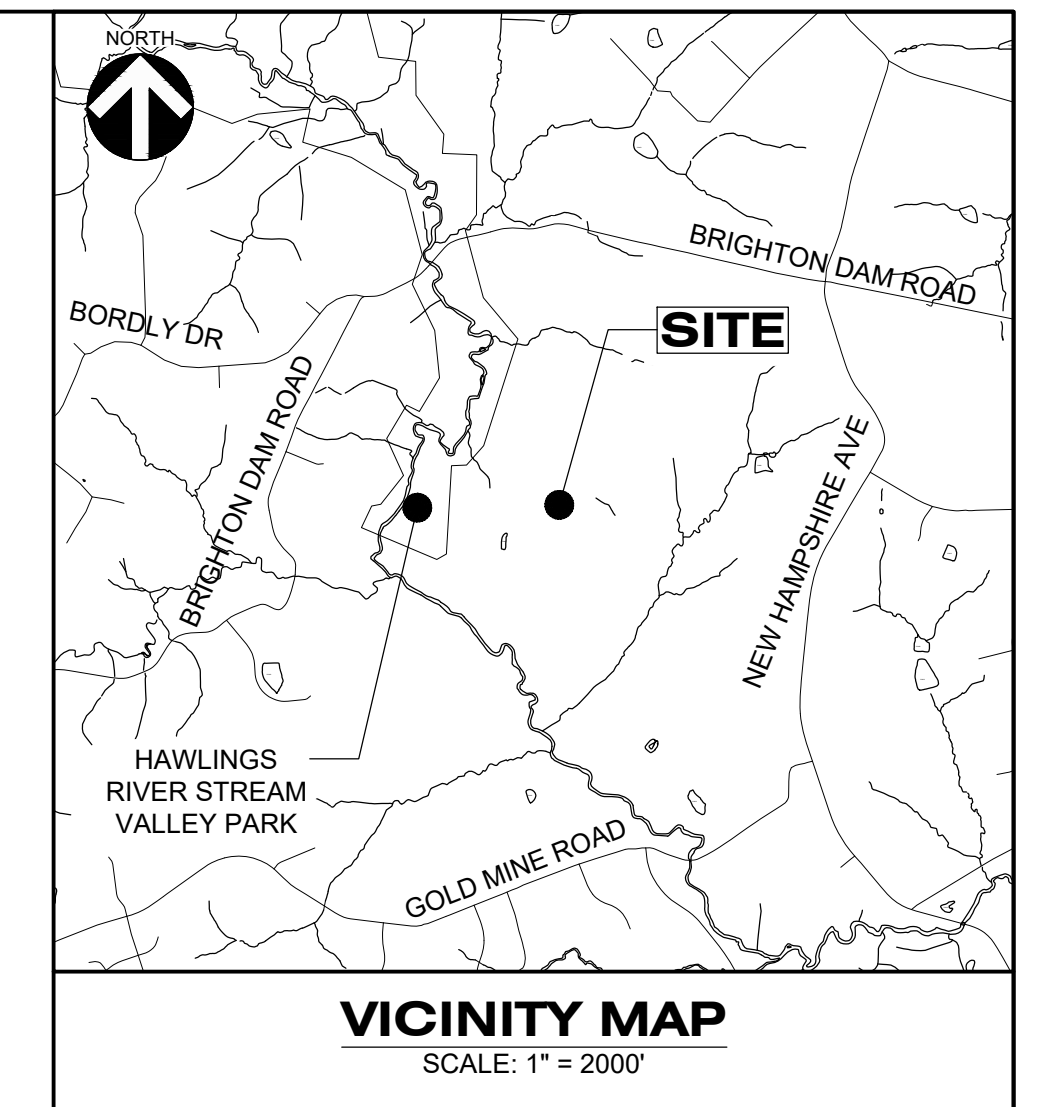
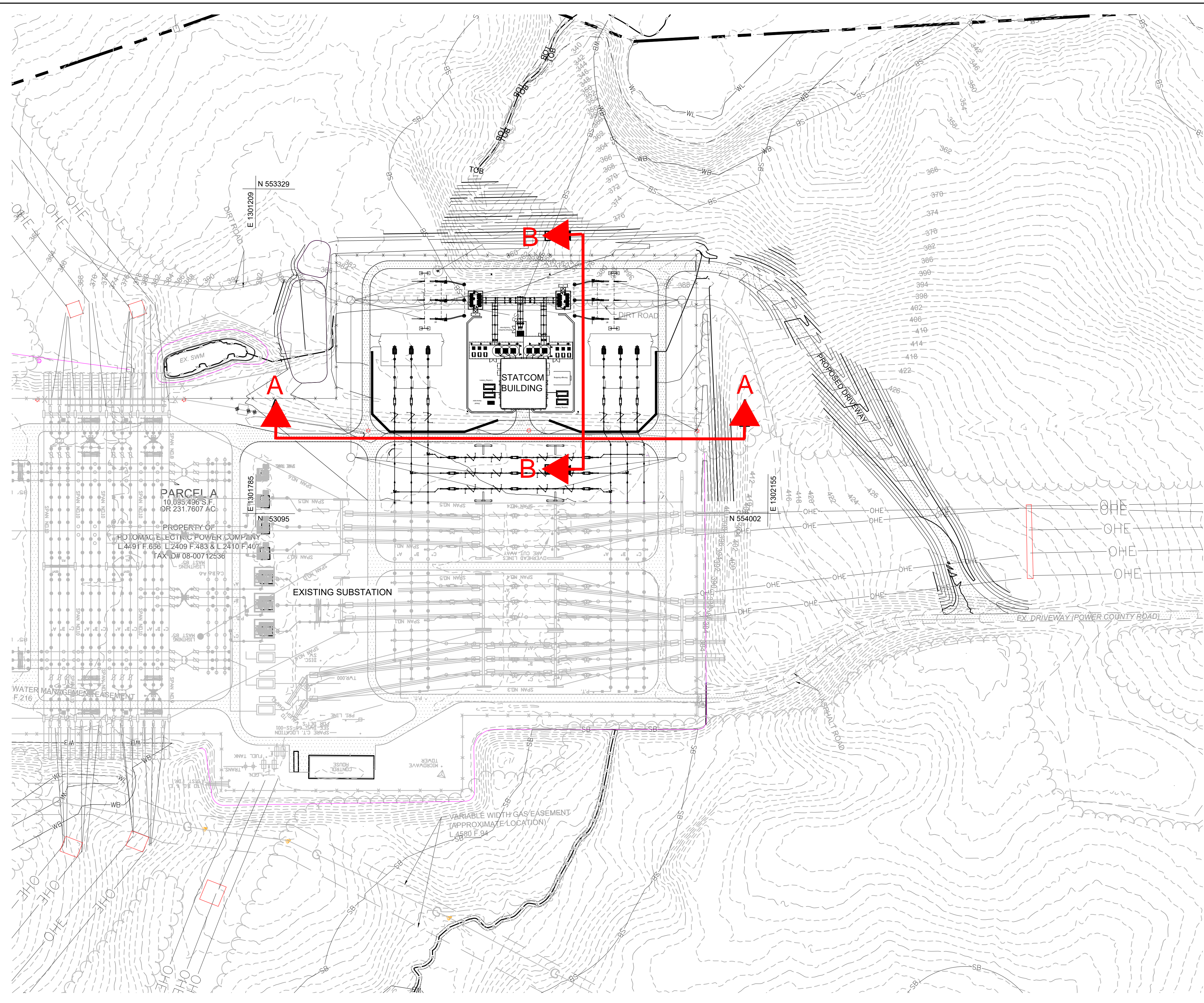
**POTOMAC ELECTRIC POWER CO.**

**05-CIRC**  
SHEET 1 OF 1

SCALE	APPD	APPD	APPD
DATE			
DR. BY	MB		
CHKD.	LB		
INSP.			

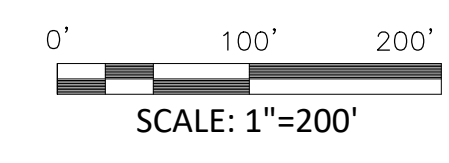


MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB88)

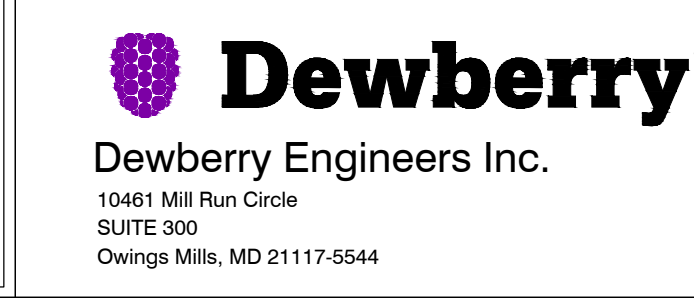


- LEGEND:**
- EXISTING ROAD
  - EXISTING BUILDING
  - EXISTING SUBJECT PROPERTY LINE
  - EXISTING ADJACENT PROPERTY LINE(S)
  - EXISTING CONTOURS
  - EXISTING TREELINE
  - EXISTING SPECIMEN TREE
  - EXISTING FENCE
  - EXISTING WETLAND
  - EXISTING WETLAND BUFFER
  - EXISTING 100-YR FLOODPLAIN
  - EXISTING 25/150' STREAM BUFFER
  - EXISTING SLOPE 15-25%
  - EXISTING SLOPE >25%
  - EXISTING REGULATED STREAM CENTERLINE
  - PROPOSED ROAD

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					



**NOTE**  
FOR LOCATION OF UTILITIES CALL  
8-1-1 OR 1-800-257-7777  
OR LOG ON TO  
[www.call811.com](http://www.call811.com)  
<http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK  
IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND  
UTILITIES WAS OBTAINED FROM AVAILABLE  
RECORDS BUT THE CONTRACTOR MUST  
DETERMINE THE EXACT LOCATION AND  
ELEVATION OF THE MAINS BY DIGGING TEST PITS  
BY HAND AT ALL UTILITY CROSSINGS WELL IN  
ADVANCE OF THE START OF EXCAVATION.



PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

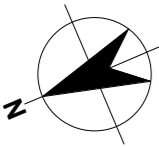
TAX DIST.

WR NO.	SCALE	APPD	APPD	APPD
FDR NO.	DATE	DR. BY	MB	
	CHKD.	LB		
	INSP.			

**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKVILLE, MD 20833**

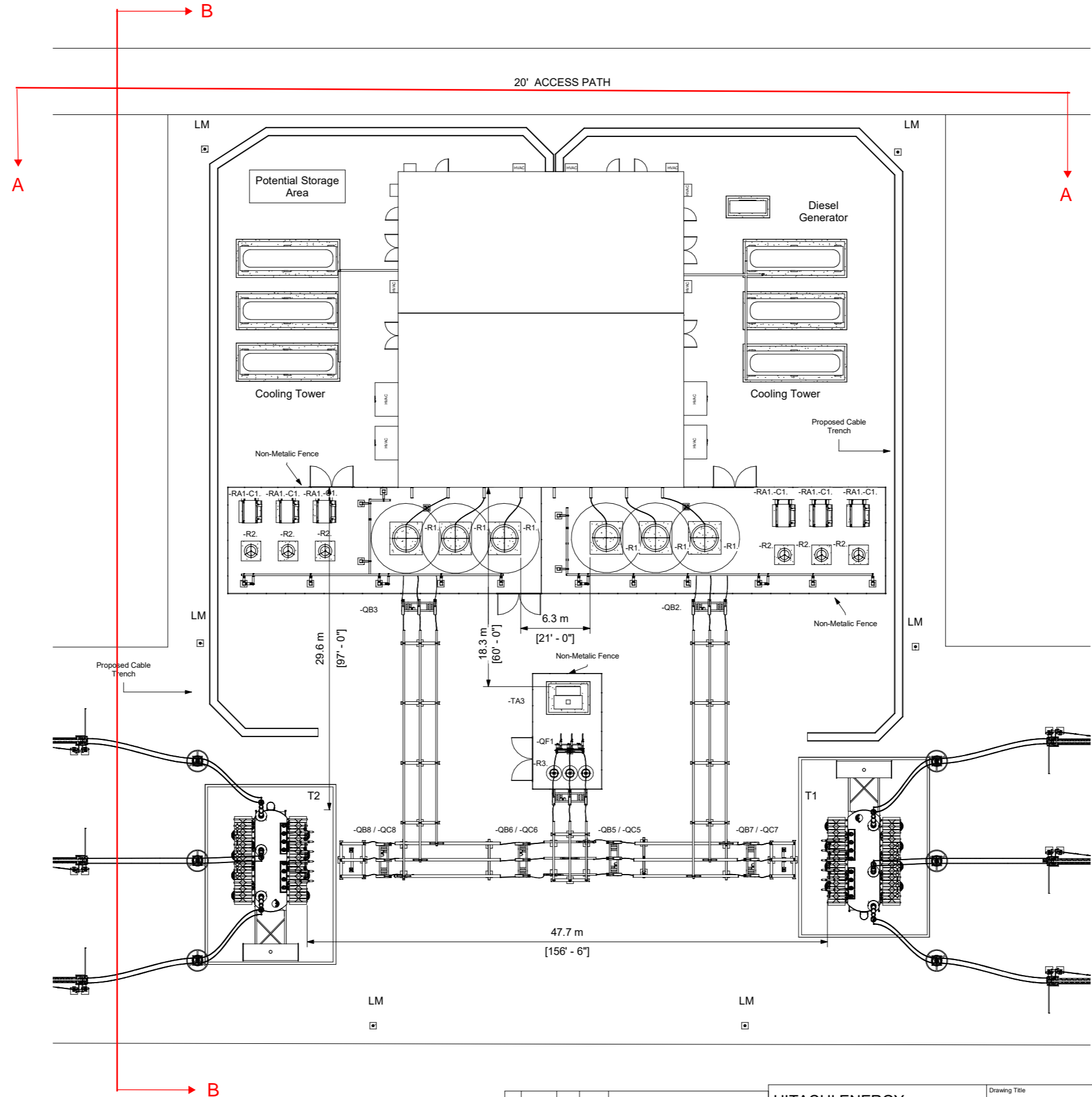
**POTOMAC ELECTRIC POWER CO.**

**32-ARCH**  
SHEET 1 OF 4



**EXISTING SUBSTATION**

Outdoor Item Designation	
Item Designation	Item Description
-BA1	Bus Support with VT - Bus support with VT
-C1	Capacitor [HP FILTER]
-QB2	Disconnecter
-QT1	IGBT Valve - IGBT Valve
-R1	Reactor
-R2	Reactor [HP Filter]
-R3	Reactor Auxillary TX
-RA1	Resistor [HP Filter]



The reproduction, distribution and utilization of this document as well as the communication of its contents to others without express authorization are prohibited. Offenders will be held liable for any damages. All rights reserved. © 2022 Hitachi Energy. All rights reserved.

**PROPOSED ACCESS DRIVEWAY**

CONCEPTUAL DESIGN FOR TENDERING PURPOSES ONLY  
2024-07-25

SCALE: 1:200

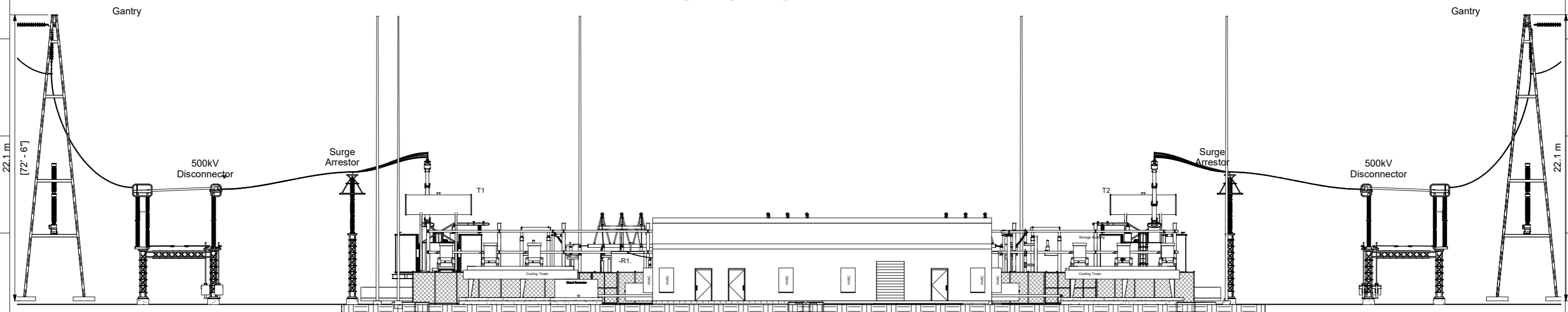
				<b>HITACHI ENERGY</b>			Drawing Title <b>LAYOUT, PLAN VIEW</b>		Client drv No.	
				Project <b>Brighton</b>			Drawing No. <b>1JNG00230D1MB</b>		Project No. OPP236984278Site ID US2804	
				Client <b>PEPCO</b>			Rev. <b>E</b>		Format A1 Sheet No. 1	
				Rev. Date Drawn Checked Description					Scale 1:200 No. of sh. 3	
									Drawing Status CONCEPTUAL DESIGN	
									Drawn by TF	
									Checked by PAT	
									Approved by PAT	

Outdoor Item Designation	
Item Designation	Item Description
-BA1	Bus Support with VT - Bus support with VT
-C1	Capacitor [HP FILTER]
-QB2	Disconnecter
-QT1	IGBT Valve - IGBT Valve
-R1	Reactor
-R2	Reactor [HP Filter]
-R3	Reactor Auxillary TX
-RA1	Resistor [HP Filter]

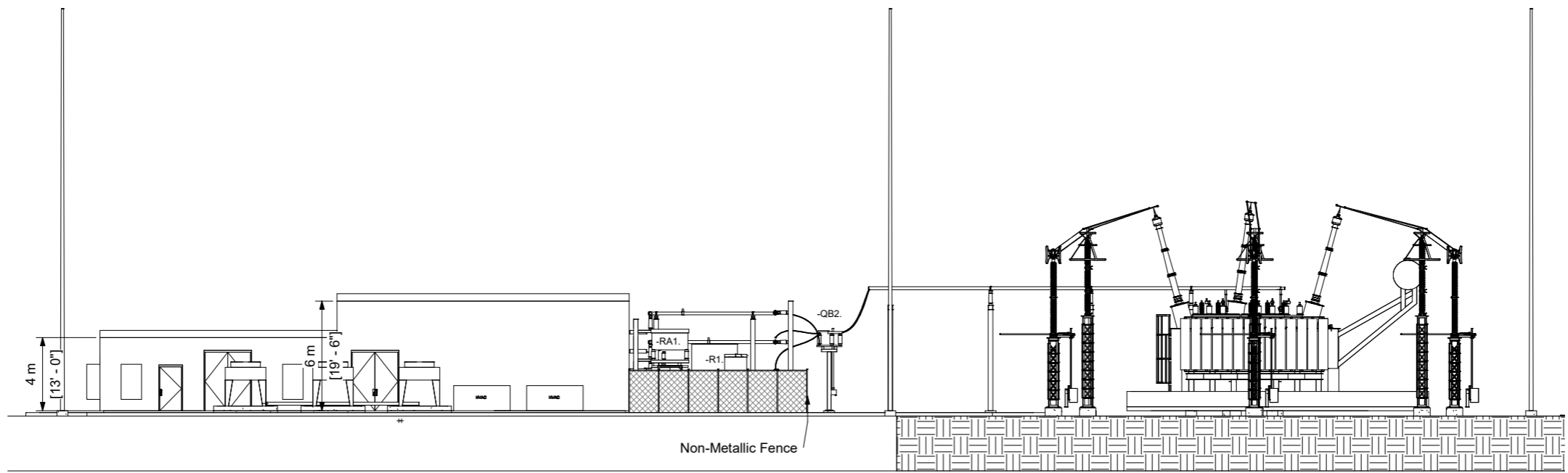
# SECTION A-A

The reproduction, distribution and utilization of this document as well as the communication of its contents to others without express authorization are prohibited. Offenders will be held liable for damages. © 2022 Hitachi Energy. All rights reserved.

This document is issued by means of a computerized system. The digitally stored original is electronically approved. The approved document has a name and date entered in the approved field. A manual signature is not required.



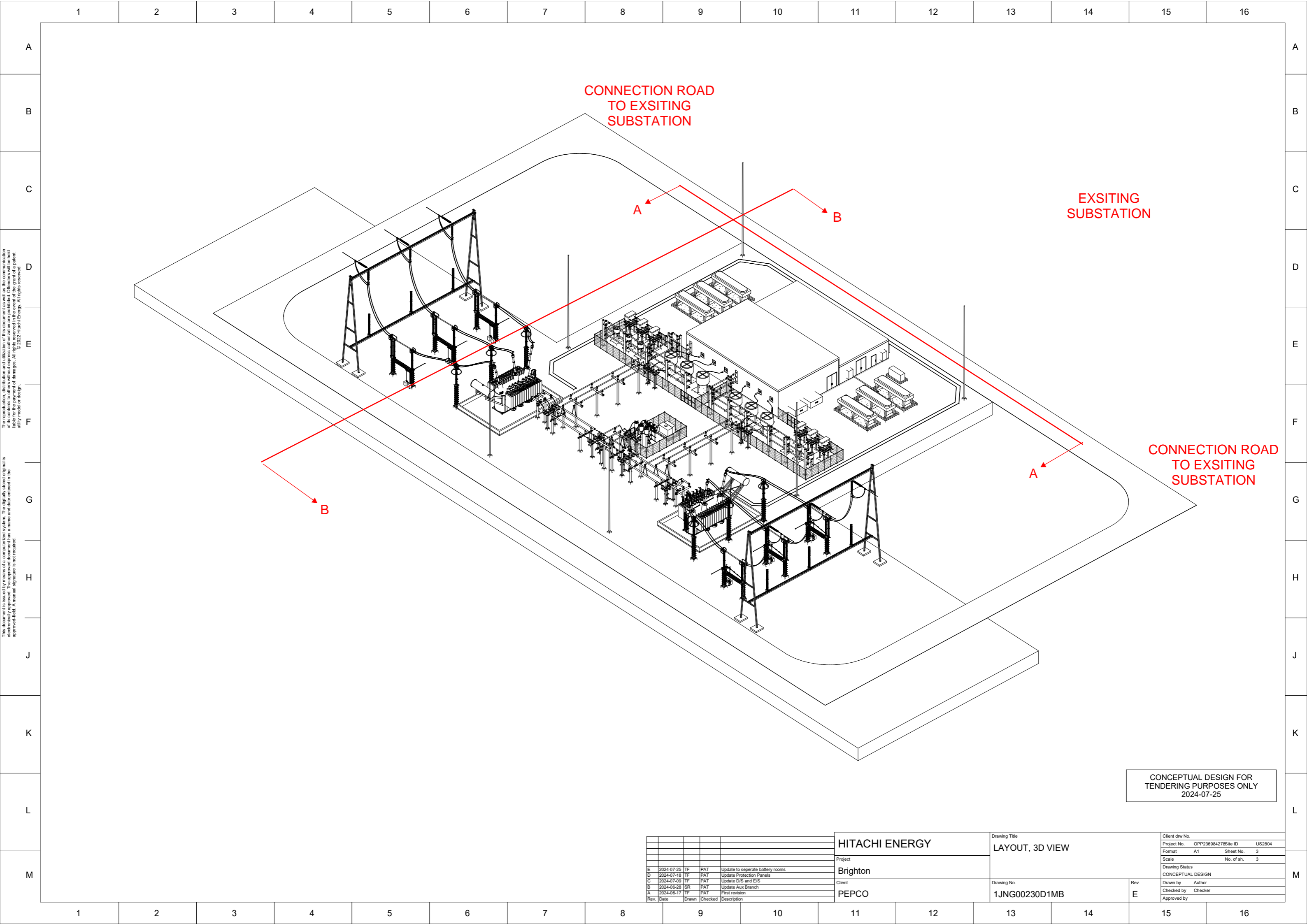
# SECTION B-B



**CONCEPTUAL DESIGN FOR TENDERING PURPOSES ONLY**  
 2024-07-25

SCALE 1:150

				<b>HITACHI ENERGY</b>			Drawing Title <b>ELEVATIONS</b>		Client drv No.		
				Project <b>Brighton</b>			Drawing No. <b>1JNG00230D1MB</b>		Project No. OPP236984278Site ID US2804		
				Client <b>PEPCO</b>			Rev. <b>E</b>		Format A1 Sheet No. 2		
				Rev. Date Drawn Checked Description					Scale 1 : 150 No. of sh. 3		
									Drawing Status CONCEPTUAL DESIGN		
									Drawn by TF		
									Checked by PAT		
									Approved by PAT		



CONNECTION ROAD  
TO EXSITING  
SUBSTATION

EXSITING  
SUBSTATION

CONNECTION ROAD  
TO EXSITING  
SUBSTATION

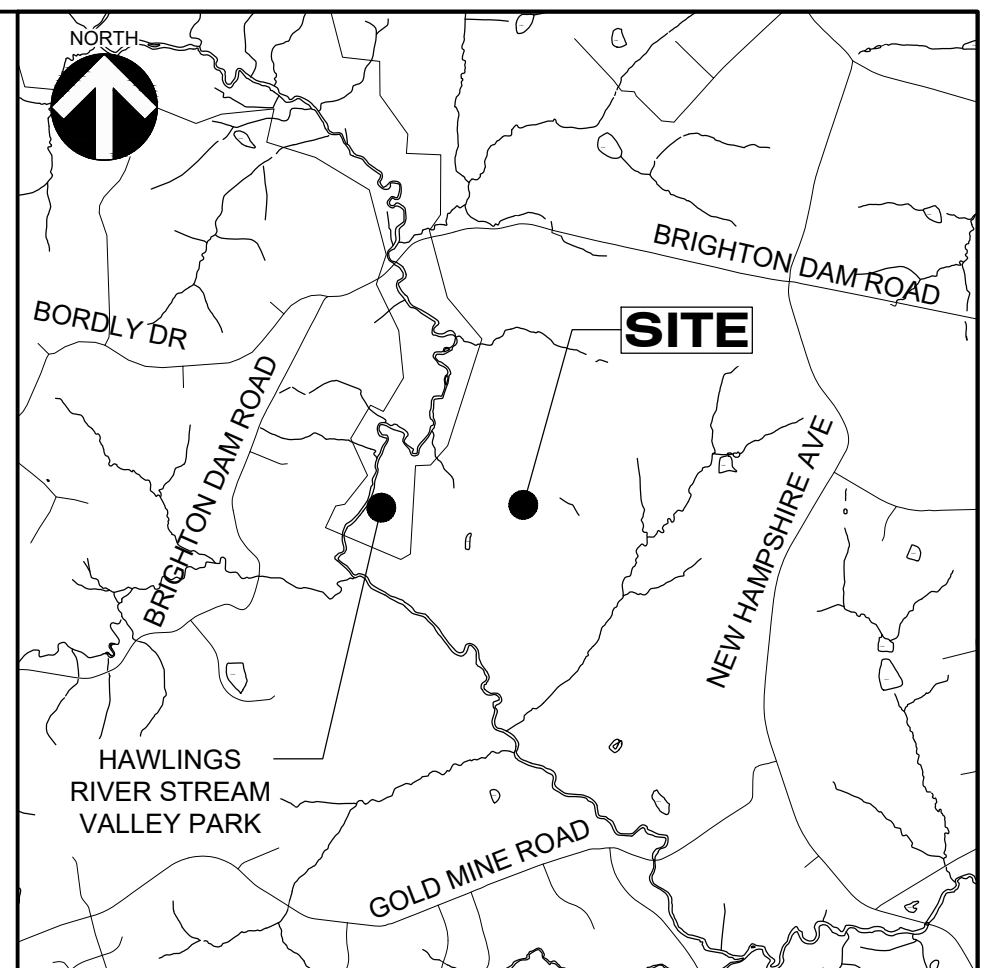
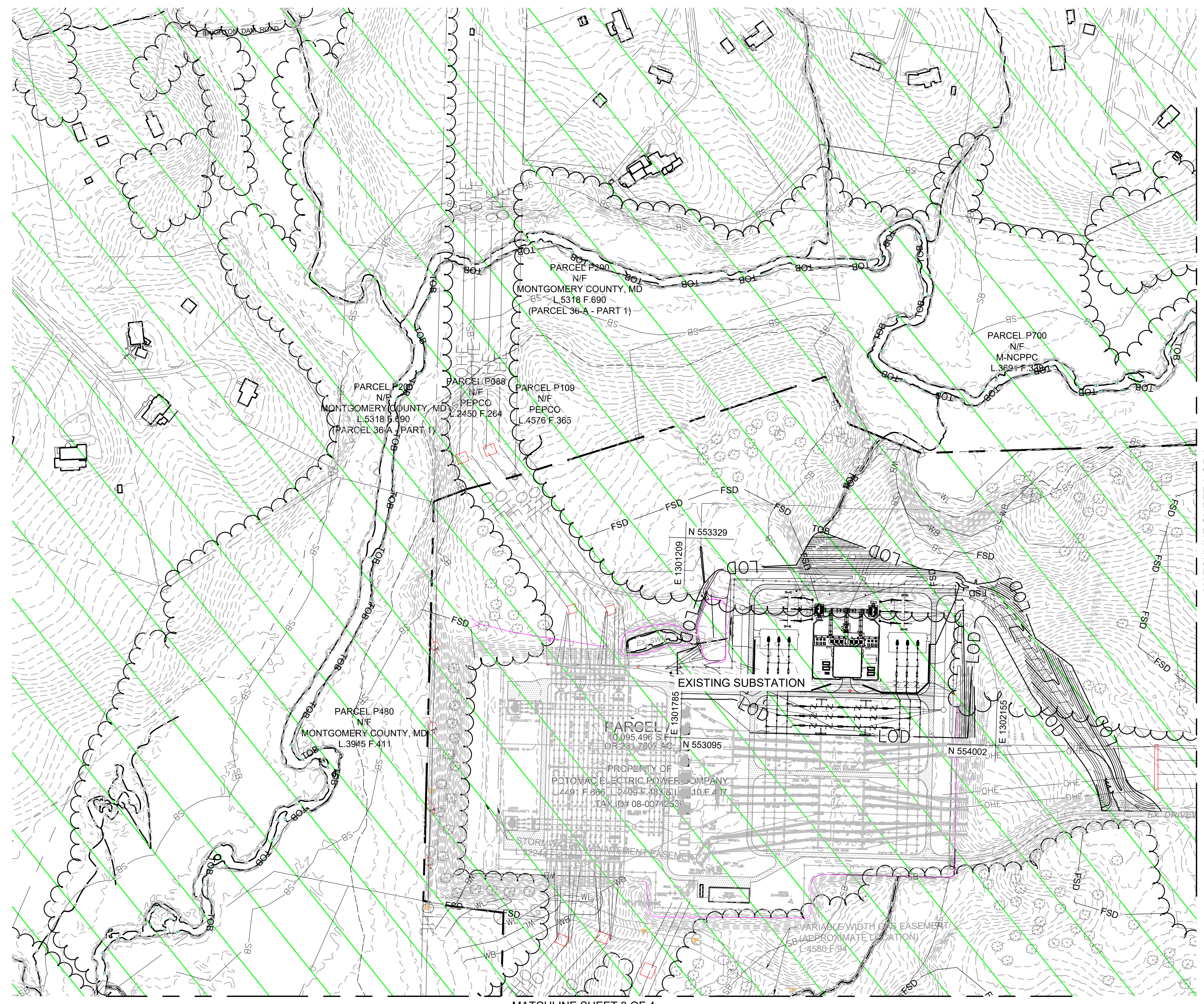
CONCEPTUAL DESIGN FOR  
TENDERING PURPOSES ONLY  
2024-07-25

The reproduction, distribution and utilization of this document as well as the communication of its contents to others without express authorization are prohibited. Offenders will be held liable for damages. © 2022 Hitachi Energy. All rights reserved.  
 This document is issued by means of a computerized system. The digitally stored original is electronically approved. The approved document has a name and date entered in the approved field. A manual signature is not required.

				<b>HITACHI ENERGY</b>		Drawing Title <b>LAYOUT, 3D VIEW</b>		Client drw No.	
				Project <b>Brighton</b>		Drawing No. <b>1JNG00230D1MB</b>		Project No. OPP236984278Site ID US2804	
				Client <b>PEPCO</b>		Rev. <b>E</b>		Format A1 Sheet No. 3	
								Scale No. of sh. 3	
								Drawing Status CONCEPTUAL DESIGN	
								Drawn by Author	
								Checked by Checker	
								Approved by	

Rev.	Date	Drawn	Checked	Description
E	2024-07-25	TF	PAT	Update to separate battery rooms
D	2024-07-18	TF	PAT	Update Protection Panels
C	2024-07-09	TF	PAT	Update D/S and E/S
B	2024-06-28	SR	PAT	Update Aux Branch
A	2024-06-17	TF	PAT	First revision

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB88)



**VICINITY MAP**  
SCALE: 1" = 2000'

**LEGEND**

- EXISTING ROAD
- EXISTING BUILDING
- EXISTING SUBJECT PROPERTY BOUNDARY
- EXISTING ADJACENT PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- RURAL CLUSTER (RC)

MATCHLINE SHEET 3 OF 4

MATCHLINE SHEET 2 OF 4

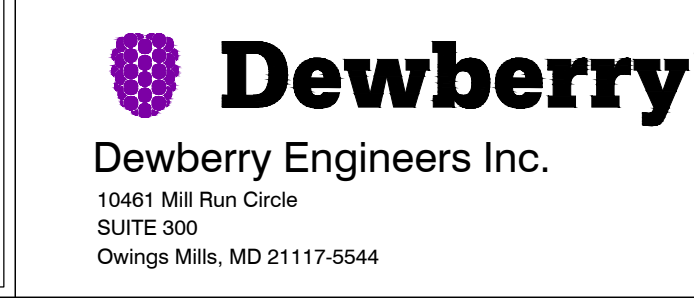
DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					



**Professional Certification**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 33959, Expiration Date: January 14, 2025.



**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MANS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.



PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM  
  
DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM  
  
TAX DIST.

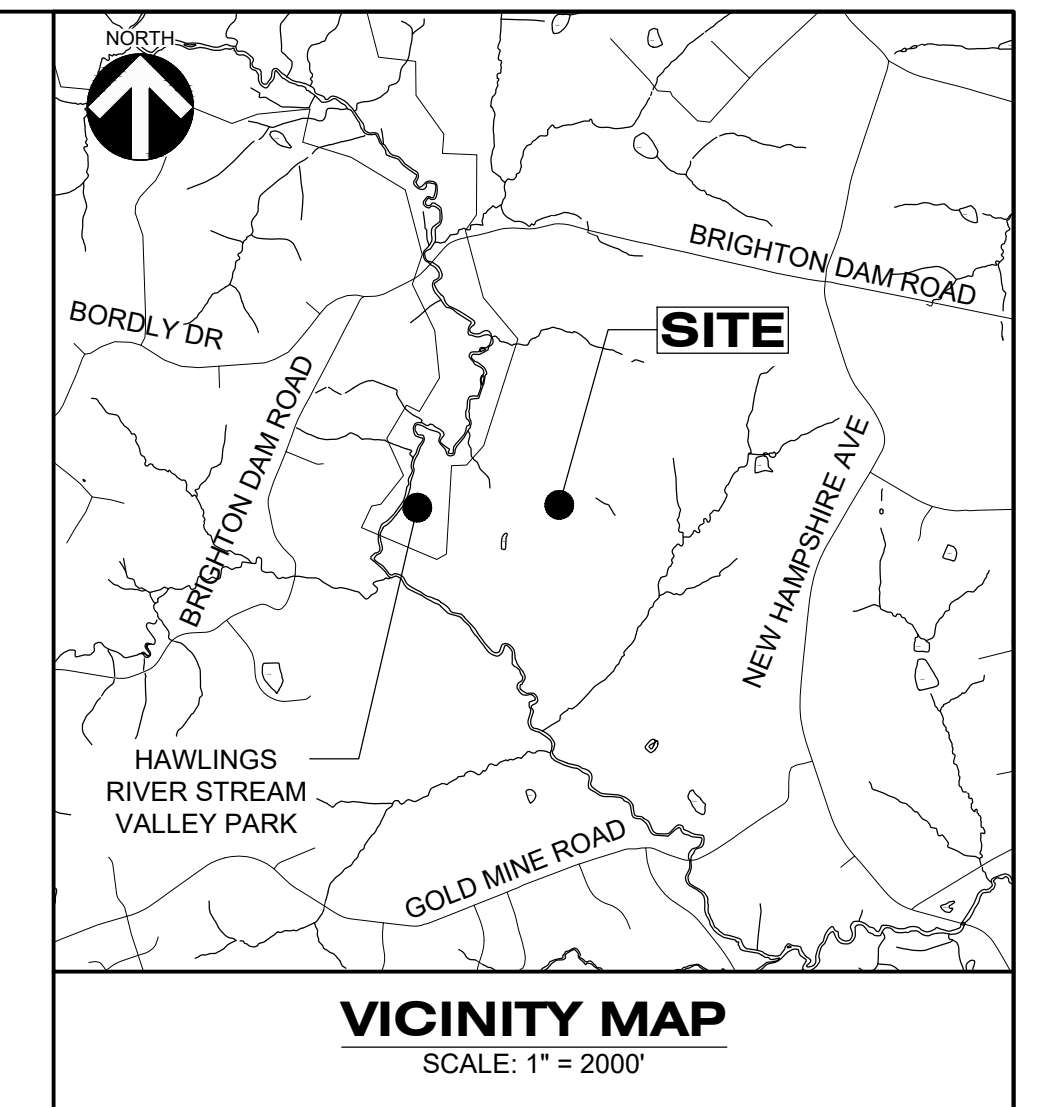
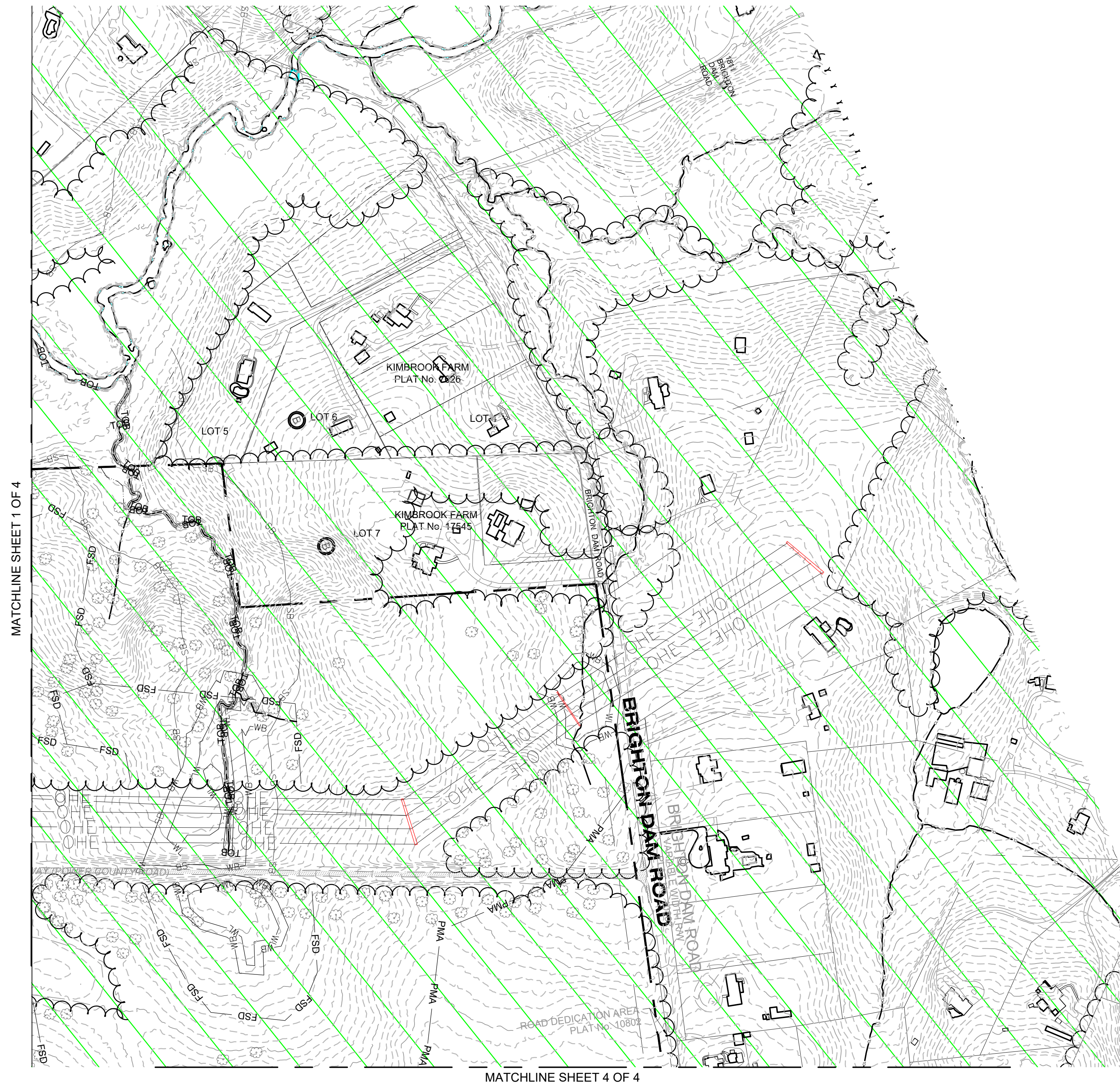
WR NO.	SCALE	APPD	APPD	APPD
FDR NO.	DATE	DR. BY	MB	
	CHKD.	LB		
	INSP.			

