

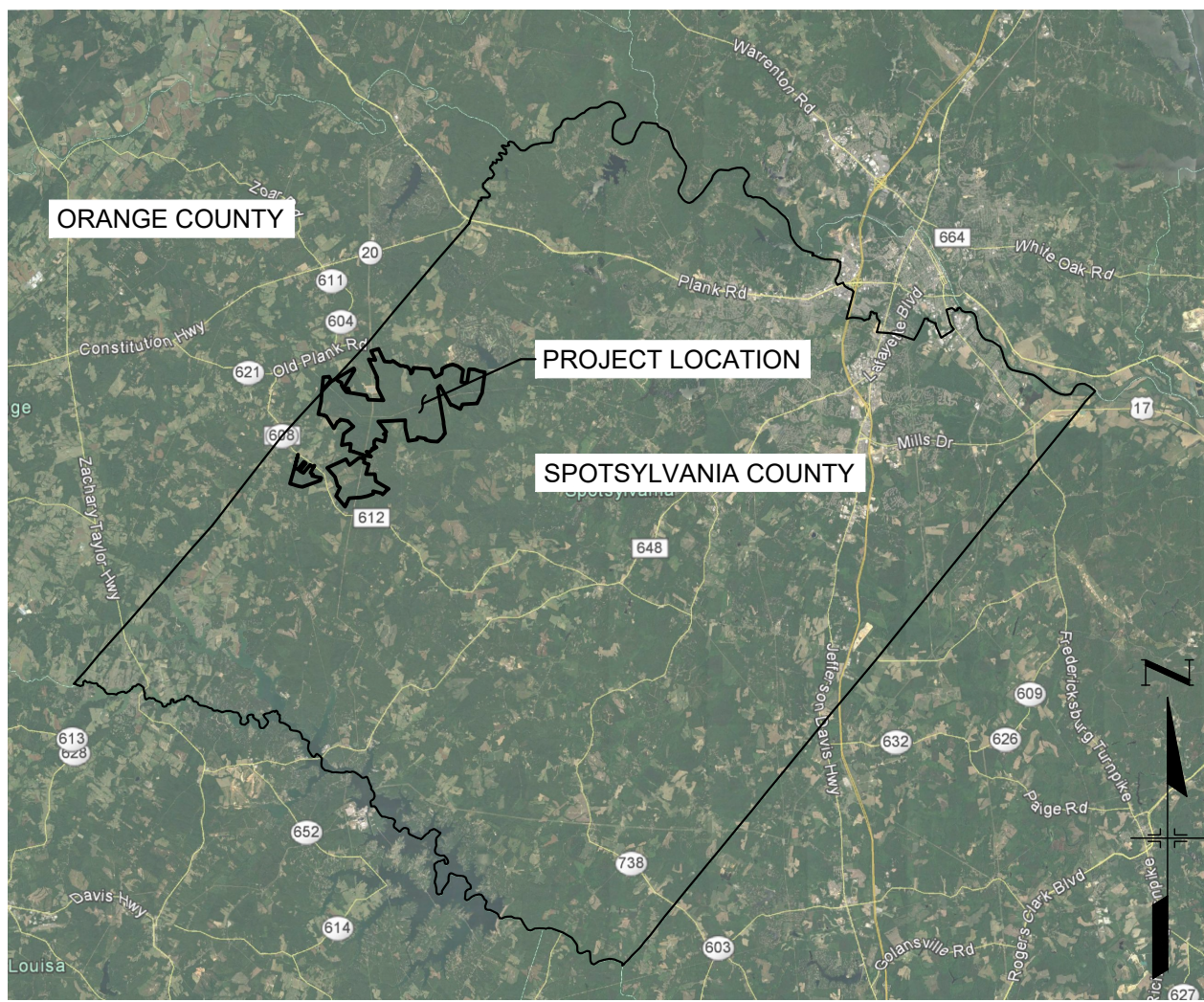
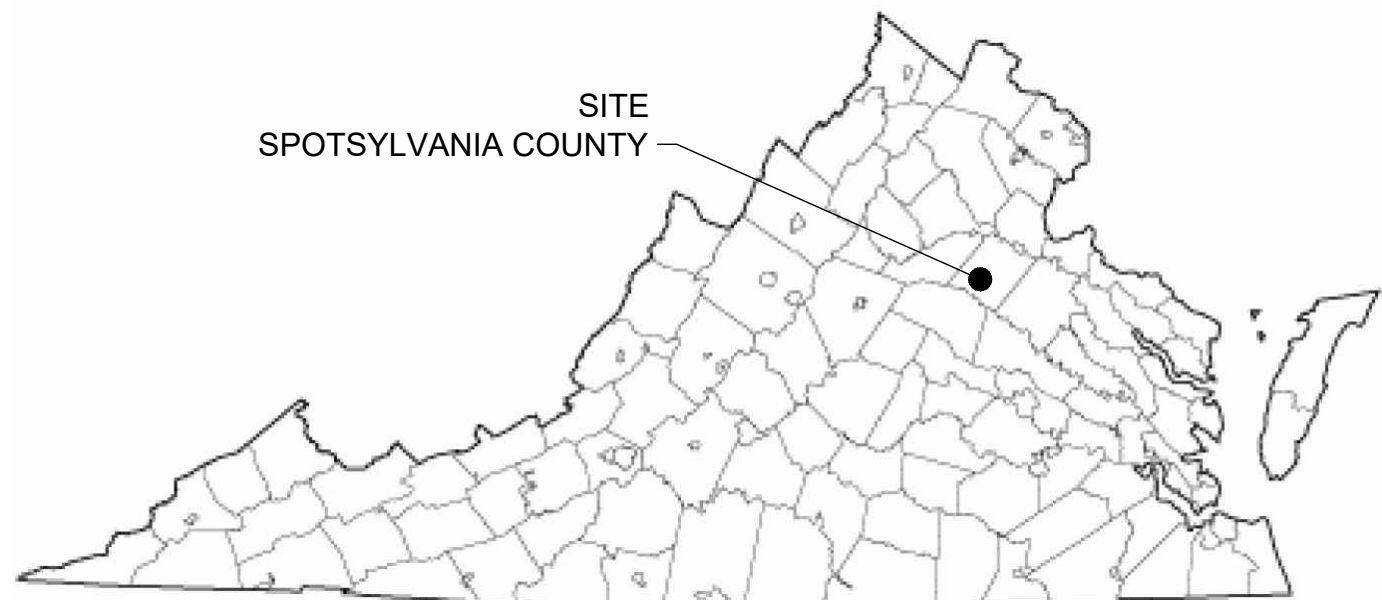
GENERALIZED DEVELOPMENT PLANS

SPOTSYLVANIA SOLAR ENERGY CENTER C

SPECIAL USE PERMIT - SUP 18-0003

LIVINGSTON MAGISTERIAL DISTRICT

SPOTSYLVANIA COUNTY, VA

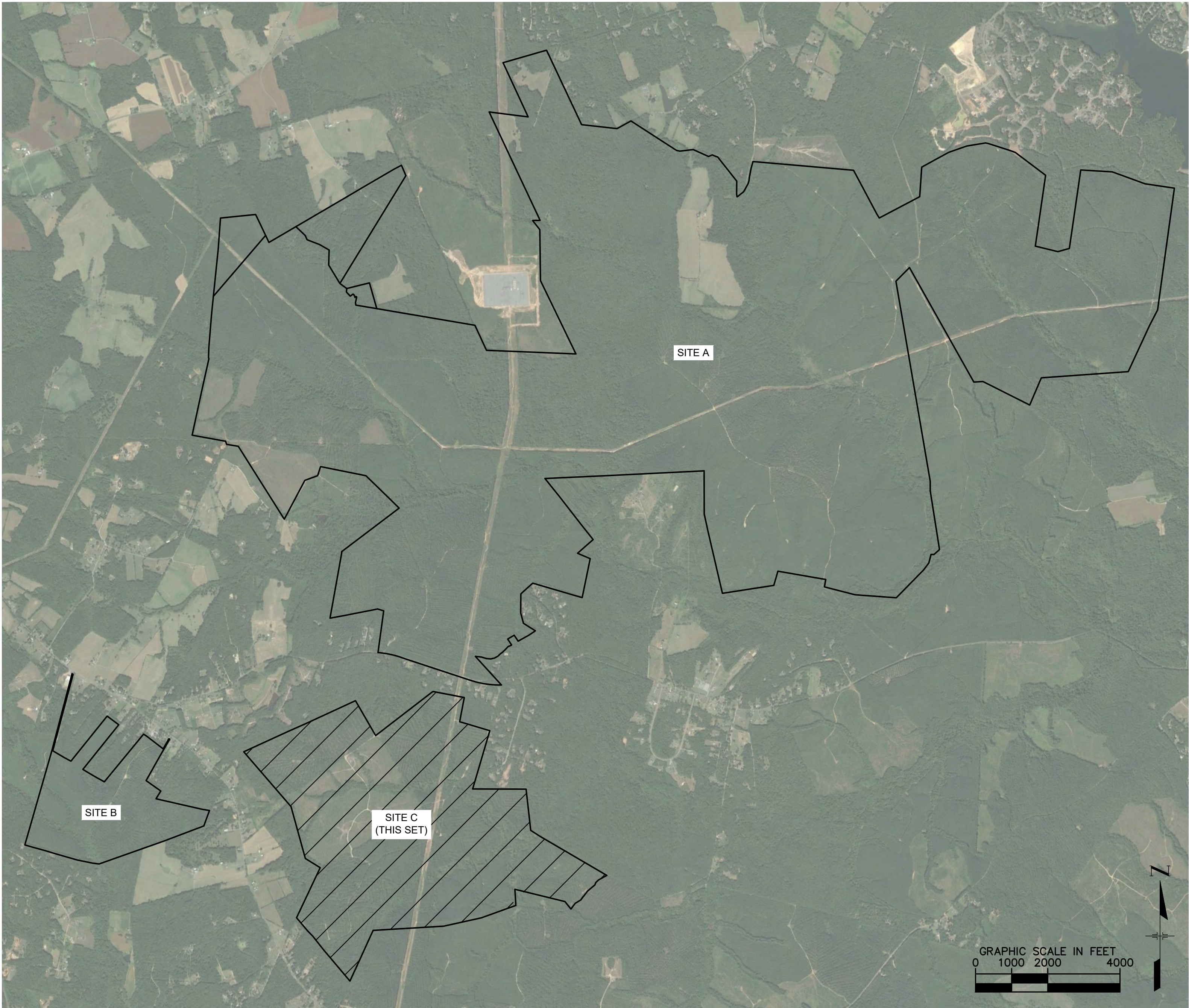


VICINITY MAP - SPOTSYLVANIA COUNTY, VA
1" = 30,000'

