

JAMIE WHITEHOUSE, AICP
DIRECTOR OF PLANNING & ZONING
(302) 855-7878 T
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Sussex County

DELAWARE
sussexcountyde.gov

PLEASE NOTE

This paperless packet is published on the County's website for convenience purposes, and only includes information received up to the close of business on the day before a public hearing. Documents received after this, or documents submitted during the public hearing are not uploaded to the Paperless Packet. The legal record is the paper record maintained in the Offices of the Planning & Zoning Department.



COUNTY ADMINISTRATIVE OFFICES
2 THE CIRCLE | PO BOX 417
GEORGETOWN, DELAWARE

PLANNING & ZONING COMMISSION

ROBERT C. WHEATLEY, CHAIRMAN
KIM HOEY STEVENSON, VICE-CHAIRMAN
R. KELLER HOPKINS
J. BRUCE MEARS
HOLLY J. WINGATE



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sussexcountyde.gov
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JAMIE WHITEHOUSE, MRTPI, AICP
DIRECTOR OF PLANNING & ZONING

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET

Planning Commission Public Hearing Date: November 17th, 2022

Application: CU 2337

Applicant: Community Power Group, LLC
Michael Borkowski
5636 Connecticut Ave
Washington, DC 20015

Owner: Reed Properties
PO Box 216
Milton, DE 19968

Site Location: Located on the north side of Beach Highway (Route 16), approximately 0.20 mile east of Dupont Boulevard (Route 113).

Current Zoning: General Commercial (C-1) District and Agricultural Residential (AR-1) Zoning District

Proposed Use: 4 MW Community Solar Facility

Comprehensive Land Use Plan Reference: Developing Area

Councilmanic District: Ms. Green

School District: Milford School District

Fire District: Ellendale Fire Co.

Sewer: N/A

Water: N/A

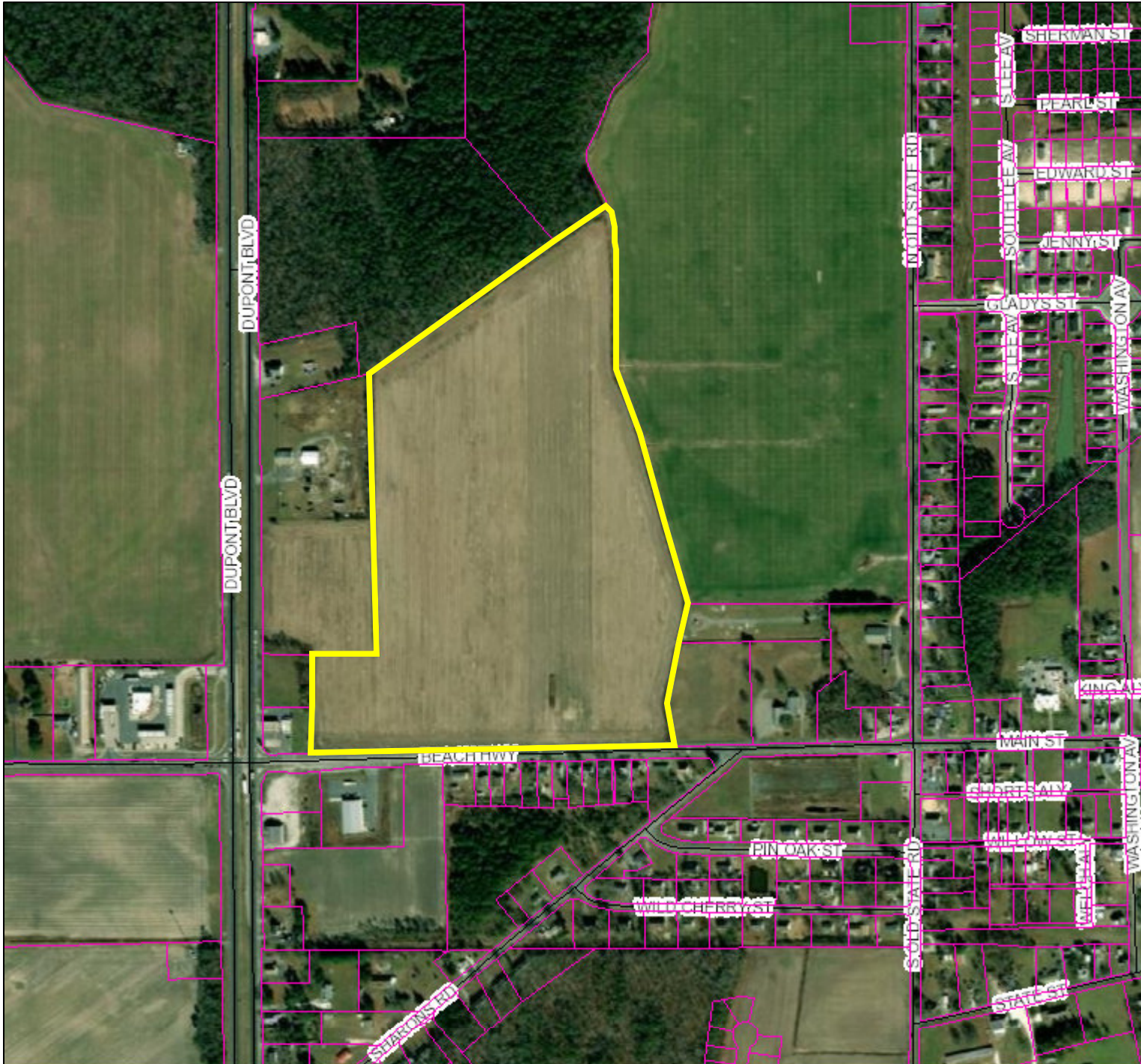
Site Area: 52.23

Tax Map ID.: 230-26.00-39.00





Sussex County



PIN:	230-26.00-39.00
Owner Name	REED PROPERTIES
Book	2763
Mailing Address	PO BOX 216
City	MILTON
State	DE
Description	DUPONT HWY
Description 2	N/RT 16 200'
Description 3	E/RT 113 FX
Land Code	