**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKVILLE, MD 20833**

**POTOMAC ELECTRIC POWER CO.**

**02-LOCAL**  
SHEET 1 OF 4

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB88)




**LEGEND**

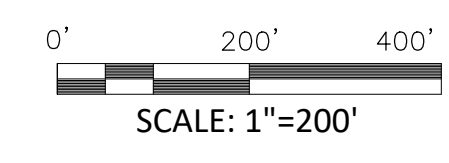
- EXISTING ROAD
- EXISTING BUILDING
- EXISTING SUBJECT PROPERTY BOUNDARY
- EXISTING ADJACENT PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- RURAL CLUSTER (RC)

MATCHLINE SHEET 1 OF 4

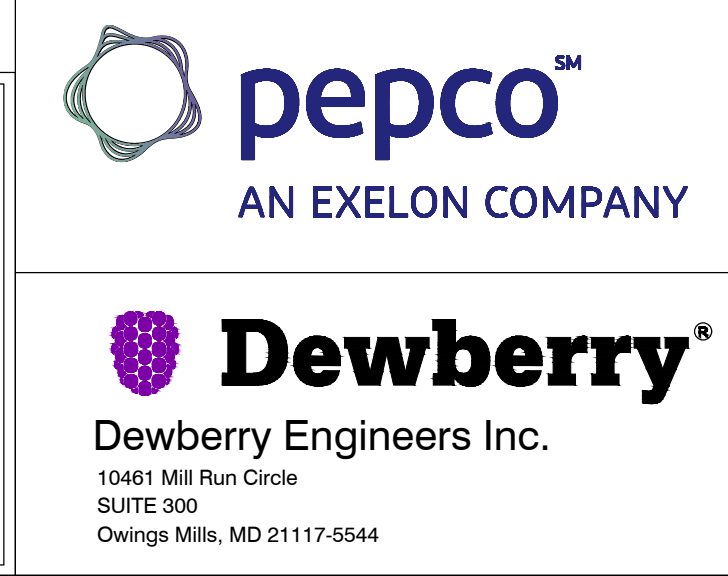
MATCHLINE SHEET 4 OF 4

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					

  
**Professional Certification**  
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2025.



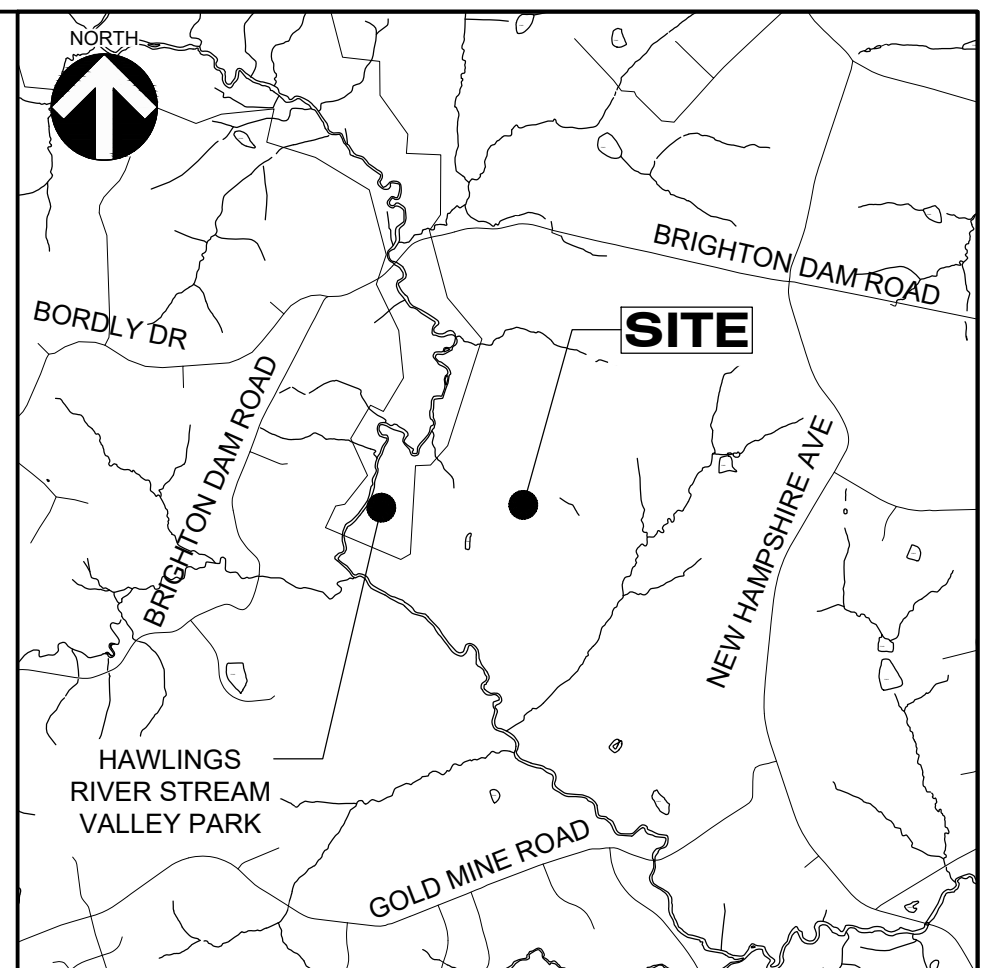
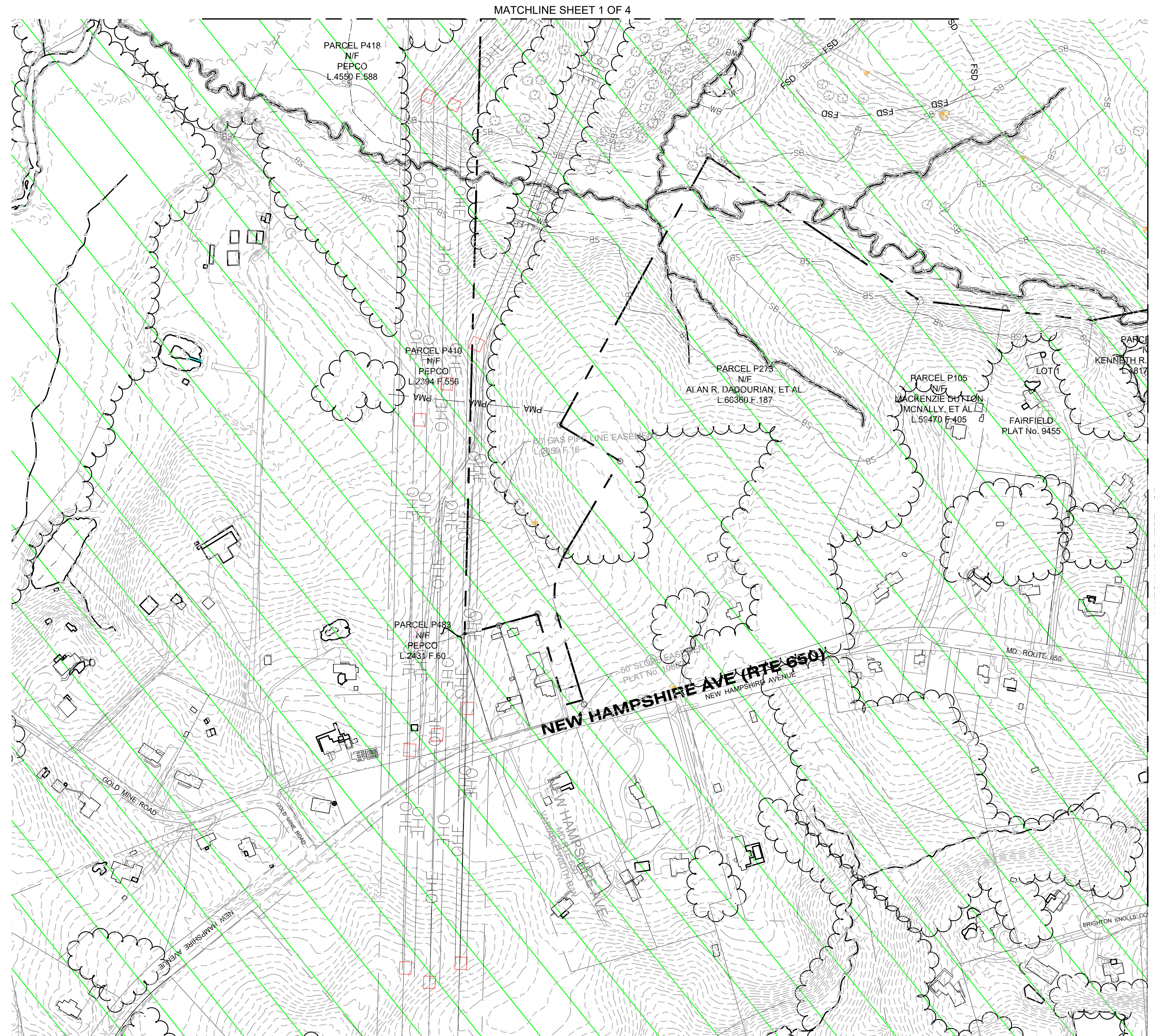
**NOTE**  
 FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
 48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
 INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MANS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.



**PEPCO RESPONSIBLE ENGINEER:**  
 701 9TH STREET NW  
 WASHINGTON, DC 20011  
 NAME: IBRAHIM KHATIB  
 PHONE: 703.226.9978  
 EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM  
  
**DESIGN CONSULTANT:**  
 NAME: LISA R. BETZ, PE  
 PHONE: 410.645.1402  
 EMAIL: LBETZ@DEWBERRY.COM  
  
**TAX DIST.:**

<b>MR2025007 BRIGHTON SUBSTATION 1300 POWER COUNTY ROAD BROOKVILLE, MD 20833</b>			
<b>POTOMAC ELECTRIC POWER CO.</b>			
WR NO.	SCALE	APPD	APPD
FDR NO.	DATE	DR. BY	MB
	CHKD.	LB	
	INSP.		
			<b>02-LOCAL</b> SHEET 2 OF 4

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB88)



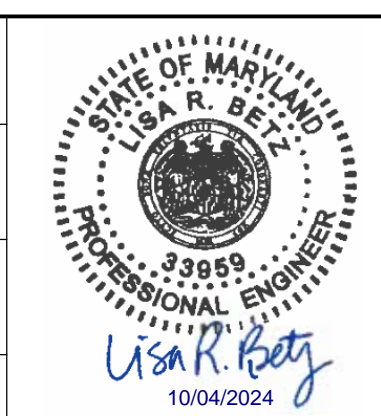
**VICINITY MAP**  
SCALE: 1" = 2000'

**LEGEND**

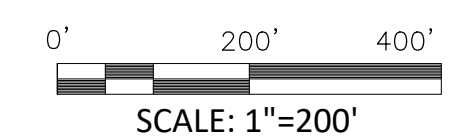
- EXISTING ROAD
- EXISTING BUILDING
- EXISTING SUBJECT PROPERTY BOUNDARY
- EXISTING ADJACENT PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- RURAL CLUSTER (RC)

MATCHLINE SHEET 4 OF 4

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					

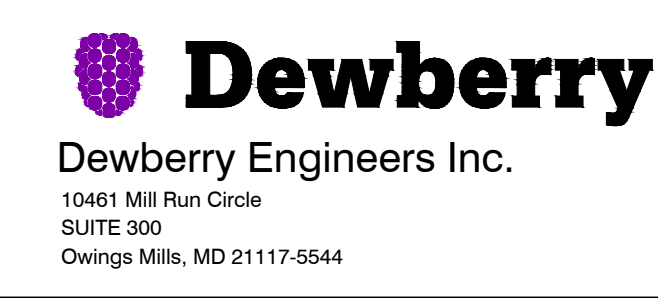


**Professional Certification**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2025.



**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY

INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.



PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

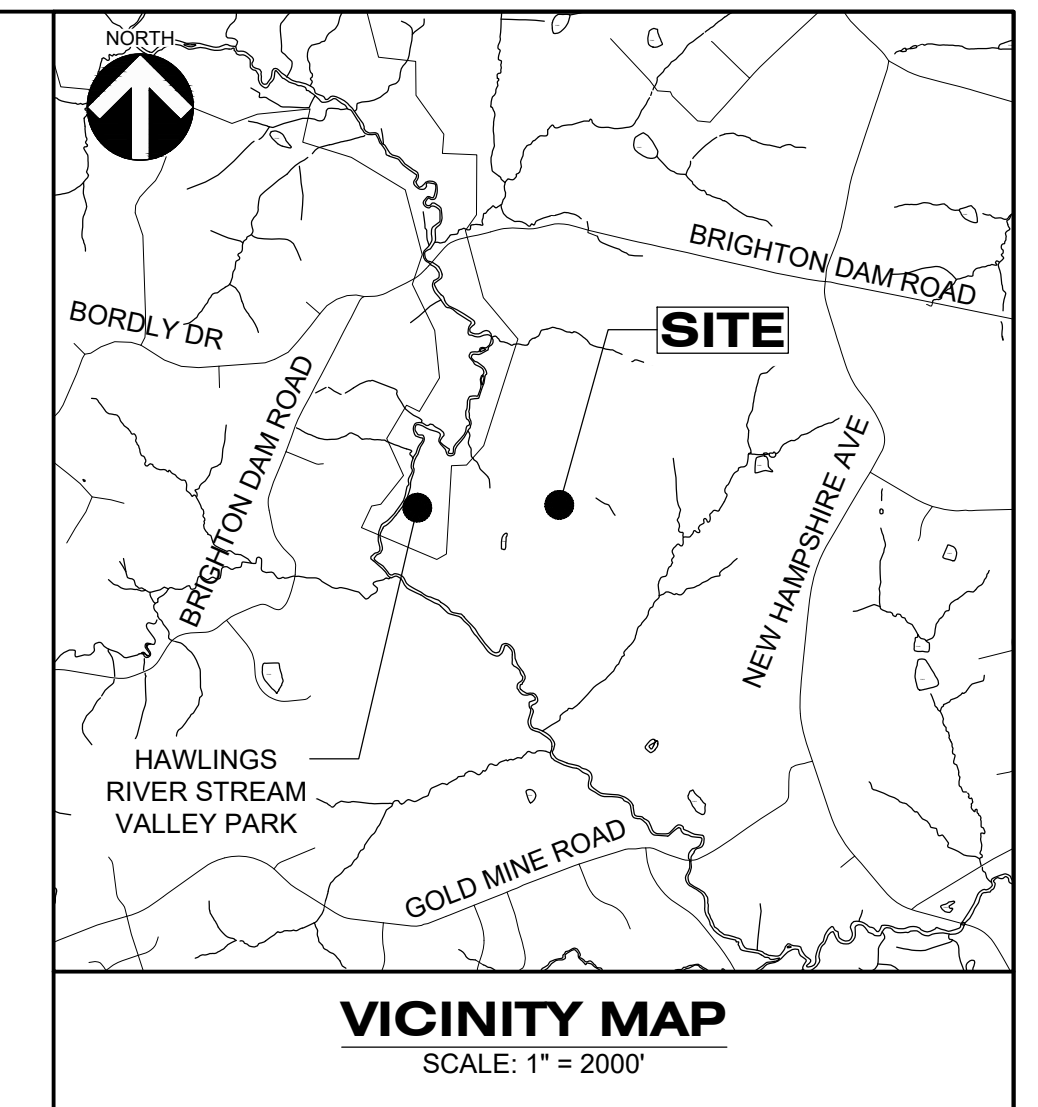
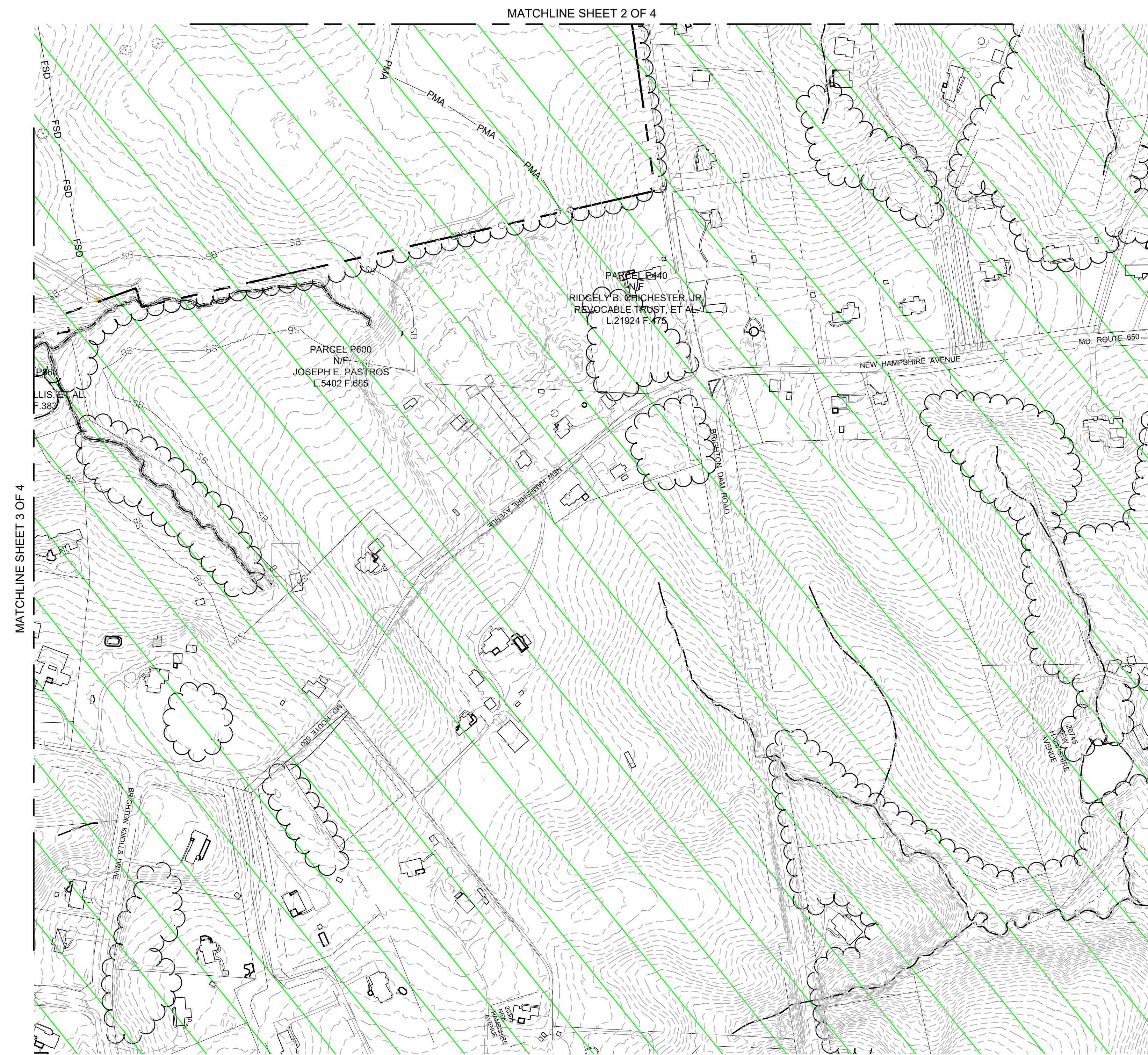
WR NO.	SCALE	APPD	APPD	APPD
FDR NO.	DATE			
	DR. BY: MB			
	CHKD: LB			
	INSP:			

**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKVILLE, MD 20833**

**POTOMAC ELECTRIC POWER CO.**

**02-LOCAL**  
SHEET 3 OF 4

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB88)

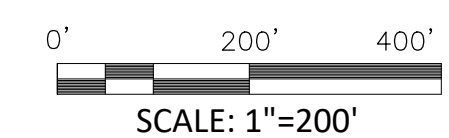


**LEGEND**

- EXISTING ROAD
- EXISTING BUILDING
- EXISTING SUBJECT PROPERTY BOUNDARY
- EXISTING ADJACENT PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING TREE LINE
- RURAL CLUSTER (RC)

MATCHLINE SHEET 3 OF 4

MATCHLINE SHEET 2 OF 4



**NOTE**  
FOR LOCATION OF UTILITIES CALL  
8-1-1 OR 1-800-257-7777  
OR LOG ON TO  
[www.call811.com](http://www.call811.com)  
<http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK  
IN THIS VICINITY

INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MANS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.

PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

WR NO.

FDR NO.

**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKVILLE, MD 20833**

**POTOMAC ELECTRIC POWER CO.**

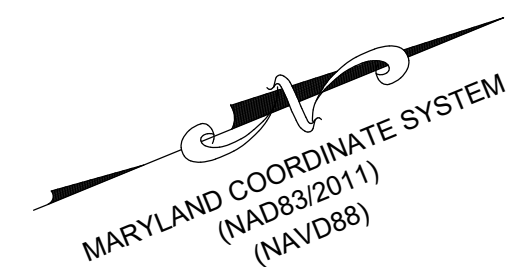
SCALE	APPD	APPD	APPD
DATE			
DR. BY	MB		
CHKD.	LB		
INSP.			

**02-LOCAL**  
SHEET 1 OF 1

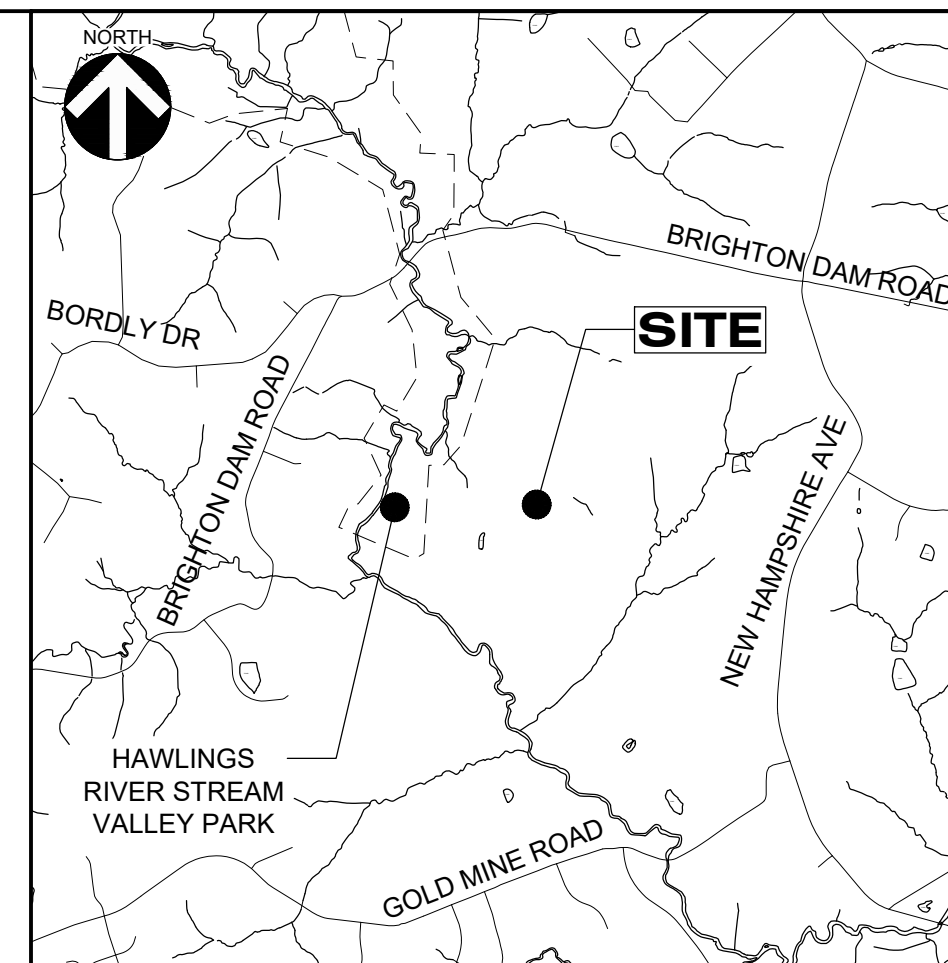
DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					

**Professional Certification**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2025.





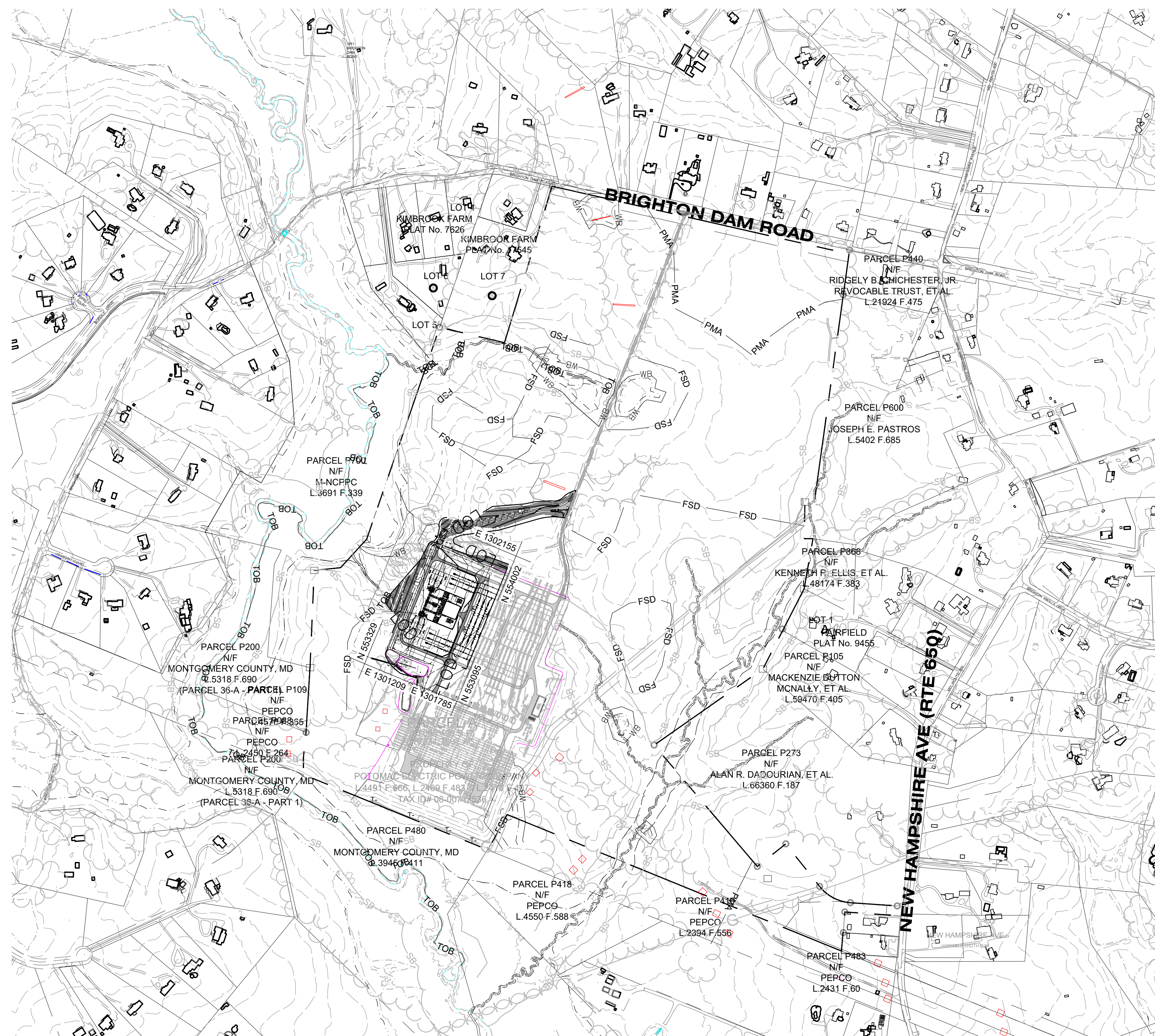
# BRIGHTON SUBSTATION STATCOM EXPANSION



**VICINITY MAP**  
SCALE: 1" = 2000'

## GENERAL NOTES:

- THE TAX IDENTIFICATION NUMBERS ASSOCIATED WITH THIS PLAN ARE: 00712536.
- SITE ADDRESS: 1300 BRIGHTON DAM ROAD, BROOKEVILLE, MD 20833
- OWNER NAME AND ADDRESS: POTOMAC ELECTRIC POWER COMPANY, 701 9TH STREET NW, WASHINGTON, D.C. 20068-0001
- TOTAL ACREAGE: 231.76 ACRES ±
- TAX MAP: JU123
- ZONING: RC (RURAL CLUSTER)
- WSSC GRID: 227NW02/228NW02
- ELECTION DISTRICT: 8
- COUNCILMAN DISTRICT: 7
- POLICE DISTRICT: 4D
- PROPERTY BOUNDARIES ON THIS PLAN SHOWN PER A BOUNDARY SURVEY PERFORMED BY DEWBERRY ENGINEERS, INC. IN MARCH AND APRIL 2024.
- THE TOPOGRAPHY SHOWN ON THIS PLAN IS FROM AN AERIAL SURVEY PERFORMED BY MCKENZIESNYDER, INC. ON MARCH 8, 2024 AND SUPPLEMENTED BY A FIELD SURVEY PERFORMED BY DEWBERRY ENGINEERS, INC. IN MARCH AND APRIL 2024, AS WELL AS READILY AVAILABLE GIS DATA FROM MONTGOMERY COUNTY. THIS DRAWING IS IN MARYLAND COORDINATE SYSTEM NAD83 (2011) HORIZONTAL DATUM AND NAVD88 VERTICAL DATUM.
- THE WETLAND AND STREAM INFORMATION ON THIS PLAN IS FROM A STUDY PREPARED BY ECO-SCIENCE PROFESSIONALS AND DATED APRIL 2024.
- THIS SITE IS LOCATED IN A TIER II CATCHMENT AREA AND CONTAINS A TIER II WATERBODY AS DEFINED IN COMAR 26.08.02.04. THIS SITE IS NOT LOCATED IN AN IMPAIRED WATER BODY WITH A TOTAL MAXIMUM DAILY LOAD (TMDL) ALLOCATED FOR SEDIMENT, WHICH ARE AFFORDED SPECIAL PROTECTION UNDER MARYLAND'S ANTI-DEGRADATION POLICY. ACCORDING TO MARYLAND DEPARTMENT OF THE ENVIRONMENT TIER II HIGH QUALITY WATERS (2022), THE WATERBODY HAS ASSIMILATIVE CAPACITY FOR NEW DEVELOPMENT.
- THIS SITE IS LOCATED WITHIN THE ROCKY GORGE DAM MDE 12 DIGIT WATERSHED 021311070942. THE WATERSHED USE IS CLASS IV.
- THIS SITE IS LOCATED WITHIN A STRONGHOLD WATERSHED AS ESTABLISHED BY THE MD DNR.
- FEMA FLOODPLAIN MAP PANELS #24031C0210D, #24031C0216D, AND #24031C0220D SHOW THAT 100 YEAR FLOODPLAIN EXISTS ON THE PROPERTY, BUT NOT WITHIN 100' OF THE ANTICIPATED LIMITS OF DISTURBANCE.
- THE PROPERTY IS NOT A REGISTERED HISTORIC SITE ACCORDING TO MONTGOMERY COUNTY DESIGNATED HISTORIC SITES AND DISTRICTS INTERACTIVE MAP.
- THIS PROPERTY IS WITHIN A PRIMARY MANAGEMENT AREA OF THE HAWLINGS RIVER, BUT IS NOT LOCATED WITHIN ANY SPECIAL PROTECTION AREAS.
- ALL DESIGNS WILL BE IN ACCORDANCE WITH MDE AND MC DPS.



## PROPERTY SUMMARY:

EXISTING IMPERVIOUS AREA: 919,098 SF (21.099 ACRES)  
% IMPERVIOUS AREA<sub>EX</sub>: 9.10%

PROPOSED IMPERVIOUS AREA: 1,181,272 SF (27.118 ACRES)  
% IMPERVIOUS AREA<sub>PR</sub>: 11.70%

## PROJECT SUMMARY:

SITE AREA (LOD): 547,638 SF (12.572 ACRES)

EXISTING IMPERVIOUS AREA: 100,560 SF (2.309 ACRES)  
% IMPERVIOUS AREA<sub>EX</sub>: 18.36%

PROPOSED IMPERVIOUS AREA: 264,782 SF (6.079 ACRES)  
% IMPERVIOUS AREA<sub>PR</sub>: 48.35%

## LEGEND:

- EXISTING ROAD
- EXISTING BUILDING
- EXISTING SUBJECT PROPERTY LINE
- EXISTING ADJACENT PROPERTY LINE(S)
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING SPECIMEN TREE
- EXISTING FENCE
- EXISTING WETLAND
- EXISTING WETLAND BUFFER
- EXISTING 100-YR FLOODPLAIN
- EXISTING 25/150' STREAM BUFFER
- EXISTING SLOPE 15-25%
- EXISTING SLOPE >25%
- EXISTING REGULATED STREAM CENTERLINE
- PROPOSED ROAD
- PROPOSED CONTOURS
- POINT OF INTEREST
- PROPOSED DRAINAGE AREA

## SURVEY CONTROL

TRAVERSE NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
501	553147.8542	1301328.3140	388.7400	TRAVERSE
511	554579.4285	1301754.7610	373.9200	TRAVERSE
512	554423.8392	1302014.4960	418.2400	TRAVERSE
513	554244.8689	1302092.5480	429.7900	TRAVERSE
514	554369.6470	1302440.0750	428.5400	TRAVERSE
537	552787.6218	1302121.4090	380.3500	TRAVERSE
540	552981.2538	1301495.1430	379.89	TRAVERSE
600	554147.8575	1302380.7990	425.96	FLY
601	553928.9690	1302243.7970	41116	TRAVERSE
602	554120.3095	1301961.4880	409.71	TRAVERSE
603	554129.9123	1301683.4890	393.82	FLY
604	553976.4262	1301899.4220	393.78	TRAVERSE
605	553757.4096	1301788.9910	391.16	TRAVERSE
606	553537.8686	1301534.4850	389.75	TRAVERSE



**Professional Certification**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2025.

0' 400' 800'  
SCALE: 1"=400'

NOTE  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.



PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

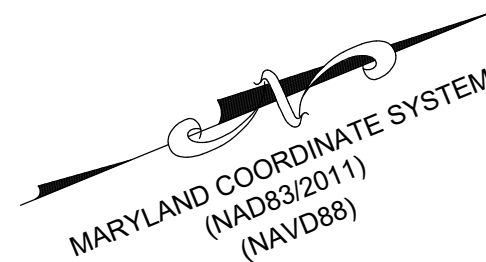
MR2025007  
BRIGHTON SUBSTATION  
1300 POWER COUNTY ROAD  
BROOKEVILLE, MD 20833

POTOMAC ELECTRIC POWER CO.

WR NO.	SCALE	APPD	APPD	APPD
FDR. NO.	DATE	DR. BY	MB	
	CHKD.	LB		
	INSP.			

MR-01  
SHEET 1 OF 2

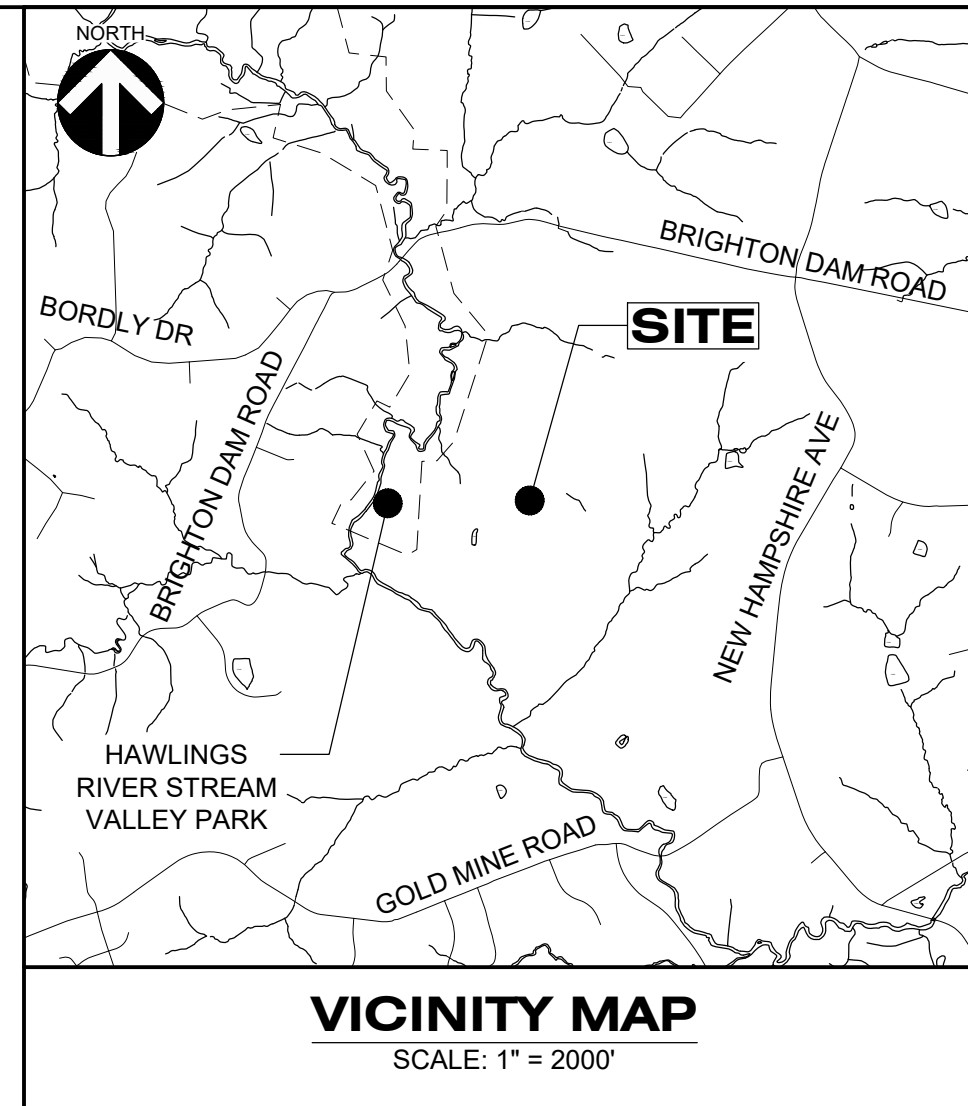
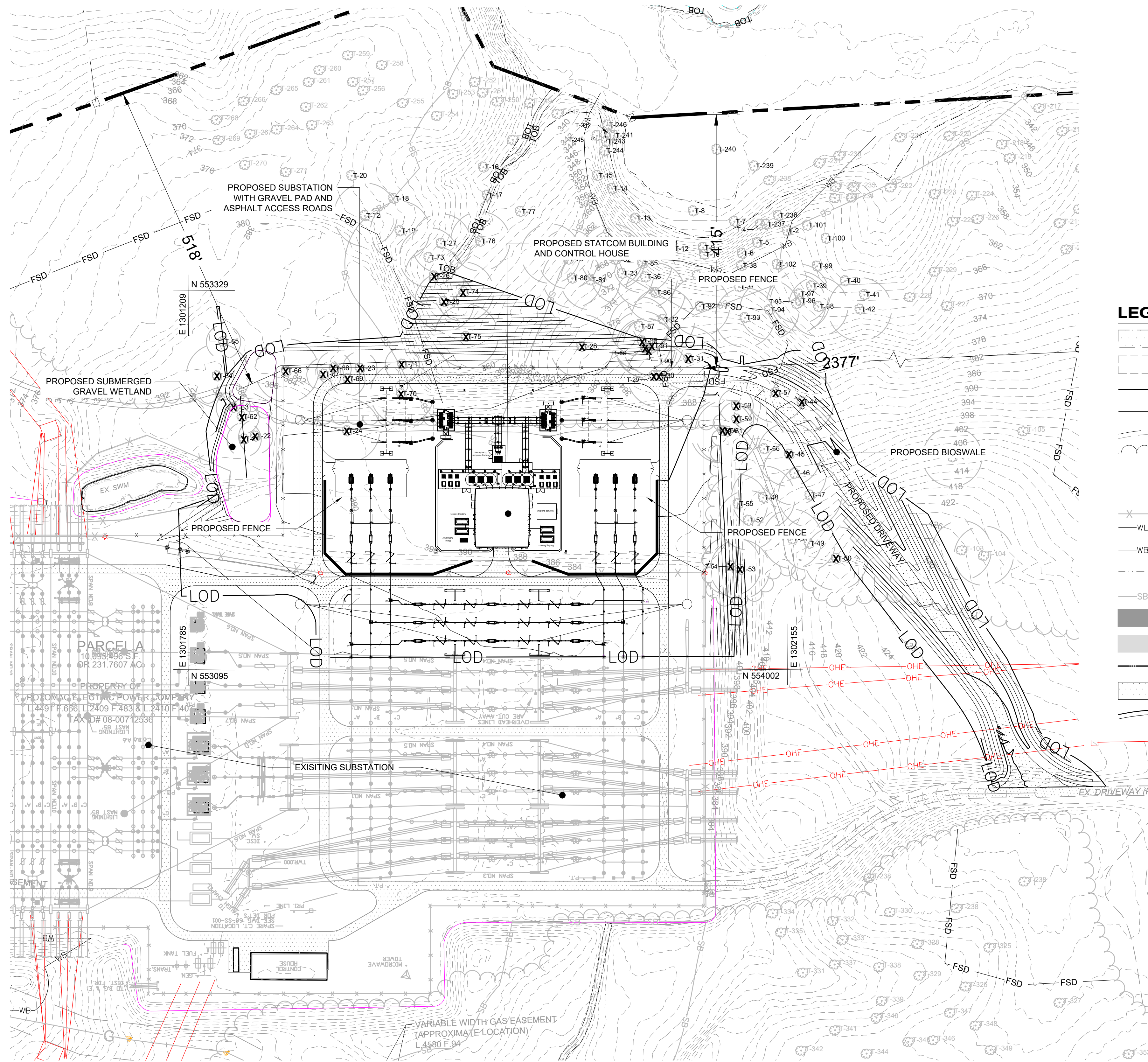
DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					



**CHAPTER 59 MONTGOMERY COUNTY ZONING ORDINANCE, TABLE 4.3.4**

**RC ZONE, STANDARD METHOD DEVELOPMENT STANDARDS**

	REQUIRED	PROPOSED
<b>1. LOT AND DENSITY</b>	DETACHED HOUSE OR A BUILDING FOR A CULTURAL INSTITUTION, RELIGIOUS ASSEMBLY, PUBLIC USE, OR A CONDITIONAL USE ALLOWED IN THE ZONE	
<b>LOT</b>		
LOT AREA (MIN)	5 ACRES	231.8 ACRES
LOT WIDTH AT FRONT BUILDING LINE (MIN)	300'	1,902'
LOT WIDTH AT FRONT LOT LINE (MIN)	300'	2,493'
DENSITY (MAX)		
DENSITY (UNITS/ACRE)	1/5	2/231
COVERAGE (MAX)		
LOT	10%	70.6%
<b>2. PLACEMENT</b>		
<b>PRINCIPAL BUILDING SETBACKS (MIN)</b>		
FRONT SETBACK	50'	N/A
SIDE STREET SETBACK	50'	N/A
SIDE SETBACK	20'	N/A
REAR SETBACK	35'	N/A
<b>ACCESSORY STRUCTURE SETBACKS (MIN)</b>		
FRONT SETBACK	80'	2,000' +
SIDE STREET SETBACK	50'	N/A
SIDE SETBACK	15'	600' +
REAR SETBACK	15'	1,200' +
<b>SPECIFICATIONS FOR PRINCIPAL BUILDING AND ACCESSORY STRUCTURE SETBACKS (MIN)</b>		
A. THE FRONT SETBACK AND SIDE STREET SETBACK MUST CONSIST OF ANY SCENIC SETBACK RECOMMENDED BY A MASTER PLAN OR 50 FEET, WHICHEVER IS GREATER.		
B. ANY ACCESSORY BUILDING OR STRUCTURE USED FOR THE HOUSING, SHELTER, OR SALE OF ANIMALS OR FOWL OTHER THAN A HOUSEHOLD PET MUST BE A MINIMUM OF 25' FROM A LOT LINE AND A MINIMUM OF 100' FROM A DWELLING ON ANOTHER LOT.		
C. ANY ACCESSORY STRUCTURE USED FOR THE HOUSING, SHELTER, OR SALE OF ANIMALS OR FOWL OTHER THAN A HOUSEHOLD PET MUST BE A MINIMUM OF 25' FROM LOT LINE AND A MINIMUM OF 100' FROM A DWELLING ON ANOTHER LOT.		
D. IN ADDITION TO THE FRONT SETBACK MINIMUM, AND ACCESSORY STRUCTURE ON A RESIDENTIAL LOT MUST BE LOCATED BEHIND THE REAR BUILDING LINE OF THE PRINCIPAL BUILDING.		
E. THE MAXIMUM FOOTPRINT OF AN ACCESSORY BUILDING ON A LOT WHERE THE MAIN BUILDING IS A DETACHED HOUSE IS 50% OF THE FOOTPRINT OF THE MAIN BUILDING. BUILDINGS FOR AN AGRICULTURAL USE ARE EXEMPT FROM THIS SIZE RESTRICTION.		
<b>3. HEIGHT</b>		
<b>HEIGHT (MAX)</b>		
PRINCIPAL BUILDING	50'	N/A
ACCESSORY STRUCTURE	50'	20'
<b>4. FORM</b>		
<b>ALLOWED BUILDING ELEMENTS</b>		
GALLERY/AWNING	N/A	NO
PORCH/STOOP	YES	NO
BALCONY	YES	NO
BUILDINGS USED FOR AGRICULTURE ASSOCIATED WITH FARMING		
A. A BUILDING USED FOR AGRICULTURE ASSOCIATED WITH FARMING MUST SATISFY THE STANDARDS OF AN ACCESSORY STRUCTURE, EXCEPT A BUILDING USED FOR AGRICULTURE IS EXEMPT FROM THE HEIGHT REQUIREMENTS UNDER SECTION 4.3.4.B.3.		