SPOTSYLVANIA SOLAR ENERGY CENTER	
OWNER	sPOWER
EXISTING AND PROPOSED ZONING	AGRICULTURE 3 (A-3)
EXISTING USE	SILVICULTURE
PROPOSED USE	SOLAR ENERGY FACILITY
TOTAL POWER TO BE GENERATED	500 MEGAWATTS AC (MWac)
OVERALL PROJECT SITE DATA:	
PROPERTY AREA	6,350 ACRES
DISTURBED AREA	3,500 ACRES
POWER GENERATED	500 MWac
SITE A DATA:	
PROPERTY AREA	5,200 ACRES
DISTURBED AREA	2,800 ACRES
POWER GENERATED	400 MWac
SITE B DATA:	
PROPERTY AREA	245 ACRES
DISTURBED AREA	200 ACRES
POWER GENERATED	30 MWac
SITE C DATA:	
PROPERTY AREA	905 ACRES
DISTURBED AREA	500 ACRES
POWER GENERATED	70 MWac

OWNER/APPLICANT
sPOWER
2180 SOUTH 1300 EAST, SUITE 600
SALT LAKE CITY, UT 84106
PHONE: 801-679-3513
CONTACT: DANIEL MENAHEM
EMAIL: DMENAHEM@SPOWER.COM

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
11400 COMMERCE PARK DRIVE, SUITE 400
RESTON, VA 20191
PHONE: 703-674-1337
CONTACT: SEAN MILLOT, P.E.
EMAIL: SEAN.MILLOT@KIMLEY-HORN.COM



VICINITY MAP - PROJECT LIMITS
1" = 2,000'

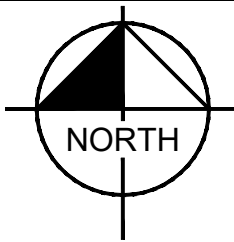
Sheet List Table	
Sheet No.	Sheet Title
C-01	GENERALIZED DEVELOPMENT PLAN COVER
EX-3-1	GENERALIZED DEVELOPMENT PLAN
EX-3-2	GENERALIZED DEVELOPMENT PLAN - 2
EX-3-3	PRESERVATION AREA PLAN
EX-3-4	LANDSCAPE AND BUFFER AREA PLAN
EX-3-5	ACCESS ROAD SERVICE AREAS
EX-3-6	COUNTY TRAIL OVERLAY PLAN
CD-1	CIVIL DETAILS
SHEETS 1-17	ALTA SURVEY

PROJECT INFORMATION - SITE C			
OWNER INFORMATION		TAX MAP PARCEL NUMBER	
RIVEROAK TIMBERLAND INVESTMENTS LLC		43-A-3	
RIVEROAK TIMBERLAND INVESTMENTS LLC		29-A-7	
NO KNOWN AIRPORTS WITHIN 5-MILE RADIUS OF SITE C.			
CULTURAL RESOURCES			
NO KNOWN HISTORIC BUILDINGS OR FEATURES WITHIN PROXIMITY OF SITE.			
TRAFFIC INFORMATION			
• VOLUMES SUBJECT TO CHANGE BASED ON TRAFFIC IMPACT STUDY RESULTS			
• SEE TRAFFIC IMPACT ANALYSIS AND EXHIBITS FOR ADDITIONAL TRAFFIC DISTRIBUTION AND RECOMMENDATIONS			
• PROPOSED CONSTRUCTION TRAFFIC: 300 VEHICLES PER DAY			
IMPERVIOUS AREAS*			
	TOTAL	AREA (SF)	AREA (AC)
SOLAR PANEL POST** (0.11 SF EACH)	38094	4190	0.10
INVERTER PAD (40' X 10')	22	8800	0.20
GRAVEL DRIVES (12' WIDTH)	29336 LF	352035	8.08
TOTAL IMPERVIOUS ACRES			8.38
TOTAL IMPERVIOUS % OF SITE			0.92%
*IMPERVIOUS AREAS SHOWN FOR THE SITE ARE FOR PRELIMINARY USE ONLY. NOT TO BE USED FOR DESIGN PURPOSES.			
**PER DEQ REGULATIONS, ONLY POLE MOUNTINGS FOR THE SOLAR PANELS ARE TO BE USED TO CALCULATE IMPERVIOUS AREA. ASSUMED SPACING OF 15' SUBJECT TO FINAL ENGINEERING.			
WATER QUALITY (VRRM)***			
TP LOAD REDUCTION REQUIRED (LB/YR)		19.61	
ACRES PLACED IN CONSERVATION AREA		224.11	
***WATER QUALITY VALUES SHOWN FOR THE SITE ARE FOR PRELIMINARY USE ONLY. NOT TO BE USED FOR DESIGN PURPOSES.			

SOLID WASTE DISPOSAL CALCULATIONS FOR CONSTRUCTION
FOR SITES A, B, AND C

Step 1: Identification of Collection Method					
Container Type (Compost, Roll Off, Dumpster, Cans)	Size (Cubic Yards)	Number of Containers	Number of Pickups Per Week	Material (Trash or Recycle)	
Compost	40 YD	2	1	Trash	
Roll Off	40 YD	0	2	Recycle	
Spotsylvania County Non-Residential Waste Generation Report The purpose of this report is to calculate the annual waste amount generated from a proposed project and to create adequate collection service is provided.					
Step 2: Determination of Annual Waste Generation					
Building Use	Floor Area (square feet)	Annual Waste Generation Rate (lbms/sq ft)	Annual Waste Generation Rate (lbms/sq ft)		
Office	280	0.0013	0.32		
Industrial	X	0.0016	0		
Food/Feed	X	0.0007	0		
Public Facility	X	0.00105	0		
Business/School	X	0.00105	0		
Warehouse	X	0.00155	0		
Combined Annual Waste Stream			0.32		
Step 3: Determination of Minimum Storage Capacity					
Determination of Minimum Storage Container and/or Dumpster Size (With Onsite Recycle Program)					
Container Type	Size (Cubic Yards)	Number of Containers	Number of Pickups Per Week	Material (Trash or Recycle)	Minimum Size of Each Storage Container (or Dumpster (Cubic Yards))
Compost	10	1	0.5	Trash	
Determination of Minimum Storage Container and/or Dumpster Size (Without Recycle Program)					
Container Type	Size (Cubic Yards)	Number of Containers	Number of Pickups Per Week	Material (Trash or Recycle)	Minimum Size of Each Storage Container (or Dumpster (Cubic Yards))
Compost	10	1	0.5	Trash	

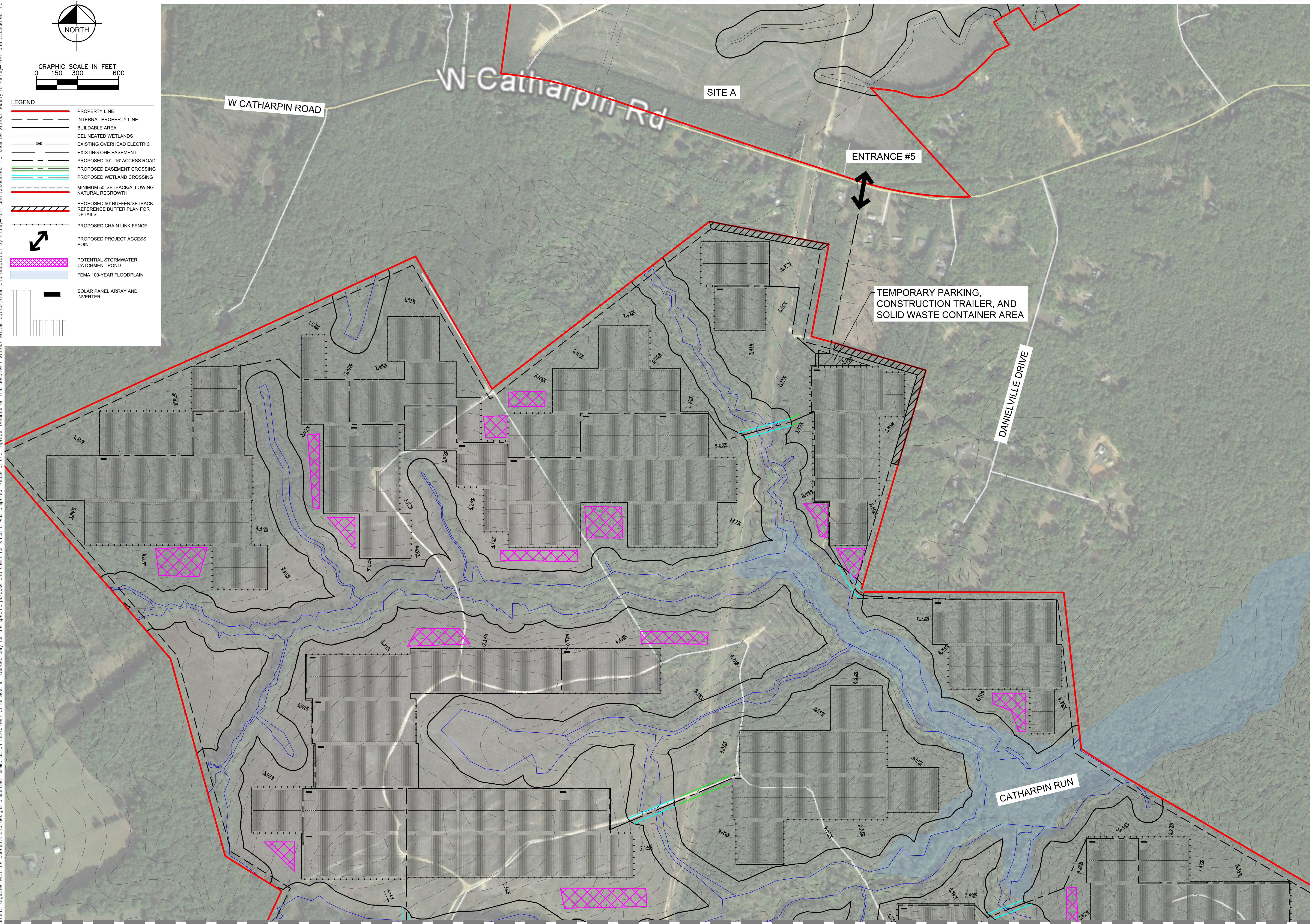
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GRAPHIC SCALE IN FEET
0 150 300 600