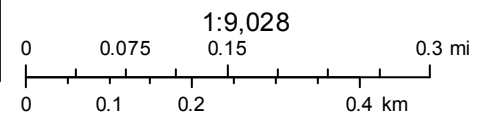
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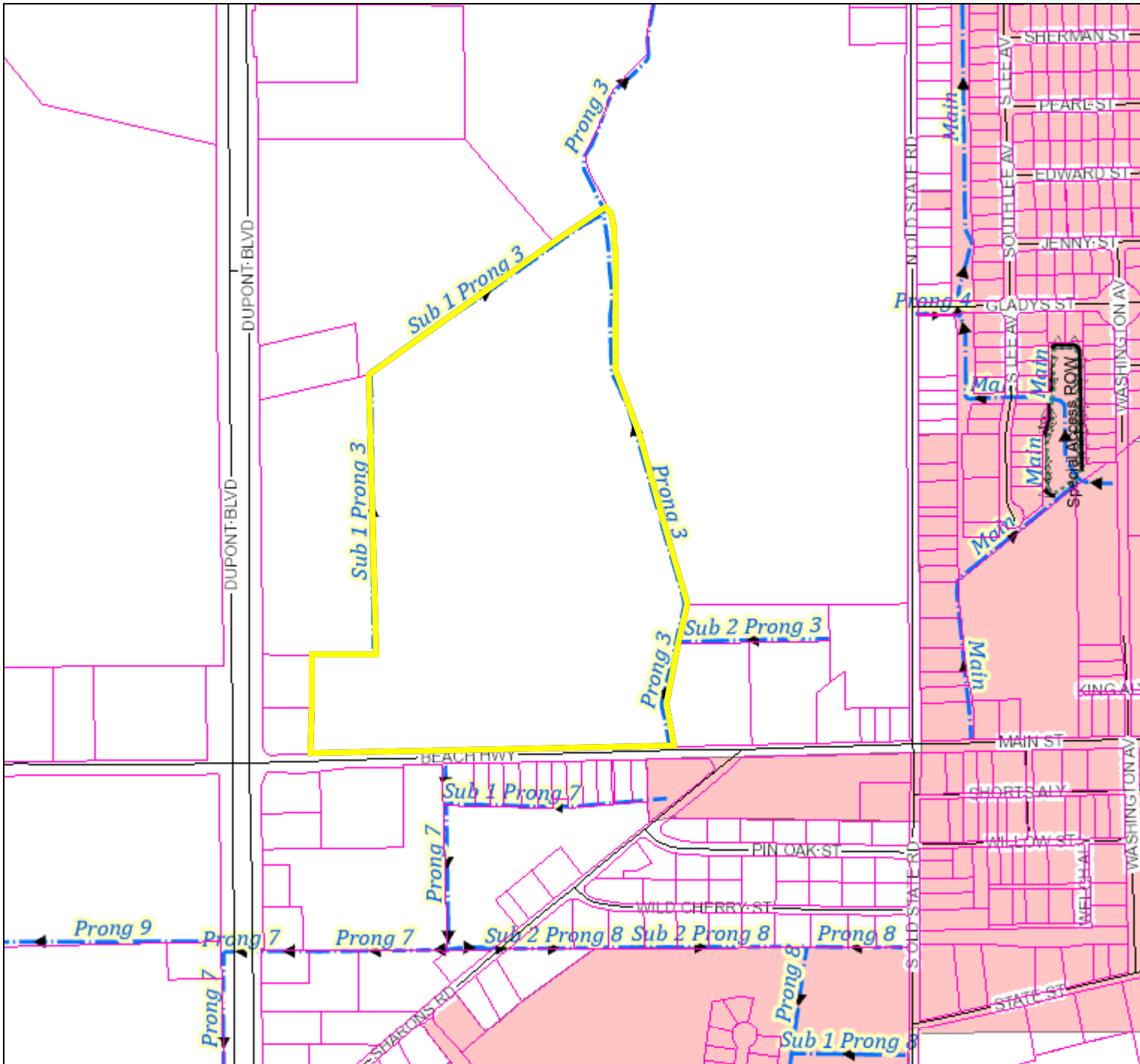
Override 1

- Tax Parcels
- Streets
- County Boundaries





Sussex County






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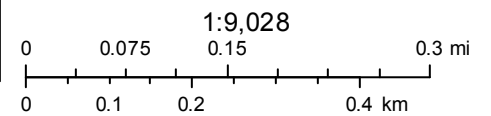
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Override 1