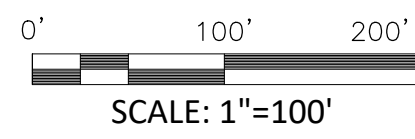
**LEGEND:**

[Symbol]	EXISTING ROAD
[Symbol]	EXISTING BUILDING
[Symbol]	EXISTING SUBJECT PROPERTY LINE
[Symbol]	EXISTING ADJACENT PROPERTY LINE(S)
[Symbol]	EXISTING CONTOURS
[Symbol]	EXISTING TREELINE
[Symbol]	EXISTING SPECIMEN TREE
[Symbol]	EXISTING FENCE
[Symbol]	EXISTING WETLAND
[Symbol]	EXISTING WETLAND BUFFER
[Symbol]	EXISTING 100-YR FLOODPLAIN
[Symbol]	EXISTING 25'/150' STREAM BUFFER
[Symbol]	EXISTING SLOPE 15-25%
[Symbol]	EXISTING SLOPE >25%
[Symbol]	EXISTING REGULATED STREAM CENTERLINE
[Symbol]	PROPOSED ROAD
[Symbol]	PROPOSED CONTOURS

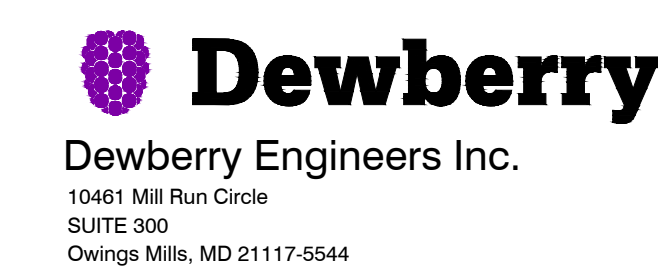
DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					



Professional Certification  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2025.



**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.



PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATI  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATI@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

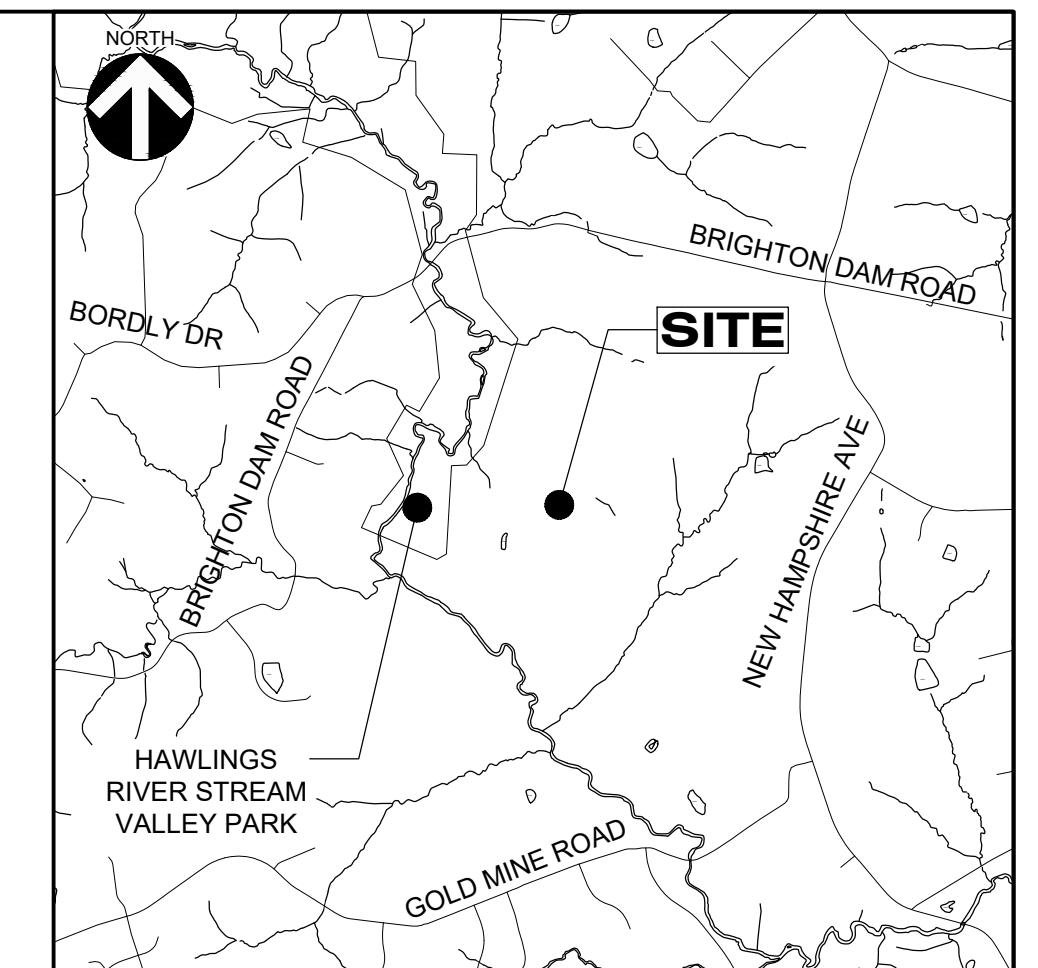
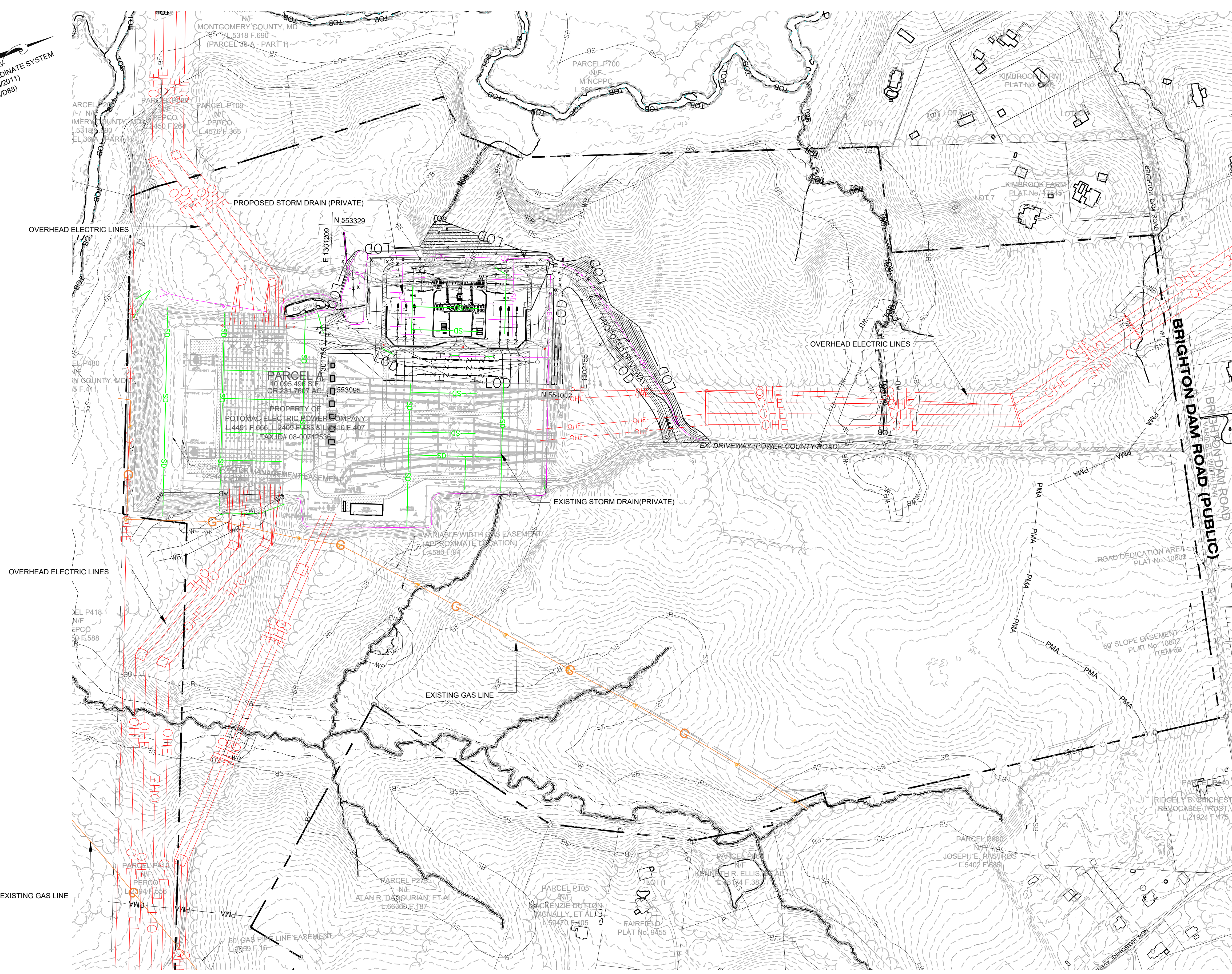
**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKEVILLE, MD 20833**

**POTOMAC ELECTRIC POWER CO.**

WR NO.	SCALE	APPD	APPD	APPD
FDR NO.	DATE			
	DR. BY MB			
	CHKD. LB			
	INSP.			

**MR-02**  
SHEET 2 OF 2

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB88)



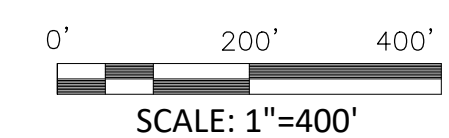
**VICINITY MAP**  
SCALE: 1" = 2000'

**LEGEND:**

	EXISTING ROAD
	EXISTING BUILDING
	EXISTING SUBJECT PROPERTY LINE
	EXISTING ADJACENT PROPERTY LINE(S)
	EXISTING CONTOURS
	EXISTING TREELINE
	EXISTING SPECIMEN TREE
	EXISTING FENCE
	EXISTING WETLAND
	EXISTING WETLAND BUFFER
	EXISTING 100-YR FLOODPLAIN
	EXISTING OVERHEAD ELECTRIC
	EXISTING GAS
	EXISTING STORM
	PROPOSED STORM

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					

**Professional Certification**  
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2025.



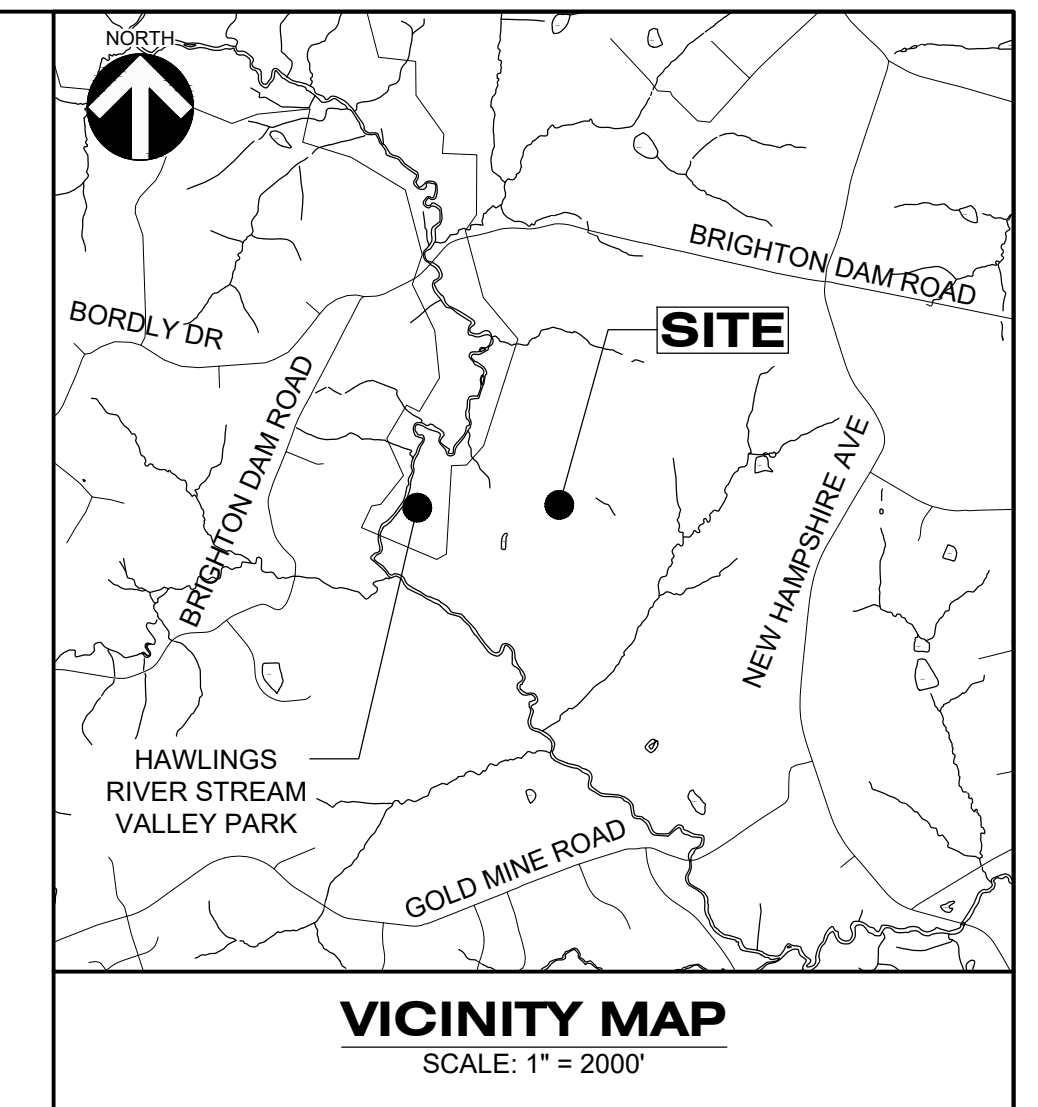
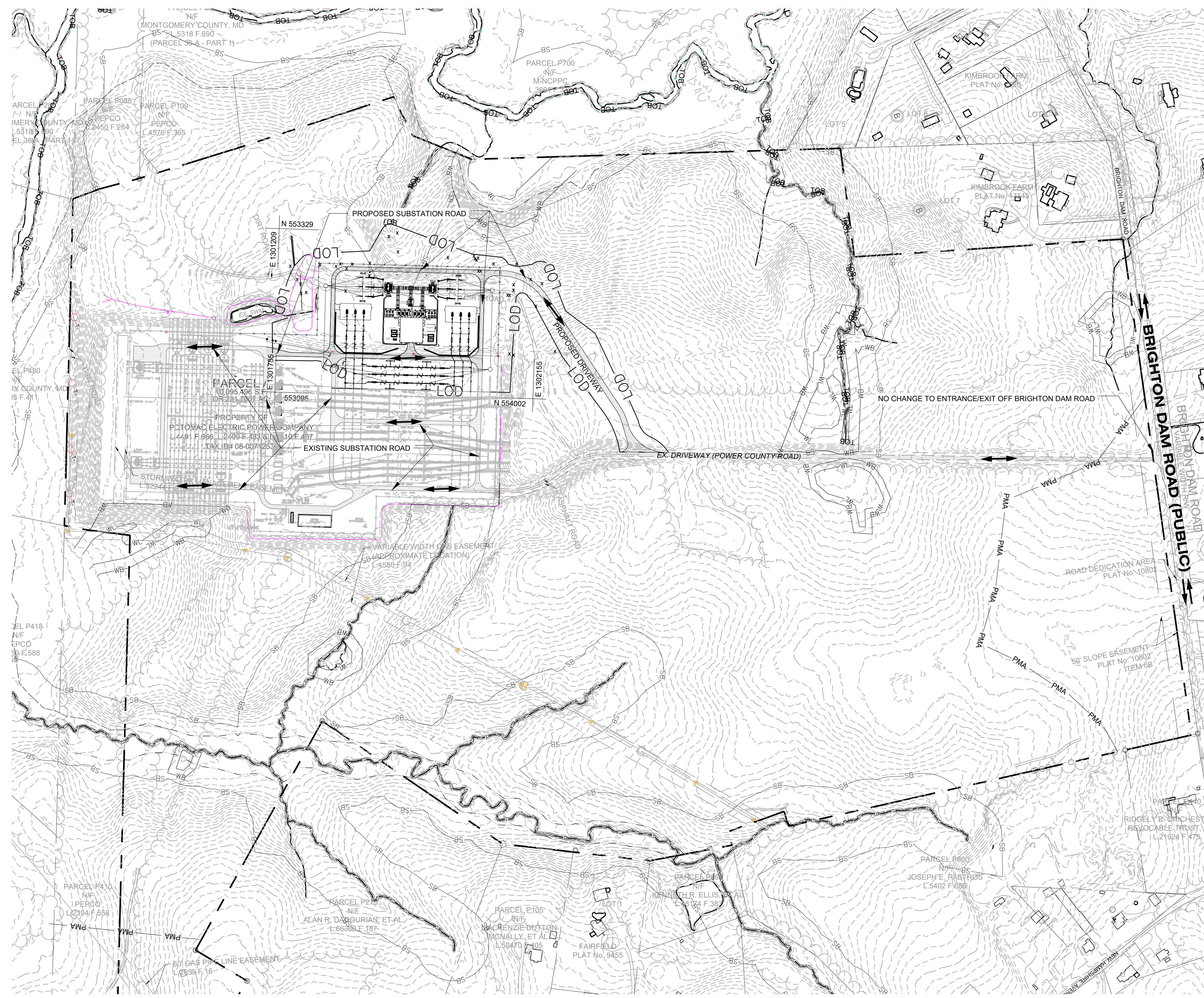
**NOTE**  
 FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com)  
<http://www.missutility.net>  
 48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
 INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.

AN EXELON COMPANY  
 Dewberry Engineers Inc.  
 10461 Mill Run Circle  
 SUITE 300  
 Owings Mills, MD 21117-5544

PEPCO RESPONSIBLE ENGINEER:  
 701 9TH STREET NW  
 WASHINGTON, DC 20011  
 NAME: IBRAHIM KHATIB  
 PHONE: 703.226.9978  
 EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM  
 DESIGN CONSULTANT:  
 NAME: LISA R. BETZ, PE  
 PHONE: 410.645.1402  
 EMAIL: LBETZ@DEWBERRY.COM  
 TAX DIST.

<b>MR2025007 BRIGHTON SUBSTATION 1300 POWER COUNTY ROAD BROOKVILLE, MD 20833</b>			
<b>POTOMAC ELECTRIC POWER CO.</b>			
WR NO.	SCALE	APPD	APPD
FDR NO.	DATE		
	DR. BY MB		
	CHKD. LB		
	INSP.		
<b>04-UTIL</b>			SHEET 1 OF 1

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB88)

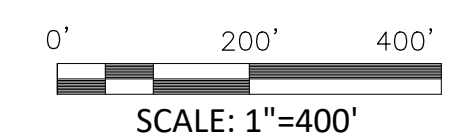


**LEGEND:**

	EXISTING ROAD
	EXISTING BUILDING
	EXISTING SUBJECT PROPERTY LINE
	EXISTING ADJACENT PROPERTY LINE(S)
	EXISTING CONTOURS
	EXISTING TREELINE
	EXISTING SPECIMEN TREE
	EXISTING FENCE
	EXISTING WETLAND
	EXISTING WETLAND BUFFER
	EXISTING 100-YR FLOODPLAIN
	EXISTING 25/150' STREAM BUFFER
	EXISTING SLOPE 15-25%
	EXISTING SLOPE >25%
	EXISTING REGULATED STREAM CENTERLINE
	PROPOSED ROAD

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					

STATE OF MARYLAND  
LISA R. BETZ  
PROFESSIONAL ENGINEER  
33959  
10/04/2024  
*Lisa R. Betz*  
Professional Certification  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2025.



**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.

**pepco**  
AN EXELON COMPANY

**Dewberry**  
Dewberry Engineers Inc.  
10461 Mill Run Circle  
SUITE 300  
Owings Mills, MD 21117-5544

PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

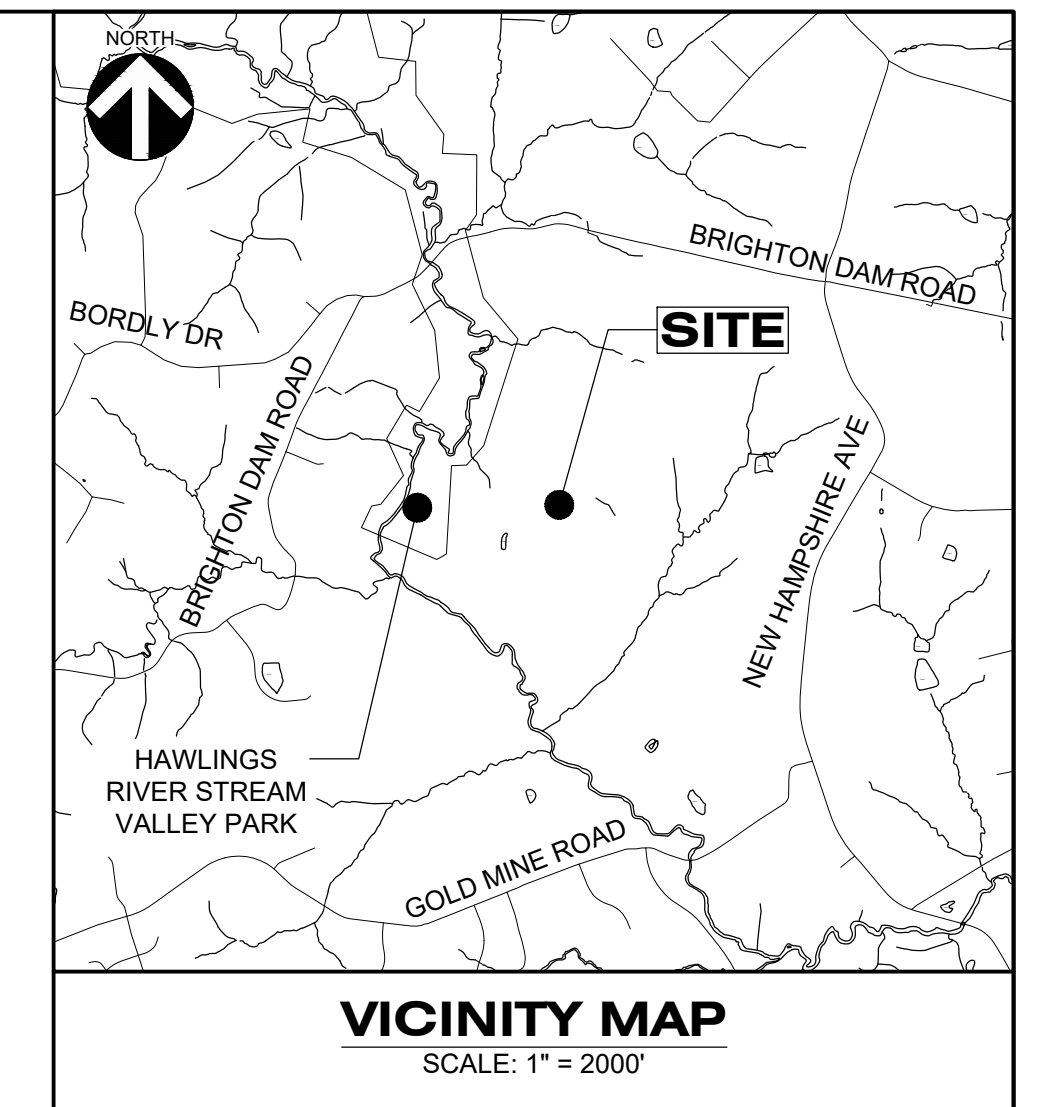
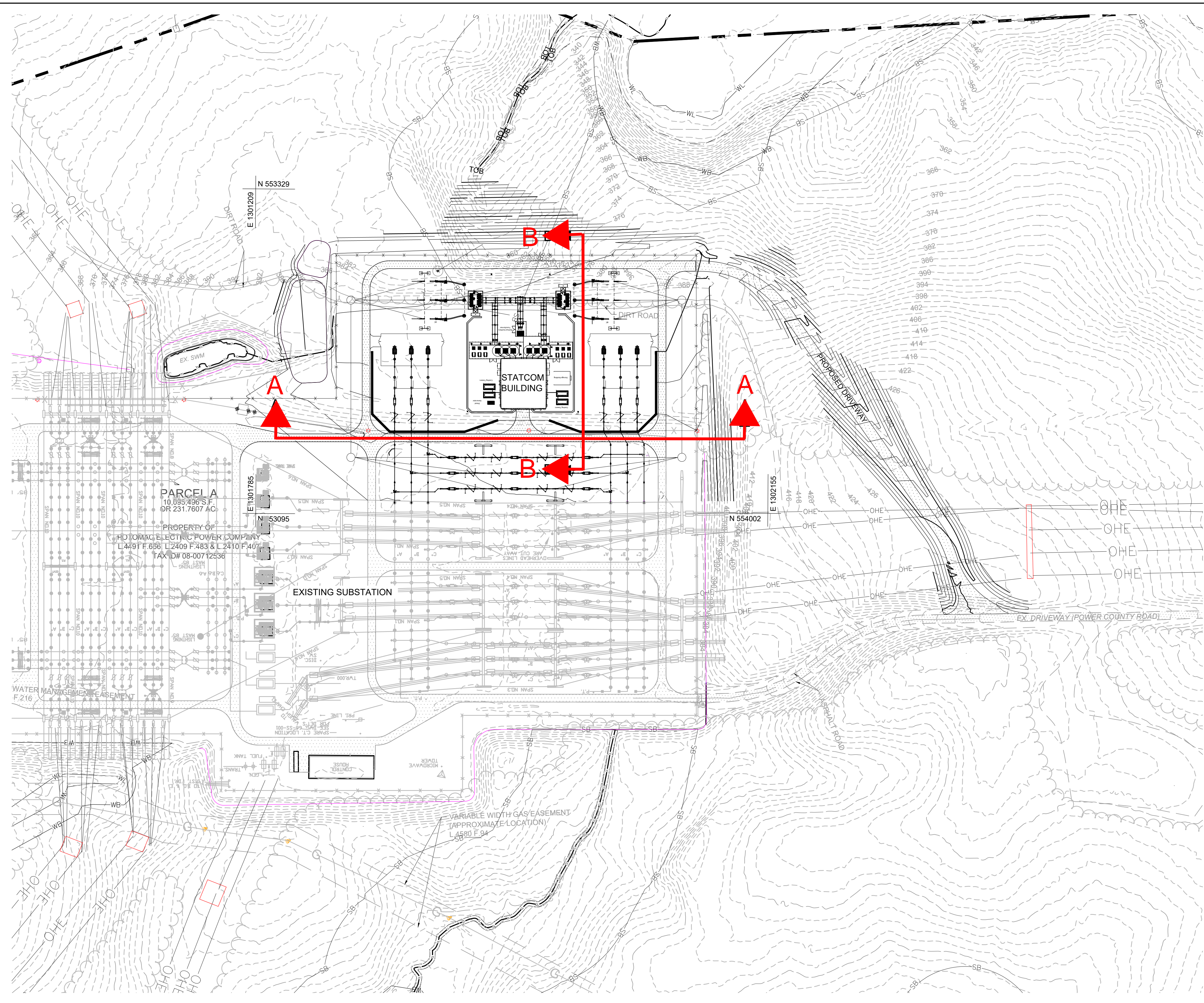
TAX DIST.

WR NO.

FDR NO.

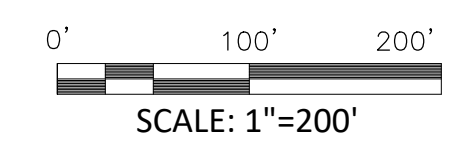
<b>MR2025007 BRIGHTON SUBSTATION 1300 POWER COUNTY ROAD BROOKVILLE, MD 20833</b>			
<b>POTOMAC ELECTRIC POWER CO.</b>			
SCALE	APPD	APPD	APPD
DATE			
DR. BY	MB		
CHKD.	LB		
INSP.			
<b>05-CIRC</b>			SHEET 1 OF 1

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB88)

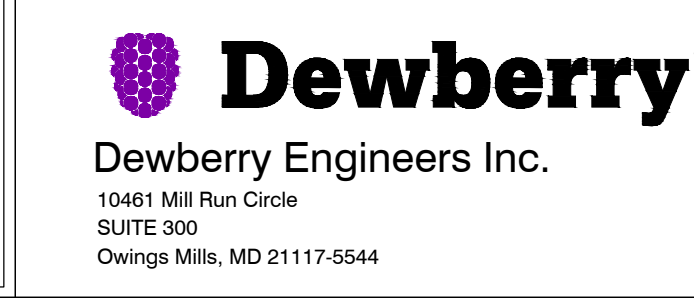


- LEGEND:**
- EXISTING ROAD
  - EXISTING BUILDING
  - EXISTING SUBJECT PROPERTY LINE
  - EXISTING ADJACENT PROPERTY LINE(S)
  - EXISTING CONTOURS
  - EXISTING TREELINE
  - EXISTING SPECIMEN TREE
  - EXISTING FENCE
  - EXISTING WETLAND
  - EXISTING WETLAND BUFFER
  - EXISTING 100-YR FLOODPLAIN
  - EXISTING 25/150' STREAM BUFFER
  - EXISTING SLOPE 15-25%
  - EXISTING SLOPE >25%
  - EXISTING REGULATED STREAM CENTERLINE
  - PROPOSED ROAD

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					



**NOTE**  
FOR LOCATION OF UTILITIES CALL  
8-1-1 OR 1-800-257-7777  
OR LOG ON TO  
[www.call811.com](http://www.call811.com)  
<http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK  
IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND  
UTILITIES WAS OBTAINED FROM AVAILABLE  
RECORDS BUT THE CONTRACTOR MUST  
DETERMINE THE EXACT LOCATION AND  
ELEVATION OF THE MAINS BY DIGGING TEST PITS  
BY HAND AT ALL UTILITY CROSSINGS WELL IN  
ADVANCE OF THE START OF EXCAVATION.



PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

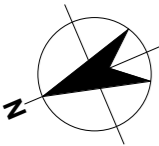
TAX DIST.

WR NO.	SCALE	APPD	APPD	APPD
FDR NO.	DATE			
	DR. BY	MB		
	CHKD.	LB		
	INSP.			

**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKVILLE, MD 20833**

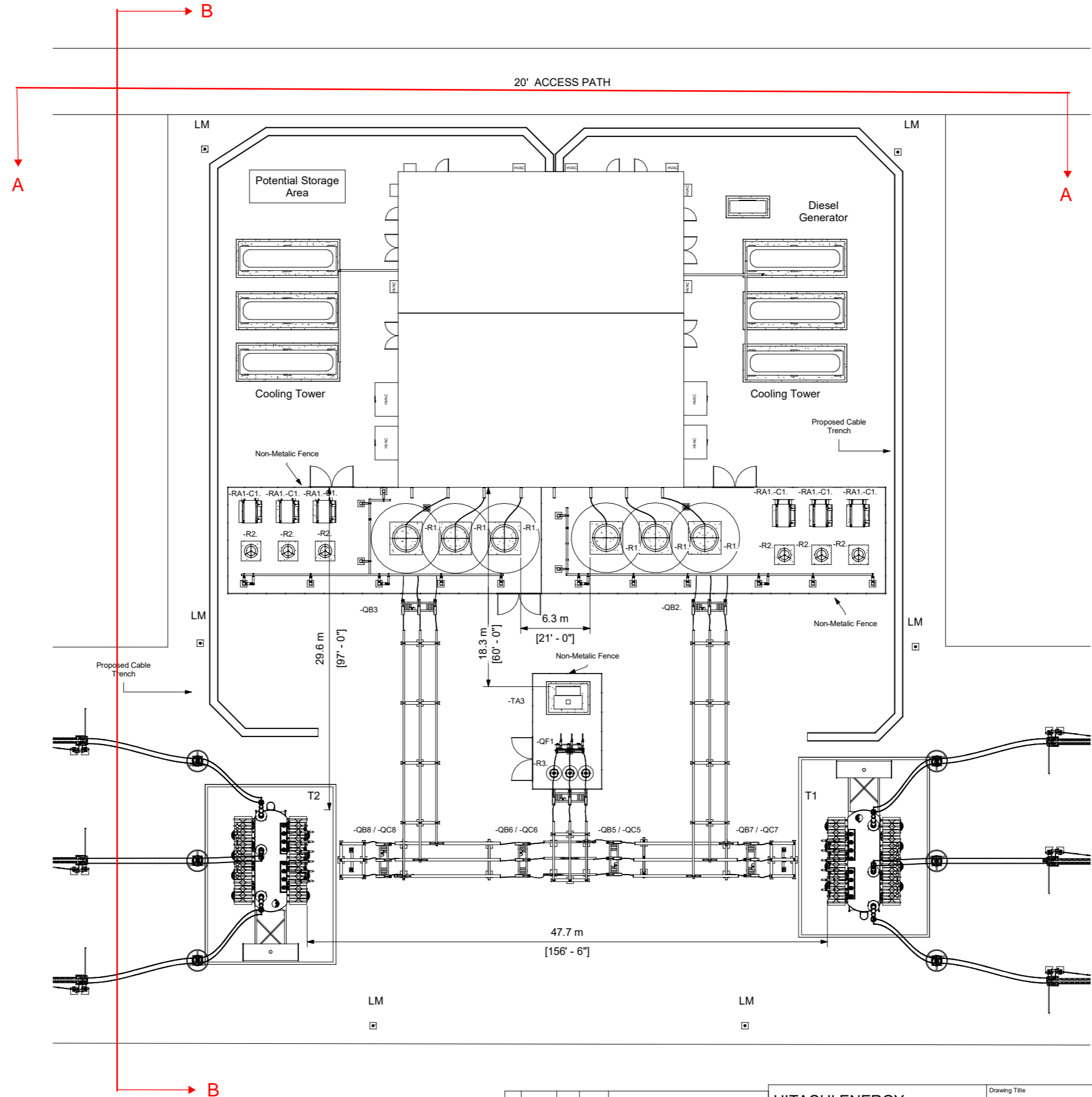
**POTOMAC ELECTRIC POWER CO.**

**32-ARCH**  
SHEET 1 OF 4



**EXISTING SUBSTATION**

Outdoor Item Designation	
Item Designation	Item Description
-BA1	Bus Support with VT - Bus support with VT
-C1	Capacitor [HP FILTER]
-QB2	Disconnect
-QT1	IGBT Valve - IGBT Valve
-R1	Reactor
-R2	Reactor [HP Filter]
-R3	Reactor Auxillary TX
-RA1	Resistor [HP Filter]



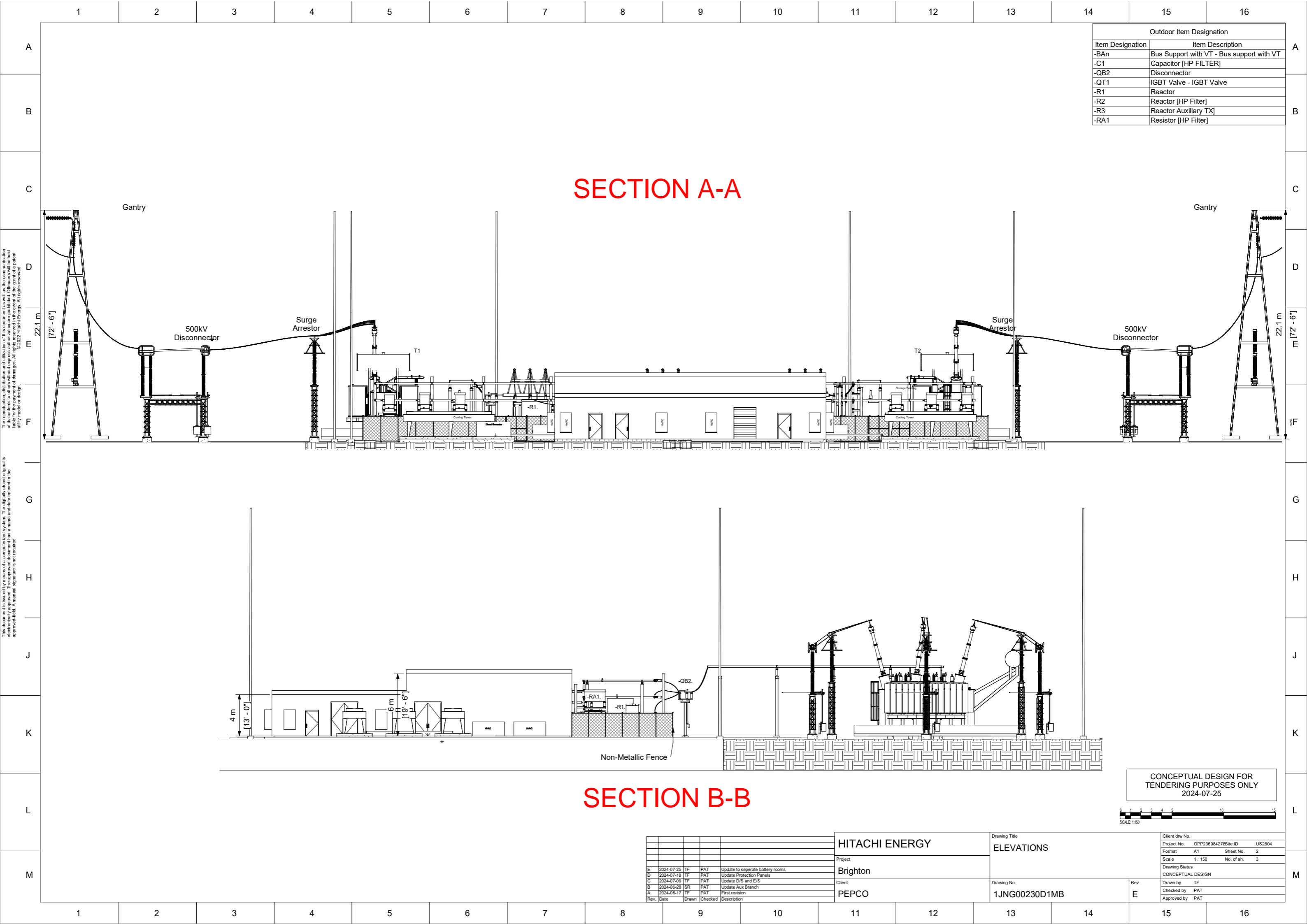
**PROPOSED  
ACCESS  
DRIVEWAY**

CONCEPTUAL DESIGN FOR TENDERING PURPOSES ONLY  
2024-07-25

SCALE: 1:200

				<b>HITACHI ENERGY</b>			Drawing Title <b>LAYOUT, PLAN VIEW</b>		Client drw No.																													
				Project <b>Brighton</b>			Drawing No. <b>1JNG00230D1MB</b>		Project No. OPP236984278Site ID US2804																													
				Client <b>PEPCO</b>			Rev. <b>E</b>		Format A1 Sheet No. 1																													
				<table border="1"> <tr><th>Rev.</th><th>Date</th><th>Drawn</th><th>Checked</th><th>Description</th></tr> <tr><td>E</td><td>2024-07-25</td><td>TF</td><td>PAT</td><td>Update to separate battery rooms</td></tr> <tr><td>D</td><td>2024-07-18</td><td>TF</td><td>PAT</td><td>Update Protection Panels</td></tr> <tr><td>C</td><td>2024-07-09</td><td>TF</td><td>PAT</td><td>Update D/S and E/S</td></tr> <tr><td>B</td><td>2024-06-28</td><td>SR</td><td>PAT</td><td>Update Aux Branch</td></tr> <tr><td>A</td><td>2024-06-17</td><td>TF</td><td>PAT</td><td>First revision</td></tr> </table>			Rev.	Date	Drawn	Checked	Description	E	2024-07-25	TF	PAT	Update to separate battery rooms	D	2024-07-18	TF	PAT	Update Protection Panels	C	2024-07-09	TF	PAT	Update D/S and E/S	B	2024-06-28	SR	PAT	Update Aux Branch	A	2024-06-17	TF	PAT	First revision	Scale 1:200 No. of sh. 3	
Rev.	Date	Drawn	Checked	Description																																		
E	2024-07-25	TF	PAT	Update to separate battery rooms																																		
D	2024-07-18	TF	PAT	Update Protection Panels																																		
C	2024-07-09	TF	PAT	Update D/S and E/S																																		
B	2024-06-28	SR	PAT	Update Aux Branch																																		
A	2024-06-17	TF	PAT	First revision																																		
									Drawing Status CONCEPTUAL DESIGN																													
									Drawn by TF																													
									Checked by PAT																													
									Approved by PAT																													

The reproduction, distribution and utilization of this document as well as the communication of its contents to others without express authorization are prohibited. Offenders will be held liable for any damages. All rights reserved. © 2022 Hitachi Energy. All rights reserved.