LEGEND

- PROPERTY LINE
- INTERNAL PROPERTY LINE
- BUILDABLE AREA
- DELINEATED WETLANDS
- EXISTING OVERHEAD ELECTRIC
- EXISTING OHE EASEMENT
- PROPOSED 10' - 16' ACCESS ROAD
- PROPOSED EASEMENT CROSSING
- PROPOSED WETLAND CROSSING
- MINIMUM 50' SETBACK/ALLOWING NATURAL REGROWTH
- PROPOSED 50' BUFFER/SETBACK. REFERENCE BUFFER PLAN FOR DETAILS
- PROPOSED CHAIN LINK FENCE
- PROPOSED PROJECT ACCESS POINT
- POTENTIAL STORMWATER CATCHMENT POND
- FEMA 100-YEAR FLOODPLAIN
- SOLAR PANEL ARRAY AND INVERTER



SEE SHEET EX-3-2 FOR CONTINUATION

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Kimley»Horn

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PHONE: 703-674-1300
WWW.KIMLEY-HORN.COM

APPROVAL

COMMONWEALTH OF VIRGINIA
Sean Millot
Lic. No. 0402052332
10/26/2018
PROFESSIONAL SEAL

KHA PROJECT	116626000
DATE	10/26/2018
SCALE	AS SHOWN
DESIGNED BY	JRB
DRAWN BY	JRB
CHECKED BY	SMM

SUP 18-0003
GENERALIZED
DEVELOPMENT PLAN

SPOTSYLVANIA SOLAR
ENERGY CENTER C
PREPARED FOR
S-POWER

VIRGINIA
SPOTSYLVANIA COUNTY

SHEET NUMBER
EX-3-1

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COMMONWEALTH OF VIRGINIA
Sean Millot
 SEAN MILLOT
 Lic. No. 0402052332
 10/26/2018
 PROFESSIONAL ENGINEER

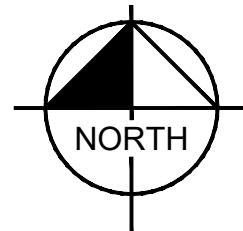
KHA PROJECT 116626000	DATE 10/26/2018	SCALE AS SHOWN	DESIGNED BY JRB	DRAWN BY JRB	CHECKED BY SMM
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SUP 18-0003
GENERALIZED
DEVELOPMENT PLAN - 2

SPOTSYLVANIA SOLAR
ENERGY CENTER C
PREPARED FOR
S-POWER
SPOTSYLVANIA COUNTY VIRGINIA

SHEET NUMBER
EX-3-2

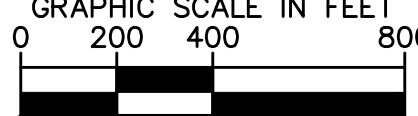
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NORTH

GRAPHIC SCALE IN FEET

0 200 400 800



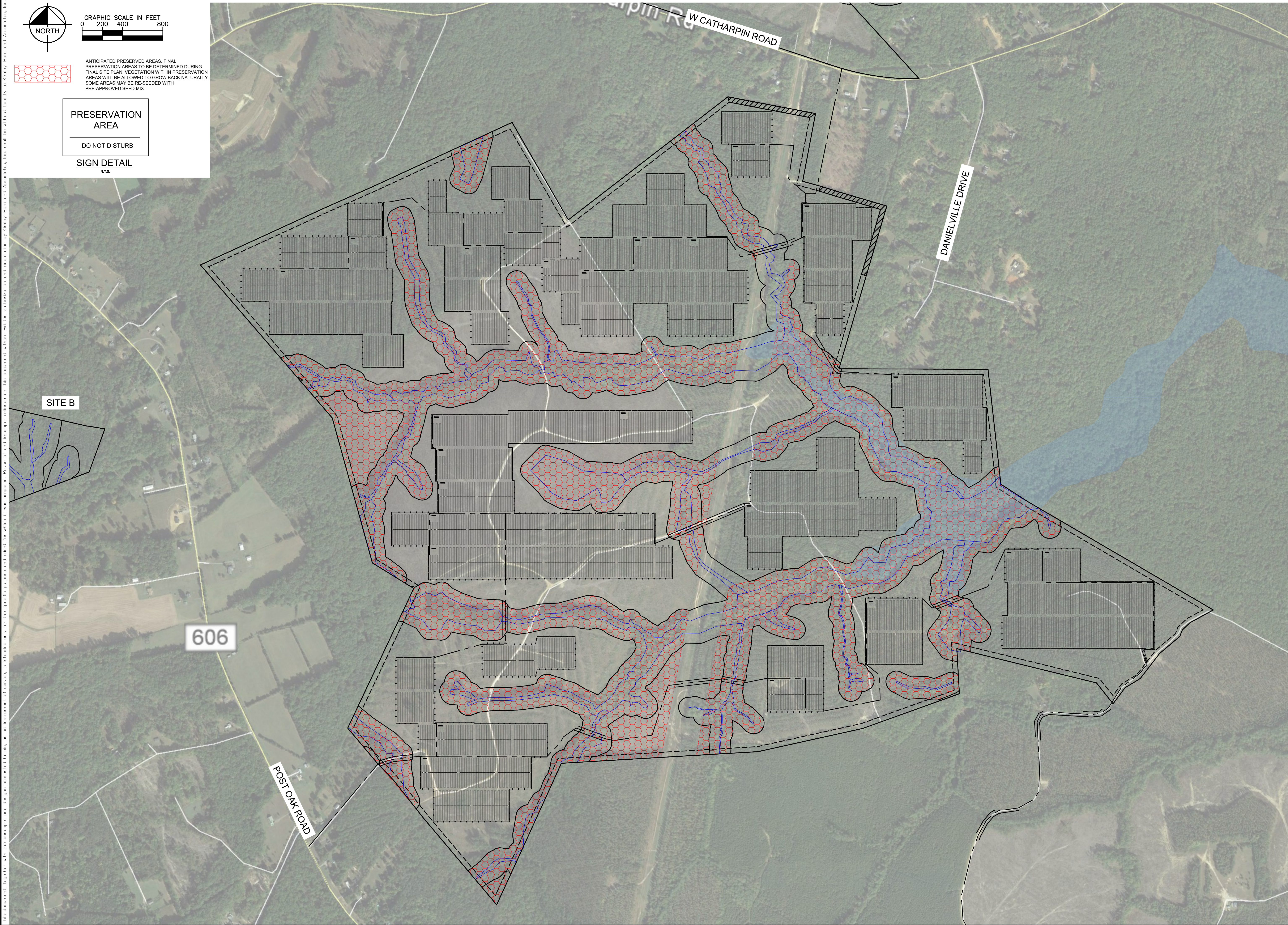
ANTICIPATED PRESERVED AREAS. FINAL PRESERVATION AREAS TO BE DETERMINED DURING FINAL SITE PLAN. VEGETATION WITHIN PRESERVATION AREAS WILL BE ALLOWED TO GROW BACK NATURALLY. SOME AREAS MAY BE RE-SEEDING WITH PRE-APPROVED SEED MIX.

PRESERVATION AREA

DO NOT DISTURB

SIGN DETAIL

N.T.S.