polygonLayer

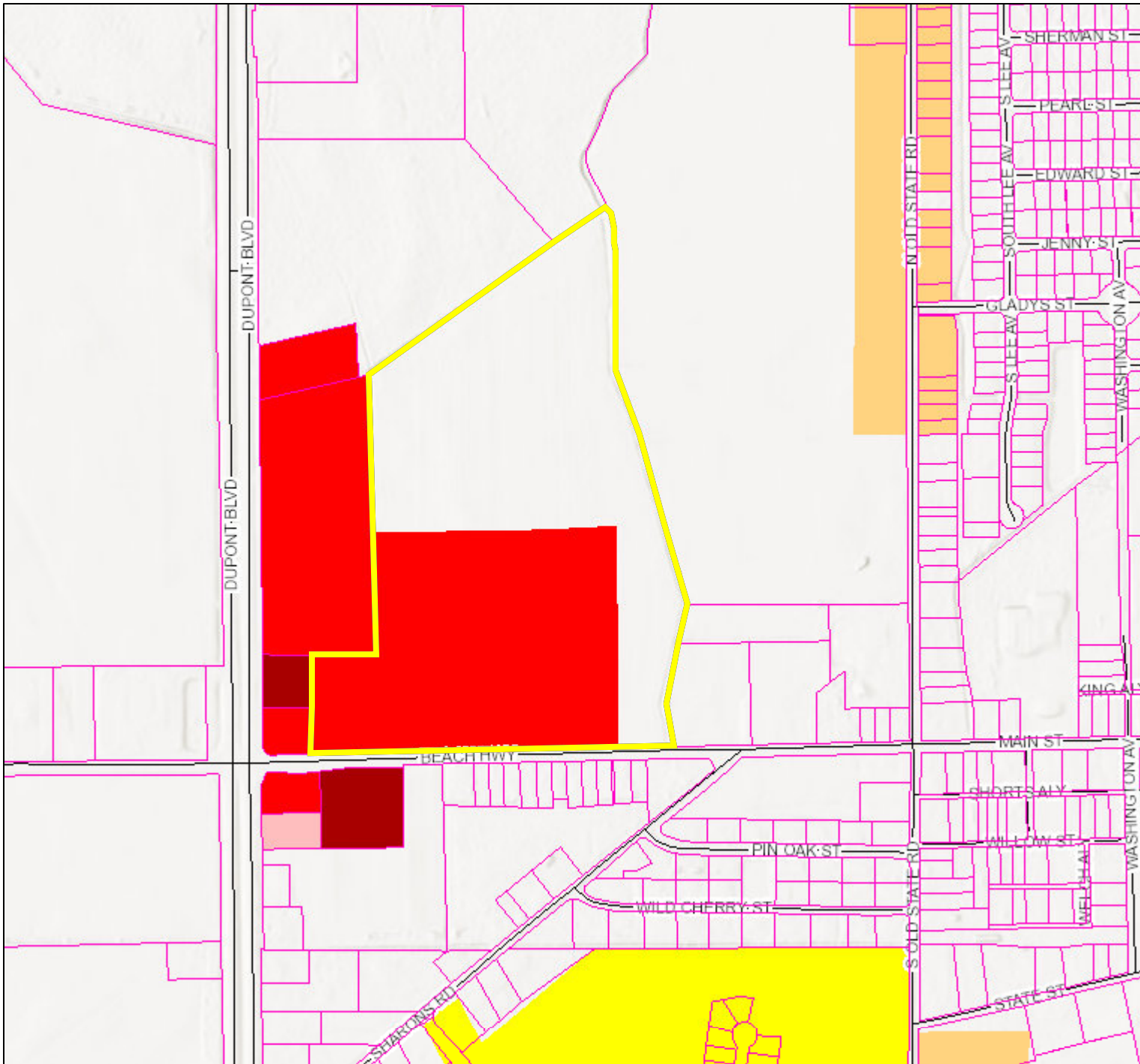
Override 1

-  Tax Parcels
-  Streets
-  County Boundaries



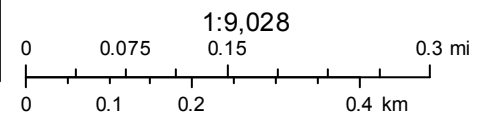


Sussex County



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- polygonLayer**
Override 1
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- Tax Parcels
- Streets



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PLANNING & ZONING DIRECTOR
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Sussex County

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Memorandum

To: Sussex County Planning Commission Members
From: Mx. Jesse Lindenberg, Planner I
CC: Mr. Vince Robertson, Assistant County Attorney and Applicant
Date: November 3rd, 2022
RE: Staff Analysis for C/U 2337 Community Power Group, LLC

This memo is to provide background and analysis for the Planning Commission to consider as a part of application C/U 2337 Community Power Group, LLC to be reviewed during the November 17th, 2022, Planning Commission Meeting. This analysis should be included in the record of this application and is subject to comments and information that may be presented during the public hearing.

The request is for a Conditional Use for Tax Parcel: 230-26.00-39.00 to allow for a 4MW solar farm. The property is located on the north side of Beach Highway (Rt. 16), approximately 0.20 mile east of Dupont Boulevard (Rt. 113). The parcel is comprised of a total area of 52.23 acres +/- and the solar farm is to be located on an approximately 25.327 +/- acre portion.

Comprehensive Plan Analysis

The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework of how land is to be developed. As part of the Comprehensive Plan, a Future Land Use Map is included to help determine how land should be zoned to ensure responsible development. The Future Land Use Map in the plan indicates that the parcel has a designation of "Developing Area". The adjacent parcels to the north, east, and west have a designation of "Developing Area." The parcels to the south, across Beach Highway (Rt. 16), also have a designation of "Developing Area."

As outlined within the 2018 Sussex County Comprehensive Plan, Developing Areas are newer, emerging growth areas that demonstrate the characteristics of developmental pressures. A range of housing types are appropriate in Developing Areas, including single family homes, townhouses, and multi-family units. In selected areas and at appropriate intersections, commercial uses should be allowed. A variety of office uses would be appropriate in many areas. Portions of the Developing Areas with good road access and few nearby homes should allow for business and industrial parks. Appropriate mixed-use development should also be allowed.

Zoning Information

The subject property is dual zoned General Commercial (C-1) District and Agricultural Residential (AR-1) District. The adjacent properties to the west are zoned General Commercial (C-1) District, Commercial Residential (CR-1) District. The adjacent properties to the north and east are zoned Agricultural Residential (AR-1) District. The properties to the south, across Beach Highway (Rt. 16), are zoned Agricultural Residential (AR-1) District, General Commercial (C-1) District, Commercial Residential (CR-1) District and one is under the Town of Ellendale's jurisdiction.



Existing Conditional Uses within the Vicinity of the Subject Site

Since 2011, there have been two (2) Conditional Use applications within a one (1) mile radius of the application site. The first application is Conditional Use No. 2172 Iris Downing to allow for a transitional/boarding house within an Agricultural Residential (AR-1) Zoning District. The Application was approved by the Sussex County Council at their meeting of Tuesday, April 16th, 2019, and the change was adopted through Ordinance No. 2649. The second application is Conditional Use No. 2192 Napoleon Hernandez, Thomas and Judy Munce to amend the conditions of CU 1979 to allow for a night club and an electronic message center within an Agricultural Residential (AR-1) Zoning District. The Application was denied by the Sussex County Council at their meeting of Tuesday, October 29th, 2019.

Based on the analysis of the land use, surrounding zoning and uses, the Conditional Use to allow for the placement of a solar farm in this location, subject to considerations of scale and impact, could be considered as being consistent with the land use, area zoning and surrounding uses.



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

November 15, 2021

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Community Power Group, LLC** proposed land use application, which we received on November 5, 2021. This application is for an approximately 52.23-acre parcel (Tax Parcel: 230-26.00-39.00). The subject land is located on the north side of Beach Highway (State Route 16) about 250 feet east of the intersection with DuPont Boulevard (US Route 113). The subject land is currently split zoned C-1 (General Commercial) and GR (General Residential), the applicant seeks a conditional use approval to build a community solar farm.