Outdoor Item Designation	
Item Designation	Item Description
-BA n	Bus Support with VT - Bus support with VT
-C1	Capacitor [HP FILTER]
-QB2	Disconnecter
-QT1	IGBT Valve - IGBT Valve
-R1	Reactor
-R2	Reactor [HP Filter]
-R3	Reactor Auxillary TX
-RA1	Resistor [HP Filter]

# SECTION A-A

# SECTION B-B

CONCEPTUAL DESIGN FOR TENDERING PURPOSES ONLY  
2024-07-25

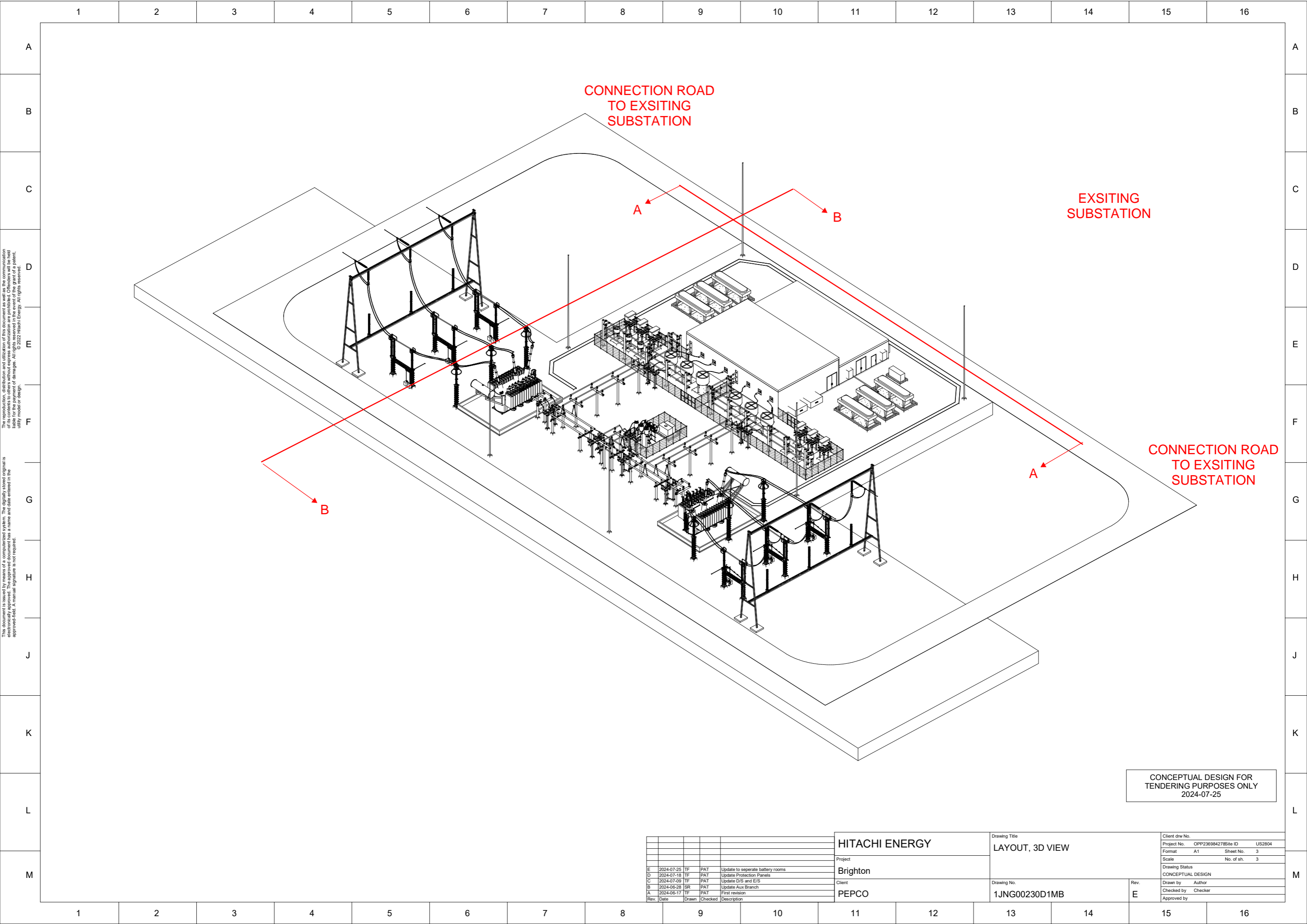


				<b>HITACHI ENERGY</b>		Drawing Title <b>ELEVATIONS</b>		Client drv No.	
				Project <b>Brighton</b>		Drawing No. <b>1JNG00230D1MB</b>		Project No. OPP236984278Site ID US2804	
				Client <b>PEPCO</b>		Rev. <b>E</b>		Format A1 Sheet No. 2	
								Scale 1:150 No. of sh. 3	
								Drawing Status CONCEPTUAL DESIGN	
								Drawn by TF	
								Checked by PAT	
								Approved by PAT	

Rev.	Date	Drawn	Checked	Description
E	2024-07-25	TF	PAT	Update to separate battery rooms
D	2024-07-18	TF	PAT	Update Protection Panels
C	2024-07-09	TF	PAT	Update D/S and E/S
B	2024-06-28	SR	PAT	Update Aux Branch
A	2024-06-17	TF	PAT	First revision

The reproduction, distribution and utilization of this document as well as the communication of its contents to others without express authorization are prohibited. Offenders will be held liable for damages. © 2022 Hitachi Energy. All rights reserved.

This document is issued by means of a computerized system. The digitally stored original is electronically approved. The approved document has a name and date entered in the approved field. A manual signature is not required.



CONNECTION ROAD  
TO EXSITING  
SUBSTATION

EXSITING  
SUBSTATION

CONNECTION ROAD  
TO EXSITING  
SUBSTATION

CONCEPTUAL DESIGN FOR  
TENDERING PURPOSES ONLY  
2024-07-25

The reproduction, distribution and utilization of this document as well as the communication of its contents to others without express authorization are prohibited. Offenders will be held liable for damages. © 2022 Hitachi Energy. All rights reserved.  
 This document is issued by means of a computerized system. The digitally stored original is electronically approved. The approved document has a name and date entered in the approved field. A manual signature is not required.

				<b>HITACHI ENERGY</b>		Drawing Title <b>LAYOUT, 3D VIEW</b>		Client drw No.	
				Project <b>Brighton</b>		Drawing No. <b>1JNG00230D1MB</b>		Project No. OPP236984278Site ID US2804	
				Client <b>PEPCO</b>		Rev. <b>E</b>		Format A1 Sheet No. 3	
								Scale No. of sh. 3	
								Drawing Status CONCEPTUAL DESIGN	
								Drawn by Author	
								Checked by Checker	
								Approved by	

Rev.	Date	Drawn	Checked	Description
E	2024-07-25	TF	PAT	Update to separate battery rooms
D	2024-07-18	TF	PAT	Update Protection Panels
C	2024-07-09	TF	PAT	Update D/S and E/S
B	2024-06-28	SR	PAT	Update Aux Branch
A	2024-06-17	TF	PAT	First revision

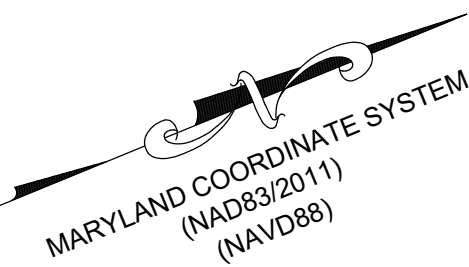


# Attachment B

## SHEET INDEX

COVER	FCP-01
FUTURE APPROVALS SHEET	FCP-02
FOREST CONSERVATION PLAN	FCP-03
FOREST CONSERVATION PLAN	FCP-04
FOREST CONSERVATION PLAN	FCP-05
FOREST CONSERVATION PLAN	FCP-06
FOREST CONSERVATION TREE TABLE	FCP-07
FOREST CONSERVATION DETAILS	FCP-08

# BRIGHTON SUBSTATION STATCOM EXPANSION FOREST CONSERVATION PLAN



## GENERAL NOTES:

- THE TAX IDENTIFICATION NUMBERS ASSOCIATED WITH THIS PLAN ARE: 00712536.
- SITE ADDRESS: 1300 BRIGHTON DAM ROAD BROOKVILLE, MD 20833
- OWNER NAME AND ADDRESS: POTOMAC ELECTRIC POWER COMPANY 701 9TH STREET NW WASHINGTON, D.C. 20068-0001
- THE TOTAL TRACT AREA IS 231.76 ACRES.
- THIS SITE IS ZONED RC (RURAL CLUSTER).
- THE MD DNR HAS DETERMINED THAT THE PROJECT IS WITHIN THE DRAINAGE TO THE HAWLINGS RIVER, WHICH IS KNOWN TO SUPPORT FRESHWATER MUSSELS INCLUDING THE YELLOW LANCE (*ELIPTIO LANCELATA*), A SPECIES LISTED BY THE U.S. FISH AND WILDLIFE SERVICE IN 2018.
- FEMA FLOODPLAIN MAP PANELS #24031C0210D, #24031C0216D, AND #24031C0220D SHOW THAT 100 YEAR FLOODPLAIN EXISTS ON THE PROPERTY, BUT NOT WITHIN 100' OF THE ANTICIPATED LIMITS OF DISTURBANCE.
- THE WETLAND AND STREAM INFORMATION ON THIS PLAN IS FROM A STUDY PREPARED BY ECO-SCIENCE PROFESSIONALS AND DATED APRIL 2024.
- THIS SITE IS LOCATED WITHIN THE ROCKY GORGE DAM MDE 12 DIGIT WATERSHED 021311070942. THE WATERSHED USE IS CLASS IV.
- THE PROPERTY IS NOT A REGISTERED HISTORIC SITE ACCORDING TO MONTGOMERY COUNTY DESIGNATED HISTORIC SITES AND DISTRICTS INTERACTIVE MAP.
- ALL TREES 24" AND GREATER ONSITE ARE SURVEYED LOCATED AND MEASURED WITH A FORESTERS DIAMETER TAPE MEASURE.
- THIS PROPERTY IS WITHIN A PRIMARY MANAGEMENT AREA OF THE HAWLINGS RIVER, BUT IS NOT LOCATED WITHIN ANY SPECIAL PROTECTION AREAS.
- THE NRI WAS CONDUCTED BY JOHN CANOLES OF ECO-SCIENCE PROFESSIONALS DURING MARCH AND APRIL 2024.
- THIS SITE IS LOCATED IN A TIER II CATCHMENT AREA AND CONTAINS A TIER II WATERBODY AS DEFINED IN COMAR 26.08.02.04. THIS SITE IS NOT LOCATED IN AN IMPAIRED WATER BODY WITH A TOTAL MAXIMUM DAILY LOAD (TMDL) ALLOCATED FOR SEDIMENT, WHICH ARE AFFORDED SPECIAL PROTECTION UNDER MARYLAND'S ANTI-DEGRADATION POLICY. ACCORDING TO MARYLAND DEPARTMENT OF THE ENVIRONMENT TIER II HIGH QUALITY WATERS (2022), THE WATERBODY HAS ASSIMILATIVE CAPACITY FOR NEW DEVELOPMENT.
- THIS SITE IS LOCATED WITHIN A STRONGHOLD WATERSHED AS ESTABLISHED BY THE MD DNR.
- THIS SITE INCLUDES FOREST INTERIOR DWELLING SPECIES HABITAT.
- THIS SITE IS NOT LOCATED IN THE CHESAPEAKE BAY CRITICAL AREA (CBCA).
- ACCORDING TO MD MERLIN ONLINE, US FISH & WILDLIFE SERVICE: NWI AND FIELD OBSERVATION: THERE ARE UNCLASSIFIED WETLANDS LOCATED ONSITE ALONG THE WESTERN EDGE OF THE SITE. THESE ARE NOT ANTICIPATED TO BE DISTURBED OR IMPACTED BY CONSTRUCTION IN ANY WAY.
- PROPERTY BOUNDARIES ON THIS PLAN SHOWN PER A BOUNDARY SURVEY PERFORMED BY DEWBERRY ENGINEERS, INC. IN MARCH AND APRIL 2024.
- THE TOPOGRAPHY SHOWN ON THIS PLAN IS FROM AN AERIAL SURVEY PERFORMED BY MCKENZIESNYDER, INC. ON MARCH 8, 2024 AND SUPPLEMENTED BY A FIELD SURVEY PERFORMED BY DEWBERRY ENGINEERS, INC. IN MARCH AND APRIL 2024, AS WELL AS READILY AVAILABLE GIS DATA FROM MONTGOMERY COUNTY. THIS DRAWING IS IN MARYLAND COORDINATE SYSTEM NAD83 (2011) HORIZONTAL DATUM AND NAVD88 VERTICAL DATUM.

## SOIL SURVEY TABLE

MAP UNIT	MAP UNIT NAME	Kf	HYDROLOGIC SOIL GROUP	HIGHLY ERODIBLE (Y/N)
UN	URBAN LAND	-	D	N
1B	GAILA SILT LOAM, 3-8% SLOPES	0.43	B	N
1C	GAILA SILT LOAM, 8-15% SLOPES	0.43	B	Y
2B	GLENELG SILT LOAM, 3-8% SLOPES	0.37	B	N
2C	GLENELG SILT LOAM, 8-15% SLOPES	0.37	B	Y
4B	ELIOAK SILT LOAM, 3-8% SLOPES	0.37	C	N
5B	GLENVILLE SILT LOAM, 3-8% SLOPES	0.37	C/D	N
6A	BAILE SILT LOAM, 0-3% SLOPES	0.37	C/D	N
16D	BRINKLOW-BLOCKTOWN CHANNERY SILT LOAMS, 15-25% SLOPES	0.37	C	Y
53A	CODORUS SILT LOAM, 0-3% SLOPES	0.32	D	N
54A	HATBORO SILT LOAM, 0-3% SLOPES	0.37	B/D	N
116D	BLOCKTOWN CHANNERY SILT LOAM 25-45% SLOPES	0.49	D	Y
116E	BLOCKTOWN CHANNERY SILT LOAM, 25-45% SLOPES	0.49	D	Y



## RESOURCES DATA TABLE

EXISTING SITE STATISTICS	TOTAL
FOREST	171.360 ACRES +/-
FLOODPLAIN	6.630 ACRES +/-
FLOODPLAIN IN FOREST	6.630 ACRES +/-
WETLANDS	2.756 ACRES +/-
WETLANDS IN FOREST	2.756 ACRES +/-
ENVIRONMENTAL BUFFER	40.403 ACRES +/-
ENVIRONMENTAL BUFFER IN FOREST	40.403 ACRES +/-
AVERAGE WIDTH OF ENVIRONMENTAL BUFFER	100 FEET +/-
LINEAR EXTENT OF STREAMS	4,820 LF +/-

## DEVELOPER'S CERTIFICATE

The Undersigned agrees to execute all the features of the Approved Final Forest Conservation Plan No. F20250240 including, financial bonding, forest planting, maintenance, and all other applicable agreements.

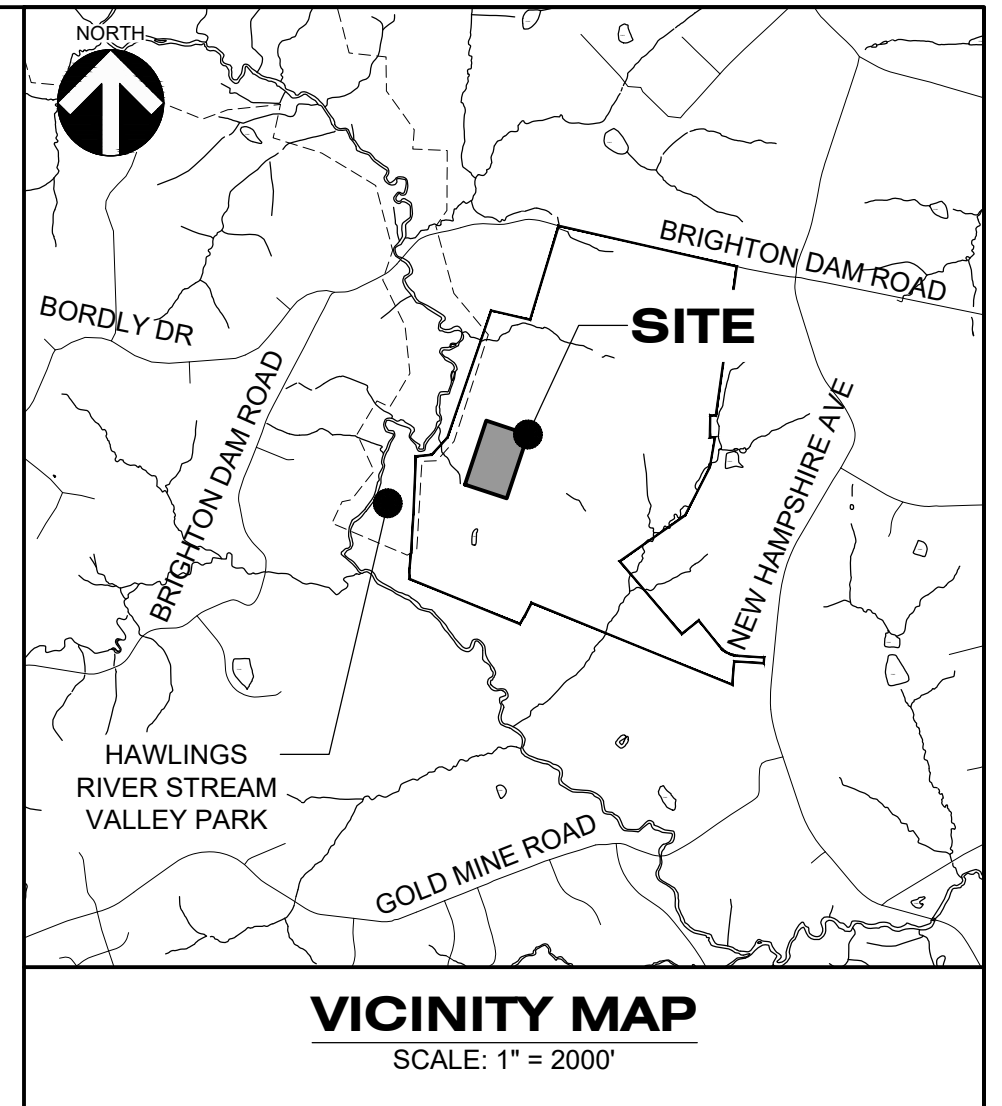
Developer's Name: **Pepco**  
Printed Company Name

Contact Person or Owner: **Edward May**  
Printed Name

Address: **701 9th St. NW, DC 20068**

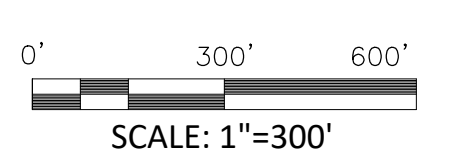
Phone and Email: **202-380-5887 Emmay@pepcoholdings.com**

Signature: *Edward May*



## LEGEND:

- EXISTING ROAD
- EXISTING BUILDING
- EXISTING SUBJECT PROPERTY LINE
- EXISTING ADJACENT PROPERTY LINE(S)
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREELINE
- EXISTING SIGNIFICANT TREE (24"-29.999")
- EXISTING SPECIMEN TREE (30"+)
- EXISTING FENCE
- EXISTING WETLAND
- EXISTING 100-YR FLOODPLAIN
- EXISTING 25'/150' STREAM BUFFER
- EXISTING SLOPE 15-25%
- EXISTING SLOPE >25%
- REGULATED STREAM CENTERLINE
- FOREST STAND BOUNDARY
- FOREST STAND SAMPLE POINTS
- SOIL BOUNDARY
- PROPOSED LIMITS OF DISTURBANCE
- SWM FEATURES DEEMED NON-JURISDICTIONAL BY MDE
- PRIMARY MANAGEMENT AREA
- TOP OF STREAM BANK
- PROPOSED FOREST CONSERVATION EASEMENT
- PROPOSED MODIFIED FOREST CONSERVATION EASEMENT
- STREAM BUFFER MITIGATION PLANTING AREA
- CONTRACTOR STOCKPILE/STAGING AREA
- SPECIMEN TREE TO BE REMOVED
- PERMANENT PROTECTIVE SIGNAGE



NOTE  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net> 48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY

INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.



PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: PHILIP KASSIR  
PHONE: 240.409.7088  
EMAIL: PHILIP.KASSIR@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

**BRIGHTON SUBSTATION STATCOM EXPANSION  
FOREST CONSERVATION PLAN  
1300 POWER COUNTY ROAD BROOKVILLE, MD 20833  
ELECTION DISTRICT 8  
F20250240  
COVER**

**POTOMAC ELECTRIC POWER CO.**

WR NO.	SCALE	APPD	APPD	APPD
FDR NO.	DATE	DR. BY	MB	
	CHKD.	LB		
	INSP.			

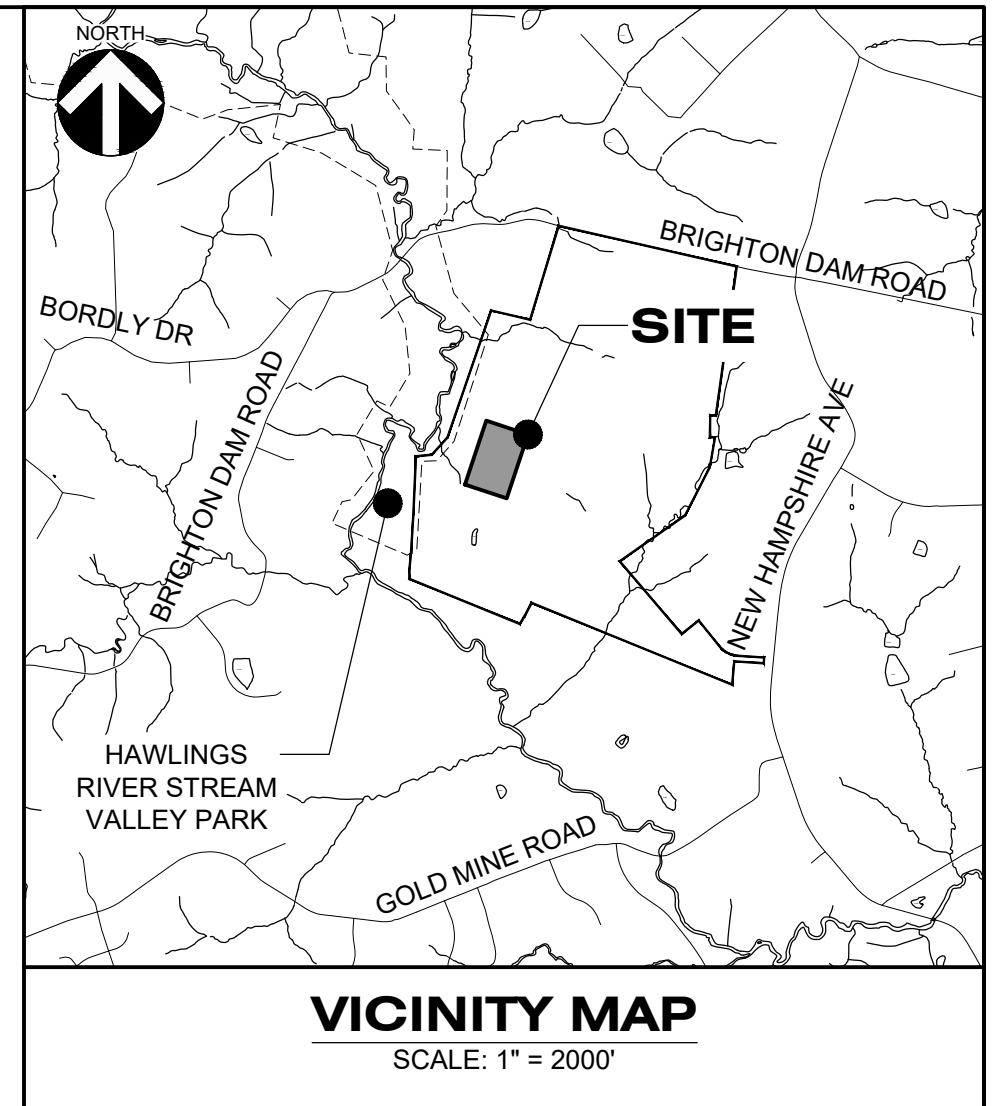
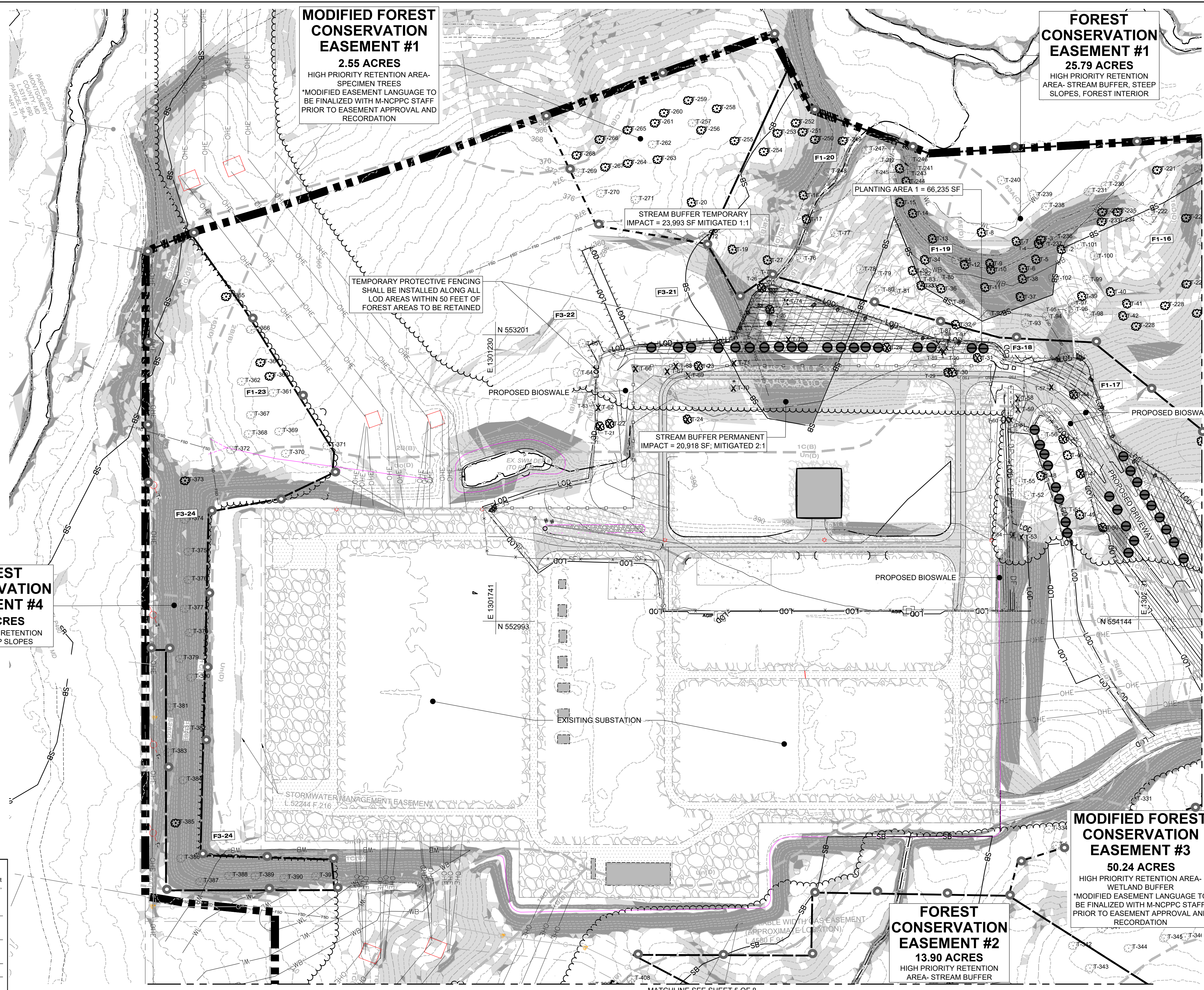
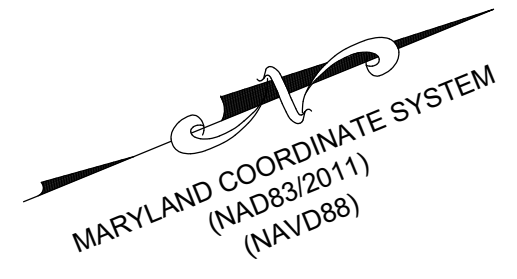
**FCP-01**  
SHEET 1 OF 8



PLAN PREPARED BY:  
**JOHN CANOLES**  
MD DNR PCA QUALIFIED PROFESSIONAL

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					





**LEGEND:**

	EXISTING ROAD
	EXISTING BUILDING
	EXISTING SUBJECT PROPERTY LINE
	EXISTING ADJACENT PROPERTY LINE(S)
	EXISTING CONTOURS
	PROPOSED CONTOURS
	EXISTING TREELINE
	EXISTING SIGNIFICANT TREE (24"-29.99')
	EXISTING SPECIMEN TREE (30'+)
	EXISTING FENCE
	EXISTING WETLAND
	EXISTING 100-YR FLOODPLAIN
	EXISTING 25'/150' STREAM BUFFER
	EXISTING SLOPE 15-25%
	EXISTING SLOPE >25%
	REGULATED STREAM CENTERLINE
	FOREST STAND BOUNDARY
	FOREST STAND SAMPLE POINTS
	SOIL BOUNDARY
	PROPOSED LIMITS OF DISTURBANCE
	SWM FEATURES DEEMED NON-JURISDICTIONAL BY MDE
	PRIMARY MANAGEMENT AREA
	TOP OF STREAM BANK
	PROPOSED FOREST CONSERVATION EASEMENT
	PROPOSED MODIFIED FOREST CONSERVATION EASEMENT
	STREAM BUFFER MITIGATION PLANTING AREA
	CONTRACTOR STOCKPILE/STAGING AREA
	SPECIMEN TREE TO BE REMOVED
	PERMANENT PROTECTIVE SIGNAGE
	SPECIMEN TREE MITIGATION PLANTING LOCATION

**DEVELOPER'S CERTIFICATE**

The Undersigned agrees to execute all the features of the Approved Final Forest Conservation Plan No. **F20250240** including, financial bonding, forest planting, maintenance, and all other applicable agreements.

Developer's Name: **Pepco**  
Printed Company Name

Contact Person or Owner: **Edward May**  
Printed Name

Address: **701 9th St. NW, DC 20068**

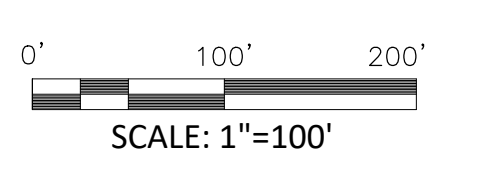
Phone and Email: **202-380-5887 Emmay@pepcoholdings.com**

Signature: *Edward May*

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD

**Eco-Science Professionals, Inc.**  
CONSULTING ECOLOGISTS  
1000 W. GREEN GLEN AVE. SUITE 100  
BETHESDA, MD 20814

PLAN PREPARED BY:  
**JOHN CARROLL**  
MD DPR FCA QUALIFIED PROFESSIONAL



**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.

**pepco**  
AN EXELON COMPANY

**Dewberry**  
Dewberry Engineers Inc.  
10491 Mill Run Circle  
SUITE 900  
Owings Mills, MD 21117-5544

PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: PHILIP KASSIR  
PHONE: 240 409 7088  
EMAIL: PHILIP.KASSIR@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410 645 1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

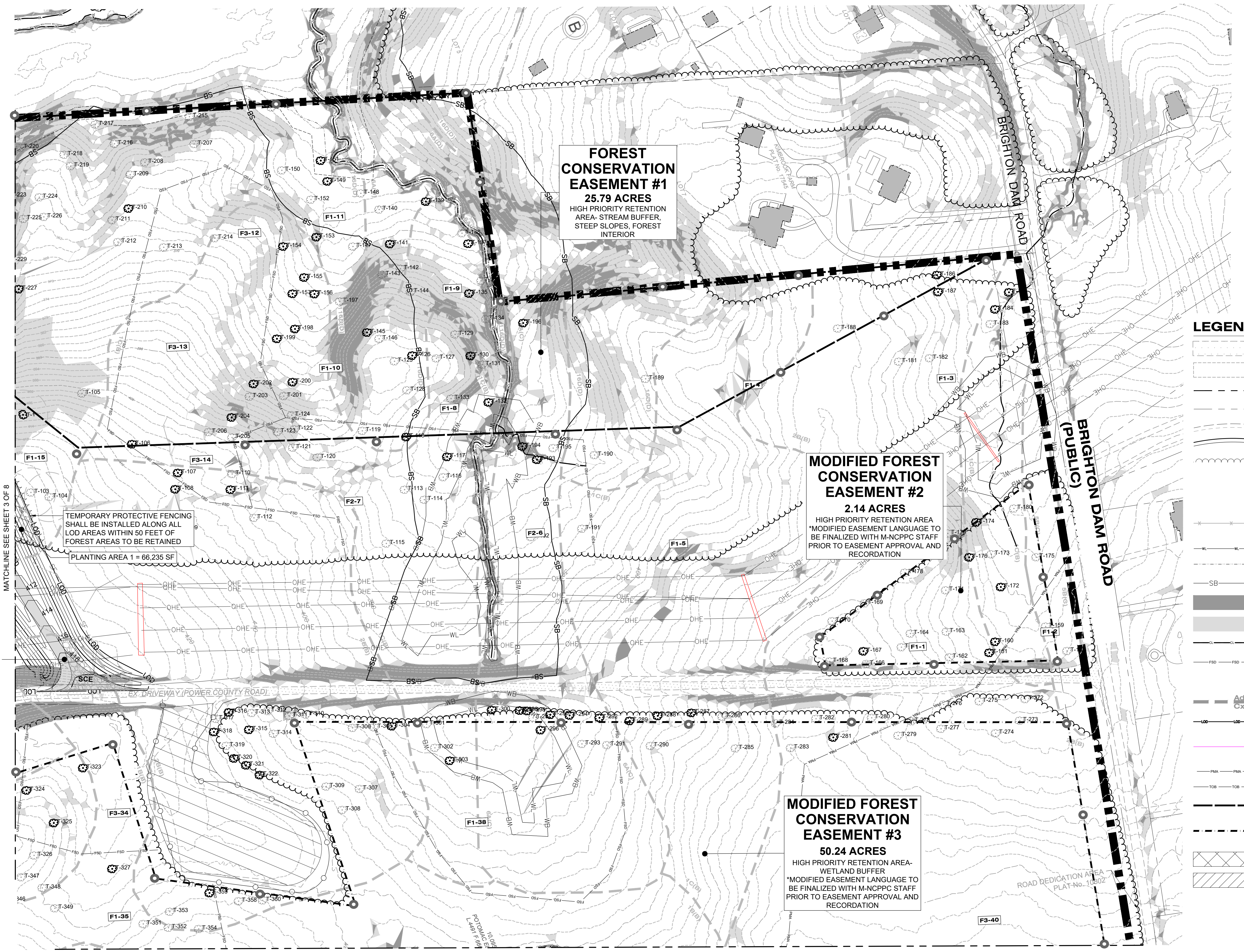
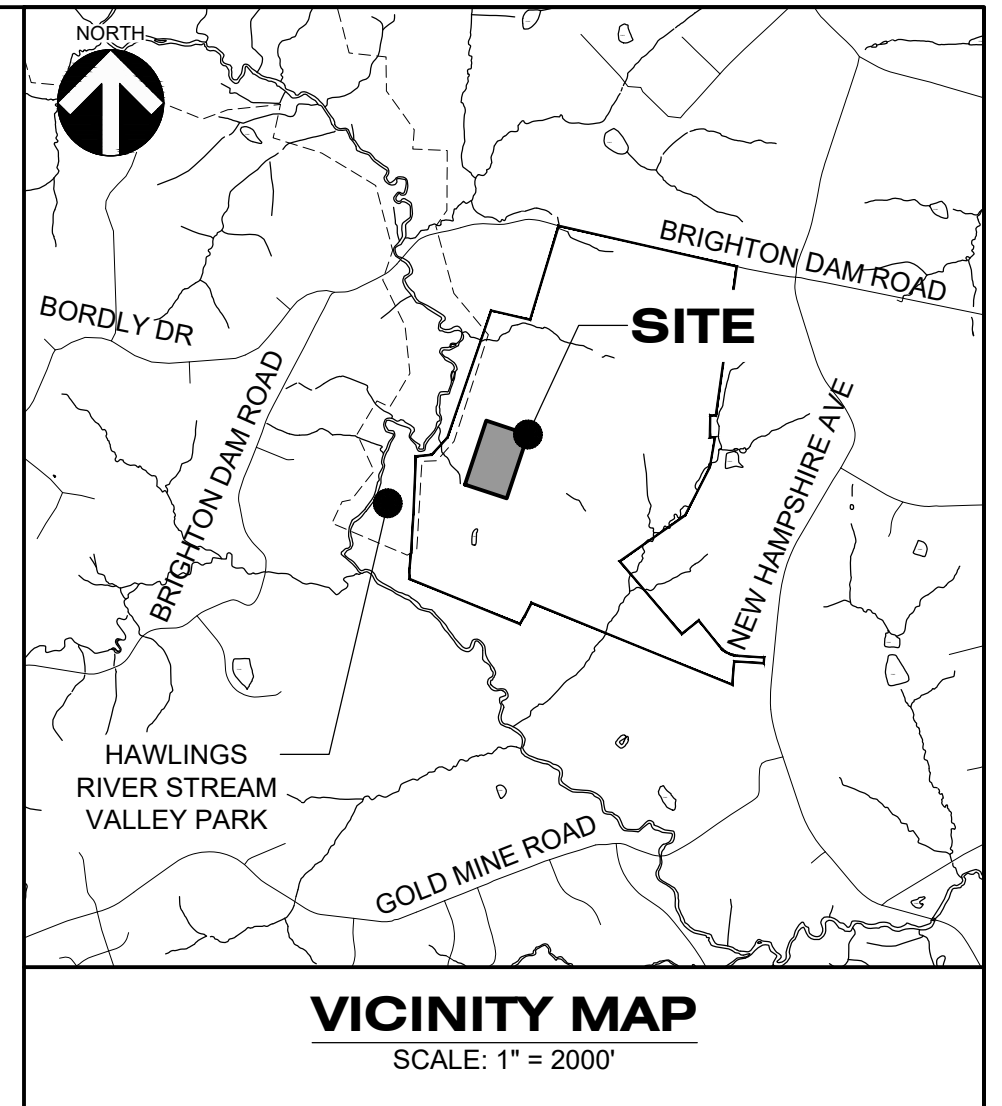
**BRIGHTON SUBSTATION STATCOM EXPANSION  
FOREST CONSERVATION PLAN  
1300 POWER COUNTY ROAD BROOKVILLE, MD 20833  
ELECTION DISTRICT 8  
F20250240  
FOREST CONSERVATION PLAN**

**POTOMAC ELECTRIC POWER CO.**

WR NO.	SCALE	APPD	APPD	APPD
FDR NO.	DATE	DR. BY	MB	
	CHKD.	LB		
	INSP.			