SPOTSYLVANIA SOLAR ENERGY CENTER C

PREPARED FOR S-POWER


SUP 18-0003

PRESERVATION AREA PLAN

SHEET NUMBER

EX-3-3

KHA PROJECT	DATE	SCALE	AS SHOWN	DESIGNED BY	DRAWN BY	CHECKED BY
116626000	10/26/2018	AS SHOWN	JRB	JRB	JRB	SMM



APPROVAL

Kimley»Horn

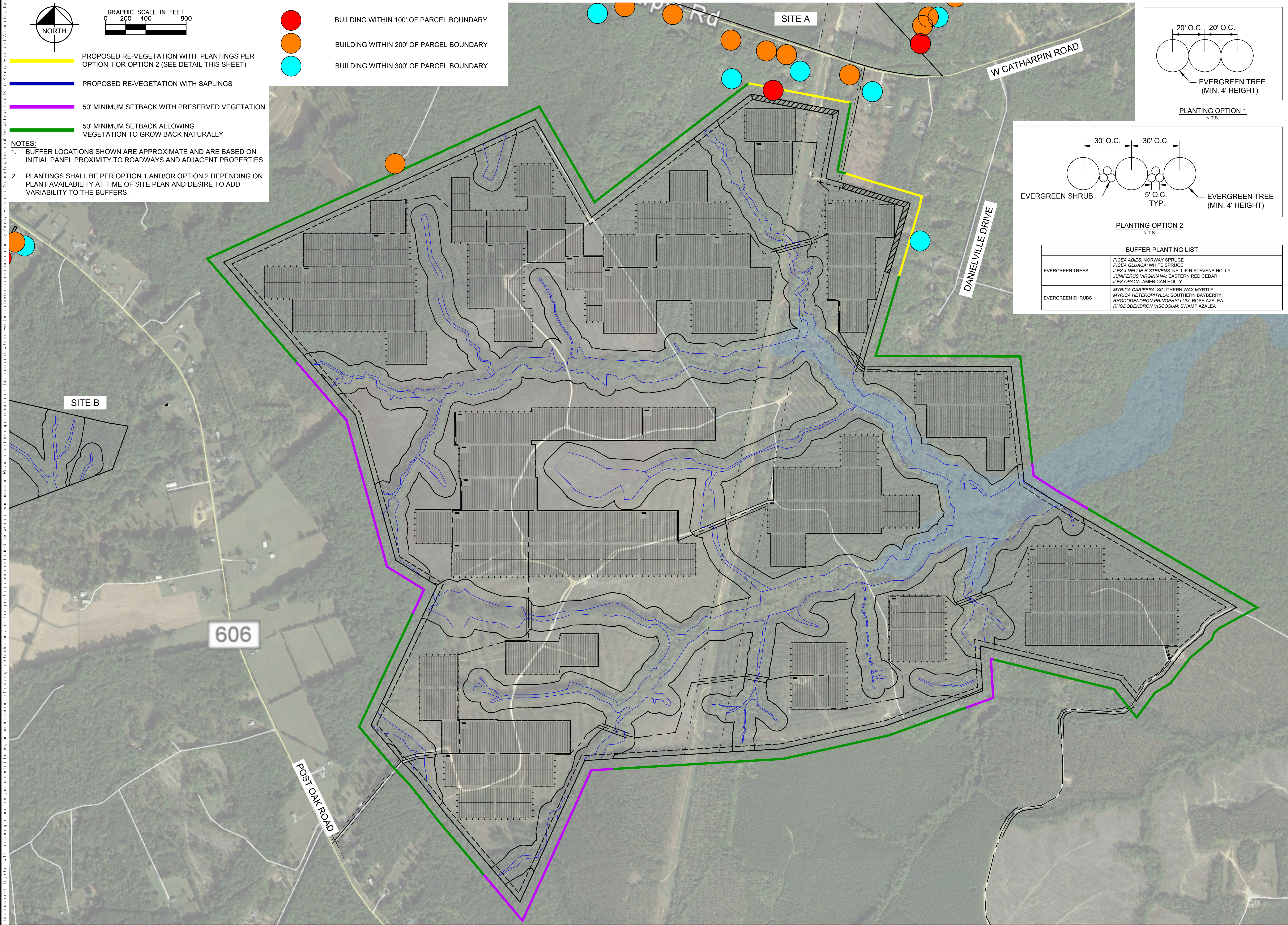
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S-POWER

An AES and AIMCo Company

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NORTH

GRAPHIC SCALE IN FEET

0 200 400 800

PROPOSED RE-VEGETATION WITH PLANTINGS PER OPTION 1 OR OPTION 2 (SEE DETAIL THIS SHEET)

PROPOSED RE-VEGETATION WITH SAPPLINGS

50' MINIMUM SETBACK WITH PRESERVED VEGETATION

50' MINIMUM SETBACK ALLOWING VEGETATION TO GROW BACK NATURALLY

NOTES:

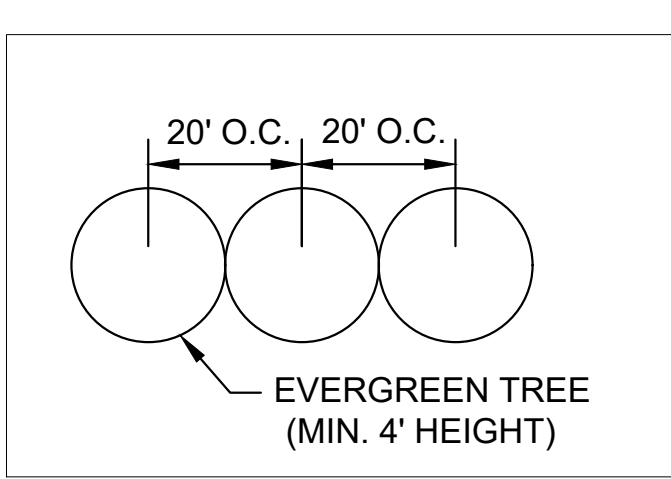
1. BUFFER LOCATIONS SHOWN ARE APPROXIMATE AND ARE BASED ON INITIAL PANEL PROXIMITY TO ROADWAYS AND ADJACENT PROPERTIES.

2. PLANTINGS SHALL BE PER OPTION 1 AND/OR OPTION 2 DEPENDING ON PLANT AVAILABILITY AT TIME OF SITE PLAN AND DESIRE TO ADD VARIABILITY TO THE BUFFERS.

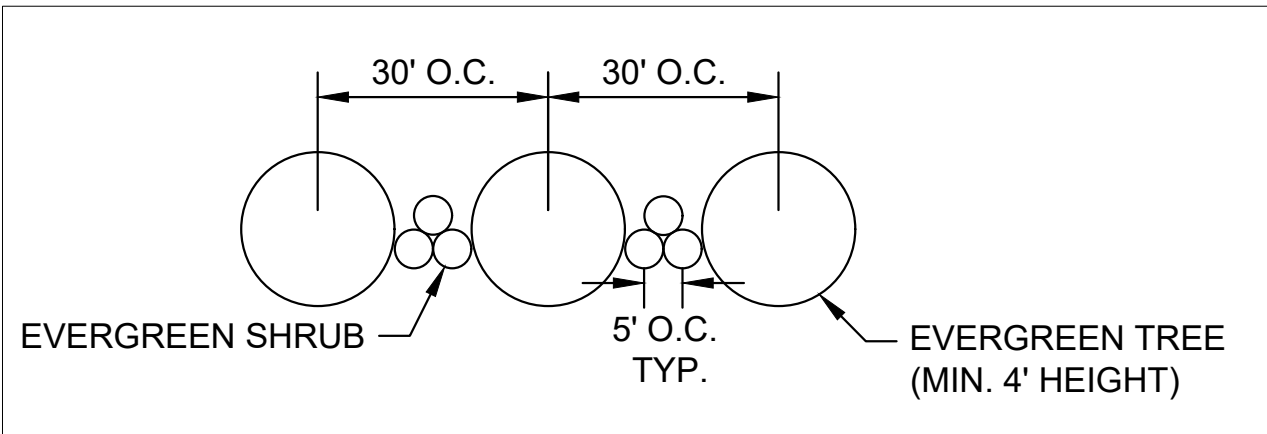
BUILDING WITHIN 100' OF PARCEL BOUNDARY

BUILDING WITHIN 200' OF PARCEL BOUNDARY

BUILDING WITHIN 300' OF PARCEL BOUNDARY



PLANTING OPTION 1
N.T.S.



PLANTING OPTION 2
N.T.S.

BUFFER PLANTING LIST	
EVERGREEN TREES	PICEA ABIES: NORWAY SPRUCE PICEA GLAUCA: WHITE SPRUCE ILEX x NELLIE R STEVENS: NELLIE R STEVENS HOLLY JUNIPERUS VIRGINIANA: EASTERN RED CEDAR ILEX OPACA: AMERICAN HOLLY
EVERGREEN SHRUBS	MYRTICA CARIFERA: SOUTHERN WAX MYRTLE MYRTICA HETEROPHYLLA: SOUTHERN BAYBERRY RHODODENDRON PRINOPHYLLUM: ROSE AZALEA RHODODENDRON VISCOSUM: SWAMP AZALEA

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APPROVAL

SEAN MILLOT
Lic. No. 0402052332
PROFESSIONAL ENGINEER

KHA PROJECT	116626000
DATE	10/26/2018
SCALE	AS SHOWN
DESIGNED BY	JRB
DRAWN BY	JRB
CHECKED BY	SMM

SUP 18-0003

LANDSCAPE AND BUFFER

AREA PLAN

SPOTSylvania SOLAR

ENERGY CENTER C

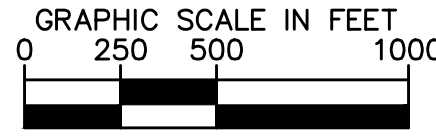
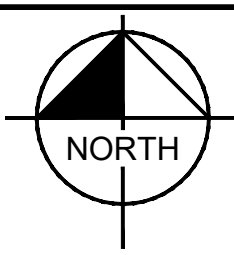
PREPARED FOR