Per the 2019 Delaware Vehicle Volume Summary, the annual and summer average daily traffic volumes along Beach Highway from Old State Road (Sussex Road 213) to DuPont Highway, are 6,935 and 8,917 vehicles per day, respectively.

Based on our review, we estimate that the above land use will generate fewer than 50 vehicle trips per day. This number of trips is below DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. DelDOT's regulations specify the minimum TIS warrants as 50 vehicle trips in any hour and/or 500 vehicle trips per day. Because the proposed land use would generate fewer than 50 vehicle trips per day, we consider the development's traffic impact to be **diminutive** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as diminutive with regard to warranting a TIS does not mean that it is diminutive in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.



Mr. Jamie Whitehouse

Page 2 of 2

November 15, 2021

Please contact Ms. Annamaria Furmato, at (302) 760-2710, if you have questions concerning this correspondence.

Sincerely,



T. William Brockenbrough, Jr.
County Coordinator
Development Coordination

TWB:afm

cc: Community Power Group, LLC, Applicant
Elliot Young, Sussex County Planning & Zoning
David Edgell, Coordinator, Cabinet Committee on State Planning Issues
Todd Sammons, Assistant Director, Development Coordination
Scott Rust, South District Public Works Manager, Maintenance & Operations
Steve McCabe, Sussex County Review Coordinator, Development Coordination
Derek Sapp, Subdivision Manager, Development Coordination
Kevin Hickman, Subdivision Manager, Development Coordination
Brian Yates, Subdivision Manager, Development Coordination
John Andrescavage, Subdivision Manager, Development Coordination
James Argo, South District Project Reviewer, Maintenance & Operations
Claudy Joinville, Project Engineer, Development Coordination
Annamaria Furmato, Project Engineer, Development Coordination

**SUSSEX COUNTY ENGINEERING DEPARTMENT
UTILITY PLANNING & DESIGN REVIEW DIVISION
C/U & C/Z COMMENTS**

TO: **Jamie Whitehouse**

REVIEWER: **Chris Calio**

DATE: **10/25/2022**

APPLICATION: **CU 2337 Community Power Group, LLC**

APPLICANT: **Community Power Group, LLC**

FILE NO: **ELS-10.0**

TAX MAP &
PARCEL(S): **230-26.00-39.00**

LOCATION: **Lying on the north side of Beach Highway (Route 16),
approximately 0.20 mile east of DuPont Boulevard (Route 113).**

NO. OF UNITS: **4 MW Community Solar Facility**

GROSS
ACREAGE: **52.23**

SYSTEM DESIGN ASSUMPTION, MAXIMUM NO. OF UNITS/ACRE: **4**

SEWER:

- (1). Is the project in a County operated and maintained sanitary sewer and/or water district?
Yes No
- a. If yes, see question (2).
b. If no, see question (7).
- (2). Which County Tier Area is project in? **Tier 1**
- (3). Is wastewater capacity available for the project? **Yes** If not, what capacity is available? **N/A.**
- (4). Is a Construction Agreement required? **Yes** If yes, contact Utility Engineering at (302) 855-7717.
- (5). Are there any System Connection Charge (SCC) credits for the project? **N/A** If yes, how many? **N/A**. Is it likely that additional SCCs will be required? **N/A** If yes, the current System Connection Charge Rate is **Unified \$6,600.00** per EDU. Please contact **Blair Lutz** at **302-855-7719** for additional information on charges.

- (6). Is the project capable of being annexed into a Sussex County sanitary sewer district? **N/A**
- Attached is a copy of the Policy for Extending District Boundaries in a Sussex County Water and/or Sanitary Sewer District.
- (7). Is project adjacent to the Unified Sewer District? **N/A**
- (8). Comments: **Click or tap here to enter text.**
- (9). Is a Sewer System Concept Evaluation required? **Yes, Contact Utility Planning at 302-855-7370 to apply**
- (10). Is a Use of Existing Infrastructure Agreement Required? **Yes**
- (11). **All residential roads must meet or exceed Sussex County minimum design standards.**

UTILITY PLANNING & DESIGN REVIEW APPROVAL:



John J. Ashman
Sr. Manager of Utility Planning & Design Review

Xc: Hans M. Medlarz, P.E.
Lisa Walls
Blair Lutz

Jesse Lindenberg

From: Robinson, Samantha (DNREC) <Samantha.Robinson@delaware.gov>
Sent: Tuesday, March 22, 2022 11:22 AM
To: Jesse Lindenberg
Cc: Jamie Whitehouse
Subject: RE: Contact Form: Environmental Reviews re: Solar in Sussex County
Attachments: Sussex County Upcoming Solar Projects_032222.xlsx

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe. Contact the IT Helpdesk if you need assistance.

Good morning Jamie and Jesse,

Attached is your spreadsheet with upcoming solar projects and the species and habitat records we found at these project locations.

Please let us know if you have any questions.

Thanks,
Sam

Sam Robinson, Ph.D. (she/her)
Program Manager for Avian Conservation

Delaware Division of Fish and Wildlife
6180 Hay Point Landing Rd
Smyrna, DE 19977
Office: (302) 735-8667
Cell: (302) 505-2936



FILE COPY

2 sheets

Delaware Division of Fish & Wildlife

*We Bring You Delaware's Great Outdoors
through Science and Service*



From: Jesse Lindenberg <jesse.lindenberg@sussexcountyde.gov>
Sent: Wednesday, March 16, 2022 9:52 AM
To: Robinson, Samantha (DNREC) <Samantha.Robinson@delaware.gov>
Subject: RE: Contact Form: Environmental Reviews re: Solar in Sussex County