**FCP-03**  
SHEET 3 OF 8

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVD88)



TEMPORARY PROTECTIVE FENCING SHALL BE INSTALLED ALONG ALL LOD AREAS WITHIN 50 FEET OF FOREST AREAS TO BE RETAINED

PLANTING AREA 1 = 66,235 SF

**FOREST CONSERVATION EASEMENT #1**  
25.79 ACRES  
HIGH PRIORITY RETENTION AREA- STREAM BUFFER, STEEP SLOPES, FOREST INTERIOR

**MODIFIED FOREST CONSERVATION EASEMENT #2**  
2.14 ACRES  
HIGH PRIORITY RETENTION AREA \*MODIFIED EASEMENT LANGUAGE TO BE FINALIZED WITH M-NCPPC STAFF PRIOR TO EASEMENT APPROVAL AND RECORDATION

**MODIFIED FOREST CONSERVATION EASEMENT #3**  
50.24 ACRES  
HIGH PRIORITY RETENTION AREA- WETLAND BUFFER \*MODIFIED EASEMENT LANGUAGE TO BE FINALIZED WITH M-NCPPC STAFF PRIOR TO EASEMENT APPROVAL AND RECORDATION

**LEGEND:**

	EXISTING ROAD
	EXISTING BUILDING
	EXISTING SUBJECT PROPERTY LINE
	EXISTING ADJACENT PROPERTY LINE(S)
	EXISTING CONTOURS
	PROPOSED CONTOURS
	EXISTING TREELINE
	EXISTING SIGNIFICANT TREE (24"-29.999")
	EXISTING SPECIMEN TREE (30"+)
	EXISTING FENCE
	EXISTING WETLAND
	EXISTING 100-YR FLOODPLAIN
	EXISTING 25/150' STREAM BUFFER
	EXISTING SLOPE 15-25%
	EXISTING SLOPE >25%
	REGULATED STREAM CENTERLINE
	FOREST STAND BOUNDARY
	FOREST STAND SAMPLE POINTS
	SOIL BOUNDARY
	PROPOSED LIMITS OF DISTURBANCE
	SWM FEATURES DEEMED NON-JURISDICTIONAL BY MDE
	PRIMARY MANAGEMENT AREA
	TOP OF STREAM BANK
	PROPOSED FOREST CONSERVATION EASEMENT
	PROPOSED MODIFIED FOREST CONSERVATION EASEMENT
	STREAM BUFFER MITIGATION PLANTING AREA
	CONTRACTOR STOCKPILE/STAGING AREA
	SPECIMEN TREE TO BE REMOVED
	PERMANENT PROTECTIVE SIGNAGE

PROPOSED ACCESS DRIVEWAY

MATCHLINE SEE SHEET 3 OF 8

MATCHLINE SEE SHEET 6 OF 8

**DEVELOPER'S CERTIFICATE**

The Undersigned agrees to expose all the features of the Approved Final Forest Conservation Plan No. F20250240 including, financial bonding, forest planting, maintenance, and all other applicable agreements.

Developer's Name: **Pepco**  
Printed Company Name

Contact Person or Owner: **Edward May**  
Printed Name

Address: **701 9th St. NW, DC 20068**

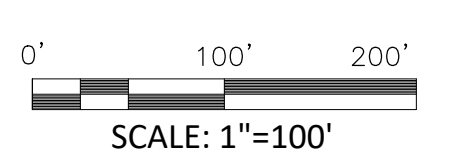
Phone and Email: **202-380-5887 Emmay@pepcoholdings.com**

Signature: *Edward May*

REVISIONS	DESCRIPTION	CORR	CHKD	APPD	APPD	APPD

**Eco-Science Professionals, Inc.**  
CONSULTING ECOLOGISTS  
1110 W. 14th St., Suite 100, Washington, DC 20004  
Tel: 202-331-1111 Fax: 202-331-1112

PLAN PREPARED BY:  
**JOHN CARROLLS**  
MD DNR PCA QUALIFIED PROFESSIONAL



**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY

INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.

**pepco**  
AN EXELON COMPANY

**Dewberry**  
Dewberry Engineers Inc.  
10491 Mill Run Circle  
SUITE 300  
Owings Mills, MD 21117-5544

PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: PHILIP KASSIR  
PHONE: 240.409.7088  
EMAIL: PHILIP.KASSIR@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM  
TAX DIST.

WR NO.  
FDR NO.

**BRIGHTON SUBSTATION STATCOM EXPANSION  
FOREST CONSERVATION PLAN  
1300 POWER COUNTY ROAD BROOKVILLE, MD 20833  
ELECTION DISTRICT 8  
F20250240  
FOREST CONSERVATION PLAN**

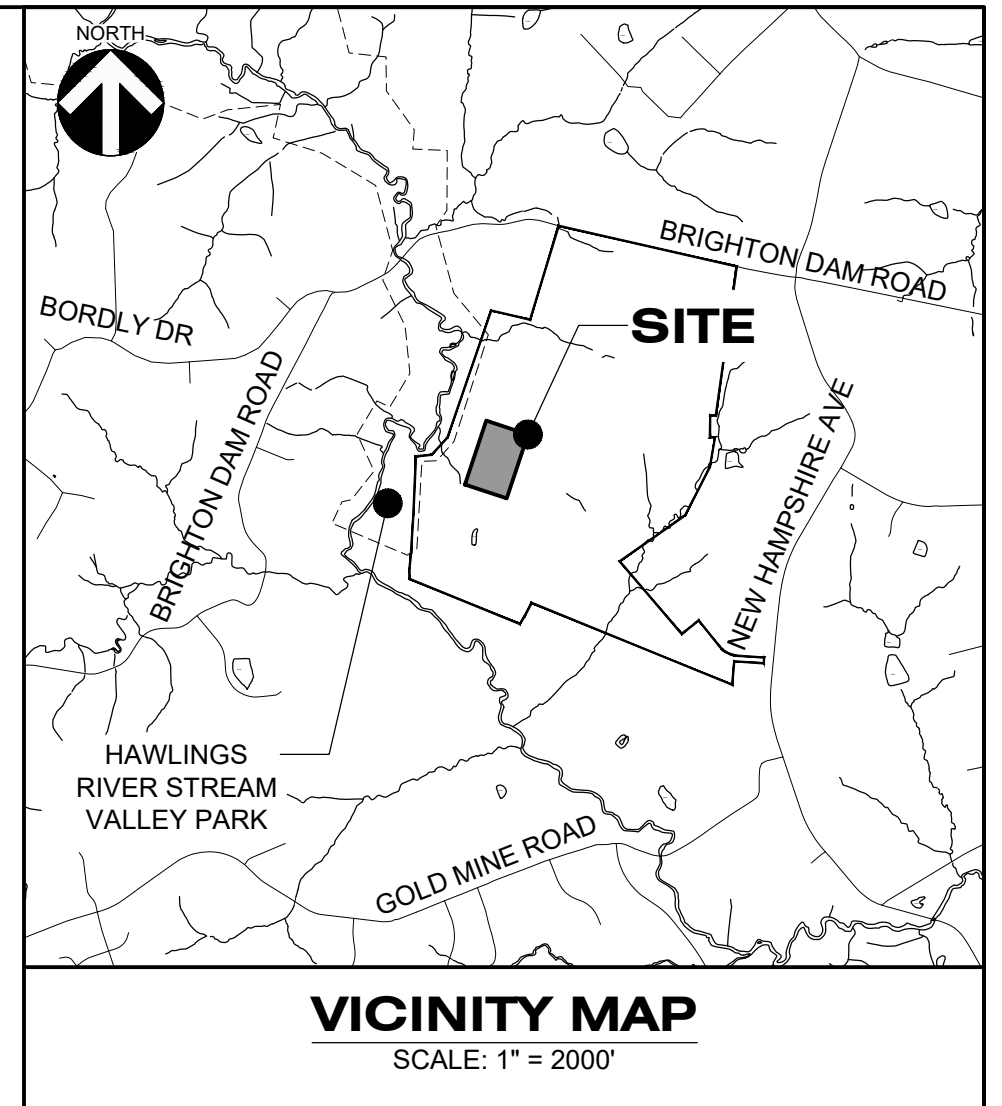
**POTOMAC ELECTRIC POWER CO.**

SCALE	APPD	APPD	APPD
DATE			
DR. BY MB			
CHKD. LB			
INSP.			

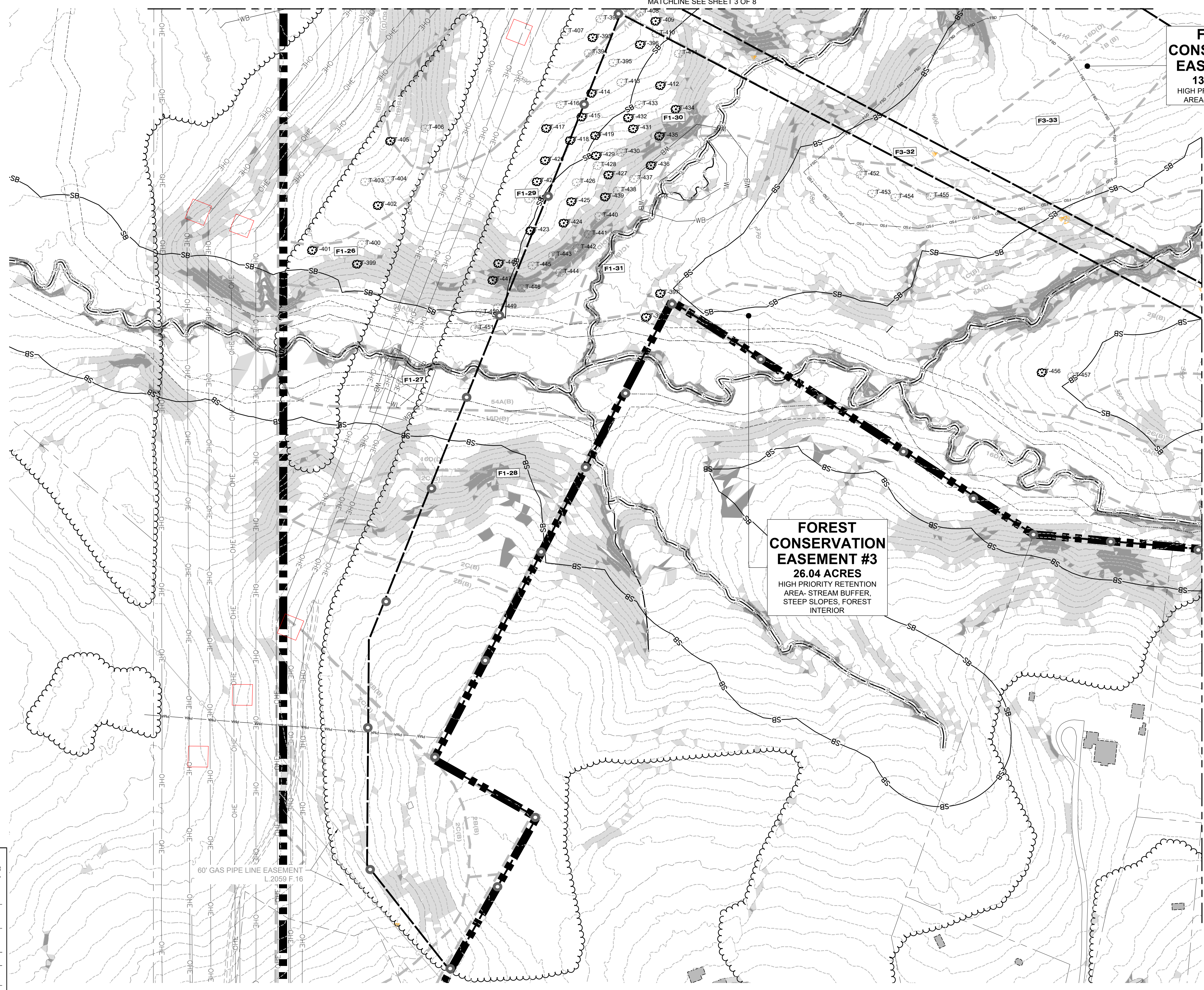
**FCP-04**  
SHEET 4 OF 8

MATCHLINE SEE SHEET 3 OF 8

**FOREST CONSERVATION EASEMENT #2**  
13.90 ACRES  
HIGH PRIORITY RETENTION AREA- STREAM BUFFER



MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB8)



**FOREST CONSERVATION EASEMENT #3**  
26.04 ACRES  
HIGH PRIORITY RETENTION AREA- STREAM BUFFER, STEEP SLOPES FOREST INTERIOR

**LEGEND:**

- EXISTING ROAD
- EXISTING BUILDING
- EXISTING SUBJECT PROPERTY LINE
- EXISTING ADJACENT PROPERTY LINE(S)
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREELINE
- EXISTING SIGNIFICANT TREE (24"-29.999")
- EXISTING SPECIMEN TREE (30"+)
- EXISTING FENCE
- EXISTING WETLAND
- EXISTING 100-YR FLOODPLAIN
- EXISTING 25'/150' STREAM BUFFER
- EXISTING SLOPE 15-25%
- EXISTING SLOPE >25%
- REGULATED STREAM CENTERLINE
- FOREST STAND BOUNDARY
- FOREST STAND SAMPLE POINTS
- SOIL BOUNDARY
- PROPOSED LIMITS OF DISTURBANCE
- SWM FEATURES DEEMED NON-JURISDICTIONAL BY MDE
- PRIMARY MANAGEMENT AREA
- TOP OF STREAM BANK
- PROPOSED FOREST CONSERVATION EASEMENT
- PROPOSED MODIFIED FOREST CONSERVATION EASEMENT
- CONTRACTOR STOCKPILE/STAGING AREA
- SPECIMEN TREE TO BE REMOVED
- PERMANENT PROTECTIVE SIGNAGE

MATCHLINE SEE SHEET 6 OF 8

**DEVELOPER'S CERTIFICATE**

The Undersigned agrees to execute all the features of the Approved Final Forest Conservation Plan No. F20250240 including, financial bonding, forest planting, maintenance, and all other applicable agreements.

Developer's Name: **Pepco**  
Printed Company Name

Contact Person or Owner: **Edward May**  
Printed Name

Address: **701 9th St. NW, DC 20068**

Phone and Email: **202-380-5987 Emmay@pepcoholdings.com**

Signature: *Edward May*

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD

**Eco-Science Professionals, Inc.**  
CONSULTING ECOLOGISTS  
Tel: 410-326-7500  
www.ecosciences.com

PLAN PREPARED BY:  
**JONAS CARROLLS**  
MD DNR FCA QUALIFIED PROFESSIONAL

0' 100' 200'  
SCALE: 1"=100'

**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.

**pepco**  
AN EXELON COMPANY

**Dewberry**  
Dewberry Engineers Inc.  
10491 Mill Run Circle  
SUITE 900  
Owings Mills, MD 21117-5544

PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: PHILIP KASSIR  
PHONE: 240.409.7088  
EMAIL: PHILIP.KASSIR@EXELCONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

WR NO.  
FDR NO.

SCALE	APPD	APPD	APPD
DATE			
DR. BY MB			
CHKD. LB			
INSP.			

**BRIGHTON SUBSTATION STATCOM EXPANSION  
FOREST CONSERVATION PLAN  
1300 POWER COUNTY ROAD BROOKEVILLE, MD 20833  
ELECTION DISTRICT 8  
F20250240  
FOREST CONSERVATION PLAN**

**POTOMAC ELECTRIC POWER CO.**

**FCP-05**  
SHEET 5 OF 8



Key (#)	Species	Size (in DBH)	CRZ 1.1.5 (ft radius)	State Champion (DBH)	Good (unless otherwise noted)
1	Tulip poplar	30	45.0	97.13	fair, wound at base, some rot
2	Tulip poplar	37	55.5	97.13	
3	Tulip poplar	35.5	53.3	97.13	
4	Tulip poplar	30.5	45.8	97.13	
5	Tulip poplar	45.75	68.6	97.13	
6	Tulip poplar	34.5	51.8	97.13	
7	Tulip poplar	32.5	48.8	97.13	
8	Tulip poplar	34	51.0	97.13	
9	Tulip poplar	31	45.5	97.13	
10	Tulip poplar	33	49.5	97.13	
11	Tulip poplar	45.5	68.3	97.13	Co-dominant stems, some dieback
12	Tulip poplar	37.5	56.3	97.13	
13	Tulip poplar	34	51.0	97.13	
14	Tulip poplar	31	46.5	97.13	
15	Tulip poplar	42	63.0	97.13	fair, leaning, some dieback
16	Tulip poplar	35.5	53.3	97.13	
17	Tulip poplar	37	55.5	97.13	
18	Tulip poplar	31	46.5	97.13	
19	Tulip poplar	31	46.5	97.13	fair, co-dominant trunks
20	Tulip poplar	38	57.0	97.13	fair, leaning, weak, root heaving
21	White Pine	32.5	48.8	56.05	fair, leaning, weak, root heaving
22	White pine	30	45.0	56.05	
23	White pine	30	45.0	56.05	
24	Sycamore	30	45.0	103.82	fair, heavy vine cover
25	Sycamore	32	48.0	103.82	
26	Sycamore	36	54.0	103.82	bent trunk
27	Sycamore	30	45.0	103.82	
28	Sycamore	37	55.5	103.82	fair, co-dominant trunks
29	Sycamore	30.5	45.8	103.82	
30	Sycamore	33	49.5	103.82	
31	Sycamore	44.5	66.8	103.82	Co-dominant stems, weak attachment
32	Sycamore	35.5	53.3	103.82	Co-dominant stems, weak attachment
33	Sycamore	31.5	47.3	103.82	Co-dominant stems, weak attachment
34	Sycamore	36.5	54.8	103.82	
35	Sycamore	30	45.0	103.82	wounds with rot, limited crown
36	Sycamore	33	49.5	103.82	
37	Sycamore	30	45.0	103.82	
38	Sycamore	34	51.0	103.82	
39	Sycamore	46	69.0	103.82	multistem in crown, weak structure
40	Sycamore	38	57.0	103.82	twisted trunk, suckering
41	Sycamore	36.5	54.8	103.82	
42	Sycamore	38	57.0	103.82	
43	Sycamore	35	52.5	103.82	
44	Sycamore	39	58.5	103.82	
45	Sycamore	45.5	68.3	103.82	fair, some dieback in canopy
46	Sycamore	38	57.0	103.82	
47	Sycamore	53.3	103.82	103.82	Poor, notable dieback
48	Sycamore	34	51.0	103.82	four trunks at bh
49	Red maple	34	51.0	86.94	fair, grinding roots some dieback
50	Sycamore	44	66.0	103.82	
51	Tulip poplar	27.5	41.3	97.13	
52	Tulip poplar	26	39.0	97.13	
53	Tulip poplar	27	40.5	97.13	
54	Tulip poplar	27	40.5	97.13	
55	Tulip poplar	24.5	36.8	97.13	
56	Tulip poplar	29	43.5	97.13	
57	Tulip poplar	24	36.0	97.13	
58	White pine	26.5	39.8	56.05	
59	White pine	28.5	42.8	56.05	fair, codominant
60	Sycamore	26	39.0	103.82	
61	Sycamore	26.5	39.8	103.82	fair, leaning
62	White pine	27	40.5	56.05	fair, codominant
63	White pine	24.5	36.8	56.05	
64	Sycamore	25.5	38.3	103.82	fair, codominant
65	White pine	24.5	36.8	56.05	
66	Sycamore	27.5	41.3	103.82	
67	White pine	25	37.5	56.05	
68	White pine	24.5	36.8	56.05	fair, codominant at 40'
69	White pine	29	42.0	56.05	
70	Sycamore	29.5	44.3	103.82	fair, codominant, root rot noted
71	White pine	24	36.0	56.05	fair, codominant at 10'
72	Sycamore	24.5	36.8	103.82	
73	Tulip poplar	24.5	36.8	97.13	
74	Tulip poplar	26.5	39.8	97.13	
75	Sycamore	28	42.0	103.82	
76	Tulip poplar	27.5	41.3	97.13	Poor, large dead present, codominant, roots cut back by bank
77	Tulip poplar	26.5	39.8	97.13	
78	Tulip poplar	24.5	36.8	97.13	
79	Tulip poplar	26	39.0	97.13	
80	Tulip poplar	27.5	41.3	97.13	fair, codominant at 30'
81	Tulip poplar	29	43.5	97.13	
82	Tulip poplar	29	43.5	97.13	
83	Tulip poplar	27	40.5	97.13	fair, large dead throughout
84	Tulip poplar	28	42.0	97.13	
85	Tulip poplar	26.5	39.8	97.13	
86	Tulip poplar	28.5	42.8	97.13	Poor, hollow at base, large dead present
87	Tulip poplar	26.5	39.8	97.13	
88	Tulip poplar	24.5	36.8	97.13	
89	Tulip poplar	27	40.5	97.13	
90	Tulip poplar	28.5	42.8	97.13	fair, codominant with included bark
91	Tulip poplar	29	43.5	97.13	fair, cavity at the base
92	Tulip poplar	28.5	42.8	97.13	fair, large dead present
93	Tulip poplar	28	42.0	97.13	
94	Tulip poplar	29	43.5	97.13	fair, codominant, heavy bitersweet pressure
95	Tulip poplar	29	43.5	97.13	fair, heavy grapevine pressure
96	Tulip poplar	27	40.5	97.13	fair, basal butt
97	Tulip poplar	24	36.0	97.13	Poor, one codominant lead dead
98	Tulip poplar	27.5	41.3	97.13	
99	Sycamore	27	40.5	103.82	
100	Tulip poplar	29	42.0	97.13	

101	Tulip poplar	26.5	39.8	97.13	
102	Tulip poplar	28.5	42.8	97.13	fair, codominant at 20'
103	Tulip poplar	26	39.0	97.13	
104	Tulip poplar	25.5	38.3	97.13	
105	Tulip poplar	28.5	42.8	97.13	
106	Tulip poplar	31.5	47.3	97.13	
107	Tulip poplar	37	55.5	97.13	fair, heavy vine pressure
108	Tulip poplar	31	46.5	97.13	
109	Silver Maple	37.5	56.3	97.13	Poor, 2/3 dead
110	Tulip poplar	26	39.0	97.13	
111	Tulip poplar	33	49.5	97.13	fair, codominant
112	Tulip poplar	29.5	44.3	97.13	fair, large deadwood present
113	Tulip poplar	26	39.0	97.13	
114	Tulip poplar	27	40.5	97.13	fair, codominant 30'
115	Tulip poplar	24.5	36.8	97.13	
116	Sycamore	28	42.0	103.82	fair, grapevine pressure
117	Sycamore	37	55.5	103.82	fair, grapevine and bitersweet pressure
118	Tulip poplar	37	55.5	97.13	fair, grapevine pressure
119	Tulip poplar	25	37.5	97.13	fair, grapevine pressure
120	Tulip poplar	27	40.5	97.13	fair, grapevine and bitersweet pressure
121	Tulip poplar	29	43.5	97.13	fair, grapevine pressure
122	Tulip poplar	26	39.0	97.13	fair, grapevine pressure
123	Tulip poplar	28	42.0	97.13	fair, grapevine pressure, codominant
124	Tulip poplar	29.5	44.3	97.13	fair, codominant
125	Tulip poplar	25	37.5	97.13	fair, grapevine and bitersweet pressure
126	Tulip poplar	30.5	45.8	97.13	
127	Tulip poplar	24	36.0	97.13	
128	Tulip poplar	28	42.0	97.13	fair, grapevine and bitersweet pressure
129	Tulip poplar	28	42.0	97.13	
130	Tulip poplar	41.5	62.3	97.13	
131	Tulip poplar	29.5	44.3	97.13	
132	Tulip poplar	35	52.5	97.13	fair, codominant
133	Tulip poplar	26	39.0	97.13	
134	Black Oak	37.5	56.3	74.84	
135	Black Oak	31	46.5	74.84	
136	Tulip poplar	29	43.5	97.13	
137	Tulip poplar	34	51.0	97.13	fair, trunk scars
138	Tulip poplar	27.5	41.3	97.13	Poor, top blown out
139	Tulip poplar	31	46.5	97.13	fair, codominant and grapevine pressure
140	Tulip poplar	29	43.5	97.13	
141	Tulip poplar	30	45.0	97.13	
142	Tulip poplar	25.5	38.3	97.13	fair, grapevine pressure
143	Tulip poplar	27	40.5	97.13	
144	Tulip poplar	24.5	36.8	97.13	
145	Tulip poplar	30.5	45.8	97.13	
146	Tulip poplar	25	37.5	97.13	
147	Tulip poplar	25	37.5	97.13	
148	Tulip poplar	29	43.5	97.13	
149	Tulip poplar	44.5	66.8	97.13	fair, codominant
150	Black Walnut	25	37.5	72.2	
151	Sycamore	46	69.0	103.82	
152	Black Walnut	29	43.5	72.2	
153	Tulip poplar	42	63.0	97.13	
154	Sycamore	38	57.0	103.82	
155	Tulip poplar	34	51.0	97.13	fair, large wound 15'
156	Tulip poplar	36	54.0	97.13	
157	Sycamore	43	64.5	103.82	
158	Pin Oak	28	42.0	58.6	fair, bitersweet pressure
159	Slippery Elm	27	40.5	60.51	
160	Silver Maple	47	70.5	91.72	
161	Silver Maple	32	48.0	91.72	Poor, heavy dieback
162	Pin Oak	27	40.5	58.6	
163	Sycamore	39	50.5	103.82	
164	White pine	24	36.0	56.05	fair, bitersweet pressure
165	White pine	28.5	42.8	56.05	fair, bitersweet pressure
166	White pine	27	40.5	56.05	fair, codominant in canopy
167	White pine	30	45.0	56.05	fair, codominant
168	White pine	25	37.5	56.05	Poor, one failed codominant lead
169	Tulip poplar	27	40.5	97.13	
170	Slippery Elm	24	36.0	60.51	
171	White pine	25.5	38.3	56.05	fair, codominant
172	Sycamore	34	51.0	103.82	
173	Silver Maple	27.5	41.3	91.72	fair, large deadwood present
174	Sycamore	32.5	48.8	103.82	fair, codominant
175	Box Elder	26.5	39.8	70.7	fair, codominant with included bark
176	Tulip poplar	37	55.5	97.13	
177	Tulip poplar	27	40.5	97.13	fair, trunk scar 30'
178	Tulip poplar	26.5	39.8	97.13	
179	Tulip poplar	28.5	42.8	97.13	
180	Box Elder	28	42.0	70.7	
181	Tulip poplar	28	42.0	97.13	fair, codominant
182	Tulip poplar	25	37.5	97.13	
183	Tulip poplar	29	43.5	97.13	
184	Tulip poplar	30	45.0	97.13	
185	Tulip poplar	30.5	45.8	97.13	fair, codominant
186	Tulip poplar	30.5	45.8	97.13	fair, codominant
187	Tulip poplar	30.5	45.8	97.13	
188	Tulip poplar	29.5	44.3	97.13	fair, codominant
189	Tulip poplar	26	39.0	97.13	
190	Tulip poplar	27	40.5	97.13	
191	Tulip poplar	28.5	42.8	97.13	fair/poor, basal cavity, trunk scar 20'
192	Tulip poplar	26	39.0	97.13	
193	Tulip poplar	32	48.0	97.13	
194	Tulip poplar	32	48.0	97.13	fair/poor, codominant, crotch cavity, bank cut back roots
195	Tulip poplar	26	39.0	97.13	fair, grapevine pressure
196	Tulip poplar	32	48.0	97.13	fair, basal cavity
197	Tulip poplar	26.5	39.8	97.13	fair, lean and grapevine pressure
198	Tulip poplar	38.5	57.8	97.13	fair/poor, trunk cavities and grapevine pressure
199	Tulip poplar	40	60.0	97.13	fair, grapevine pressure
200	Tulip poplar	34	51.0	97.13	fair, grapevine pressure
201	Tulip poplar	35	52.5	97.13	fair, grapevine pressure
202	Tulip poplar	31	46.5	97.13	
203	Tulip poplar	26	39.0	97.13	
204	Tulip poplar	31.5	47.3	97.13	fair, large dead present
205	Tulip poplar	28	42.0	97.13	
206	Shingle Oak	28	42.0	46.18	fair/poor, codominant dead, wetwood present
207	Tulip poplar	28	42.0	97.13	fair, grapevine pressure
208	Tulip poplar	26	39.0	97.13	
209	Tulip poplar	27	40.5	97.13	fair, bitersweet pressure
210	Tulip poplar	30	45.0	97.13	fair, codominant and bitersweet pressure
211	Tulip poplar	29.5	44.3	97.13	fair, root flare scar
212	White pine	25	37.5	56.05	fair, grapevine pressure
213	Tulip poplar	27	40.5	97.13	
214	Tulip poplar	28.5	42.8	97.13	
215	Red maple	39	50.5	86.94	
216	Tulip poplar	26.5	39.8	97.13	
217	Shingle Oak	26.5	39.8	46.18	fair, Grapevine pressure
218	Tulip poplar	29.5	44.3	97.13	fair, codominant, hunting stand
219	Tulip poplar	25	37.5	97.13	
220	Tulip poplar	26.5	39.8	97.13	
221	Tulip poplar	46.5	69.8	97.13	Poor, one codom failed, large trunk scar
222	Slippery Elm	27.5	41.3</		

**DEVELOPER'S CERTIFICATE**

The Undersigned agrees to execute all the features of the Approved Final Forest Conservation Plan No. **F20250240** including, financial bonding, forest planting, maintenance, and all other applicable agreements.

Developer's Name: **Pepco**  
Printed Company Name

Contact Person or Owner: **Edward May**  
Printed Name

Address: **701 9th St. NW, DC 20068**

Phone and Email: **202-380-5887 Emmay@pepcoholdings.com**

Signature: *Edward May*

**Specimen Tree Mitigation Plantings**

Qty	Species	Size	Spacing as shown
42	Acer rubrum - Red maple	3" caliper	● species may be randomly interspersed
	Juglans nigra - Black walnut		
	Liriodendron tulipifera - Tulip poplar		
	Pinus strobus - White pine		
	Platanus occidentalis - Sycamore		
	Prunus serotina - Black cherry		
	Quercus alba - White oak		
	Quercus velutina - Black oak		

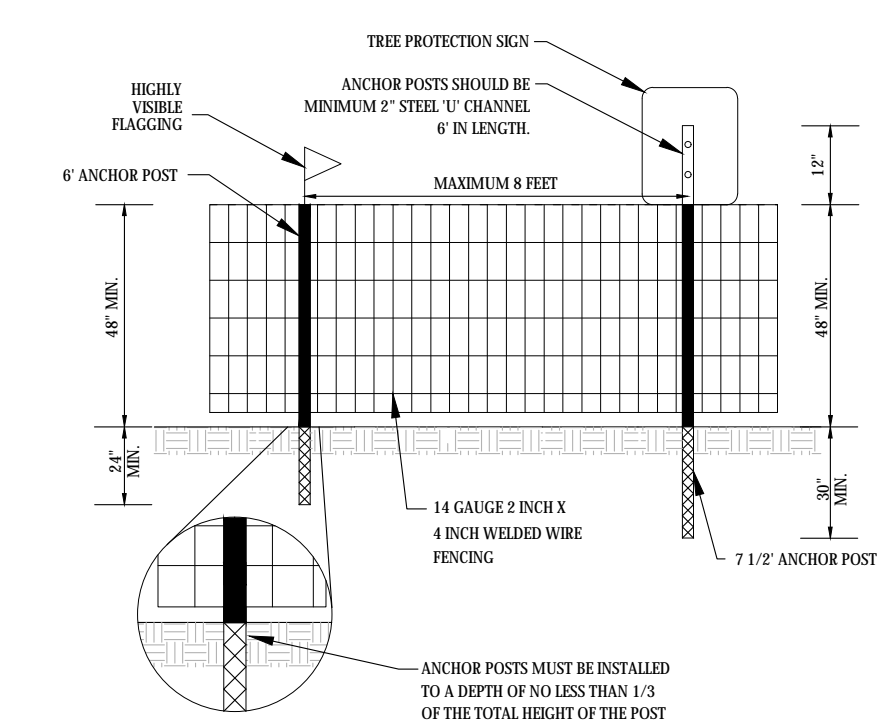
To be selected from the following list of species based on availability - no single species shall account for more than 30% of the trees planted

**PLANTING SCHEDULE**

Planting Area 1 - 66,235 sq. ft. / 1.52 acres  
Planting Units Required: 1065  
Planting Units Provided: 1067.5

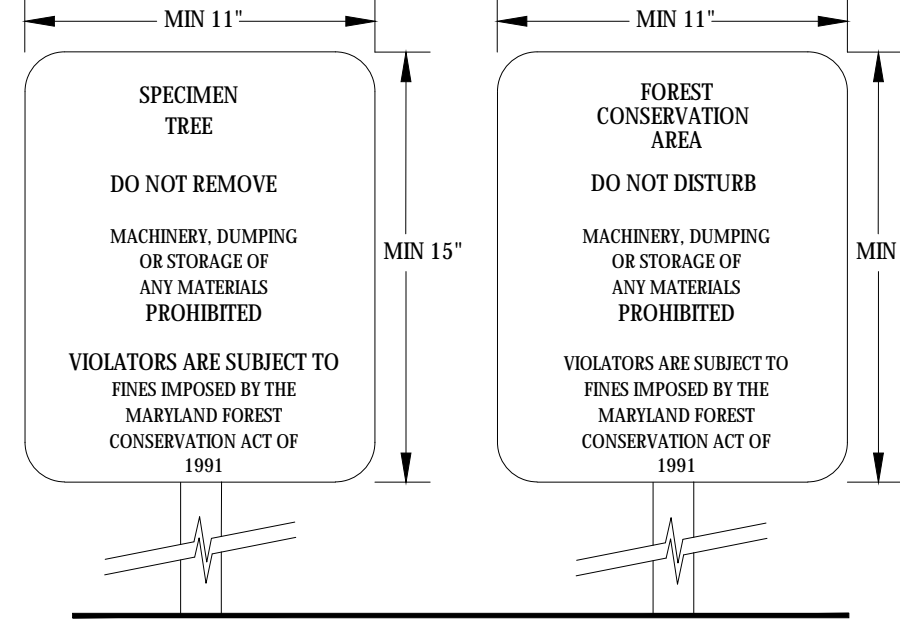
Qty	Species	Size (minimum)	Spacing ** (average)	Total FCA Units
35	Acer rubrum - Red maple	3/4" caliper	15' oc	
30	Cornus florida - Flowering dogwood	3/4" caliper	15' oc	
35	Juglans nigra - Black walnut	3/4" caliper	15' oc	
55	Liriodendron tulipifera - Tulip poplar	3/4" caliper	15' oc	
30	Pinus strobus - White pine	3/4" caliper	15' oc	
25	Platanus occidentalis - Sycamore	3/4" caliper	15' oc	
35	Prunus serotina - Black cherry	3/4" caliper	15' oc	
35	Quercus alba - White oak	3/4" caliper	15' oc	
25	Quercus velutina - Black oak	3/4" caliper	15' oc	
305	Total 3/4" caliper plantings x 3.5 units/tree = FCA unit credit			1067.5
	Total Unit Credit			1067.5

\*\* Tree species shall be randomly intersperse



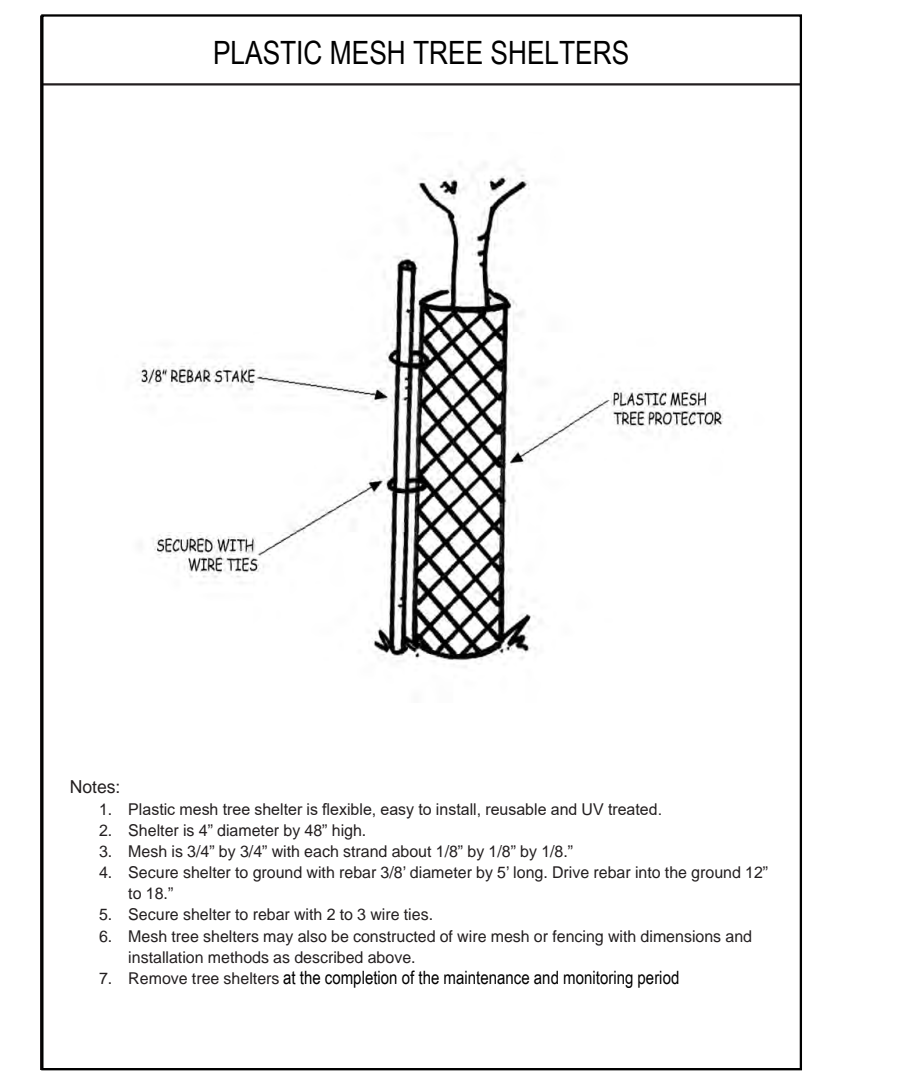
- NOTES:**
- THE BOUNDARIES OF THE LIMITS OF DISTURBANCE SHOULD BE STAKED AND FLAGGED PRIOR TO GRADING. THE PROTECTIVE DEVICE SHOULD BE PLACED APPROXIMATELY 1' AWAY FROM THE TREE TRUNK TO AVOID SEVERING OR DAMAGING THE TREE TRUNK.
  - ANCHOR POSTS SHOULD BE PLACED TO AVOID SEVERING OR DAMAGING THE TREE TRUNK.
  - FENCING MATERIAL SHOULD BE FASTENED SECURELY TO THE ANCHOR POSTS WITH FENCE WIRE.
  - FENCE SIGNS AND THEREFORE THE TALLEST 7 1/2" POSTS, MUST BE PLACED A MINIMUM OF 50' APART AND AT FENCE CORNERS. CONDITIONS OF SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FURTHER APART. ATTACHING SIGNS TO TREES IS PROHIBITED.
  - FENCE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

**TREE PROTECTION & REFORESTATION FENCE**



- NOTES:**
- BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
  - SIGNS TO BE PLACED APPROXIMATELY 1' AWAY FROM THE TREE TRUNK TO AVOID SEVERING OR DAMAGING THE TREE TRUNK.
  - ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

**TREE PROTECTION CONSTRUCTION SIGNS**



- Notes:**
- Plastic mesh tree shelter is flexible, easy to install, reusable and UV treated.
  - Shelter is 6" diameter by 48" high.
  - Mesh is 3/4" by 3/4" with each strand about 1/8" by 1/8".
  - Secure shelter to ground with rebar 3/8" diameter by 5' long. Drive rebar into the ground 12" to 18".
  - Secure shelter to rebar with 2 to 3 wire ties.
  - Mesh tree shelters may also be constructed of wire mesh or fencing with dimensions and installation methods as described above.
  - Remove tree shelters at the completion of the maintenance and monitoring period.