S-POWER

SHEET NUMBER

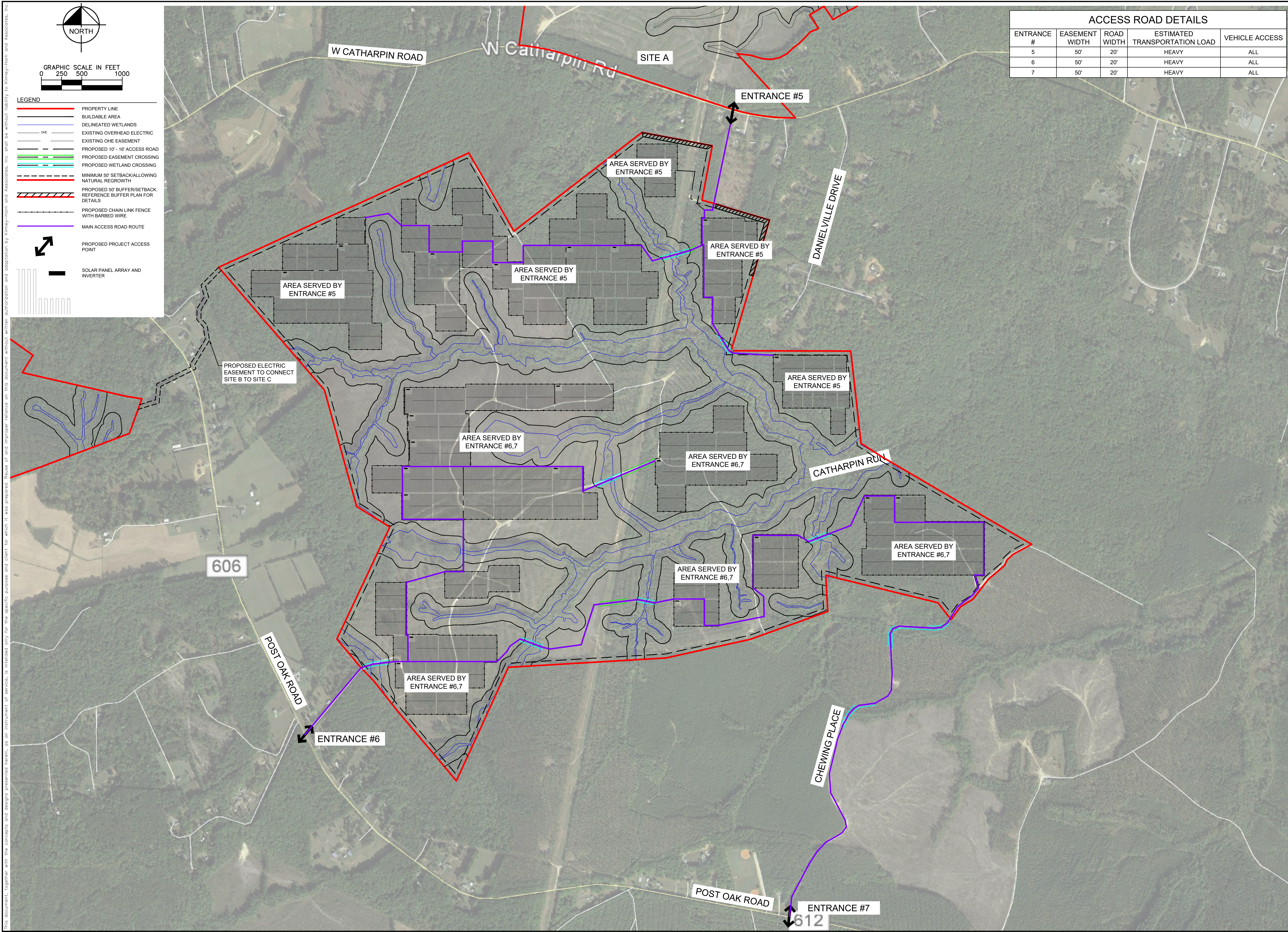
EX-3-4

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LEGEND

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- BUILDABLE AREA
- DELINEATED WETLANDS
- EXISTING OVERHEAD ELECTRIC
- EXISTING OHE EASEMENT
- PROPOSED 10' - 16' ACCESS ROAD
- PROPOSED EASEMENT CROSSING
- PROPOSED WETLAND CROSSING
- MINIMUM 50' SETBACK/ALLOWING NATURAL REGROWTH
- PROPOSED 50' BUFFER/SETBACK. REFERENCE BUFFER PLAN FOR DETAILS
- PROPOSED CHAIN LINK FENCE WITH BARBED WIRE
- MAIN ACCESS ROAD ROUTE
- PROPOSED PROJECT ACCESS POINT
- SOLAR PANEL ARRAY AND INVERTER



ACCESS ROAD DETAILS				
ENTRANCE #	EASEMENT WIDTH	ROAD WIDTH	ESTIMATED TRANSPORTATION LOAD	VEHICLE ACCESS
5	50'	20'	HEAVY	ALL
6	50'	20'	HEAVY	ALL
7	50'	20'	HEAVY	ALL

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APPROVAL

KHA PROJECT	116626000
DATE	10/26/2018
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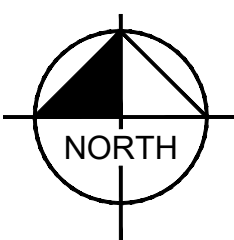
SUP 18-0003
ACCESS ROAD SERVICE
AREAS

SPOTSYLVANIA SOLAR
ENERGY CENTER C
PREPARED FOR
S-POWER

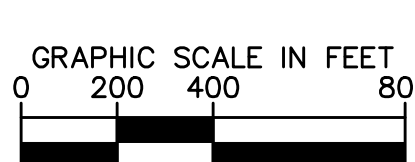
SPOTSYLVANIA COUNTY VIRGINIA

SHEET NUMBER
EX-3-5


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NORTH



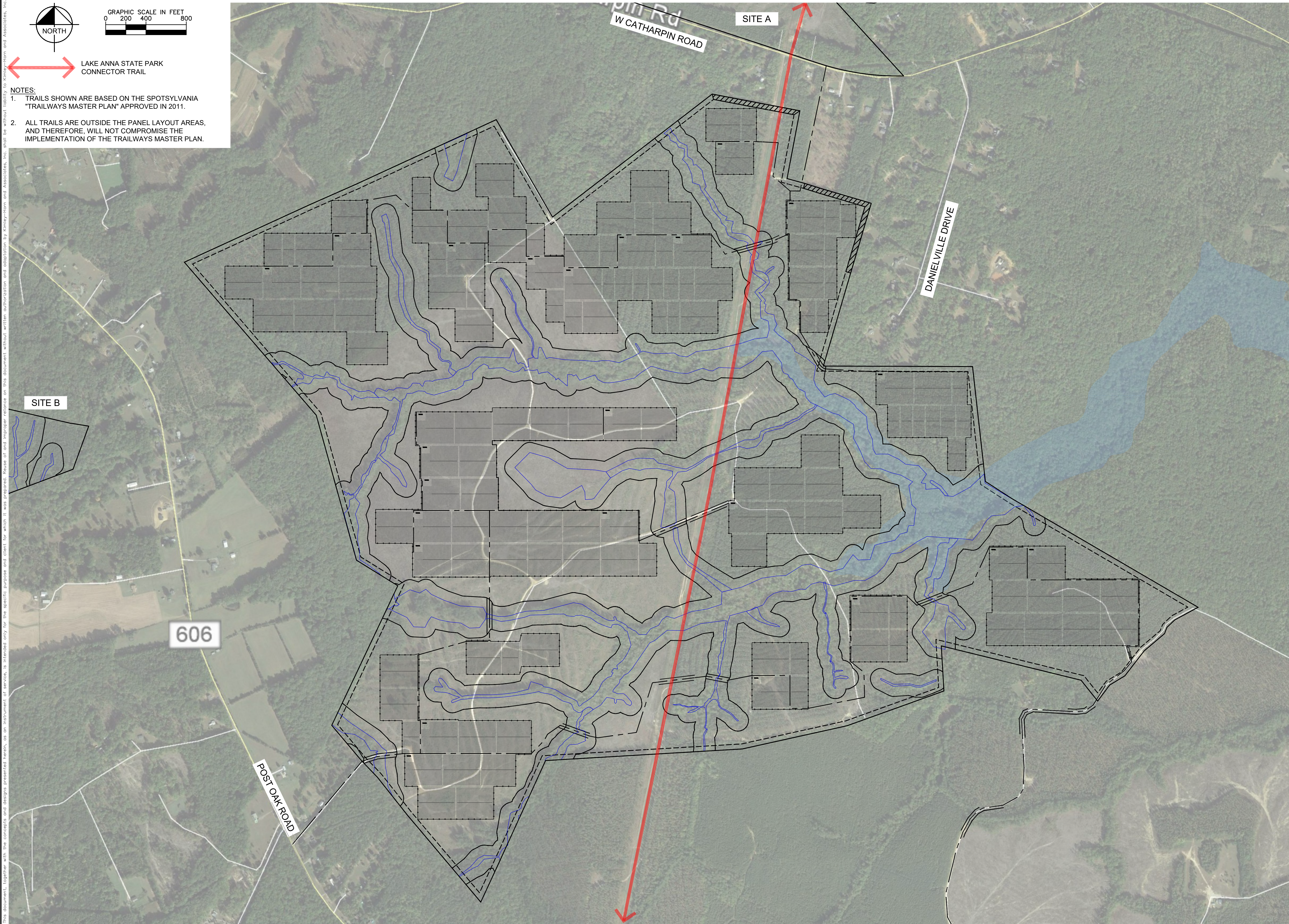
GRAPHIC SCALE IN FEET
0 200 400 800



LAKE ANNA STATE PARK
CONNECTOR TRAIL

NOTES:

- TRAILS SHOWN ARE BASED ON THE SPOTSYLVANIA "TRAILWAYS MASTER PLAN" APPROVED IN 2011.
- ALL TRAILS ARE OUTSIDE THE PANEL LAYOUT AREAS, AND THEREFORE, WILL NOT COMPROMISE THE IMPLEMENTATION OF THE TRAILWAYS MASTER PLAN.