Hello Sam,

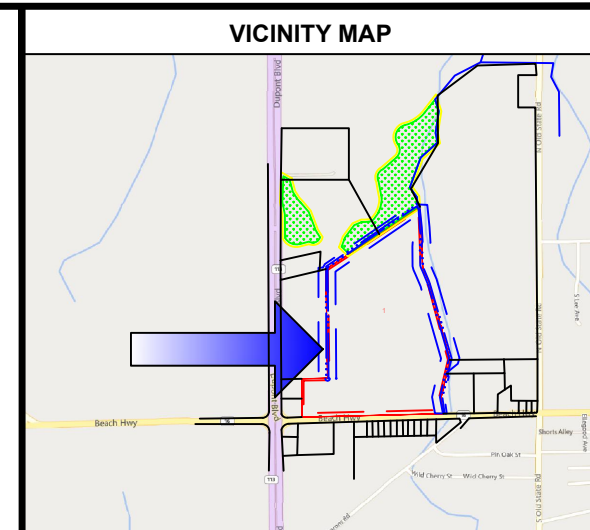
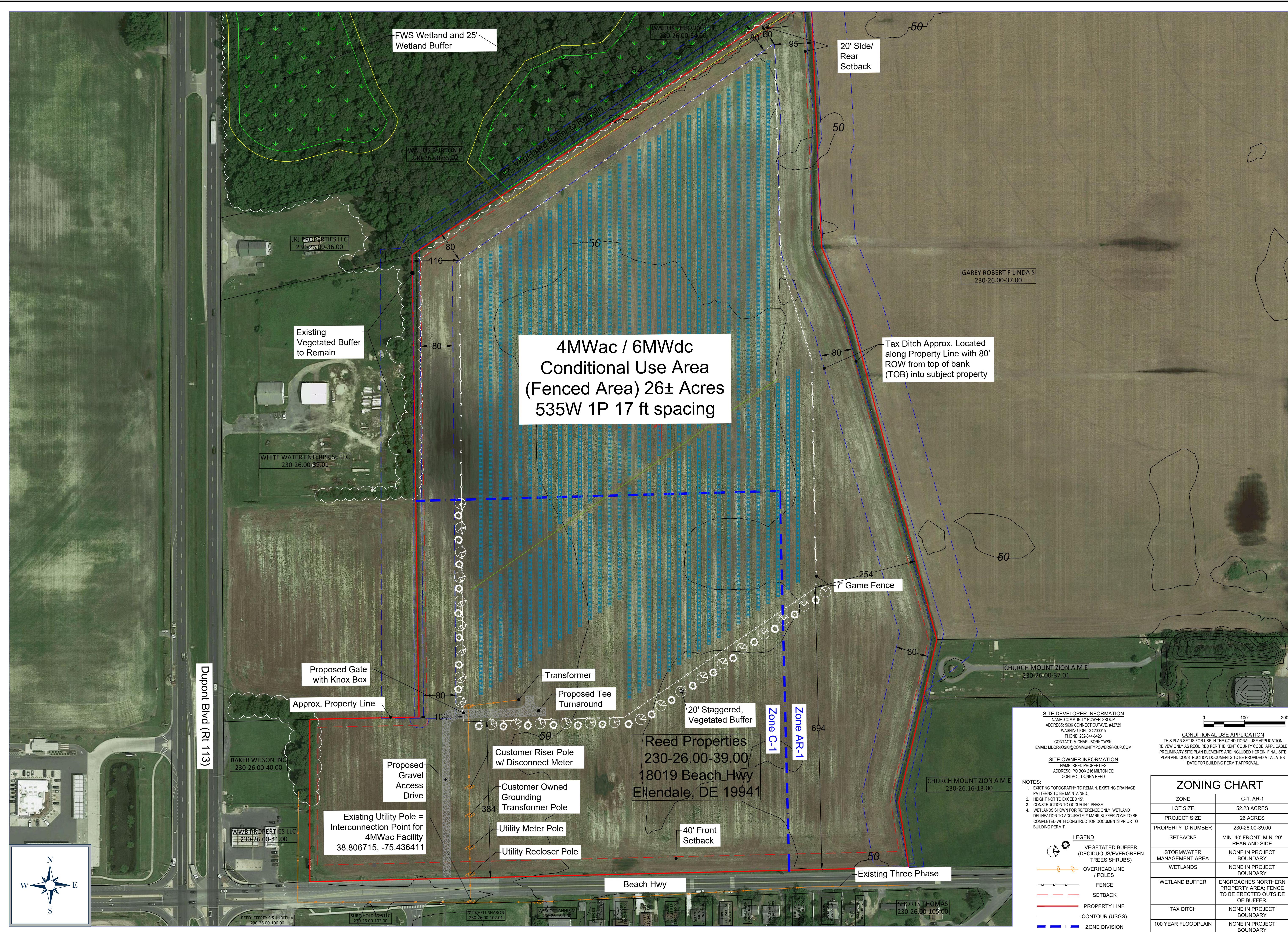
Jamie asked me to collect a list of our upcoming solar project applications for you. I've attached an excel spreadsheet here for you. Please let me know if there is any other information you would like!

Thanks,

Jesse Lindenberg (they/he)