**TREE PLANTING DETAIL**

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					

**Eco-Science Professionals, Inc.**  
CONSULTING ECOLOGISTS  
1400 NEW YORK AVE. WASHINGTON, DC 20004  
Tel: 202-462-7848  
www.ecosciencenetwork.com

PLAN PREPARED BY:  
**JOHN CANNON**  
MD DBP FCA QUALIFIED PROFESSIONAL

**PLANTING NARRATIVE**

- PRE-PLANTING CONSIDERATIONS**
  - IN AREAS WITH SUBSTANTIAL GROWTH OF INVASIVE GROUND COVER SPECIES, MEASURES SHALL BE TAKEN TO REMOVE AND CONTROL INVASIVES. THE INFESTED AREAS SHOULD BE MOWN PRIOR TO COMMENCEMENT OF PLANTING. NECESSARY WEED CONTROL MEASURES SHOULD BE DETERMINED DURING THE PRE-PLANTING INSPECTION, INCLUDING, BUT NOT LIMITED TO, MULCHING, PERIODIC MOWING AROUND THE REFORESTATION PLANTINGS, AND FABRIC COVERINGS. THE USE OF CHEMICAL WEED CONTROLS WILL BE LIMITED TO EXTREME CASES AND ONLY WITH PRIOR WRITTEN APPROVAL BY MNCPPC STAFF. WHERE PERIODIC MOWING WILL OCCUR AS A WEED CONTROL MEASURE, THE TYPICAL TREE PLANTING DISTRIBUTION PATTERN SHOULD BE MODIFIED SO AS TO ALLOW ACCESS BY MOWING EQUIPMENT WITHOUT DAMAGE TO PLANTINGS.
  - A SOIL ANALYSIS WILL BE CONDUCTED PRIOR TO COMMENCEMENT OF REFORESTATION. ON LAND WHERE EXTENSIVE AGRICULTURAL USE HAS OCCURRED IN THE PAST, TEST PITS WILL BE DUG IN AREAS OF UNDISTURBED SOIL TO DETERMINE IF A FRAGIPAN LAYER IS PRESENT. IF FRAGIPAN IS PRESENT, IT SHOULD BE PIERCED BY AUGURING AND PLANTING HOLES SHOULD BE DUG TO TWICE THE NORMAL DIAMETER FOR THE MATERIAL PLANTED.
  - SOILS SHOULD BE TREATED BY INCORPORATING NATURAL MULCH WITHIN THE TOP 12 INCHES, OR AMENDMENTS AS DETERMINED BY THE SOILS ANALYSIS. NATURAL AMENDMENTS, SUCH AS ORGANIC MULCH OR LEAF MOLD COMPOST ARE PREFERRED.
  - IF FILL MATERIAL IS USED AT THE PLANTING SITE, IT SHOULD BE CLEAN FILL WITH A FINE SOIL. STOCKPILING OF NATIVE TOP SOILS MUST BE DONE IN SUCH A WAY THAT THE HEIGHT OF THE PILE DOES NOT DAMAGE THE SEED BANK.
- PLANT AMENDMENT MATERIAL STORAGE**  
IT IS RECOMMENDED THAT PLANTING OCCUR WITHIN 24 HOURS OF DELIVERY TO THE SITE. PLANT MATERIALS WHICH ARE LEFT UNPLANTED FOR MORE THAN 24 HOURS SHOULD BE PROTECTED FROM DIRECT SUN AND WEATHER AND KEPT MOIST. NURSERY STOCK SHOULD NOT BE LEFT UNPLANTED FOR MORE THAN TWO (2) WEEKS.
- ON-SITE INSPECTION**  
PRIOR TO PLANTING, PLANTING STOCK SHOULD BE INSPECTED. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS, AND DISEASE SHOULD BE REPLACED.
- PLANTING SPECIFICATIONS**
  - CONTAINER GROWN STOCK: SUCCESSFUL PLANTING OF CONTAINER GROWN STOCK REQUIRES CAREFUL SITE PREPARATION AND INSPECTION OF THE PLANT MATERIAL ROOT SYSTEM. CAUTION IS RECOMMENDED WHEN SELECTING PLANTS GROWN IN A SOILS MEDIUM DIFFERING FROM THAT OF THE PLANTING SITE. THE PLANT SHOULD BE REMOVED FROM THE CONTAINER AND THE ROOTS GENTLY LOOSENED FROM THE SOILS. IF THE ROOTS ENIRCLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED. J-SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED, AND SUBSTITUTED IF NECESSARY. ROOTS MAY NOT BE TRIMMED ON-SITE. DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES, THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED. NATIVE STOCKPILED SOILS SHOULD BE USED TO BACKFILL PLANTING FIELD. BARE SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH 2 TO 4 INCHES OF MULCH.
  - BALLED AND BURLAPPED TREES: BALLED AND BURLAPPED TREES MUST BE HANDLED WITH CARE WHILE PLANTING. TREES SHOULD NOT BE PICKED UP BY THE TRUNK OR DROPPED. AS BOTH PRACTICES WILL TEND TO SEPARATE THE TRUNK FROM THE ROOT BALL. PRIOR TO PLANTING, ROOT BALLS SHOULD BE KEPT MOIST.
  - PLANTING FIELDS SHOULD BE CREATED EQUAL TO 2.5 TIMES THE DIAMETER OF THE ROOT BALL. USE WATERING TO SETTLE SOIL BACKFILLED AROUND TREES. STOCKPILED NATIVE TOP SOILS, IF AVAILABLE, SHOULD BE USED TO BACKFILL THE PLANTING FIELD. AMENDMENTS ARE NOT RECOMMENDED IN THE PLANTING FIELD. AS STUDIES HAVE SHOWN THAT ROOTS WILL BE ENCOURAGED TO STAY WITHIN THE AMENDED SOILS. SOILS SHOULD BE RAKED EVENLY OVER THE PLANTING FIELD AND COVERED WITH 2 TO 4 INCHES OF MULCH.
  - STAKING OF TREES IS NOT RECOMMENDED EXCEPT IN AREAS OF HIGH WINDS. MOVEMENT IS NECESSARY TO STRENGTHEN THE TRUNK OF THE PLANTED TREE. IF STAKES ARE USED, THEY SHOULD BE REMOVED AFTER THE FIRST GROWING SEASON. WRAPPING IS ALSO NOT RECOMMENDED DUE TO THE INCREASED OPPORTUNITIES FOR INSECT INFESTATION AND DISEASE.
- POST-PLANTING CONSIDERATIONS**
  - SOIL STABILIZATION: FOR AREAS OF LARGE-SCALE DISTURBANCE, SOILS MUST BE STABILIZED USING A NON-TURF-BUILDING GROUND COVER OR ENGINEERING FABRIC.
  - PROTECTIVE DEVICES: TO PREVENT DAMAGE OF PLANTED AREAS, ALL REFORESTATION AND AFFORESTATION SITES MUST BE POSTED WITH APPROPRIATE SIGNS AND FENCED. CONSTRUCTION EQUIPMENT SHALL BE PROHIBITED IN THESE AREAS. SEE FINAL FOREST CONSERVATION NOTES 5-7 ABOVE.

**NET TRACT AREA**

A. Total tract area	231.76
B. Land dedication acres (park, county facility, etc.)	0.00
C. Land dedication for roads or utilities (not being constructed by this plan)	0.00
D. Area to remain in commercial agricultural production/use	0.00
E. Other deductions (specify) Gas line easements	4.93
F. Net Tract Area	226.83

**LAND USE CATEGORY: (from Tree Technical Manual)**  
Input the number "1" under the appropriate land use, limit to only one entry.

Category	ARA	MGR	IDA	HDR	MPO	CIA
G. Afforestation Threshold	0	0	1	0	0	0
H. Conservation Threshold						

**EXISTING FOREST COVER:**

I. Existing forest cover	171.36
J. Area of forest above afforestation threshold	137.34
K. Area of forest above conservation threshold	125.99

**BREAK-EVEN POINT:**

L. Forest retention above threshold with no mitigation	70.56
M. Clearing permitted without mitigation	100.80

**PROPOSED FOREST CLEARING:**

N. Total area of forest to be cleared	45.87 *
O. Total area of forest to be retained	125.49

**PLANTING REQUIREMENTS:**

P. Reforestation for clearing above conservation threshold	11.47
Q. Reforestation for clearing below conservation threshold	0.00
R. Credit for retention above conservation threshold	80.12
S. Total reforestation required	0.00
T. Total afforestation required	0.00
U. Credit for landscaping (may not exceed 20% of "S")	0.00
V. Total reforestation and afforestation required	0.00

\*NO ADDITIONAL FOREST CLEARING IS EXPECTED OUTSIDE OF THE LIMITS OF DISTURBANCE WITH THIS PROJECT

- FCP NOTES**
- THE PROPOSED PROJECT WILL RESULT IN THE REMOVAL OF 14 SPECIMEN TREES. A VARIANCE HAS BEEN REQUESTED TO ALLOW FOR THE REMOVAL OF THESE TREES. MITIGATION FOR THE REMOVAL OF SPECIMEN TREES HAS BEEN CALCULATED BY TAKING THE TOTAL DBH INCHES TO BE REMOVED/4 TO DETERMINE THE NUMBER OF INCHES OF REPLACEMENT PLANTINGS MUST BE PROVIDED. THIS VALUE IS THEN DIVIDED BY 3 TO DETERMINE THE NUMBER OF 3" CALIPER TREES THAT WILL BE REQUIRED. FOR THIS PROJECT 42, 3" CALIPER TREES WILL BE REQUIRED TO MITIGATE FOR THE 14 SPECIMEN TREES TO BE REMOVED.
  - THE FOREST CONSERVATION ACT REQUIREMENTS FOR THE PROJECT WILL BE MET THROUGH THE RETENTION OF 70.56 ACRES OF FOREST IN A CATEGORY 1 EASEMENT. THIS FOREST TO BE PLACED IN AN EASEMENT IS LOCATED IN HIGH PRIORITY RETENTION AREAS WITHIN AND ADJACENT TO STREAM BUFFERS AND STEEP SLOPES. AN ADDITIONAL 54.93 ACRES OF FOREST WILL BE PLACED IN A MODIFIED FOREST CONSERVATION EASEMENT. THIS FOREST WILL NOT BE IMPACTED BY DEVELOPMENT OF THIS PHASE OF THE PROJECT AND WILL BE RETAINED BUT WILL BE SUBJECT TO FUTURE DEVELOPMENT, AS APPROVED BY MONTGOMERY COUNTY. FUTURE CLEARING OF THE MODIFIED CONSERVATION EASEMENT WILL NOT GENERATE ADDITIONAL REFORESTATION OBLIGATIONS BECAUSE THE FOREST RETAINED IN THE CATEGORY 1 EASEMENT MEETS THE BREAK-EVEN POINT OBLIGATION FOR THE SITE.

- STREAM BUFFER IMPACTS WILL BE REQUIRED FOR THE INSTALLATION OF THE BUFFER MITIGATION AREAS ARE NOT COUNTED TOWARD THE REQUIRED PLANTING DENSITY. BUFFER MITIGATION AREAS ARE PLANTED AT A RATE OF 200 3/4-1" CALIPER TREES/ACRE.

- TEMPORARY PROTECTIVE FENCING SHALL BE INSTALLED ALONG ALL PROPOSED LIMITS OF DISTURBANCE OCCURRING WITHIN 50 FEET OF FOREST OR SPECIMEN TREES TO BE RETAINED. FENCING SHALL BE INSTALLED PRIOR TO INITIATION OF ANY SITE GRADING OR CLEARING.

- PERMANENT PROTECTIVE SIGNAGE SHALL BE INSTALLED ALONG THE PERIMETER OF ALL FOREST CONSERVATION EASEMENTS. SIGNS SHALL BE POSTED AT 100' +/- INTERVALS AND AT ALL ANGLE BREAKS ALONG THE EASEMENT LIMITS.

- NO GRADING, CLEARING OR DISTURBANCE SHALL OCCUR WITHIN PROPOSED FOREST CONSERVATION EASEMENTS.

- FORESTED FLOPLAIN IS NOT CREDITED TOWARD RETENTION AREA BUT MAY BE INCLUDED IN FOREST CONSERVATION EASEMENT.

Key (X#)	Species	Size (in DBH)
21	White Pine	32.5
22	White Pine	30
23	White Pine	30
24	Sycamore	30
25	Sycamore	32
26	Sycamore	36
28	Sycamore	37
29	Sycamore	30.5
30	Sycamore	33
31	Sycamore	44.5
44	Sycamore	39
45	Sycamore	45.5
47	Sycamore	35.5
50	Sycamore	44
Total Specimen Tree to be Removed		499.5
Mitigation Requirement Total Inches DBH/4		125
Total 3" Caliper Trees Required		42

**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777  
OR LOG ON TO [www.call811.com](http://www.call811.com)  
<http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.

**pepco**  
AN EXELON COMPANY

**Dewberry**  
Dewberry Engineers Inc.  
10491 Mill Run Circle  
SUITE 900  
Owings Mills, MD 21117-5544

**FINAL FOREST CONSERVATION NOTES (MNCPPC STANDARD)**

- SEQUENCE OF EVENTS FOR PROPERTY OWNERS REQUIRED TO COMPLY WITH FOREST CONSERVATION AND/OR TREE-SAVE PLANS
- PRE-CONSTRUCTION**
- AN ON-SITE PRE-CONSTRUCTION MEETING IS REQUIRED AFTER THE LIMITS OF DISTURBANCE HAVE BEEN STAKED AND FLAGGED, BUT BEFORE ANY CLEARING OR GRADING BEGINS. THE PROPERTY OWNER SHOULD CONTACT THE MONTGOMERY COUNTY PLANNING DEPARTMENT INSPECTION STAFF BEFORE CONSTRUCTION TO VERIFY THE LIMITS OF DISTURBANCE AND DISCUSS TREE PROTECTION AND TREE CARE MEASURES. THE DEVELOPER'S REPRESENTATIVE, CONSTRUCTION SUPERINTENDENT, SA CERTIFIED ARBORIST OR MARLAND LICENSED TREE EXPERT THAT WILL IMPLEMENT THE TREE PROTECTION MEASURES, FOREST CONSERVATION INSPECTOR, DEPARTMENT OF PERMITTING SERVICES (DPS) SEDIMENT CONTROL INSPECTOR, AND DPS SITE PLAN INSPECTOR SHOULD ATTEND THIS PRE-CONSTRUCTION MEETING.
  - NO CLEARING OR GRADING SHALL BEGIN BEFORE STRESS REDUCTION MEASURES HAVE BEEN IMPLEMENTED. APPROPRIATE MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO:
    - ROOT PRUNING
    - REDUCTION OR PRUNING
    - WATERING
    - FERTILIZING
    - VERTICAL MULCHING
    - ROOT AERATION MATING

- MEASURES NOT SPECIFIED ON THE FOREST CONSERVATION PLAN MAY BE REQUIRED AS DETERMINED BY THE FOREST CONSERVATION INSPECTOR IN COORDINATION WITH THE ARBORIST.
- A MARYLAND LICENSED TREE EXPERT OR AN INTERNATIONAL SOCIETY OF ARBORICULTURE CERTIFIED ARBORIST MUST PERFORM ALL STRESS REDUCTION MEASURES. DOCUMENTATION OF STRESS REDUCTION MEASURES MUST BE EITHER OBSERVED BY THE FOREST CONSERVATION INSPECTOR OR SENT TO THE INSPECTOR AT 8787 GEORGIA AVENUE, SILVER SPRING, MD 20910. THE FOREST CONSERVATION INSPECTOR WILL DETERMINE THE EXACT METHOD TO CONVEY THE STRESS REDUCTIONS MEASURES DURING THE PRE-CONSTRUCTION MEETING.
  - TEMPORARY TREE PROTECTION DEVICES SHALL BE INSTALLED PER THE FOREST CONSERVATION PLAN/TREE SAVE PLAN AND PRIOR TO ANY CONSTRUCTION ACTIVITIES. TREE PROTECTION FENCING LOCATIONS SHOULD BE STAKED PRIOR TO THE PRE-CONSTRUCTION MEETING. THE FOREST CONSERVATION INSPECTOR, IN COORDINATION WITH THE DPS SEDIMENT CONTROL INSPECTOR, MAY MAKE FIELD ADJUSTMENTS TO INCREASE THE SURVIVABILITY OF TREES AND FOREST SHOW AS SAVED ON THE APPROVED PLAN. TEMPORARY TREE PROTECT DEVICES MAY INCLUDE:
    - CHAIN LINK FENCE (FOUR FEET HIGH)
    - SUPER SLIT FENCE WITH WIRE STRUNG BETWEEN SUPPORT POLES (MINIMUM 4 FEET HIGH) WITH HIGH VISIBILITY FLAGGING.
    - 14 GAUGE 2 INCH X 4 INCH WELDED WIRE FENCING SUPPORTED BY STEEL T-BAR POSTS (MINIMUM 4 FEET HIGH) WITH HIGH VISIBILITY FLAGGING.

- TEMPORARY PROTECTION DEVICES SHALL BE MAINTAINED AND INSTALLED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION PROJECT AND MUST NOT BE ALTERED WITHOUT PRIOR APPROVAL FROM THE FOREST CONSERVATION INSPECTOR. NO EQUIPMENT, TRUCKS, MATERIALS, OR DEBRIS MAY BE STORED WITHIN THE TREE PROTECTION FENCE AREAS DURING THE ENTIRE CONSTRUCTION PROJECT. NO VEHICLE OR EQUIPMENT ACCESS TO THE FENCED AREA WILL BE PERMITTED. TREE PROTECTION SHALL NOT BE REMOVED WITHOUT PRIOR APPROVAL OF FOREST CONSERVATION INSPECTOR.
- FOREST RETENTION AREA SIGNS SHALL BE INSTALLED AS REQUIRED BY THE FOREST CONSERVATION INSPECTOR, OR AS SHOWN ON THE APPROVED PLAN.
- LONG-TERM PROTECTION DEVICES WILL BE INSTALLED PER THE FOREST CONSERVATION PLAN/TREE SAVE PLAN AND ATTACHED DETAILS. INSTALLATION WILL OCCUR AT THE APPROPRIATE TIME DURING THE CONSTRUCTION PROJECT. REFER TO THE PLAN DRAWING FOR LONG-TERM PROTECTION MEASURES TO BE INSTALLED.

- DURING CONSTRUCTION**
- PERIODIC INSPECTIONS BY THE FOREST CONSERVATION INSPECTOR WILL OCCUR DURING THE CONSTRUCTION PROJECT. CORRECTIONS AND REPAIRS TO ALL TREE PROTECTION DEVICES, AS DETERMINED BY THE FOREST CONSERVATION INSPECTOR, MUST BE MADE WITHIN THE TIMEFRAME ESTABLISHED BY THE INSPECTOR.

- POST-CONSTRUCTION**
- AFTER CONSTRUCTION IS COMPLETED, AN INSPECTION SHALL BE REQUESTED. CORRECTIVE MEASURES MAY INCLUDE:
    - REMOVAL AND REPLACEMENT OF DEAD AND DYING TREES
    - PRUNING OF DEAD OR DECLINING LIMBS
    - SOIL AERATION
    - FERTILIZATION
    - WATERING
    - WOUND REPAIR
    - CLEAN UP OF RETENTION AREAS
  - AFTER INSPECTION AND COMPLETION OF CORRECTIVE MEASURES HAVE BEEN UNDERTAKEN, ALL TEMPORARY PROTECTION DEVICES SHALL BE REMOVED FROM THE SITE. REMOVAL OF TREE PROTECTION DEVICES THAT ALSO OPERATE FOR EROSION AND SEDIMENT CONTROL MUST BE COORDINATED WITH BOTH THE DEPARTMENT OF PERMITTING SERVICES AND THE FOREST CONSERVATION INSPECTOR. NO ADDITIONAL GRADING, SODDING, OR BURIAL MAY TAKE PLACE AFTER THE TREE PROTECTION FENCING IS REMOVED.

**INSPECTIONS (MNCPPC STANDARD)**

- ALL FIELD INSPECTIONS MUST BE REQUESTED BY THE APPLICANT. INSPECTIONS MUST BE CONDUCTED AS FOLLOWS:
- TREE SAVE PLANS AND FOREST CONSERVATION PLANS WITHOUT PLANTING REQUIREMENTS**
- AFTER THE LIMITS OF DISTURBANCE HAVE BEEN STAKED AND FLAGGED, BUT BEFORE ANY CLEARING OR GRADING BEGINS.
  - AFTER COMPLETION OF ALL CONSTRUCTION ACTIVITIES, BUT BEFORE REMOVAL OF TREE PROTECTION FENCING, TO DETERMINE THE LEVEL OF COMPLIANCE WITH THE PROVISIONS OF THE FOREST CONSERVATION.
- ADDITIONAL REQUIREMENTS FOR PLANS WITH PLANTING REQUIREMENTS**
- BEFORE THE START OF ANY REQUIRED REFORESTATION AND AFFORESTATION PLANTING.
  - AFTER THE REQUIRED REFORESTATION AND AFFORESTATION PLANTING HAS BEEN COMPLETED TO VERIFY THAT THE PLANTING IS ACCEPTABLE AND PRIOR TO THE START OF THE MAINTENANCE PERIOD.
  - AT THE END OF THE MAINTENANCE PERIOD TO DETERMINE THE LEVEL OF COMPLIANCE WITH THE PROVISIONS OF THE PLANTING PLAN, RELEASE OF THE PERFORMANCE BOND.

**AFFORESTATION/ REFORESTATION MANAGEMENT PLAN**

- YEAR 1:**
- AREA IS PLANTED ACCORDING TO PRE-APPROVED PLAN.
  - SURVIVAL CHECK 3 TIMES (MARCH-APRIL), (JULY-AUGUST), (OCTOBER-NOVEMBER).
  - WATERING AS NEEDED.
  - CONTROL OF UNDESIRABLE VEGETATION AS NEEDED.
- YEAR 2:**
- REINFORCEMENT PLANTING IF NEEDED.
  - SURVIVAL CHECK ONCE ANNUALLY (MAY-SEPTEMBER).
- FERTILIZATION OR WATERING DURING YEAR 1 WILL BE DONE ON AN AS NEEDED BASIS. CONDITION CHECK SHEETS SHOULD BE PROVIDED TO THE CLIENT AND THE M-NCCPC INSPECTOR AFTER EACH VISIT. A SURVIVAL RATE OF 75% IS REQUIRED AFTER 2 (TWO) YEARS. IF ADEQUATE NATURAL REGENERATION HAS OCCURRED, IT MAY BE INCLUDED IN THE FINAL SURVIVAL TALLY. SPECIAL RETURN OPERATIONS OR RECOMMENDATIONS WILL BE CONDUCTED ON AN AS NEEDED BASIS. TEMPORARY PERIMETER FENCING AND SIGNAGE WILL BE REMOVED AFTER YEAR 2 BASED ON THE DATE PLANTED AFTER FORMAL ACCEPTANCE OF THE PLANT MATERIAL BY THE M-NCCPC INSPECTOR.

**ADDITIONAL NOTES**

- SPOILS AND DEMOLITION, DEBRIS, EXCAVATION, ETC. SHALL NOT BE STOCKPILED WITHIN 50' OF THE TREE SAVE LINE.
- PLANTINGS INSTALLED UNDER THIS PLAN SHALL BE MAINTAINED IN A HEALTHY CONDITION FOR A PERIOD OF TWO YEARS UNDER THE TERMS OF A MAINTENANCE & MANAGEMENT AGREEMENT WITH THE MONTGOMERY COUNTY PLANNING BOARD.

**BRIGHTON SUBSTATION STATCOM EXPANSION FOREST CONSERVATION PLAN**  
1300 POWER COUNTY ROAD BROOKEVILLE, MD 20833  
ELECTION DISTRICT 8  
F20250240  
FOREST CONSERVATION DETAILS

**POTOMAC ELECTRIC POWER CO.**

PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: PHILIP KASSIR  
PHONE: 240.409.7088  
EMAIL: PHILIP.KASSIR@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

WR NO.	SCALE	APPD	APPD	APPD
	DATE			
FDR. NO.	DR. BY MB			
	CHKD. LB			
	INSP.			

**FCP-08**  
SHEET 8 OF 8





pepco<sup>SM</sup>

AN EXELON COMPANY

# Attachment C

Edison Place  
701 Ninth St. NW  
Washington D.C. 20068-0001

January 10, 2024

Montgomery County Planning Board  
2425 Reedie Drive, 14<sup>th</sup> Floor  
Wheaton, MD 20902  
301-495-4605

RE: MR2025007/F20250240 – Brighton Substation STATCOM Expansion Waiver Request for Exceeding the 10% Impervious Cap in the PMA for a Public Service Necessity

Dear Planning Board,

As you may know, Talen Energy announced their intention to retire the Brandon Shores Generation Station, a coal-fired generation station in Baltimore, Maryland, by June 1, 2025. As a result of the planned retirement of the coal-fired Brandon Shores Generating Station, PJM, the regional transmission organization responsible for the movement of wholesale electricity, determined that transmission system upgrades are required to maintain grid reliability before Brandon Shores' deactivation. Given the power plant's critical role in serving the central Maryland region, PJM has directed Exelon's Utilities (i.e., PECO, BGE, and PEPCO) to implement transmission projects that together will ensure regional grid reliability. In Montgomery County specifically, Pepco is charged with expanding the Brighton Substation to accommodate the size of the new transmission equipment being installed.

The Brighton Substation (Site) is a 231.76 acre site with an existing roughly 20-acre electric substation owned and operated by PEPCO. The Site is located at 1300 Brighton Dam Road, Brookeville, MD 20833. The subject property is bounded on the north by Brighton Dam Road, on the west by public park land owned by Maryland-National Capital Park and Planning Commission (M-NCPPC), and on the south and east by private land. The property is zoned Rural Cluster. Other than the substation, the property is forested and located almost entirely within the Primary Management Area (PMA) associated with the Hawlings River. Based on the location and proximity to Hawlings River, the site is subject to a 10% impervious area cap per the Montgomery County Environmental Guidelines associated with the Priority Management Area (PMA). The existing substation represents a 9.6% impervious surface composed of 16% pavement, 33% compacted stone and 51% uncompacted stone. The proposed project- will add new equipment for grid reliability as required by PJM (overarching grid manager)- will drive the impervious area up to 12.5% as a mix of pavement, compacted and uncompacted stone. Pepco has worked to reduce impervious area, to the greatest extent practical, and has optimized the equipment footprint and utilize an existing open substation bay as shown in our provided alternatives analysis- see Attachment A.

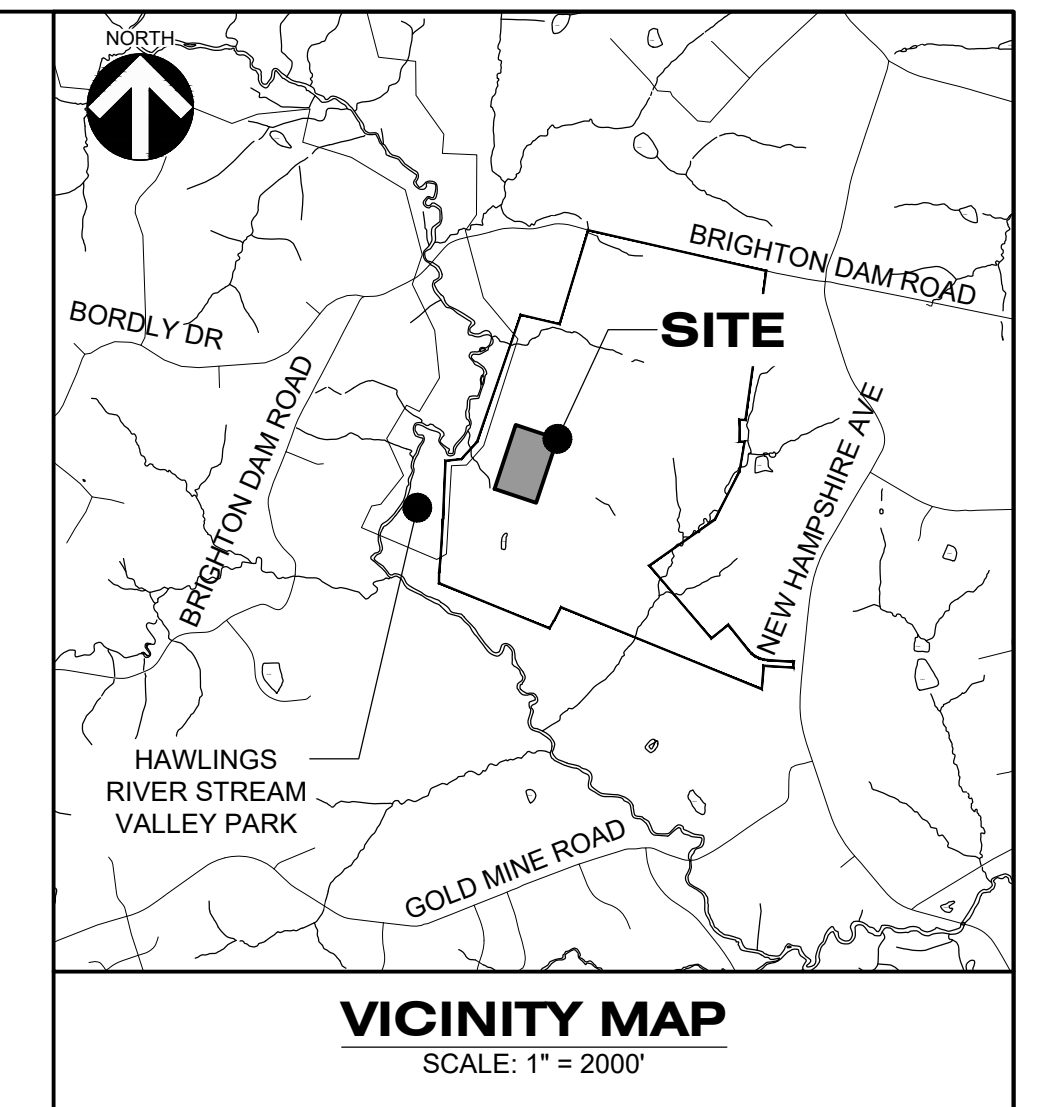
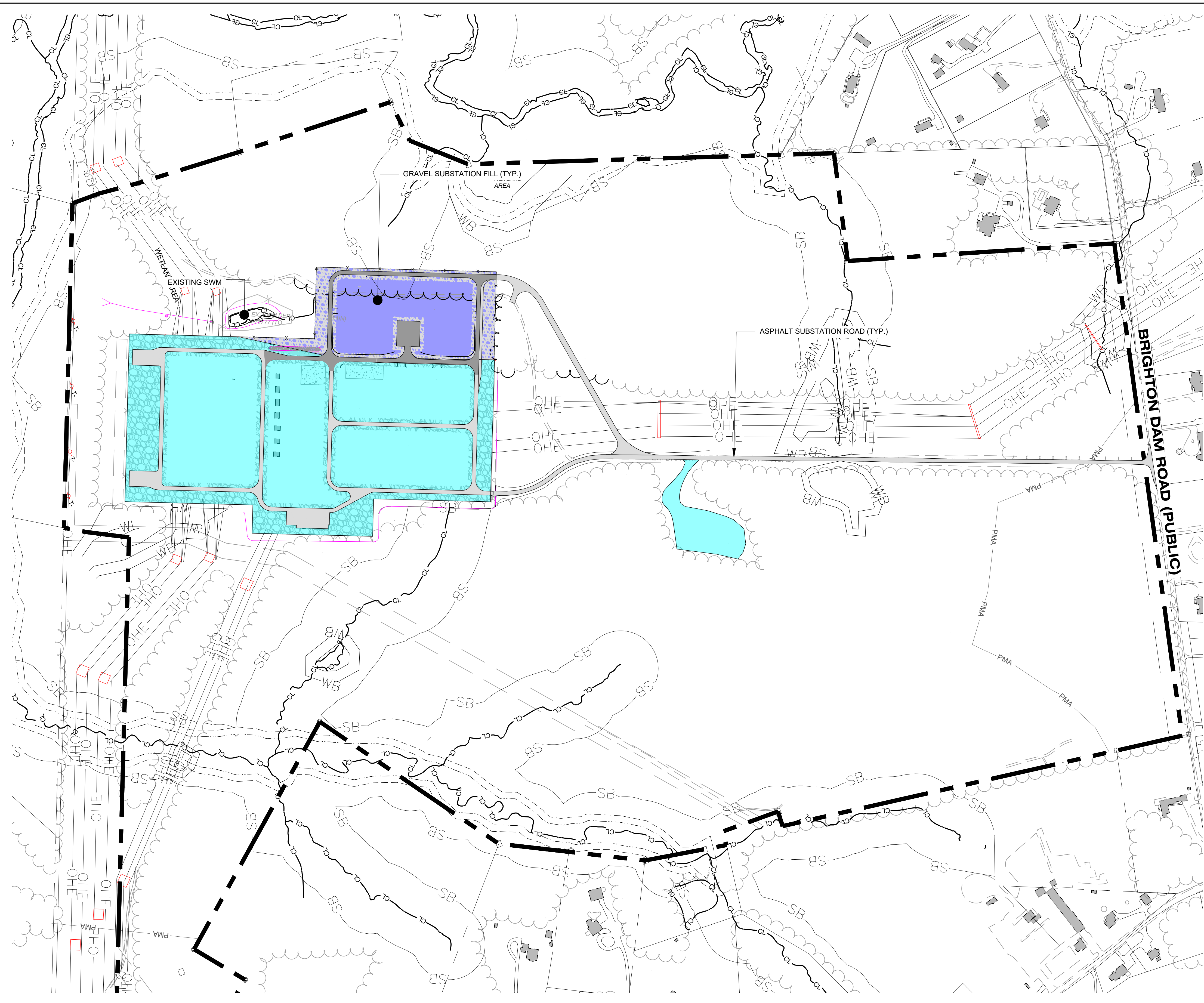
PEPCO is requesting that the Planning Board grant a waiver of the Montgomery County Environmental Guidelines (2021) 10% Impervious Area Cap within the PMA on the Brighton Substation STATCOM Expansion Project. We ask the Board to consider this waiver request taking into consideration this is a mandated improvement necessary by Pepco to support the regional grid operation and reliability. The project will provide direct benefit to the citizens in Montgomery County ensuring reliable and stable electric service as fossil fuel power generation sites retire within the region.

Thank you for considering this waiver request for Pepco's critical electric infrastructure project to support the regional and local grid.

Sincerely,

Asteway Ribbiso  
Manager, Project Execution

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAVDB88)

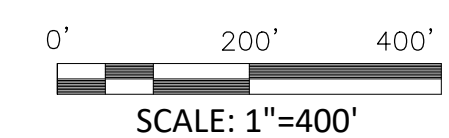


- LEGEND:**
- EXISTING BUILDING
  - EXISTING SUBJECT PROPERTY LINE
  - EXISTING ADJACENT PROPERTY LINE(S)
  - EXISTING CONTOURS
  - EXISTING TREELINE
  - EXISTING FENCE
  - EXISTING WETLAND
  - EXISTING 100-YR FLOODPLAIN
  - EXISTING STREAM AND WETLAND BUFFER
  - EXISTING REGULATED STREAM CENTERLINE
  - PROPOSED BLUESTONE
  - PROPOSED IMPERVIOUS (WITHOUT BLUESTONE)
  - EXISTING BLUESTONE
  - EXISTING IMPERVIOUS (WITHOUT BLUESTONE)

PROPERTY AREA: 231.76 ACRES ±

BLUESTONE @100% IMPERVIOUS	EXISTING	PROPOSED
IMPERVIOUS AREA	971,388 SF ±	1,236,233 SF ±
	22.30 ACRES ±	28.38 ACRES ±
% IMPERVIOUS	22.30 / 231.76 * 100 = 9.62%	28.38 / 231.76 * 100 = 12.25%

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					



**NOTE**  
FOR LOCATION OF UTILITIES CALL  
8-1-1 OR 1-800-257-7777  
OR LOG ON TO  
[www.call811.com](http://www.call811.com)  
<http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK  
IN THIS VICINITY

INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.

**pepco**  
AN EXELON COMPANY

**Dewberry**  
Dewberry Engineers Inc.  
10461 Mill Run Circle  
SUITE 300  
Owings Mills, MD 21117-5544

PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

WR NO.

FDR NO.

**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKVILLE, MD 20833**

**POTOMAC ELECTRIC POWER CO.**

SCALE	APPD	APPD	APPD
DATE			
DR. BY MB			
CHKD. LB			
INSP.			

**EX - IMP**  
SHEET 1 OF 1

# Attachment D

**From:** [Donald E. Chamberlin](#)  
**To:** [MCP-Chair](#); [Beall, Mark](#)  
**Cc:** [Putman, Jim](#); [Faustini, Lou](#); [lbetz@dewberry.com](mailto:lbetz@dewberry.com); [phillip.kassir@exeloncorp.com](mailto:phillip.kassir@exeloncorp.com); [Ryan McNally](#); [Thornton, Kate](#)  
**Subject:** PWPA comments re Brighton Substation STATCOM Expansion FCP F20250240 and MR 2025007  
**Date:** Friday, January 24, 2025 10:09:43 AM

---

**[EXTERNAL EMAIL]** Exercise caution when opening attachments, clicking links, or responding.

Mr. Harris & Planning Board Members, Mr. Beall,

The Patuxent Watershed Protective Association (PWPA) has reviewed the Forest Conservation Plan (FCP) F20250240 for PEPCO's Brighton Substation STATCOM expansion, and the related Variance Request for the removal of 31 specimen trees.

We complement Dewberry Engineering for an excellent Forest Conservation Plan and approve of it. With respect to the tree variance request 10-VAR-F20250240.pdf, completed by Eco-Science Professionals, Inc., we also find this paper to be an excellent discussion of the tree removal needs and the consideration of alternatives to minimize tree removal. We agree with the conclusions in the paper and that a mitigation plan for trees #21, 22, 62 and 63 within the proposed stormwater management facilities need not be developed until the variance is granted.

With respect to the remainder of the 35 trees to be removed, while we recognize that - because these trees are within an existing Forest Delineation Stand - there is not a legal requirement to replace them, we nevertheless recommend that as a good environmental and community relations practice, PEPCO should agree to replace them with hardwoods native to the area. There are very few hardwoods noted in the Natural Resources Inventory of the property. There are multiple locations within the 231-acre property where replacement hardwood trees - particularly deep-rooted varieties - can be planted along the edges of the many steep gradients in order to help stabilize the soils in those areas. Alternative locations would be along the boundaries of abutting property owners, and planting replacement trees there would be a nice community relations gesture. Because this PEPCO property is in a critical location within the Hawlings River Watershed, which is part of the Patuxent Watershed, and contains feeder streams to the Hawlings River, which itself contains significant aquatic species and is a critical feeder to the nearby Rocky Gorge Reservoir, which supplies drinking water for over 800,000 customers in Prince Georges and Montgomery counties, the more trees that can be planted in this watershed to improve and maintain water quality, the better.

If you have any questions regarding these comments, please do not hesitate to contact me.

Regards,

Donald E. Chamberlin, Representative  
*[Patuxent Watershed Protective Association](#)*

# Attachment E



## DEPARTMENT OF PERMITTING SERVICES

Marc Elrich  
County Executive

Rabbiah Sabbakhan  
Director

January 17, 2025

Ms. Lisa Betz, PE  
Dewberry Engineers, Inc.  
10461 Mill Run Circle, Suite 300  
Owings Mills, Maryland 21117

Re: **COMBINED STORMWATER MANAGEMENT  
CONCEPT/SITE DEVELOPMENT  
STORMWATER MANAGEMENT PLAN** for  
Brighton Substation Statcom Expansion  
Mandatory Referral #: MR2025007  
SM File #: 295204  
Tract Size/Zone: 231.76 Ac.  
Total Concept Area: 13.281 Ac./578,477 sq.ft.  
Parcel(s): A  
Watershed: Hawlings River/Class IV  
Redevelopment (Yes/No): No

Dear Ms. Betz:

Based on a review by the Department of Permitting Services Review Staff, the stormwater management concept for the above-mentioned site is **acceptable**. The plan proposes to meet required stormwater management goals via the use of bioswales. A partial SWM waiver was requested and is hereby granted for the volume which was unable to be treated in an ESD practice, due to site constraints. A large portion of the property will be contained in conservation easements. The nature of the requirements for this essential utility do not allow for micro-scale practices to be dispersed throughout the substation pad.

The following items will need to be addressed during the detailed sediment control/stormwater management plan stage:

1. A detailed review of the stormwater management computations will occur at the time of detailed plan review.
2. An engineered sediment control plan must be submitted for this project.
3. All filtration media for manufactured best management practices, whether for new development or redevelopment, must consist of MDE approved material.

This list may not be all-inclusive and may change based on available information at the time.