SPOTSYLVANIA SOLAR
ENERGY CENTER C
PREPARED FOR
S-POWER


SHEET NUMBER
EX-3-6

SUP 18-0003
COUNTY TRAIL OVERLAY
PLAN


KHA PROJECT	116626000
DATE	10/26/2018
SCALE	AS SHOWN
DESIGNED BY	JRB
DRAWN BY	JRB
CHECKED BY	SMM



APPROVAL

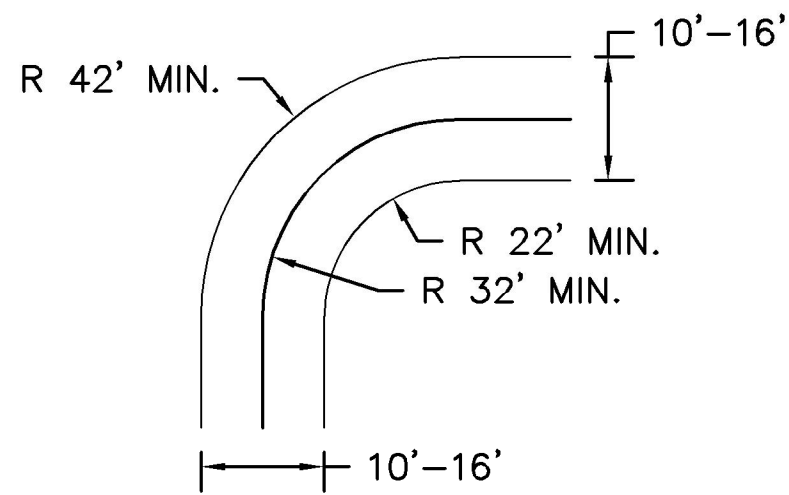


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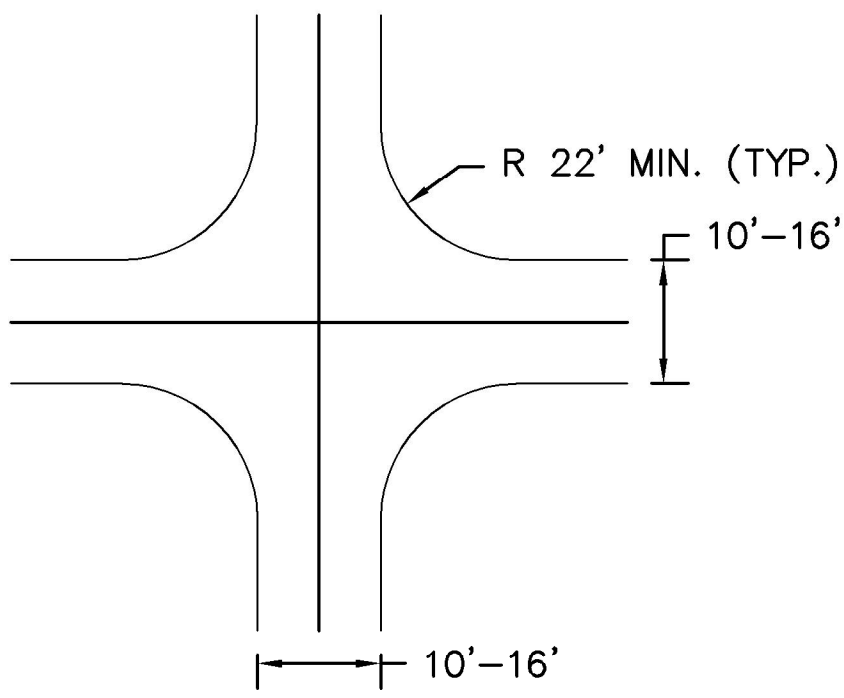


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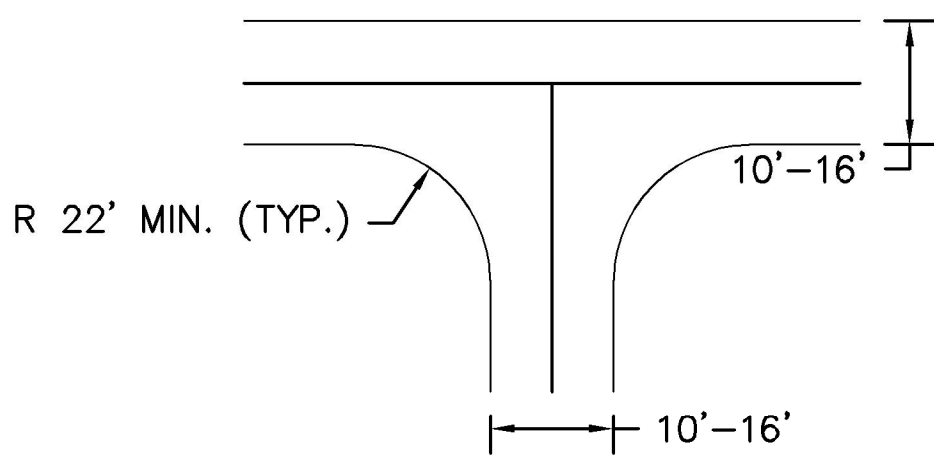
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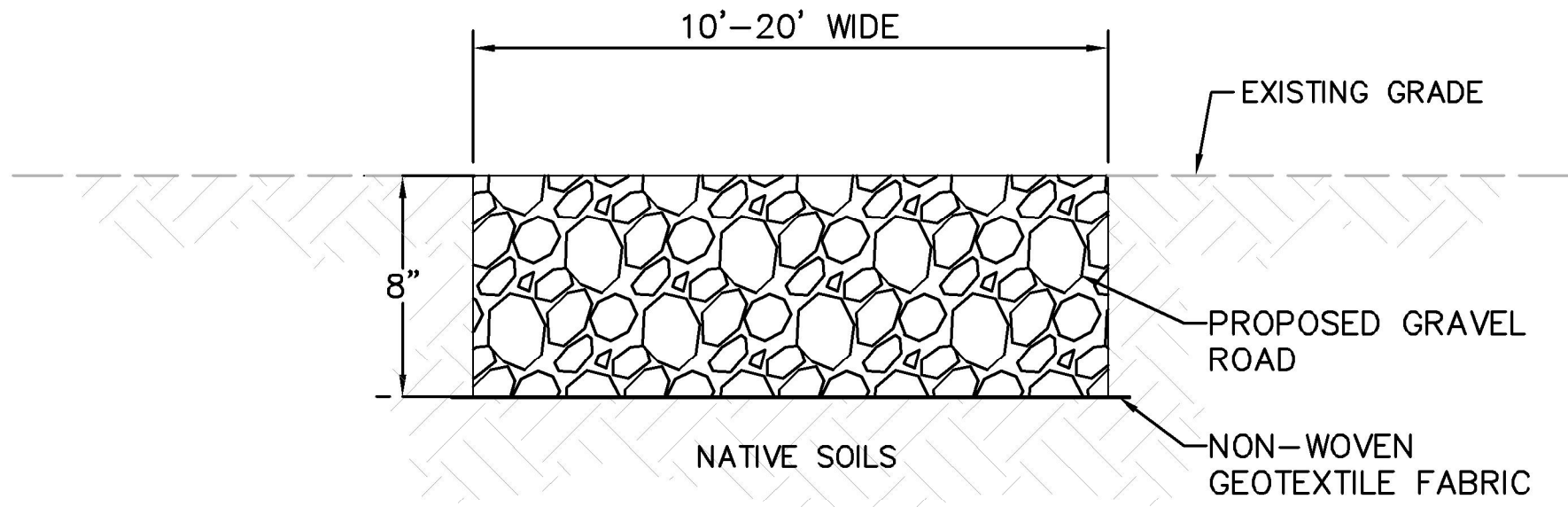
TYPICAL SITE ACCESS ROAD 90° TURN
N.T.S.



TYPICAL SITE ACCESS ROAD 4-WAY INTERSECTION
N.T.S.

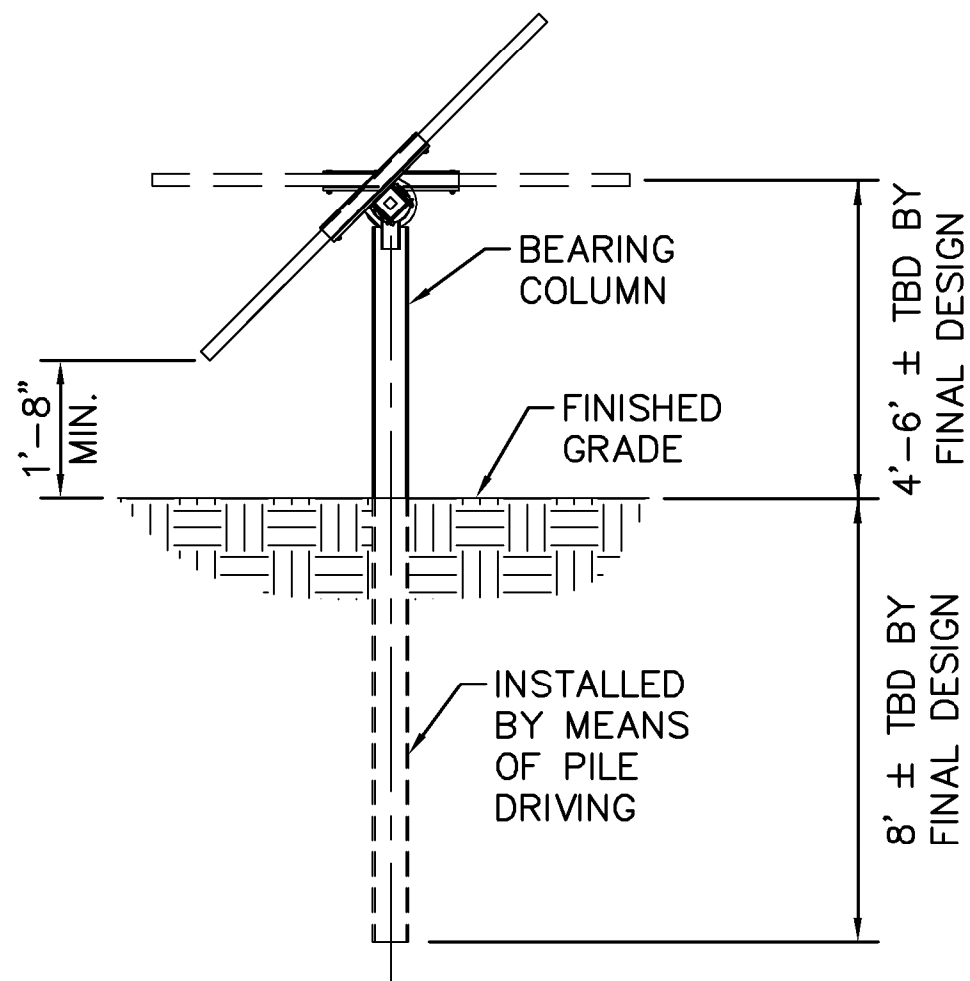


TYPICAL SITE ACCESS ROAD "T" - INTERSECTION
N.T.S.