Planner I
Sussex County Government

Conditional Use Number	Tax Parcel # (s)	APPLICANT	911 Address or Road Name	Current Zoning	Proposed Use	Status/Notes	Application Rcvd Date	ER Project	DW Species/Habitat Hits	Recommendations (In addition to standard solar comments)
2354	532-20.00-14.00 433-6.00-18.00 433-6.00-20.00 433-6.00-26.00	Sussex CSG 1, LLC Sussex CSG 2, LLC	8880 Old Racetrack Road 34112 Dupont Blvd	AR-1 AR-1/C-1	Community Solar Facility Community Solar Facility		2/23/2022 2/23/2022	NA NA	KWH Non-tidal coastal plain stream bordering W of parcel KWH Non-tidal coastal plain stream bordering W of two parcels	Minimum 100 ft. vegetated buffer Minimum 100 ft. vegetated buffer
2348	432-8.00-11.00	TPE DE SUI24, LLC	Sharptown Road	AR-1	Community Solar Facility		2/7/2022	NA	Protected Species: Bald Eagle Nest E of parcel, within 660 buffer. Latest status - empty. Protected Area: Within 1/2 mile of State Wildlife Management Area	Protected Species: Contact DFW Protected Area: The proposed project is within 1/2 mile of the boundary of Horeseys Pond, a State Wildlife Area managed by the Division of Fish and Wildlife, DNREC. The developer should consult with the Regional Wildlife Biologist, Rob Gano, at (302) 539-3160 to minimize potential negative impacts of the proposed project on State Wildlife Area lands.
2347	230-12.00-39.00	TPE DE SUI94, LLC	North Old State Road	AR-1	Community Solar Facility		2/7/2022	NA	None	None
2346	332-7.00-19.00	TPE DE SUI114, LLC	N RT 64/W RT 13	AR-1	Community Solar Facility		2/7/2022	NA	DEN and Freshwater forested wetlands on forested portion of parcel	Maintain current forested buffer
2344	135-22.00-23.00	Turning Point Energy	East Trap Pond Rd	AR-1	Community Solar Facility		1/18/2022	NA	KWH Non-tidal coastal plain stream passes through center of parcel Potential mature forest and forested wetlands on forested portion of parcel	Minimum 100 ft vegetated buffer Avoid impacts to forested area and maintain buffer
2343	135-11.00-48.00	Turning Point Energy	Gravel Hill Rd	AR-1	Community Solar Facility		1/18/2022	NA		
2342	331-1.00-15.01	Turning Point Energy - SUI07, LLC	Elks Rd	AR-1	Community Solar Facility		1/18/2022	DUFF 2021 Sussex County Solar Generation	Rare Species: Northern Lance (<i>Elliptio fisheriana</i> , S2), Alewife Floater (<i>Anodonta imbecilis</i> , S1) adjacent to site Habitat: KWH Non-tidal coastal plain stream adjacent to site Protected Area: Adjacent to State Wildlife Management Area	Rare Species: Impacts to water quality as result of removing the forested uplands and the site and encroaching on the wetland buffer could negatively impact these species. To minimize negative impacts, we recommend that natural habitats be conserved to the maximum extent practicable. Habitat: Minimum 100 ft vegetated buffer Protected Area: The proposed project is within 1/2 mile of the boundary of Hearn's Pond, a State Wildlife Area managed by the Division of Fish and Wildlife, DNREC. The developer should consult with the Regional Wildlife Biologist, Rob Gano, at (302) 539-3160 to minimize potential negative impacts of the proposed project on State Wildlife Area lands.
2337	230-26.00-39.00	Community Power Group, LLC	Beach Hwy	AR-1/C-1	Community Solar Facility		1/11/2022	NA	KWH Non-tidal coastal plain stream bordering E of parcel; Freshwater forested/shrub wetland bordering N of parcel	Minimum 100 ft vegetated buffer
2336	232-5.00-11.03	Community Power Group, LLC	Bethel Rd & Woodland Ferry Rd	AR-1	Community Solar Facility		1/11/2022	NA	KWH Non-tidal coastal plain stream bordering NE of parcel	Minimum 100 ft vegetated buffer
2328	230-13.00-121.00	Sunrise Solar	Clendaniel Pond Rd	AR-1	Community Solar Facility		11/24/2021	NA	DEN on NW portion of parcel	Maintain corridor
2298	130-3.00-246.00, 130-3.00-247.00, 130-3.00-247.02, 130-6.00-75.00, 130-5.00-76.00, 130-5.00-92.00, 130-5.00-94.00, 130-5.00-95.00, 130-5.00-96.00, 130-5.00-97.00	Freeman Solar, LLC	Calhoun Road (S.C.R. 621)	AR-1, GR & MR	Solar Farm - to include 75 megawatts of alternate current as a photovoltaic electric generation facility	Introduced to County Council 8/24/21	7/7/2021	STAN 2021 Freeman Solar Project (Only included seven parcels)	KWH Non-tidal coastal plain stream	Minimum 100 ft vegetated buffer
2288	533-5.00-47.00	Broom Solar Partners	Frankford School Road	AR-1	Solar Farm	Introduced to County Council 7/13/21; Application heard by P&Z 2/10/22. Recommended Approval on 3/10/22	6/1/2021	TRC 2020 Broom Solar Project	Freshwater forested/shrub wetlands bordering parcel	Minimum 100 ft vegetated buffer



PROJECT

BEACH HIGHWAY SOLAR: 4MWac

PROJECT ADDRESS
 18019 BEACH HIGHWAY ELLENDALE, DE 19941
 SUSSEX COUNTY
 PARCEL 230-26.00-39.00
 ZONE: AR-1

REVISION LIST

6/1/22	TAX DITCH ROW
10/26/22	ADDED DETAILS

PROJECT INFORMATION

Project Latitude	38.806715
Project Longitude	-75.436411
Utility Name	DELMARVA
Min. Ambient Temperature	0°C
Max. Ambient Temperature	40°C
Meter Number	OPEN

ARRAY 1

Module Name	JINKO 535W
Inverter	SUNGROW 250
Tilt Angle	SAT
No. of Modules	11,421
DC String Length	27
No. of Strings	423

ARRAY 2

Module Name	
Inverter	
Tilt Angle	
No. of Modules	
DC String Length	
No. of Strings	

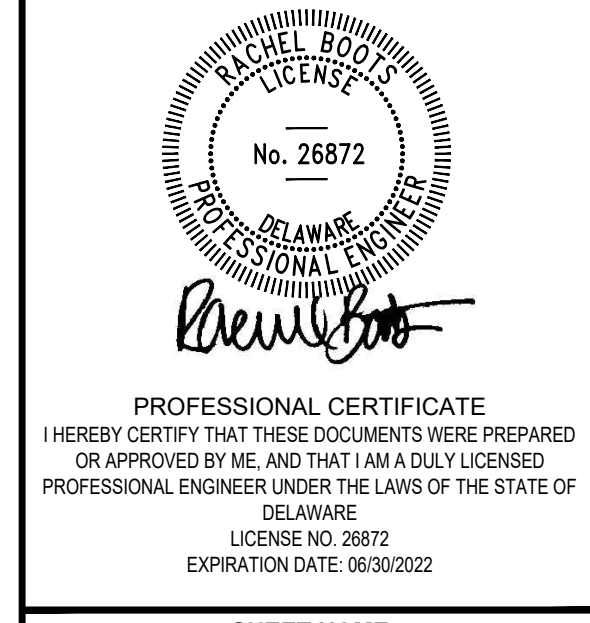
ARRAY 3

Module Name	
Inverter	
Tilt Angle	
No. of Modules	
DC String Length	
No. of Strings	



COMPANY CONTACT INFO

COMPANY NAME: Community Power Group
 COMPANY ADDRESS: 5636 Connecticut Ave #42729 Washington, DC 20015
 COMPANY PHONE: 202-844-6423
 EMAIL: mborkowski@communitypowergroup.com



PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF DELAWARE
 LICENSE NO. 26872
 EXPIRATION DATE: 06/30/2022

CONDITIONAL USE PLAN C100

SCALE 1" = 100' DATE 11/8/2021

SITE DEVELOPER INFORMATION
 NAME: COMMUNITY POWER GROUP
 ADDRESS: 5636 CONNECTICUT AVE, #42729 WASHINGTON, DC 20015
 PHONE: 202-844-6423
 CONTACT: MICHAEL BORKOWSKI
 EMAIL: MBORKOWSKI@COMMUNITYPOWERGROUP.COM

SITE OWNER INFORMATION
 NAME: REED PROPERTIES
 ADDRESS: PO BOX 216 MILTON DE CONTACT: DONNA REED

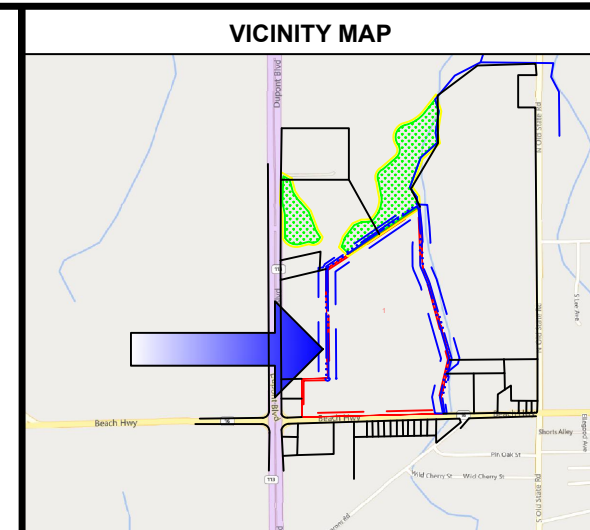
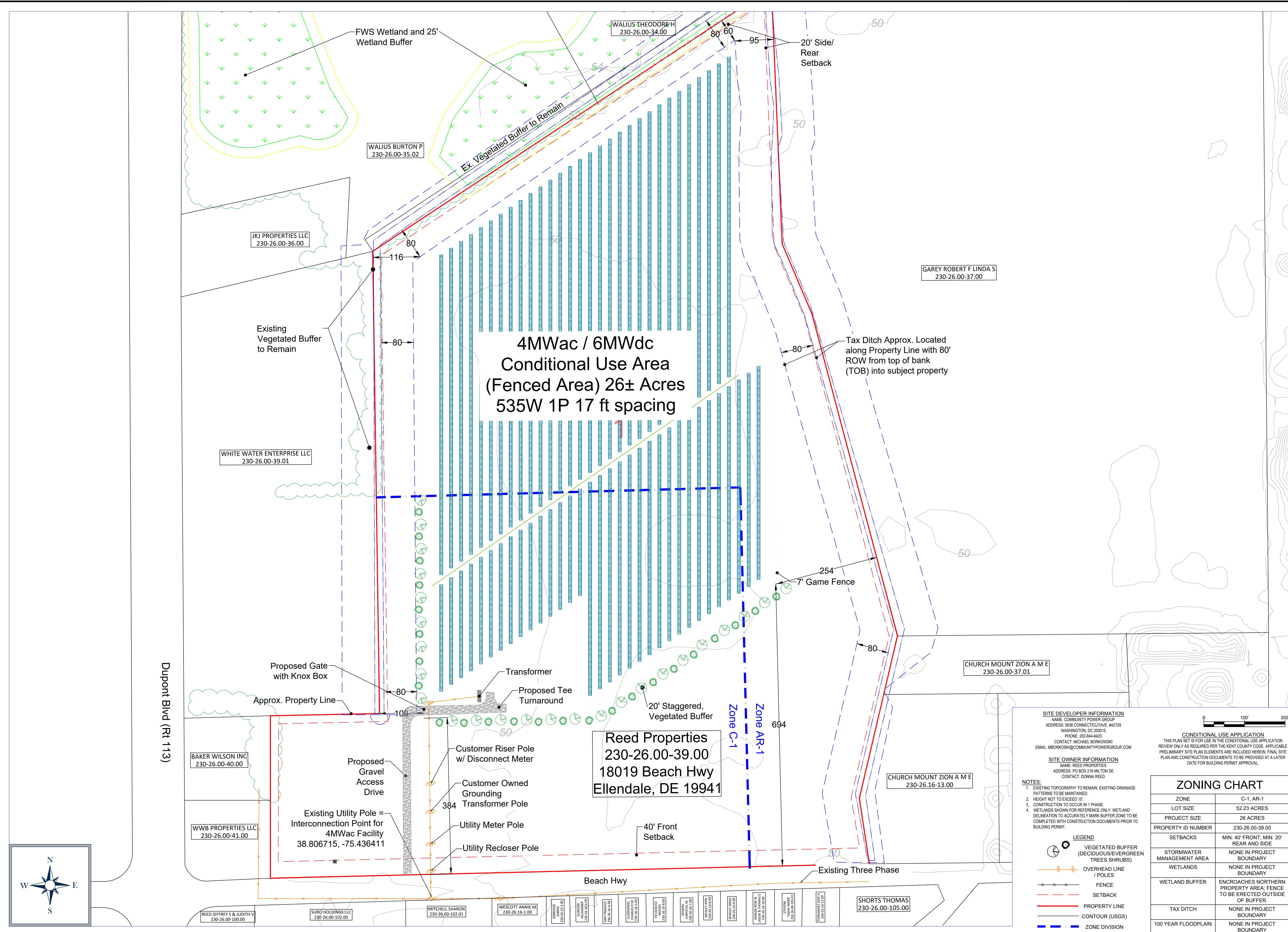
NOTES:
 1. EXISTING TOPOGRAPHY TO REMAIN. EXISTING DRAINAGE PATTERNS TO BE MAINTAINED.
 2. HEIGHT NOT TO EXCEED 16'.
 3. CONSTRUCTION TO OCCUR IN 1 PHASE.
 4. WETLANDS SHOWN FOR REFERENCE ONLY. WETLAND DELINEATION TO ACCURATELY MARK BUFFER ZONE TO BE COMPLETED WITH CONSTRUCTION DOCUMENTS PRIOR TO BUILDING PERMIT.