Payment of a stormwater management contribution in accordance with Section 2 of the Stormwater Management Regulation 4-90 **is required**.

This letter must appear on the sediment control/stormwater management plan at its initial submittal. The concept approval is based on all stormwater management structures being located



2425 Reedie Drive, 7th Floor, Wheaton, Maryland 20902 | 240-777-0311  
[www.montgomerycountymd.gov/permittingservices](http://www.montgomerycountymd.gov/permittingservices)

*Ms. Lisa Betz, PE*  
*January 17, 2025*  
*Page 2 of 2*

outside of the Public Utility Easement, the Public Improvement Easement, and the Public Right of Way unless specifically approved on the concept plan. Any divergence from the information provided to this office; or additional information received during the development process; or a change in an applicable Executive Regulation may constitute grounds to rescind or amend any approval actions taken, and to reevaluate the site for additional or amended stormwater management requirements. If there are subsequent additions or modifications to the development, a separate concept request shall be required.

If you have any questions regarding these actions, please feel free to contact Sherry Mitchell at 240-777-5206 or [sherryl.mitchell@montgomerycountymd.gov](mailto:sherryl.mitchell@montgomerycountymd.gov).

Sincerely,



Mark Etheridge, Manager  
Water Resources Section  
Division of Land Development Services

cc: Neil Braunstein  
SM File # 295204

ESD: Required/Provided 29,918 cf / 10,827 cf  
PE: Target/Achieved: 1.00"/0.36"  
STRUCTURAL: N/A cf  
WAIVED: 19,091 cf.



---

---

**Department of Permitting Services  
Fire Department Access and Water Supply Comments**

---

---

**DATE:** 26-Jan-25  
**TO:** Maddy Bullis - mbullis@dewberry.com  
Dewberry  
**FROM:** Marie LaBaw  
**RE:** PEPCO Brighton Substation STATCOM Expansion  
MR2025007

---

**PLAN APPROVED**

1. Review based only upon information contained on the plan submitted **24-Jan-25** .Review and approval does not cover unsatisfactory installation resulting from errors, omissions, or failure to clearly indicate conditions on this plan.
2. Correction of unsatisfactory installation will be required upon inspection and service of notice of violation to a party responsible for the property.

**\*\*\* Limited access for safety; see attached documentation \*\*\***

**\*\*\* Water supply tank to be reviewed, permitted, and inspected by DPS Commercial Building Fire Protection System group. Tank shall be operational prior to occupancy of new building \*\*\***



Dr Marie LaBaw  
Montgomery County Department of Permitting Services  
2425 Reddie Dr.  
7<sup>th</sup> Floor  
Wheaton, MD 20902

Dr. LaBaw:

Potomac Electric Power Company (Pepco or Company) is responding to the permit comment for a lock box, commonly known under the trademarked name, Knox Box.

Pepco acknowledges that the Montgomery County approved amendments to NFPA 1, The Fire Code, Chapter 18, §18.2.2.1.1 states:

*All occupancies other than [1]one- and [2]two-family dwellings must have an approved access box.*

Pepco does intend to install the approved “Knox Box” at the first gate located approximately 40-feet off Brighten Dam Road on the private road identified as Power County Road. This will allow immediate access to perimeter fence of the Pepco Brighton Substation.

Pepco cannot provide unescorted access to into the Extra-High Voltage substation. Providing access to anyone that is not escorted by a properly badged individual for the Brighton Substation would be a violation of:

- Exelon & Pepco Safety Procedures
- Exelon Security Procedure
- National Electric Safety Code
  - **Definitions:**
    - **electric supply station.** *Any building, room, or separate space within which electric supply equipment is located and the interior of which is accessible, as a rule, only to qualified persons. This includes generating stations and substations, including their associated generator, storage battery, transformer, and switchgear rooms or enclosures, but does not include facilities such as pad-mounted equipment and installations in manholes and vaults.*
    - **qualified (as applied to persons).** *Having been trained in and having demonstrated adequate knowledge of the installation, construction, or operation of lines and equipment and the hazards involved, including identification of and exposure to electric supply and communication lines and equipment in or near the workplace. An employee who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of*

*training, and who is under the direct supervision of a qualified person, is considered to be a qualified person for the performance of those duties.*

- Rule 110 (A) (1)

*Rooms and spaces in which electric supply conductors or equipment are installed shall be so arranged with barriers, such as fences, screens, partitions, or walls, to form an enclosure as to limit the likelihood of entrance of unauthorized persons or interference by them with equipment inside. Entrances not under observation of an authorized attendant shall be kept locked. An installed barrier may be satisfied with any one of the following:*

- a. Fence fabric, not less than 7 ft (2.13 m) in height.*
- b. A combination of 6 ft (1.8 m) or more of fence fabric and an extension utilizing three or more strands of barbed wire to achieve an overall height of the fence of not less than 7 ft (2.13 m).*
- c. Other types of construction, not less than 7 ft (2.13 m), that present equivalent barriers to climbing or other unauthorized entry.*

- OSHA/MOSH 1910.303(h)(2)(i)

*Electrical installations in a vault, room, or closet or in an area surrounded by a wall, screen, or fence, access to which is controlled by lock and key or other approved means, are considered to be accessible to qualified persons only. The type of enclosure used in a given case shall be designed and constructed according to the hazards associated with the installation.*

- OSHA/MOSH 1910.303(h)(2)(iv)

*Outdoor electrical installations having exposed live parts shall be accessible to qualified persons only.*

- Federal Energy Regulatory Commission via the North American Electric Reliability Corporation – Critical Infrastructure Protection (CIP-014-2)

These rules and regulations are in place for:

- Safety of the general public to include preventing trespassing
- The safety of employees and contractors working on site
- The safety of first responders in the event of an emergency.
- The security of the bulk electric system.

It is vital for the safety of the MCFRS personnel that responders wait for the arrival of a qualified escort. For this reason, a joint training program was created by Pepco with input from MCFRS Training Division. Please refer to the joint training program for more details.





If you or your department would like more information on the substation, the fire hazards, and the mitigation strategies, please do not hesitate to reach out to myself or your Regional Governmental Affairs Manager, Danielle Freedman.

Sincerely yours,

William M. Buirch,  
Principal Project Manager-Fire Protection  
Pepco Holdings Inc  
William.Buirch@exeloncorp.com

Cc:

Ms. Danielle Freedman, Regional Governmental Affairs Manager, Pepco  
Ms. Valencia McClure, President Pepco

**FIRE CODE ENFORCEMENT**

**Fire Department Access Review**

Review based only upon information contained on this plan. Does not cover unsatisfactory layout resulting from omissions, errors or failure to clearly indicate conditions on this plan. Correction of such unsatisfactory layout to afford required access will be required if found upon inspection after installation

BY: SAC FM: DPS DATE: 1/26/2025

January 23, 2024

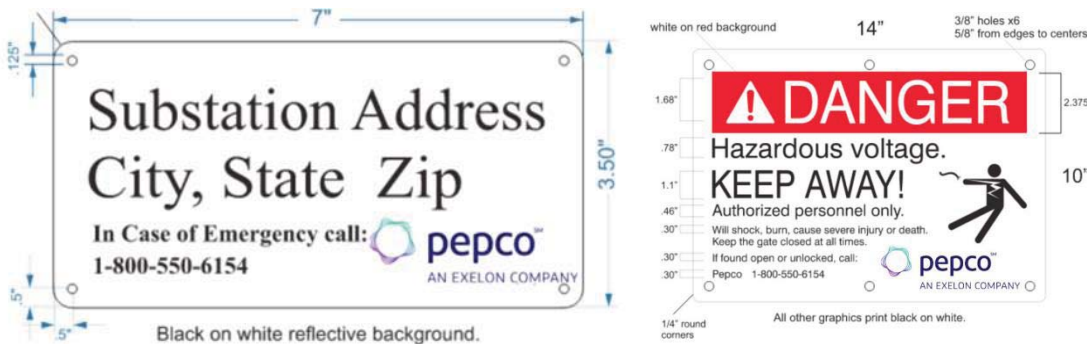
Dr. Marie LaBaw  
Fire Department Access and Water Supply  
Montgomery County Department of Permitting Services  
2425 Reedie Drive, 7<sup>th</sup> Floor  
Wheaton, MD 20902  
240-773-8917

RE: MR2025007 – Brighton Substation Fire Protection Review

Dr. LaBaw,

Pepco Operations Control Center and MontCo Fireboard have direct-in-dial phone numbers for each other in the event of an emergency. Police, Fire, and EMS responders should work through the respective communication center. They have the non-public numbers that are the best method for rapid communication. This is the same method used to contact Pepco for a working fire that requires utility controls, motor vehicle collisions involving pole/wires, and wires on fire during storms. The communication process is well exercised across all the Pepco service territory.

Should something occur that first responders are having difficulty reaching the respective communication center, each gate has the emergency contact number listed at the bottom of the sign.



The 800-550-6154 number is the Exelon Security Operations Center (ESOC). ESOC operators have post orders and substation information pages similar to a 911 dispatch center. ESOC handles all security and police related incidents and routes other concerns to the respective organizations.

Attached to this letter is the LMS Module related to substation fire response used in the Montgomery County Fire Training system. PEPCO worked with Assistant Chief Burns and Capt. Hayunga on the training program.

Sincerely,



William M. Buirch  
Pepco Holdings Inc.  
Principal Project Manager– Fire Protection  
William.Buirch@exeloncorp.com

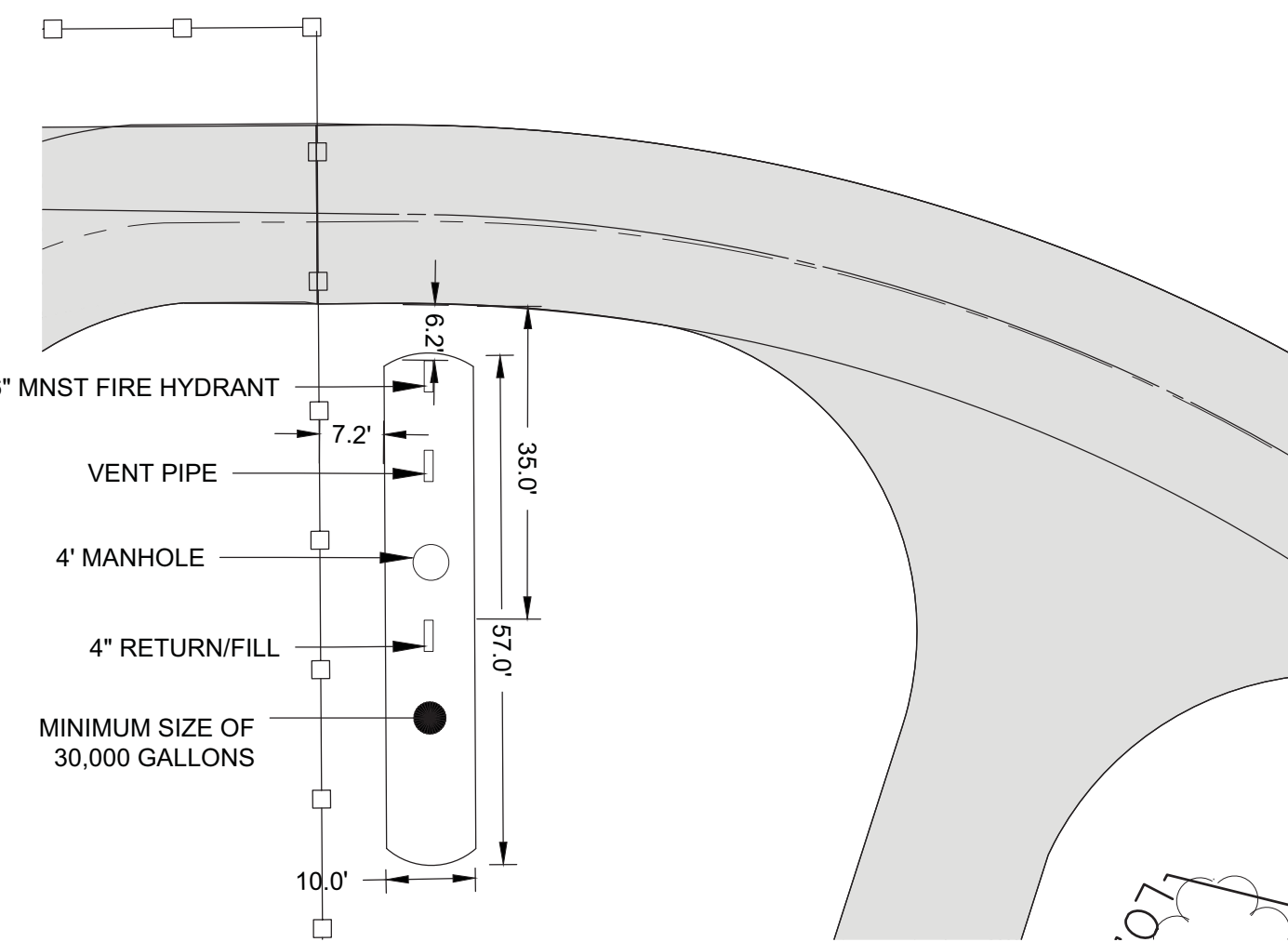
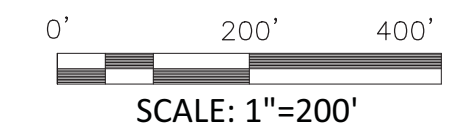
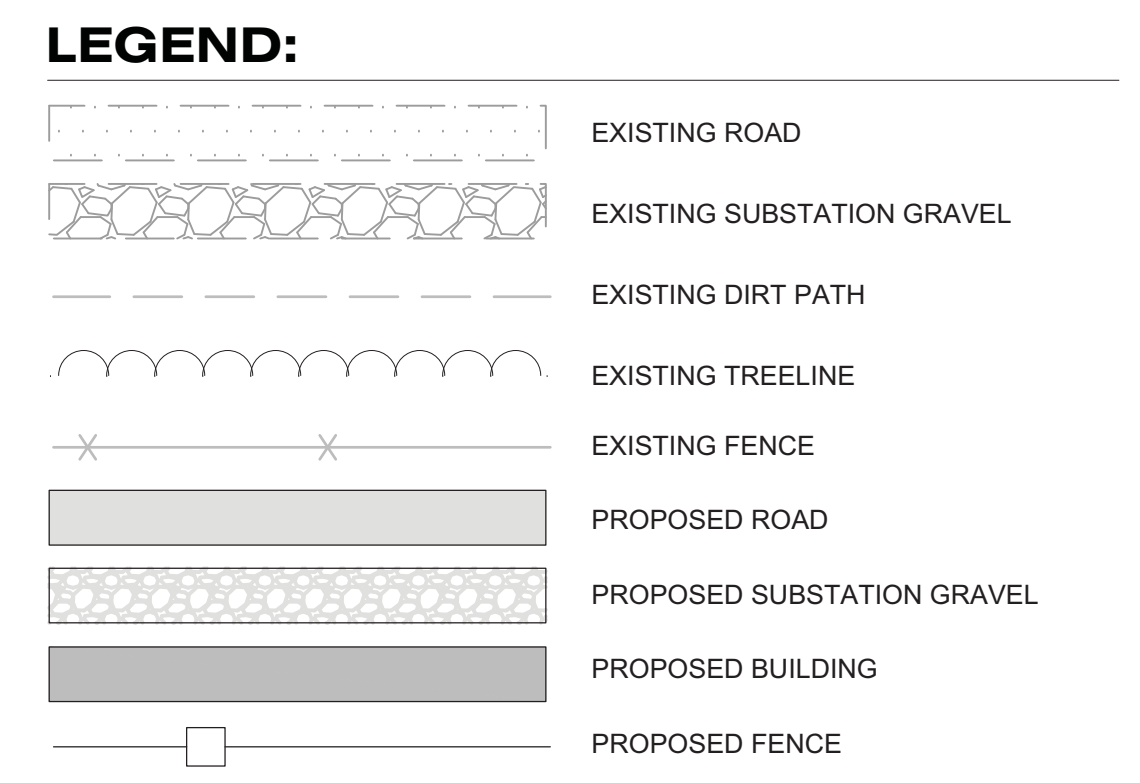
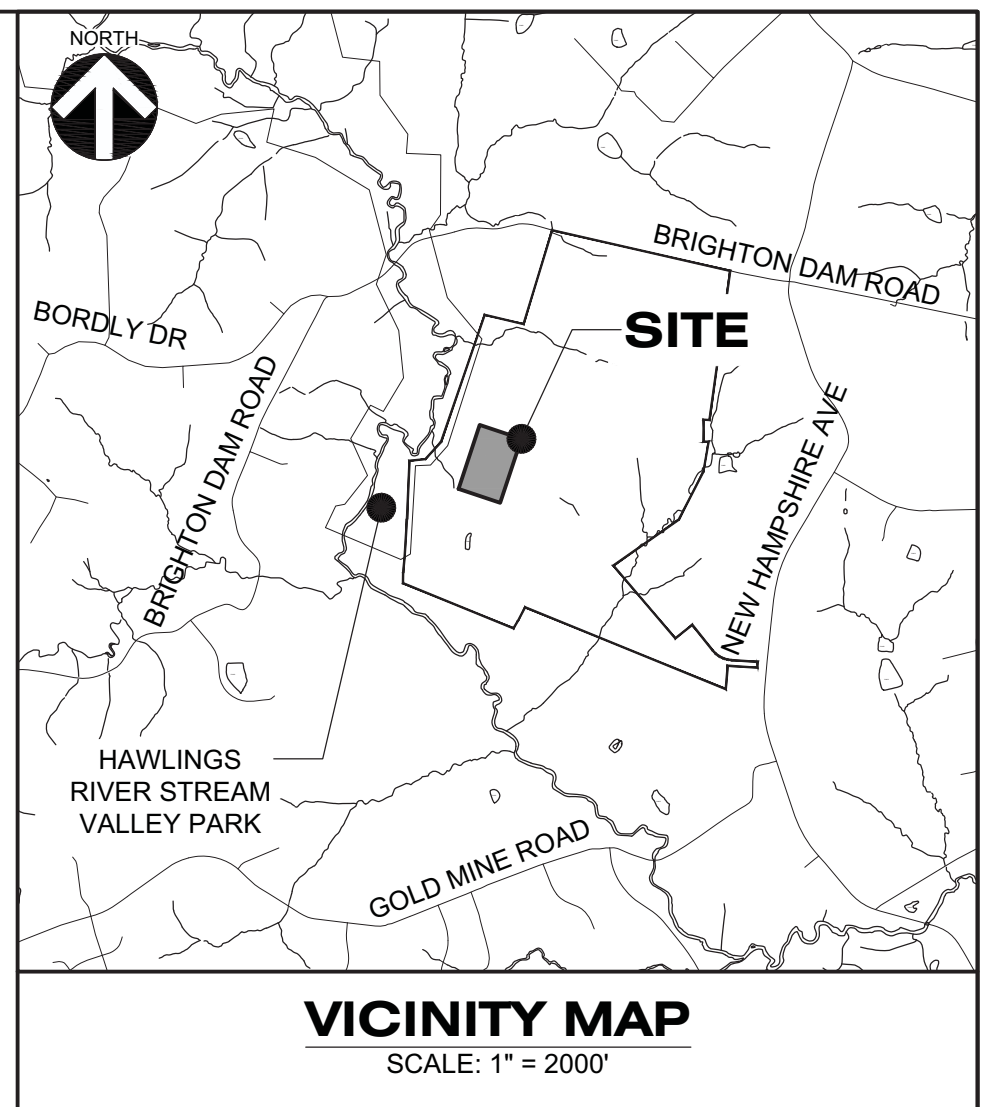
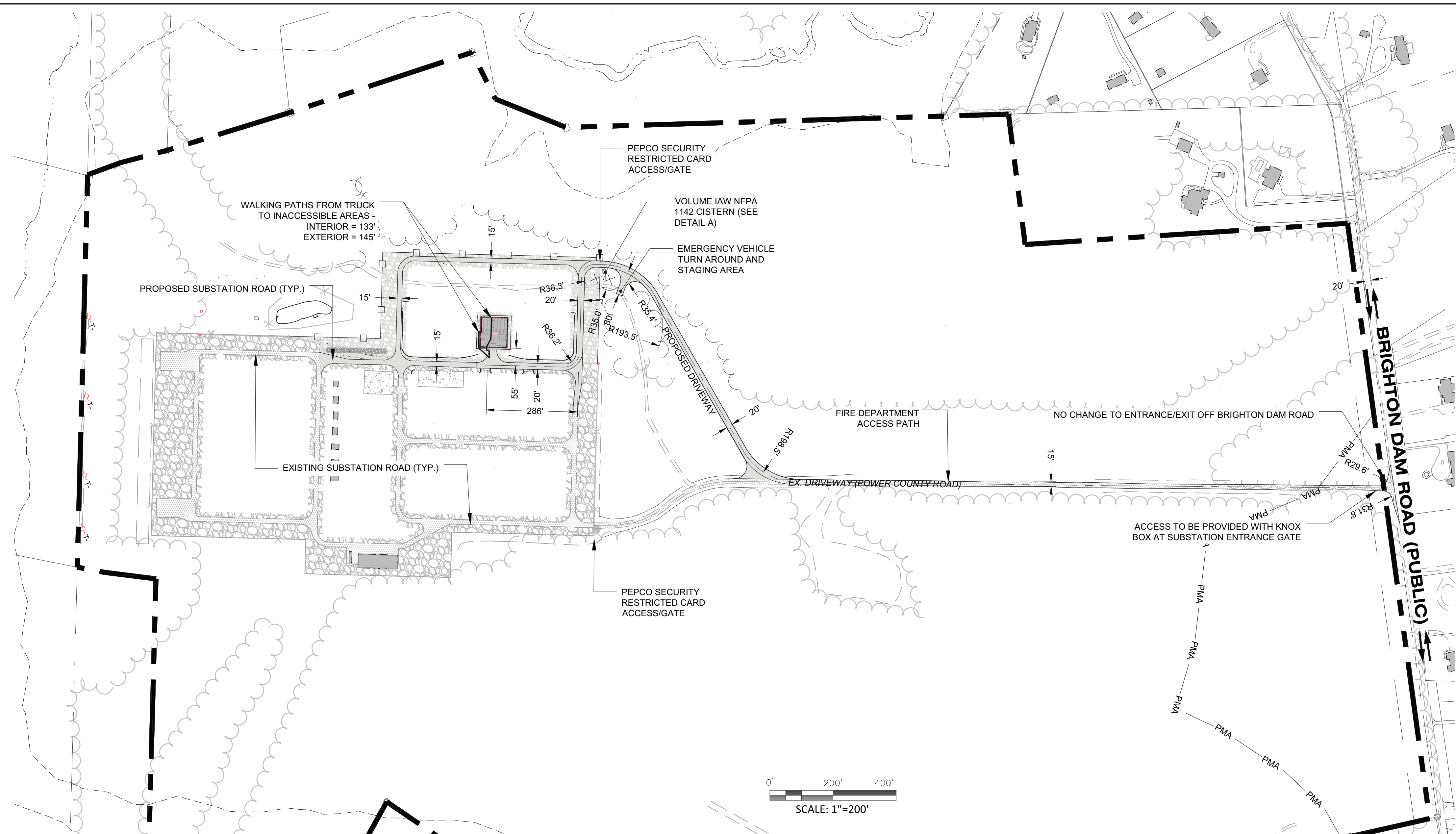
**FIRE CODE ENFORCEMENT**

**Fire Department Access Review**

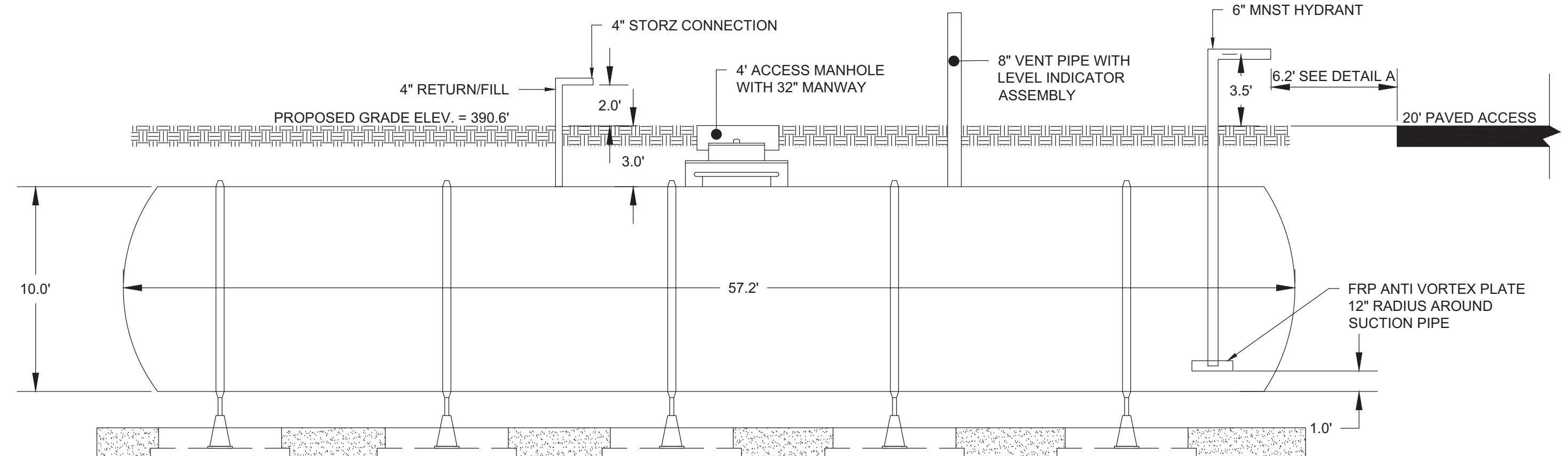
**Review based only upon information contained on this plan. Does not cover unsatisfactory layout resulting from omissions, errors or failure to clearly indicate conditions on this plan. Correction of such unsatisfactory layout to afford required access will be required if found upon inspection after installation**

BY: SAC FM: DPS DATE: 1/26/2025

MARYLAND COORDINATE SYSTEM  
(NAD83/2011)  
(NAV/D88)



**DETAIL A**  
SCALE 1:20



- NOTES:**
- XERXES SINGLE WALL FIBERGLASS REINFORCED PLASTIC TANK (FRP) - 30,000 GALLON, 10 FOOT DIAMETER OR EQUIVALENT.
  - FOOTER, ANCHORS, AND STRAP SYSTEM TO BE COORDINATED WITH THE TANK VENDOR.
  - MAXIMUM OF 15' LIFT FOR TANK TO BE USED.
  - CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ENGINEER REVIEW.

**TANK SECTION VIEW**  
NTS

**FIRE CODE ENFORCEMENT**  
Fire Department Access Review  
Review based only upon information contained on this plan. Does not cover unsatisfactory layout resulting from omissions, errors or failure to clearly indicate conditions on this plan. Correction of such unsatisfactory layout to afford required access will be required if found upon inspection after installation.  
BY: *S.M.C.* PM: *DPS* DATE: 1/26/2025

DESCRIPTION	CORR	CHKD	APPD	APPD	APPD
REVISIONS					

**Professional Certification**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 33959, Expiration Date: January 14, 2027.

**NOTE**  
FOR LOCATION OF UTILITIES CALL 8-1-1 OR 1-800-257-7777 OR LOG ON TO [www.call811.com](http://www.call811.com) <http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION.

PEPCO RESPONSIBLE ENGINEER:  
701 9TH STREET NW  
WASHINGTON, DC 20011  
NAME: IBRAHIM KHATIB  
PHONE: 703.226.9978  
EMAIL: IBRAHIM.KHATIB@EXELONCORP.COM

DESIGN CONSULTANT:  
NAME: LISA R. BETZ, PE  
PHONE: 410.645.1402  
EMAIL: LBETZ@DEWBERRY.COM

TAX DIST.

WR NO.

FDR NO.

**MR2025007**  
**BRIGHTON SUBSTATION**  
**1300 POWER COUNTY ROAD**  
**BROOKVILLE, MD 20833**  
**FIRE DEPARTMENT ACCESS PLAN**

**POTOMAC ELECTRIC POWER CO.**

SCALE	APPD	APPD	APPD
DATE			
DR. BY	MB		
CHKD.	LB		
INSP.			

**05-CIRC**  
SHEET 1 OF 1

# Substation Emergency Planning

## 1. Substation Emergency Planning

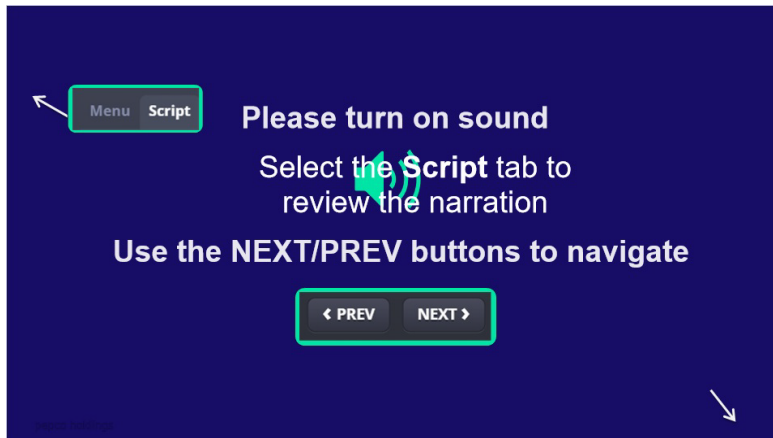
### 1.1 Introduction



#### Notes:

Welcome to this learning module on Substation Emergency Planning.

### 1.2 Navigation



#### Notes:

This course contains narration. Please make sure your sound is turned on.

To access the narration text, select the script tab in the upper left-hand side of the course window next to the menu tab.

To navigate this course, use the buttons in the bottom right-hand corner of the course window.

### ***1.3 Defining Curbside Equipment***



#### **Notes:**

A substation is a crucial component of the power grid that plays a key role in transmitting and distributing electricity. Its primary function is to transform voltage levels and manage the flow of electric power between various parts of the grid.

### ***1.4 Ultra Hazardous Work***




#### **Notes:**

Firefighting is ultra hazardous and inherently dangerous, meaning that the risk of injury cannot be fully

---

eliminated. The work that substation personnel do are also ultra hazardous and inherently dangerous. When two ultra hazardous and inherently dangerous professions come together, the risk is even greater.

## 1.5 Module Overview and Objectives

<p><b>Module Objectives</b></p> 	<ul style="list-style-type: none"><li>• Recall basic staging processes upon arrival at a substation.</li><li>• Recognize equipment typically found in substations and their associated hazards.</li><li>• Describe a substation pre-fire plan and the information contained in it.</li></ul>
---	--

### Notes:

The purpose of this module is to focus on the planning steps for first responders in the event of a substation emergency.


By the end of this module, you will be able to:

Recall basic staging processes upon arrival at a substation.

Recognize equipment typically found in substations and their associated hazards.

Describe a substation pre-fire plan and the information contained in it.

## 1.6 Key Safety Points

<p><b>Key Safety Points</b></p> 	<ol style="list-style-type: none"><li>1. STAY AWAY</li><li>2. Wait for a utility representative</li><li>3. Assume that <b><u>ALL</u></b> utility equipment is energized</li><li>4. Do <b><u>NOT</u></b> use water unless approved by the utility</li></ol> <p><i>Click NEXT to continue.</i></p>
---	--

## Notes:

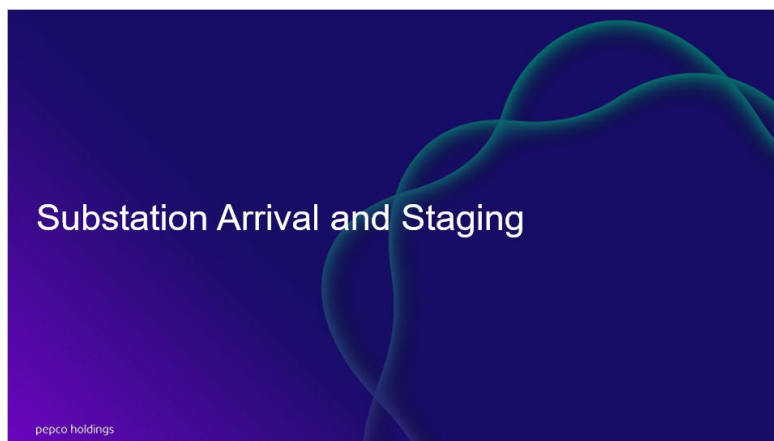
Throughout this module, we will often refer to the following four key safety points.

- 1: Stay away! When arriving to the scene of a utility fire emergency, remain as far as possible from all substation equipment.
- 2: Wait for a utility representative! Do not attempt to suppress a utility fire until a utility representative is present to offer safe guidance.
- 3: Assume that all utility equipment is energized! Always wait for a utility representative to inform you that equipment has been de-energized.
- and 4: Do not use water to suppress a utility fire unless instructed that it is safe to do so. Water conducts electricity, so always wait for a utility representative to advise you on whether it is safe to use water or a dry chemical agent.

These key points will be revisited in this course to ensure that you recall the most critical safety guidelines when responding to substation fire emergencies.

These points will be revisited in this course to ensure you recall the most critical safety guidelines when responding to substation emergencies.

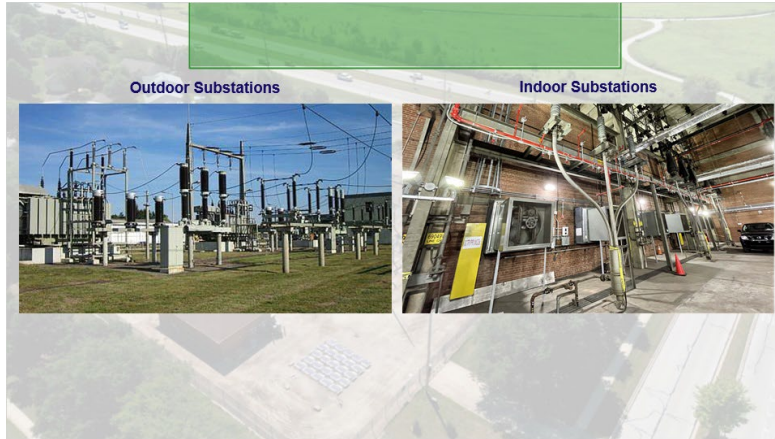
## 1.7 Arrival and Staging



## Notes:

In this chapter we will review staging steps upon arrival at a substation.

## 1.8 Arrival / Staging



### Notes:

Substations can be found in outdoor yards or indoors in commercial buildings, concealed from public view. Let's take a look at some characteristics of each type of substation.

## 1.9 Substations You May Encounter

### Substations You May Encounter

Click each video to learn more.

#### Outdoor Substations

00:00 / 00:23

**Dean Hashmall**  
Pepco Holdings  
Sr. Emergency Preparedness Specialist

#### Indoor Substations

00:00 / 00:30

**Bill Buirch**  
Pepco Holdings  
Fire Protection and Response Project Manager

### Notes:

Click on each video to hear more about arriving at outdoor versus indoor substations. When you are finished, press Next.

#### Outdoor Substations:

As a first responder, when you pull up to this substation, the first thing you see is electrical wires, a large fence and structures. We have different voltages coming into this station. We have 230k volts over here, we have 69k volts, and we have 13k volts down on the bottom. There is nothing behind that fence that you want to come close to as a first responder.

#### Substations:

This is an indoor substation behind me. The station looks like other buildings with the exception that you won't see



any windows typically, and when you do see windows on our substation, they are usually false windows for appearance purposes only. Substations will typically be surrounded by a fence to limit access to the public. When the fire department is responding they want to come to the main entrance and most importantly DO NOT ENTER the substation.

### 1.10 Pepco Representative




#### Notes:

Upon arrival at the substation, stage outside outside of the gates. Do not under any circumstances, enter or attempt to gain access into the facility without the onsite presence and clearance of a Pepco authorized representative.

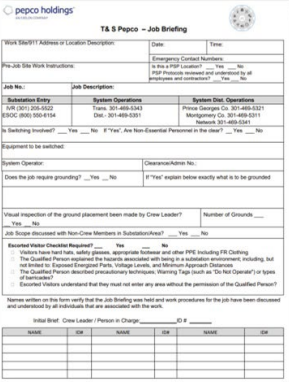
### 1.11 Job Briefings

#### Job Briefings

- Completed prior to substation entry.
- Lists key contact and hazard information.
- Communication encouraged.



pepco holdings



## Notes:

The utility representative will provide a job briefing to be reviewed with and completed by first responder personnel prior to entering the facility. The job brief form lists information such as the location address, contact, and hazard information. The job brief is intended to be a means of two-way communication. Questions are encouraged during the briefing process.

### ***1.12 Emergency Staging and Entry Video***



## Notes:

Let's review arrival at a substation during an emergency incident.


As a first responder, as you pull up this is the safest area for you to stage your vehicles. Out of the way so our crews can come in and assist you, assist us. If it's a large enough incident, we'll establish unified command. If it's a smaller incident, we still want you to work with our professionals to mitigate those incidents. But for no reason should you be entering this station without our help. If you see flames coming from behind that fence, leave it be. There's no water that is going to put it out. There's no equipment that is worth saving. Anything that we have behind that fence that is ruined by fire cannot be salvaged. It's going to have to be replaced. So it's not worth anybody's life to go in there and start throwing ladders and pulling hoses or putting water on anything.

Your apparatus should be parked outside. And the only thing we would want going through these doors WITH our personnel is your personnel and a stretcher. Possibly an ambulance or medic unit should you need to get first aid or medical supplies closer to any patient.

## 1.13 Summary

### Summary

- Stage vehicles and equipment outside substation.
- DO NOT enter without clearance from an authorized utility representative.



pepco holdings

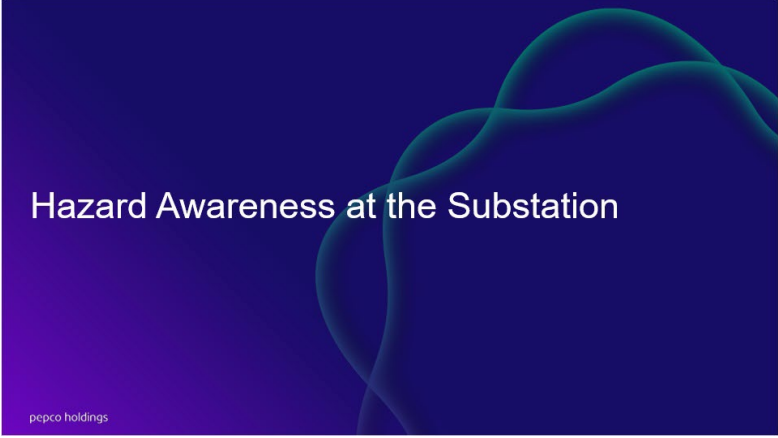
### Notes:

To summarize, upon arrival at a substation in either emergency or non-emergency situations, stage vehicles outside of the substation. And.

Whether in a non-emergency or emergency incident, do not enter the substation without clearance from an authorized Pepco representative.

## 1.14 Onsite Hazard Awareness

### Hazard Awareness at the Substation



pepco holdings

### Notes:

In this chapter we will review hazard awareness while at the substation.

## 1.15 Substation Hazards



### Notes:

First responders coming onsite to a substation as part of a planned visit or during an emergency, should consider all substation equipment an **electrocution hazard** if not **DE-ENERGIZED** and **GROUND**ED.

## 1.16 Minimum Approach Distance (MAD)

**Minimum Approach Distance (MAD)**

To reduce risk:

- Identify electrical wires and equipment as you arrive.
- Maintain a safe working distance from electrical equipment.

pepco holdings

### Notes:

To reduce the risk of electrical shock or contact at a substation.



- Identify electrical wires and equipment as you arrive at the incident location.
- Maintain a safe working distance from any electrical wires or equipment.

At Pepco Holdings, an unqualified worker shall maintain a minimum approach distance (aka MAD) from energized conductors. This distance varies by voltage level from at least 10 feet, for voltages of 36kV or less, and up to 27 feet for high voltage equipment of 500kV+.


## 1.17 Electrical Hazards

### Electrical Hazards

**Water on energized electrical equipment can be hazardous to firefighters.**



Carbon dioxide or dry chemical extinguishers, should be used first.



Water should be used as a last resort at the direction of utility personnel.

**Continue to maintain the Minimum Approach Distance!**

pepco holdings

### Notes:

The use of firefighting water on energized electrical equipment could be hazardous to firefighters. Non-conductive firefighting agents, such as carbon dioxide or dry chemical extinguishers should be used first. Water should only be used as a last resort and at the direction of the utility personnel. If water is used, limit to a fine water mist spray. Ensure proper nozzle pressure and use a fog stream not tighter than a 15 degree pattern. Continue to maintain the minimum approach distance, even with the equipment de-energized.

## 1.18 Oil Hazards

### Oil Hazards

Oil-filled equipment in substations represent the highest fire risk.



pepco holdings

### Notes:

Oil-filled equipment in substations represent the highest fire risk. The number one fire hazard that we have is our larger transformers. Transformers come in basically three different types in the substation, an auto transformer which is stepping down very high voltages, 230,000, stepping down to a more user-friendly voltage of 69 KV, which is what these transformers are. There are medium class transformers taking 69,000 volts stepping it down to 13,000, which is what goes out on the poles throughout the Pepco network. The Transformers fire hazard for two reasons. One, it has its own internal ignition source, the marking

that would occur inside the transformer. And second is the insulating medium is mineral oil. It's a class three B liquid. So it has the least restrictions by fire code. And we in most cases have automatic suppression around them, which puts an unlimited volume. The mineral oil, though, when superheated, will burn and will burn readily. And that's what occurs when a transformer fails. The failure of the transformer can occur, can result in the loss of the oil. Some transformers have of oil forced oil cooling pumps that are attached to the radiators. When those fail, all of the volume of the transformer oil will come out.