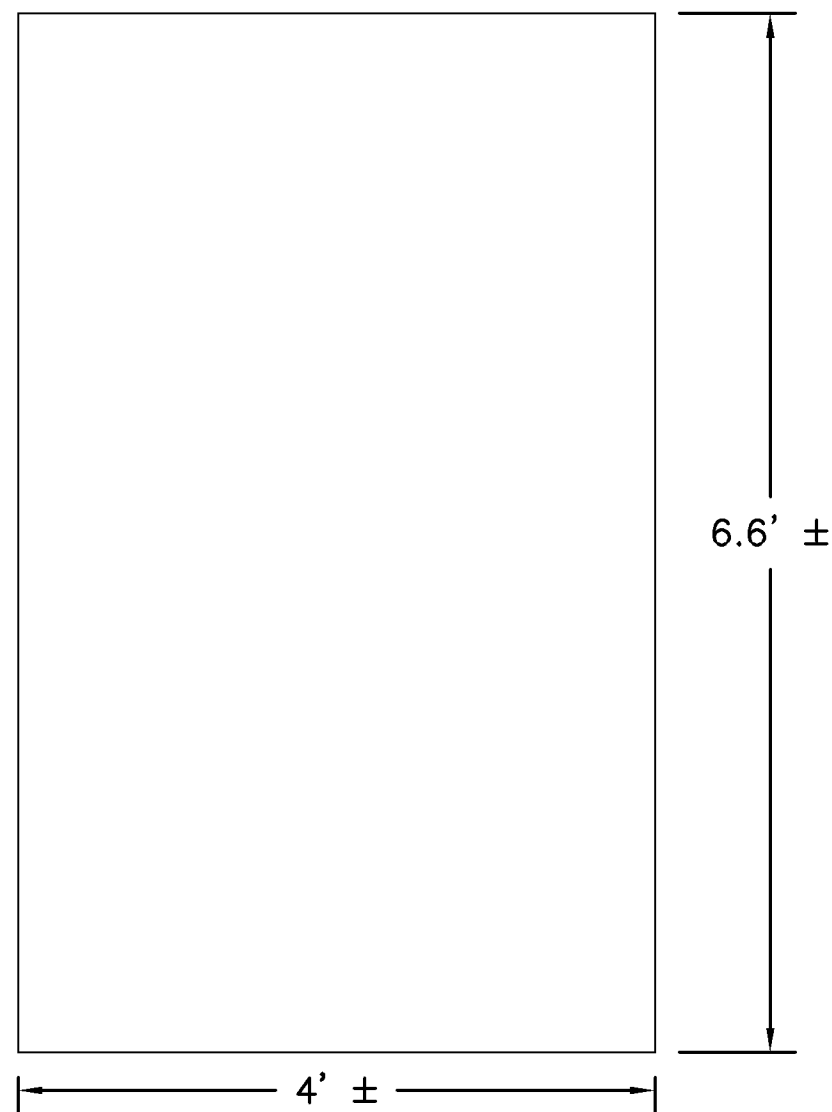


- NOTES:
1. REMOVE ALL GRASSES AND ORGANICS WITHIN ACCESS ROAD AREA.
 2. SCARIFY, MOISTURE CONDITION, AND RE-COMPACT EXISTING NATIVE SOILS TO 90% OF THE MATERIAL'S ASTM D-1557 MAXIMUM DRY DENSITY.
 3. COMPACTION SHALL BE VERIFIED BY TESTING BY THE GEOTECHNICAL CONSULTANT.

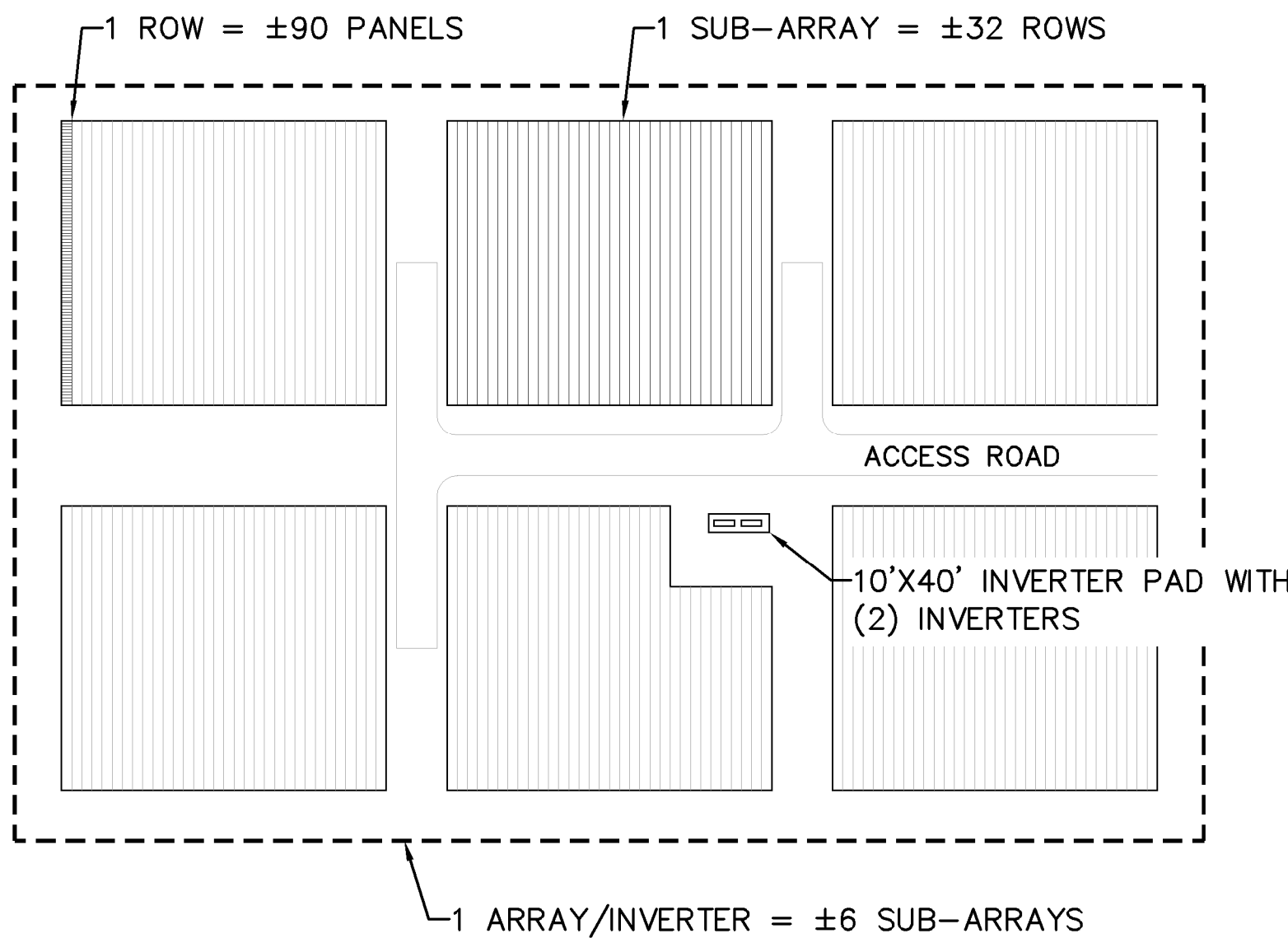
TYPICAL SITE ACCESS ROAD - GRAVEL ROAD SECTION
N.T.S.