Behind me is a 69kV-13kV spare transformer. It can be utilized to transfer power should we have an issue anywhere on our system. Like most of the equipment in the yard, it is full of oil. Should it catch fire, it would be the oil that is burning. The reason we don't want water utilized to extinguish the fire is bc it will start filling up a containment pit. All of our oil filled equipment pits will hold 110% of the product in the equipment, but if we add water or foam, we will start to overflow the containment pit, which will push the oil out.

Reminder: important steps to follow:

- 1.Park outside
- 2.Work with a PHI Personnel
- 3.No water – We don't want any water in this equipment pushing oil out.

•

## ***1.19 Substation Equipment***



### **Notes:**

Let's review the types of equipment you may encounter at a substation.

## 1.20 Substation Equipment

### Substation Equipment



- Transformers
- Circuit Breakers
- Capacitors
- Voltage Regulators
- Bus Work
- High Voltage Cable

pepco holdings

### Notes:

- Many types of equipment are used in substations and equipment varies from substation to substation.
- General equipment found in most substations include:
  - Transformers,
  - Circuit Breakers,
  - Capacitors,
  - Voltage Regulators,
  - Bus Work, and
  - High Voltage Cable.

## 1.21 Power Transformers

### Transformers

Click each hazard button to learn more.



pepco holdings

### Notes:

The primary purpose of a transformer is to either step up or step down the voltage of the electricity being transmitted. Transformers contain hazardous material including mineral oil and in some cases, PCB's. Click each hazard button to learn more.

## Popup (Slide Layer)

**Transformers**

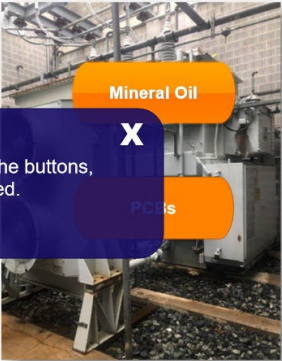
Click each hazard button to learn more.

**Mineral Oil**

**PCBS**

**X**

You must click on all the buttons, before you can proceed.




pepco holdings

## 1.22 Mineral Oil

**Transformers**

**Mineral Oil Hazards**

- May contain 25 to 29,000 gallons of oil.
- Surrounded by collection areas to catch leaking oil and protect waterways.



pepco holdings

### Notes:

- A power transformer may contain between 25 and 29,000 gallons of mineral oil, a combustible liquid.
- Oil filled transformers are surrounded by collection areas to catch any leaking oil and prevent it from reaching waterways.



## 1.23 PCB

### Transformers

#### PCBs

- Equipment is labeled.
- During a fire, labels may not be visible.
- Follow Fire Department procedures for PCBs.
- Always wear full PPE, including SCBA .



pepco holdings

#### Notes:

A small number of transformers in our utility network contain PCBs. This equipment is conspicuously labeled with exact PCB content in parts per million, and can be quickly identified by PHI personnel. Unfortunately, during a fire condition these labels may not be visible.

Follow the Fire Department procedures for PCBs and take appropriate precaution.

Always wear full PPE including SCBA whenever exposed to smoke from the electrical system regardless if PCBs are present or not.

## 1.24 Oil

### Circuit Breakers

#### Oil

- Old and represent the highest risk.
- A failure within the circuit breaker or a fault in the equipment may lead to the ignition of the oil, resulting in a fire.



pepco holdings

#### Notes:


Oil circuit breakers are the oldest type in the industry and tend to represent the highest risk given the oil content. A failure within the circuit breaker or a fault in the equipment may lead to the ignition of the oil, resulting in a fire.

## 1.25 Explosion

**Circuit Breakers**

**Explosion**

- The generation of gases during a fault can lead to an increase in pressure inside the circuit breaker.
- In extreme cases, pressure buildup may result in an explosion.



pepco holdings

### Notes:

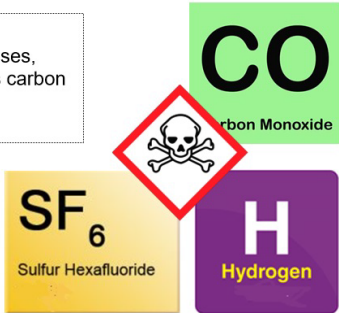
Explosion - The generation of gases during a fault can lead to an increase in pressure inside the circuit breaker. In extreme cases, this pressure buildup may result in an explosion.

## 1.26 Toxicity

**Circuit Breakers**

**Toxic Gas**

- Oil may decompose and release gases, including toxic by-products, such as carbon monoxide and hydrogen.
- SF<sub>6</sub> gas can be harmful if inhaled.



pepco holdings

### Notes:

#### Toxic Gas

In the event of a fault or arc, the oil may decompose and release gases, including toxic by-products such as carbon monoxide and hydrogen. Additionally, some circuit breakers contain Sulfurhexafluoride, SF<sub>6</sub> gas, which, if released, can be harmful if inhaled.


## 1.27 Circuit Breakers

### Circuit Breakers

Click each hazard button to learn more.

**Purpose**

- Open or close circuits to prevent damage.



pepco holdings

### Notes:

Circuit breakers are designed to open and close electrical circuits under normal and abnormal conditions to prevent damage to the power system. Some of hazard includes oil, explosion and toxicity. Click on each hazard button to learn more.

Oil

Oil circuit breakers are the oldest type in the industry and tend to represent the highest risk given the oil content. A failure within the circuit breaker or a fault in the equipment may lead to the ignition of the oil, resulting in a fire.

Explosion

The generation of gases during a fault can lead to an increase in pressure inside the circuit breaker. In extreme cases, this pressure buildup may result in an explosion.

Toxic Gas

In the event of a fault or arc, the oil may decompose and release gases, including toxic by-products such as carbon monoxide and hydrogen.

## Popup (Slide Layer)

### Circuit Breakers

Click each hazard button to learn more.

**Purpose**


- Open or close circuits to prevent damage.

You must click on all the buttons, before you can proceed.

Oil

Explosion

Toxicity



pepco holdings

## 1.28 Switchgear

### Switchgear



pepco holdings

### Notes:

Switchgear are designed to protect equipment by isolating faulty sections of the system and interrupting current during abnormal conditions.

Switchgear breakers are typically located in the control building of the substation.


Switchgear are an **electrocution hazard** if the panel doors are opened and the equipment is not **DE-ENERGIZED** and **GROUND**ED.

## 1.29 Capacitor banks

### Capacitor Banks

**Purpose**

- Used when power correction is needed.
- Prevent dips or surges in voltage.



pepco holdings

### Notes:

Capacitor banks store energy and are used when power correction is needed. The banks prevent dips or surges in voltage that can damage equipment.

Each capacitor may contain between one and five gallons of oil.

Capacitor banks are an **electrocution hazard** if the equipment is not **DE-ENERGIZED** and **GROUND**ED.


•

## 1.30 Voltage Regulators

### Voltage Regulators

**Purpose**

- Maintain voltage stability and current leaving the substation.



pepco holdings

### Notes:


Voltage regulators maintain stability in voltage and current leaving the substation. Their hazards include that they generally contain between 50 and 150 gallons of mineral oil. And, as with most all equipment in a substation, Voltage regulators are an electrocution hazard if not **DE-ENERGIZED** and **GROUND**ED.

## 1.31 Reactors

### Reactors

**Purpose**

- Protect against surges by controlling or modifying the flow of electrical current.



pepco holdings

### Notes:

Reactors provide protection against surges on the electrical system by controlling or modifying the flow of electrical current. Do not reach inside the fence or grated cover housing the reactors. Reactors are an electrocution hazard if they are not de-energized and grounded.


•

## 1.32 Disconnect Switches

### Disconnect Switches

**Purpose**

- Used to isolate sections of electrical system.
  - Closed = electrical flow
  - Open = isolation
- Provide a visible break in a circuit.



pepco holdings

### Notes:


Disconnect switches are used to isolate sections of the electrical system for maintenance or operational reasons. They allow current flow when closed and provide isolation when open. Their primary purpose is to provide a visible break in the electrical circuit, allowing personnel to work safely on connected equipment. Disconnect switches present an **electrocution hazard** if not **DE-ENERGIZED and GROUNDED**

### 1.33 Wires and Cables

**Wires and Cables**

**Purpose**

- Carry current.
- May be insulated or exposed.



pepco holdings

#### Notes:


Wires and cables in the substation that carry current tend to be large, heavy, and inflexible. They may be insulated or exposed. Under fire conditions, insulated wires and cables may become damaged. The risk that this exposure can place on firefighters is significant. Thus, consider wires and cables in the fire areas to be exposed. Exposed electrical wires and cables create an **electrocution hazard** until **DE-ENERGIZED** and **GROUND**ED.

### 1.34 Bus Bar

**Bus Bar**

**Purpose**

- Rigid, inflexible conductor.
- May be exposed or enclosed indoors.



pepco holdings

#### Notes:


While a wire is a flexible conductor, a bus bar is a rigid conductor, typically made of aluminum or copper. Bus bars may be exposed in yard areas, or may be enclosed in indoor substations. Bus bar is an electrocution hazard until **DE-ENERGIZED** and **GROUND**ED. Before operations are initiated, always confirm bus bars are de-energized.

### 1.35 Compressed Nitrogen

**Compressed Nitrogen**

**Purpose**

- Used for pressure maintenance of electrical equipment.



pepco holdings

**Notes:**

Nitrogen cylinders located in substations are used for pressure maintenance of transformers and other oil-filled electrical equipment.

Nitrogen cylinders represent a projectile hazard. Nitrogen gas is also an asphyxiant hazard.


### 1.36 Batteries

**Batteries**

*What else is still energized?*

**Purpose**

- Origination and back-up for substation power.



pepco holdings

**Notes:**

Substation control power originates from a direct current (DC) battery bank and charger located in the control building. Even if all alternating current (AC) sources of power are isolated, the battery bank will remain energized. Thus, the substation can NEVER be completely de-energized without the battery bank being removed from service. DC power originating from the battery bank can however be safely isolated by the utility



representative.

Always ask, "...what else is still energized?". At the very minimum, the answer to this question should include the battery bank.

### 1.37 Control Buildings



#### Notes:

Control buildings provide a weather proof, environmentally controlled enclosure for sensitive substation equipment.

Equipment found in a control building may include:

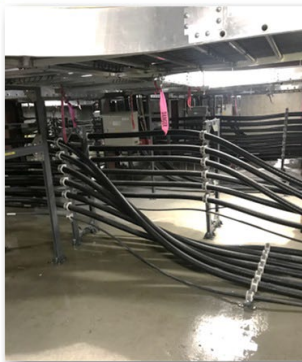
- Batteries and battery chargers
- Switchgear
- Monitoring panels and devices
- and Alarm panels

### 1.38 Underground Areas

#### Underground Areas

Basement areas commonly contain:

- Sumps
- Cable spreading areas
- Oil filled transmission lines
- Holding tanks



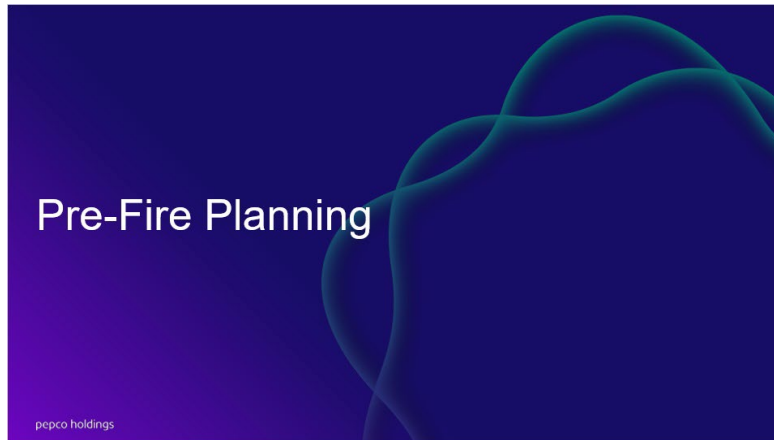
pepco holdings

#### Notes:

Some substations have basement areas.

- Basement areas commonly contain:
  - Sumps
  - Cable spreading areas
  - Oil filled transmission lines
  - Holding Tanks

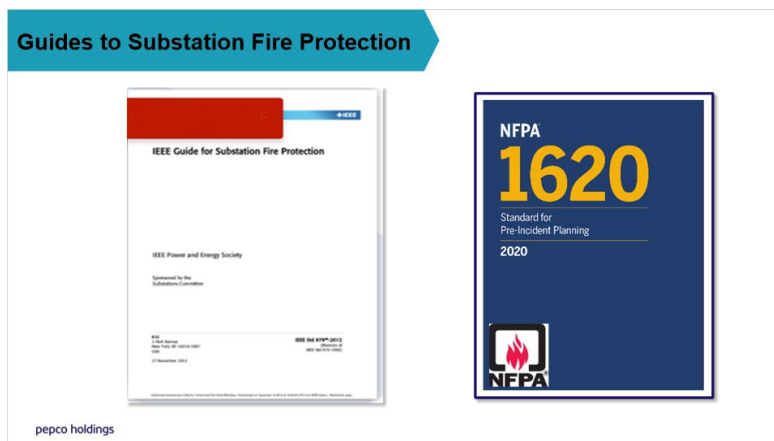
### 1.39 Pre-Fire Planning



#### Notes:

Next we'll review pre-fire planning.

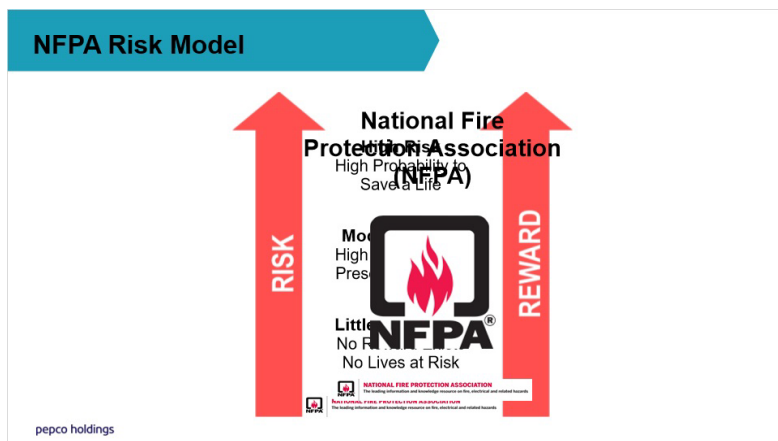
### 1.40 IEEE 979



#### Notes:

PHI follows the highest standards for Pre-Fire Planning which includes the IEEE guide for substation fire protection, as well as the National Fire Protection Association standards.

## 1.41 NFPA Risk Model



### Notes:

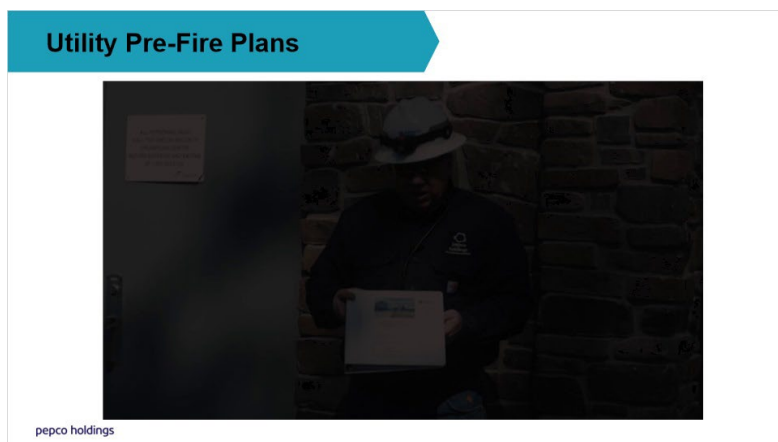
The National Fire Protection Association's risk model determines how to balance risk and reward in fire emergencies.

In summary, the model advises that firefighters accept little-to-no risk when no reward exists. In other words, when no lives are at risk, and there is little-to-no opportunity to protect or preserve property.

At the other end of the spectrum, the NFPA suggests that firefighters only accept a high level of risk when there is a high probability to save a life.

This is why utility personnel may decide to let utility equipment burn itself out, while directing firefighters to protect exposures.

## 1.42 Pre-Fire Plans Intro



### Notes:

(video script) The pre fire plan is a critical communications tool for responding to an incident at the substation. Its whole function is to help our employees, the Pepco first responders, communicate better with the fire department

who responds to an incident. Pre fire plans are either located in the building or on the fence line, depending on the type of station and the required security. The pre fire plan is located in a red box with a reflective trim inside the box, Is the book Inside of a Ziploc bag to keep it even more weather tight. Inside the book, you will find spare sets of drawings to assist with the overall site layout, in addition to ones that are located within the pre fire plan. Once the Pepco rep has the pre fire plan, they will report back to the front gate and provide the pre fire plan with the fire department and review section three with the fire department.

## 1.43 Pre-Fire Plan Overview

### Pre-Fire Plan Overview


**Standard Sections:**

1. General Information
2. Site Layout & Drawings
- 3. Substation Specific Hazards & Precautions**
4. General Hazards & Precautions
5. Fire Protection Systems
6. Site Equipment & Photos
7. Oil Containment
8. Safety Data Sheets

pepco holdings

**Table of Contents**

Section 1 - General Information	3
Section 2 - Site Plans and Floor Plan Layout Drawings	4








### Notes:

The pre fire plan follows a standard format that's used throughout all of Exelon utilities. Inside, you'll find a table of contents with standard sections. The standard sections you will see in a Pre-Fire plan include:

1. General information
2. Site Layout & Drawings
3. Substation Specific Hazards & Precautions
4. General Hazards & Precautions
5. Fire Protection Systems
6. Site Equipment & Photos
7. Oil Containment
8. Safety Data Sheets

## 1.44 Section 1 - General info

**Section 1 - General info**

	Substation Name and Number
	Substation Address
	Type of Facility
	<b>Emergency Contacts</b>
	Facility Description

pepco holdings



### Notes:

Section one contains general information regarding the specific substation such as substation name, number and address. The most important information for first responders in this section is the emergency contact information.

## 1.45 Section 2 – Site Layout and Drawings

**Section 2 – Site Layout & Drawings**

- Orange = Class B liquids & electrical hazards
- Yellow = High voltage electrical hazards
- Green = DC battery system
- BESS Location and Layout



pepco holdings

### Notes:

Next in section two are the aerial views and sketches. The overhead satellite images provide a view of the surrounding area along with close-ups of the substation. There are also illustrations that show the entire yard layout and the individual building elevations.

To summarize the color coding in the drawings:

Items highlighted in orange are oil-filled or class b liquids and gasses that are electrical hazards.

Those in yellow are high voltage electrical hazards. And.

Green items represent the DC battery system with sulfuric acid containing lead acid batteries.

## 1.46 Section 3 – Substation Specific Hazards & Precautions

### Section 3 – Site Specific Hazards

May include:

- Electrical Hazards
- Exposed Electrical Components
- Battery Banks
- Compressed Nitrogen
- Transformers
- Building Construction
- Lithium-Ion Batteries



pepco holdings

### Notes:

Section three covers site specific hazards. The Pepco representative will review site specific items, at this substation, that are hazards to firefighters, which may include:

- Electrical Hazards
- Exposed Electrical Components
- Battery Banks
- Compressed Nitrogen
- Transformers
- Building Construction
- Lithium-Ion Batteries

## 1.47 Section 4 – General Procedures & Precautions

### Section 4 – General Hazards

–Applies to all substations.  
–Areas in **RED** are deadly.  
–Remember...**RED EQUALS DEAD.**



**Consider all equipment ENERGIZED until CONFIRMED DE-ENERGIZED, GROUNDED and safe by QUALIFIED utility personnel.**



pepco holdings

### Notes:

Section four covers general hazards. This section applies to all substations. At the top in red font is a very important note about the use of water on energized electrical. Remember, **“Red equals dead.”** If you read nothing else in section four, make sure to read all of the red items. The section also includes specifics of the electrical hazards, oil filled components, oil hazards, and PCBs.

## 1.48 Section 5 – Fire Protection Systems

### Section 5 – Fire Protection Systems

**Covers:**

- Fire alarms and fire detection systems
- Clean agent suppression systems
- Manual deluge suppression systems
- Fixed water spray – deluge systems
- Smoke exhaust control systems
- Transformer fire walls
- Fire barriers



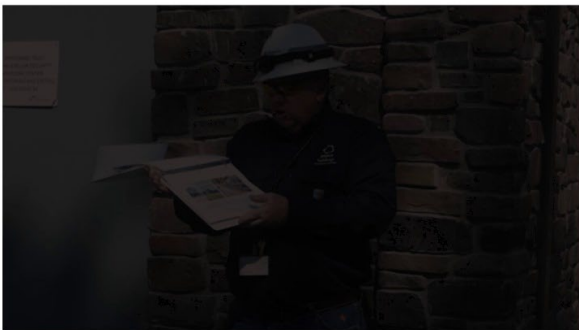
pepco holdings

### Notes:

Section five is the fire suppression systems and fire protection systems that are at the substation, including water supply and fixed water spray systems. Also included is smoke removal, if provided at the substation and other interconnections to ventilation.

## 1.49 Section 6

### Section 6 – Equipment Photos & Hazards



pepco holdings

### Notes:

When we read Section six, this is the picture side of the book. The picture side is to help aid in that communication so you can look at something and say, Yeah, that's what I'm looking at. What is it? In this section we set up the photos in a basic format. We tell you what it is. This is how it's going to kill you. And this is what you need to do to

prevent it from killing you. So please take the time to look at the bold, capitalized text in here, which is telling you how it's going to kill you and what you need to do to prevent it from killing you.

## 1.50 Section 7 – Oil Containment

**Section 7 – Oil Containment**

- Where oil can be found
- Gallons of oil
- Oil collection and suppression systems



pepco holdings

### Notes:

Section seven pertains to oil containment and outlines where oil can be found in equipment, oil collection and suppression systems. The capacity of the containment pit is important because adding water or foam can make it exceed capacity and cause an environmental issue.

## 1.51 Section 8 – Safety Data Sheets

**Section 8 – Safety Data Sheets**



pepco holdings


### Notes:

The last section is section eight, which covers the safety data sheets with hazards for various materials within the substation.



## 1.52 Key Safety Points

### Key Safety Points



1. STAY AWAY
2. Wait for a utility representative
3. Assume that ***ALL*** utility equipment is energized
4. Do ***NOT*** use water unless approved by the utility

*Click NEXT to continue.*


### Notes:

That concludes this training module. To reiterate the key safety points outlined throughout this module:

- 1: Stay away! When arriving to the scene of a utility fire emergency, remain as far as possible from all substation equipment.
- 2: Wait for a utility representative! Do not attempt to suppress a utility fire until a utility representative is present to offer safe guidance.
- 3: Assume that all utility equipment is energized! Always wait for a utility representative to inform you that equipment has been de-energized.
- and 4: Do not use water to suppress a utility fire unless instructed to do so. Water conducts electricity, so always wait for a utility representative to advise you if it is safe to use water or a dry chemical agent.

## 1.53 Knowledge Checks

### Knowledge Check



### Notes:

Now let's review how much you have learned with a few knowledge check questions.

---

### 1.54 KC 1

(Multiple Choice, 10 points, 2 attempts permitted)

True or False?

Fire personnel responding to a substation fire emergency should not enter a substation without clearance from an authorized utility representative.

- True
- False



Correct	Choice
True	X
False	

**Feedback when correct:**

That's Correct!

**Feedback when incorrect:**


Incorrect!

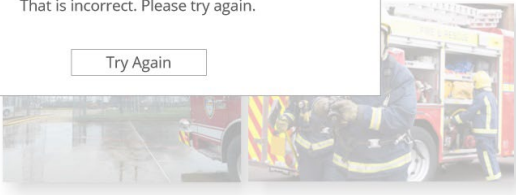
**Notes:**

## Try Again (Slide Layer)

True or False?  
Fire personnel responding to a substation fire emergency should not enter a substation without clearance from an authorized utility representative.

True  
 False


Incorrect  
That is incorrect. Please try again.  
Try Again

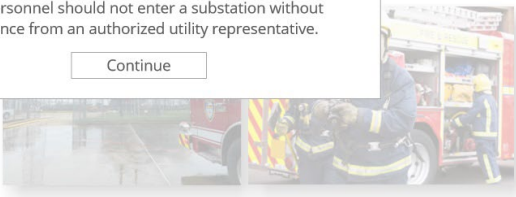


## Incorrect (Slide Layer)

True or False?  
Fire personnel responding to a substation fire emergency should not enter a substation without clearance from an authorized utility representative.

True  
 False

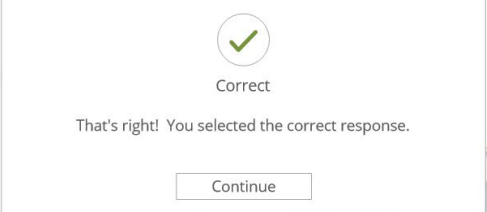
Incorrect  
Fire personnel should not enter a substation without clearance from an authorized utility representative.  
Continue




## Correct (Slide Layer)

True or False?  
Fire personnel responding to a substation fire emergency should not enter a substation without clearance from an authorized utility representative.

True  
 False

Correct  
That's right! You selected the correct response.  
Continue



## 1.55 KC 2

(Multiple Response, 10 points, 2 attempts permitted)

Which of the following are true about a job briefing completed by utility personnel when responding to a substation fire emergency?  
(select all that apply)

- The job briefing is to be complete once inside the substation.
- The job briefing is to be completed prior to entering the substation.
- One of the primary purposes is to review hazards in the substation.
- Wait to ask questions until after the job briefing is completed.
- Questions are encouraged throughout the job briefing discussion.

Correct	Choice
The job briefing is to be complete once inside the substation.	
The job briefing is to be completed prior to entering the substation.	X
One of the primary purposes is to review hazards in the substation.	X
Wait to ask questions until after the job briefing is completed.	
Questions are encouraged throughout the job briefing discussion.	X

**Feedback when correct:**

a


**Feedback when incorrect:**

a

## Try Again (Slide Layer)

Which of the following are true about a job briefing completed by utility personnel when responding to a substation fire emergency?  
*(select all that apply)*

- Th
- Th
- Or
- W
- Q



**Incorrect**


That is incorrect. Please try again.

[Try Again](#)

## Incorrect (Slide Layer)

Which of the following are true about a job briefing completed by utility personnel when responding to a substation fire emergency?  
*(select all that apply)*

- Th
- Th
- Or
- W
- Q



**Incorrect**


The job briefing must be completed before entering a substation and includes hazards. Questions are encouraged.

[Continue](#)

## Correct (Slide Layer)

Which of the following are true about a job briefing completed by utility personnel when responding to a substation fire emergency?  
*(select all that apply)*

- Th
- Th
- Or
- W
- Q



**Correct**

That's right! You selected the correct response.

[Continue](#)

### 1.56 KC 3

(Multiple Choice, 10 points, 2 attempts permitted)

Substation equipment are an electrocution hazard if not \_\_\_\_\_ and \_\_\_\_\_.

- energized and ablaze
- staged and avoided
- de-energized and grounded
- energized and working
- none of the above



Correct	Choice
energized and ablaze	
staged and avoided	
de-energized and grounded	X
energized and working	
none of the above	


#### Feedback when incorrect:

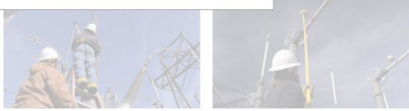
Substation equipment are an electrocution hazard if not de-energized and grounded.

## Try Again (Slide Layer)

Substation equipment are an electrocution hazard if not \_\_\_\_\_  
and \_\_\_\_\_.

- er
- st
- de
- er
- no


  
Incorrect  
That is incorrect. Please try again.

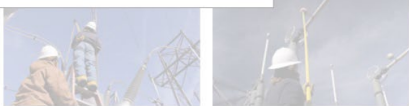


## Incorrect (Slide Layer)

Substation equipment are an electrocution hazard if not \_\_\_\_\_  
and \_\_\_\_\_.

- er
- st
- de
- er
- no


  
Incorrect  
Substation equipment are an electrocution hazard if not  
de-energized and grounded.

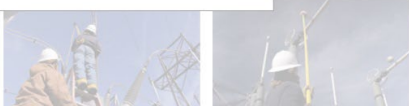


## Correct (Slide Layer)

Substation equipment are an electrocution hazard if not \_\_\_\_\_  
and \_\_\_\_\_.

- er
- st
- de
- er
- no

  
Correct  
That's right! You selected the correct response.



## 1.57 KC 4

(Multiple Response, 10 points, 2 attempts permitted)

Which of the following can be said of transformers in substations?  
(select all that apply)

- Large transformers are normally the number one fire risk in a substation.
- Transformers are filled with oil which can burn readily.
- Transformers may contain SF6 gas which can be harmful if inhaled.
- Transformers are normally found inside the control room or control building.



Correct	Choice
Large transformers are normally the number one fire risk in a substation.	X
Transformers are filled with oil which can burn readily.	X
Transformers may contain SF6 gas which can be harmful if inhaled.	
Transformers are normally found inside the control room or control building.	

### Feedback when incorrect:

Transformers are the number one risk in a substation and are filled with oil which burns readily.



## Try Again (Slide Layer)


Which of the following can be said of transformers in substations?  
*(select all that apply)*

- Large risk in
- Trans
- Trans harm
- Trans room

**Incorrect**

That is incorrect. Please try again.

Try Again



## Incorrect (Slide Layer)


Which of the following can be said of transformers in substations?  
*(select all that apply)*

- Large risk in
- Trans
- Trans harm
- Trans room

**Incorrect**

Transformers are the number one risk in a substation and are filled with oil which burns readily.

Continue



## Correct (Slide Layer)

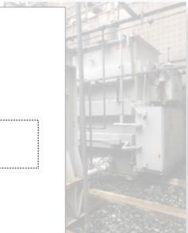
Which of the following can be said of transformers in substations?  
*(select all that apply)*

- Large risk in
- Trans
- Trans harm
- Trans room

**Correct**

That's right! You selected the correct response.

Continue



### 1.58 KC 5

(Multiple Choice, 10 points, 2 attempts permitted)

True or False?

The purpose of a containment pit surrounding a transformer is to hold all the oil should it be released from the transformer plus any water used to put out a fire in the transformer.

True

False



Correct	Choice
True	
False	X

**Feedback when correct:**

That's Correct!

**Feedback when incorrect:**

Incorrect!

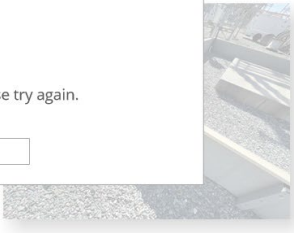
## Try Again (Slide Layer)

True or False?  
The purpose of a containment pit surrounding a transformer is to hold all the oil should it be released from the transformer plus any water used to put out a fire.

True  
 False

**Incorrect**  
That is incorrect. Please try again.

Try Again



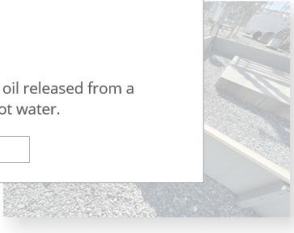
## Incorrect (Slide Layer)

True or False?  
The purpose of a containment pit surrounding a transformer is to hold all the oil should it be released from the transformer plus any water used to put out a fire.

True  
 False

**Incorrect**  
The containment pit is to hold oil released from a transformer only, not water.

Continue



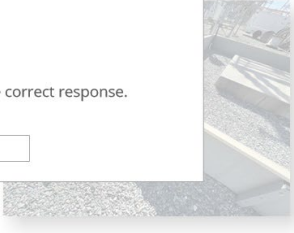
## Correct (Slide Layer)

True or False?  
The purpose of a containment pit surrounding a transformer is to hold all the oil should it be released from the transformer plus any water used to put out a fire.

True  
 False

**Correct**  
That's right! You selected the correct response.

Continue



### 1.59 KC 6

(Multiple Response, 10 points, 2 attempts permitted)

Equipment that can be found in the control building of a substation may include which of the following? (select all that apply)

- Batteries and Battery Chargers
- Alarm Panels
- Control Panels
- Switchgear



Correct	Choice
Batteries and Battery Chargers	X
Alarm Panels	X
Control Panels	X
Switchgear	X

**Feedback when correct:**

That's right! You selected the correct response.

**Feedback when incorrect:**

All of these items can be found in a control building.

## Try Again (Slide Layer)

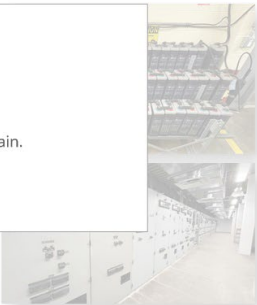
Equipment that can be found in the control building of a substation may include which of the following? *(select all that apply)*

- Bat
- Ala
- Co
- Sw

**Incorrect**

That is incorrect. Please try again.

Try Again



## Incorrect (Slide Layer)

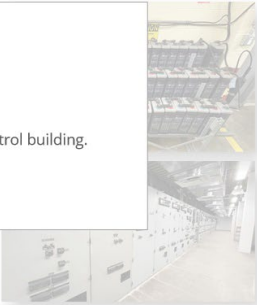
Equipment that can be found in the control building of a substation may include which of the following? *(select all that apply)*

- Bat
- Ala
- Co
- Sw

**Incorrect**

All of these items can be found in a control building.

Continue



## Correct (Slide Layer)

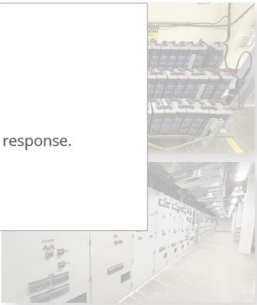
Equipment that can be found in the control building of a substation may include which of the following? *(select all that apply)*

- Bat
- Ala
- Co
- Sw

**Correct**

That's right! You selected the correct response.

Continue



### 1.60 KC 7

(Multiple Choice, 10 points, 2 attempts permitted)

True or False?

A substation can NEVER be completely de-energized without the battery bank being removed from service.

True

False



Correct	Choice
True	X
False	

**Feedback when correct:**

That's Correct!

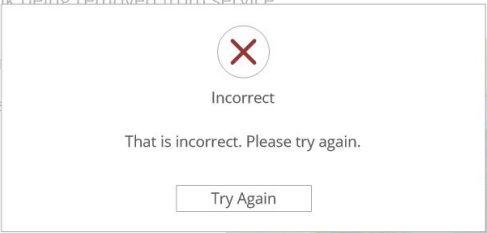
**Feedback when incorrect:**

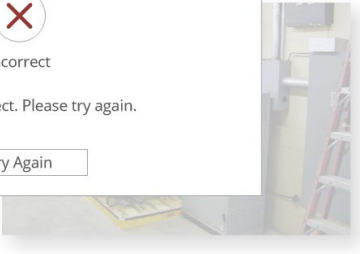
Incorrect!

## Try Again (Slide Layer)

True or False?  
A substation can NEVER be completely de-energized without the battery bank being removed from service.

True  
 False

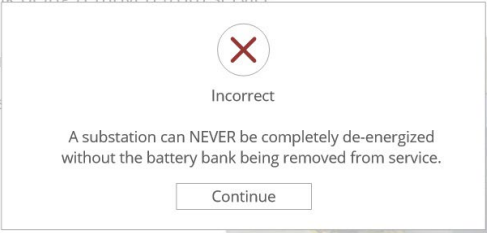
Incorrect  
That is incorrect. Please try again.  
Try Again

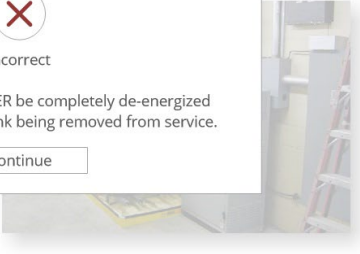


## Incorrect (Slide Layer)

True or False?  
A substation can NEVER be completely de-energized without the battery bank being removed from service.

True  
 False

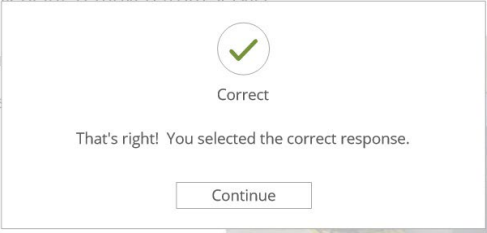
Incorrect  
A substation can NEVER be completely de-energized without the battery bank being removed from service.  
Continue

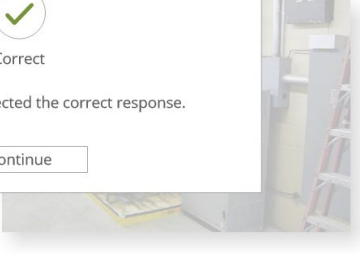


## Correct (Slide Layer)

True or False?  
A substation can NEVER be completely de-energized without the battery bank being removed from service.

True  
 False

Correct  
That's right! You selected the correct response.  
Continue




## 1.61 KC 8

(Multiple Choice, 10 points, 2 attempts permitted)

A pre-fire plan can be explained as....

- A map of the substation with directions to each piece of equipment.
- A state required document on how to de-energize substation equipment in a fire.
- A critical communication tool to help utility first responders communicate with fire department responders during a substation emergency.
- None of the above.



Correct	Choice
A map of the substation with directions to each piece of equipment.	
A state required document on how to de-energize substation equipment in a fire.	
A critical communication tool to help utility first responders communicate with fire department responders during a substation emergency.	X
None of the above.	

### Feedback when correct:

That's right! You selected the correct response.

### Feedback when incorrect:

A pre-fire plan is a critical communication tool to help utility first responders communicate with fire department responders during a substation emergency.

### Notes:



## Try Again (Slide Layer)


A pre-fire plan can be explained as....

- A map piece
- A state energy
- A critical response response
- None of the above.

**Incorrect**

That is incorrect. Please try again.

Try Again



## Incorrect (Slide Layer)


A pre-fire plan can be explained as....

- A map piece
- A state energy
- A critical response response
- None of the above.

**Incorrect**

A pre-fire plan is a critical communication tool to help utility first responders communicate with fire department responders during a substation emergency.

Continue



## Correct (Slide Layer)


A pre-fire plan can be explained as....

- A map piece
- A state energy
- A critical response response
- None of the above.

**Correct**

That's right! You selected the correct response.

Continue



### 1.62 KC 9

(Multiple Choice, 10 points, 2 attempts permitted)

The color yellow that can be seen on substation layout illustrations represents which of the following?

- Class B liquids and electrical hazards, such as oil filled equipment
- High voltage electrical hazards
- DC Battery system equipment
- All of the above



Correct	Choice
Class B liquids and electrical hazards, such as oil filled equipment	
High voltage electrical hazards	X
DC Battery system equipment	
All of the above	

#### Feedback when correct:

That's right! You selected the correct response.


#### Feedback when incorrect:


Yellow on substation layout illustrations represents high voltage electrical hazards

## Try Again (Slide Layer)

The color yellow that can be seen on substation layout illustrations represents which of the following?

- Class
- High
- DC B
- All of


  
Incorrect  
That is incorrect. Please try again.




## Incorrect (Slide Layer)

The color yellow that can be seen on substation layout illustrations represents which of the following?

- Class
- High
- DC B
- All of


  
Incorrect  
Yellow on substation layout illustrations represents high voltage electrical hazards




## Correct (Slide Layer)

The color yellow that can be seen on substation layout illustrations represents which of the following?

- Class
- High
- DC B
- All of

  
Correct  
That's right! You selected the correct response.



### 1.63 KC 10

(Multiple Choice, 10 points, 2 attempts permitted)

When you see red font in the Pre-Fire Plan it is important to carefully read all the items in red. This is because...

- "Red equals dead." This indicates a deadly hazard.
- Red font indicates the location of the DC battery system.
- All items in the pre-fire plan are red because they are all the most important.
- None of the above.



Correct	Choice
"Red equals dead." This indicates a deadly hazard.	X
Red font indicates the location of the DC battery system.	
All items in the pre-fire plan are red because they are all the most important.	
None of the above.	

#### Feedback when correct:

That's right! You selected the correct response.

#### Feedback when incorrect:

"Red equals dead." This indicates a deadly hazard.


#### Notes:


## Try Again (Slide Layer)

When you see red font in the Pre-Fire Plan it is important to carefully read all the items in red. This is because...

- "Red"
- Red
- All it
- None

...t important.

  
Incorrect  
That is incorrect. Please try again.





## Incorrect (Slide Layer)

When you see red font in the Pre-Fire Plan it is important to carefully read all the items in red. This is because...

- "Red"
- Red
- All it
- None

...t important.

  
Incorrect  
"Red equals dead." This indicates a deadly hazard.





## Correct (Slide Layer)

When you see red font in the Pre-Fire Plan it is important to carefully read all the items in red. This is because...

- "Red"
- Red
- All it
- None


...t important.

  
Correct  
That's right! You selected the correct response.



## 1.64 Conclusion

**Conclusion**



**Congratulations!**

You have completed this module on Substation Emergency Planning

[Exit Course](#)

### Notes:

Congratulations! You have completed this module on Substation Emergency Planning.