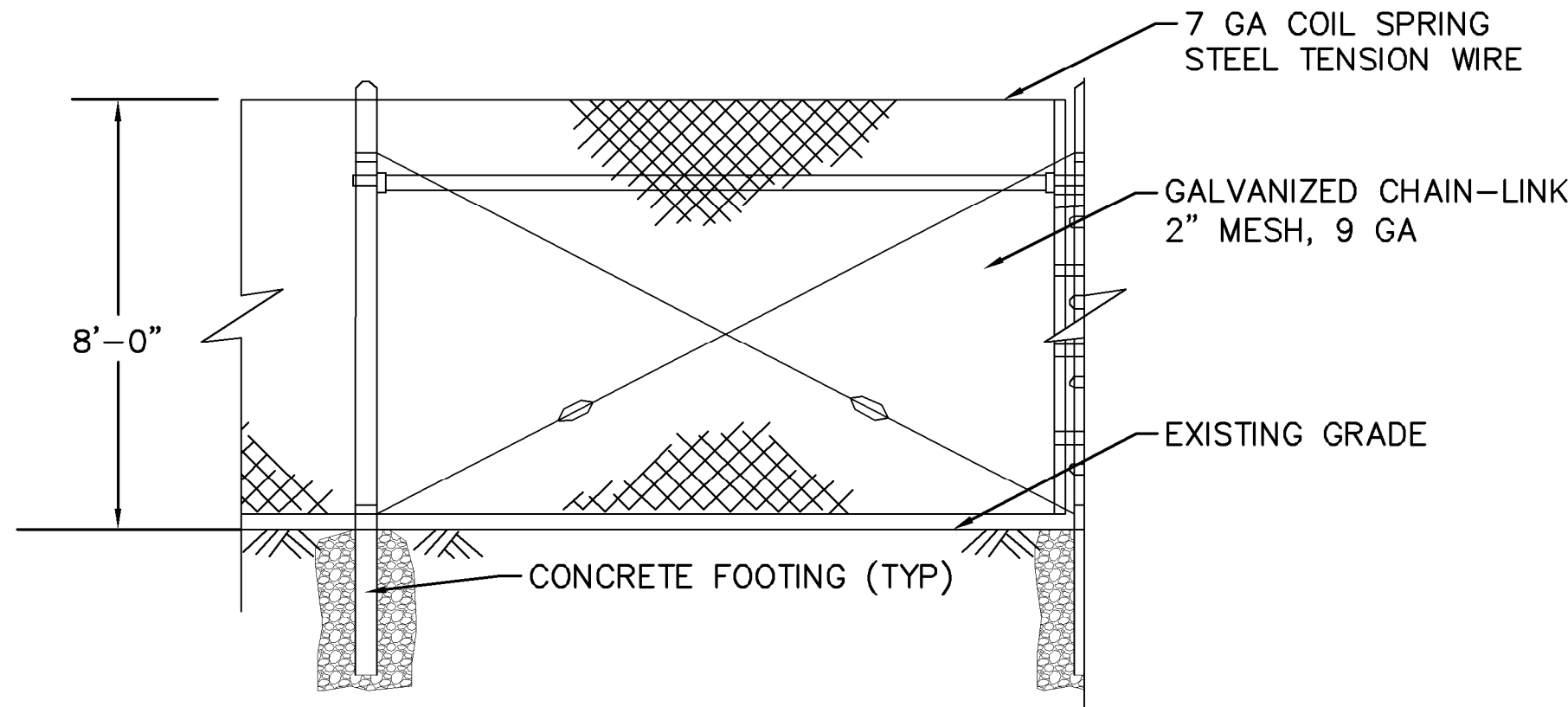
TRACKER RACK AND FOUNDATION DETAIL
N.T.S.
NOTE: ACTUAL CONSTRUCTION DETAIL OF TRACKER RACK AND FOUNDATION MAY VARY FROM THIS DETAIL.



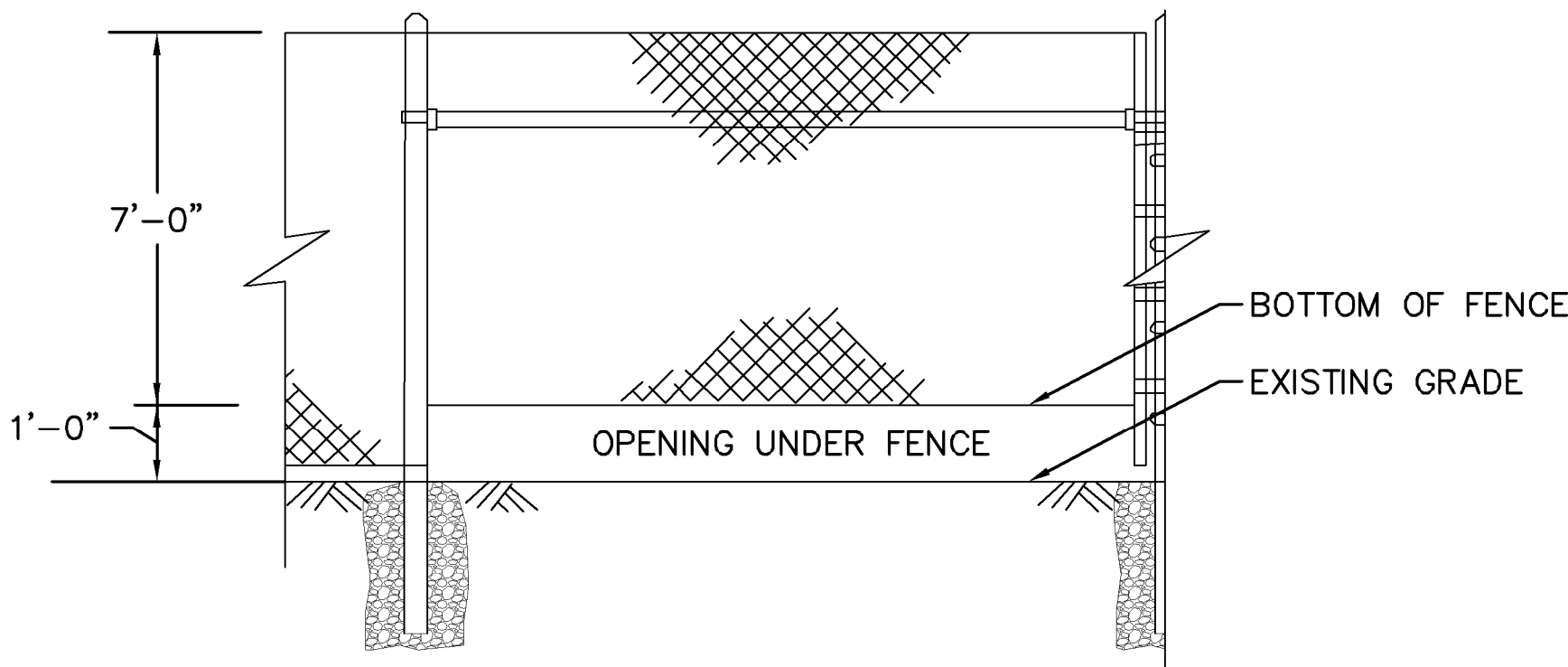
MODULE DETAIL
N.T.S.
NOTE: ACTUAL CONSTRUCTION DETAIL OF MODULE MAY VARY FROM THIS DETAIL.



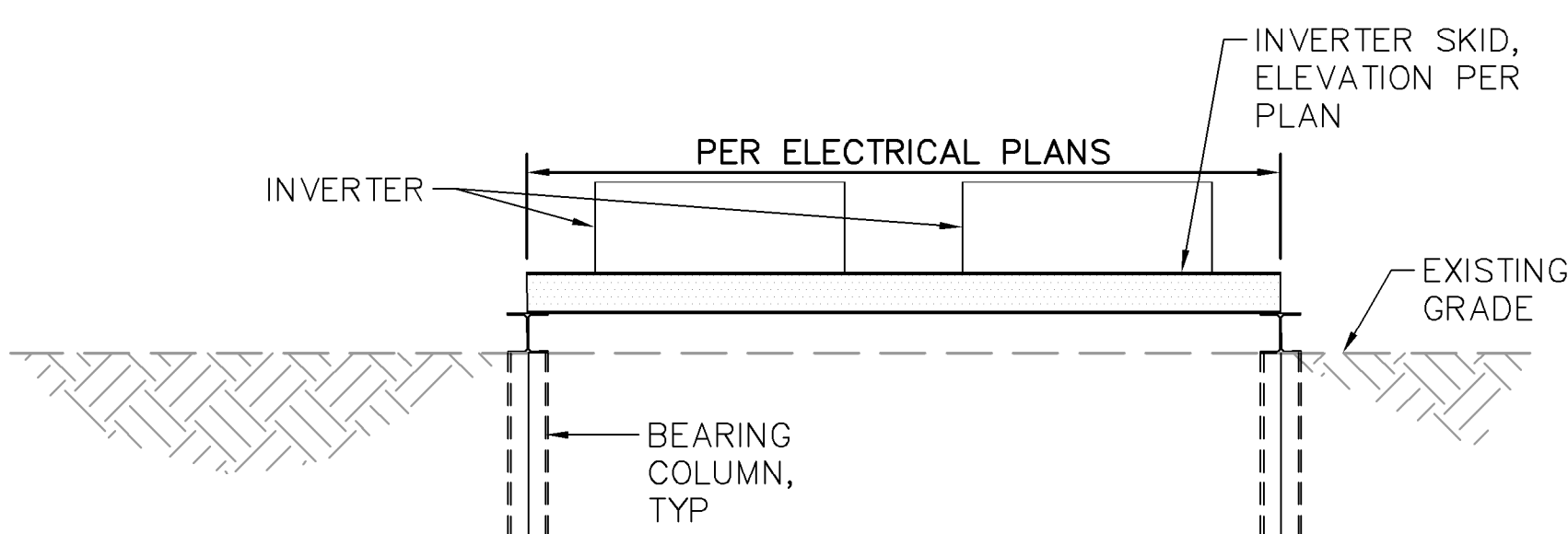
INVERTER BLOCK EXAMPLE
N.T.S.
NOTE: INVERTER PAD APPROXIMATELY 10'X40' WITH (2) 9'LX5.5'WX7.5'H INVERTERS SUBJECT TO FINAL ENGINEERING.



CHAIN LINK SECURITY FENCE
N.T.S.



WILDLIFE FENCE
N.T.S.
NOTE: WILDLIFE FENCE WILL SPACED EVERY 2000 FEET ALONG FENCE LINE SUBJECT TO ENGINEERING AND SITE DESIGN.



INVERTER DETAIL
N.T.S.
NOTE: INVERTER PAD APPROXIMATELY 10'X40' WITH (2) 9'LX5.5'WX7.5'H INVERTERS SUBJECT TO FINAL ENGINEERING.