LEGEND
 VEGETATED BUFFER (DECIDUOUS/EVERGREEN TREES SHRUBS)
 OVERHEAD LINE / POLES
 FENCE
 SETBACK
 PROPERTY LINE
 CONTOUR (USGS)
 ZONE DIVISION

CONDITIONAL USE APPLICATION
 THIS PLAN SET IS FOR USE IN THE CONDITIONAL USE APPLICATION REVIEW ONLY AS REQUIRED PER THE KENT COUNTY CODE. APPLICABLE PRELIMINARY SITE PLAN ELEMENTS ARE INCLUDED HEREIN. FINAL SITE PLAN AND CONSTRUCTION DOCUMENTS TO BE PROVIDED AT A LATER DATE FOR BUILDING PERMIT APPROVAL.

ZONING CHART

ZONE	C-1, AR-1
LOT SIZE	52.23 ACRES
PROJECT SIZE	26 ACRES
PROPERTY ID NUMBER	230-26.00-39.00
SETBACKS	MIN. 40' FRONT, MIN. 20' REAR AND SIDE
STORMWATER MANAGEMENT AREA	NONE IN PROJECT BOUNDARY
WETLANDS	NONE IN PROJECT BOUNDARY
WETLAND BUFFER	ENCROACHES NORTHERN PROPERTY AREA. FENCE TO BE ERECTED OUTSIDE OF BUFFER.
TAX DITCH	NONE IN PROJECT BOUNDARY
100 YEAR FLOODPLAIN	NONE IN PROJECT BOUNDARY



PROJECT

BEACH HIGHWAY SOLAR: 4MWac

PROJECT ADDRESS
 18019 BEACH HIGHWAY ELLENDALE, DE 19941
 SUSSEX COUNTY
 PARCEL 230-26.00-39.00
 ZONE: AR-1

REVISION LIST

6/1/22	TAX DITCH ROW
10/26/22	ADDED DETAILS

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Meter Number	OPEN

ARRAY 1

Module Name	JINKO 535W
Inverter	SUNGROW 250
Tilt Angle	SAT
No. of Modules	11,421
DC String Length	27
No. of Strings	423

ARRAY 2

Module Name	
Inverter	
Tilt Angle	
No. of Modules	
DC String Length	
No. of Strings	

ARRAY 3

Module Name	
Inverter	
Tilt Angle	
No. of Modules	
DC String Length	
No. of Strings	



COMPANY CONTACT INFO

COMPANY NAME: Community Power Group
 COMPANY ADDRESS: 5636 Connecticut Ave #42729 Washington, DC 20015
 COMPANY PHONE: 202-844-6423
 EMAIL: mborkowski@communitypowergroup.com

CONDITIONAL USE APPLICATION

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PROFESSIONAL CERTIFICATE

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LICENSE NO. 26872
 EXPIRATION DATE: 06/30/2022

CONDITIONAL USE PLAT C101

SCALE 1" = 100' DATE 10/26/2022

SITE DEVELOPER INFORMATION

NAME: COMMUNITY POWER GROUP
 ADDRESS: 5636 CONNECTICUT AVE, #42729 WASHINGTON, DC 20015
 PHONE: 202-844-6423
 CONTACT: MICHAEL BORKOWSKI
 EMAIL: MBORKOWSKI@COMMUNITYPOWERGROUP.COM

SITE OWNER INFORMATION

NAME: REED PROPERTIES
 ADDRESS: PO BOX 216 MILTON DE
 CONTACT: DONNA REED

NOTES:

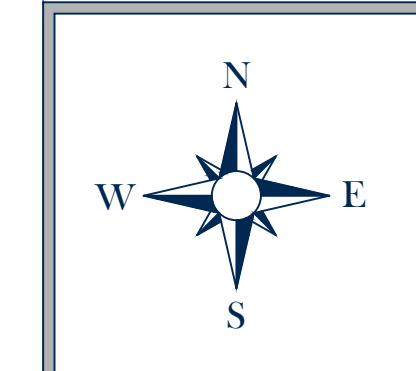
- EXISTING TOPOGRAPHY TO REMAIN. EXISTING DRAINAGE PATTERNS TO BE MAINTAINED.
- HEIGHT NOT TO EXCEED 15'
- CONSTRUCTION TO OCCUR IN 1 PHASE.
- WETLANDS SHOWN FOR REFERENCE ONLY. WETLAND DELINEATION TO ACCURATELY MARK BUFFER ZONE TO BE COMPLETED WITH CONSTRUCTION DOCUMENTS PRIOR TO BUILDING PERMIT.

LEGEND

- VEGETATED BUFFER (DECIDUOUS/EVERGREEN TREES SHRUBS)
- OVERHEAD LINE / POLES
- FENCE
- SETBACK
- PROPERTY LINE
- CONTOUR (USGS)
- ZONE DIVISION

ZONING CHART

ZONE	C-1, AR-1
LOT SIZE	52.23 ACRES
PROJECT SIZE	26 ACRES
PROPERTY ID NUMBER	230-26.00-39.00
SETBACKS	MIN. 40' FRONT, MIN. 20' REAR AND SIDE
STORMWATER MANAGEMENT AREA	NONE IN PROJECT BOUNDARY
WETLANDS	NONE IN PROJECT BOUNDARY
WETLAND BUFFER	ENCROACHES NORTHERN PROPERTY AREA. FENCE TO BE ERECTED OUTSIDE OF BUFFER.
TAX DITCH	NONE IN PROJECT BOUNDARY
100 YEAR FLOODPLAIN	NONE IN PROJECT BOUNDARY



SUSSEX COUNTY STANDARD CONDITIONS

- A. No storage facilities shall be constructed on the site.
- B. Lighting on the facility will only consist of perimeter lighting, if needed, for security purposes. All lighting shall be downward screened so that it does not shine on neighboring properties or roadways.
- C. One unlighted sign, not to exceed 32 square feet in size, shall be permitted.
- D. The site shall be secured by fencing with a gate with a "Knox Box" to accommodate emergency access by the local fire company or other emergency responders.
- E. All of the grounds, including the area outside of the fence, shall be maintained so that it does not become overgrown.
- F. All national industry standards shall be followed in the construction of the project.
- G. The Final Site Plan shall be subject to the review and approval of the Planning and Zoning Commission.

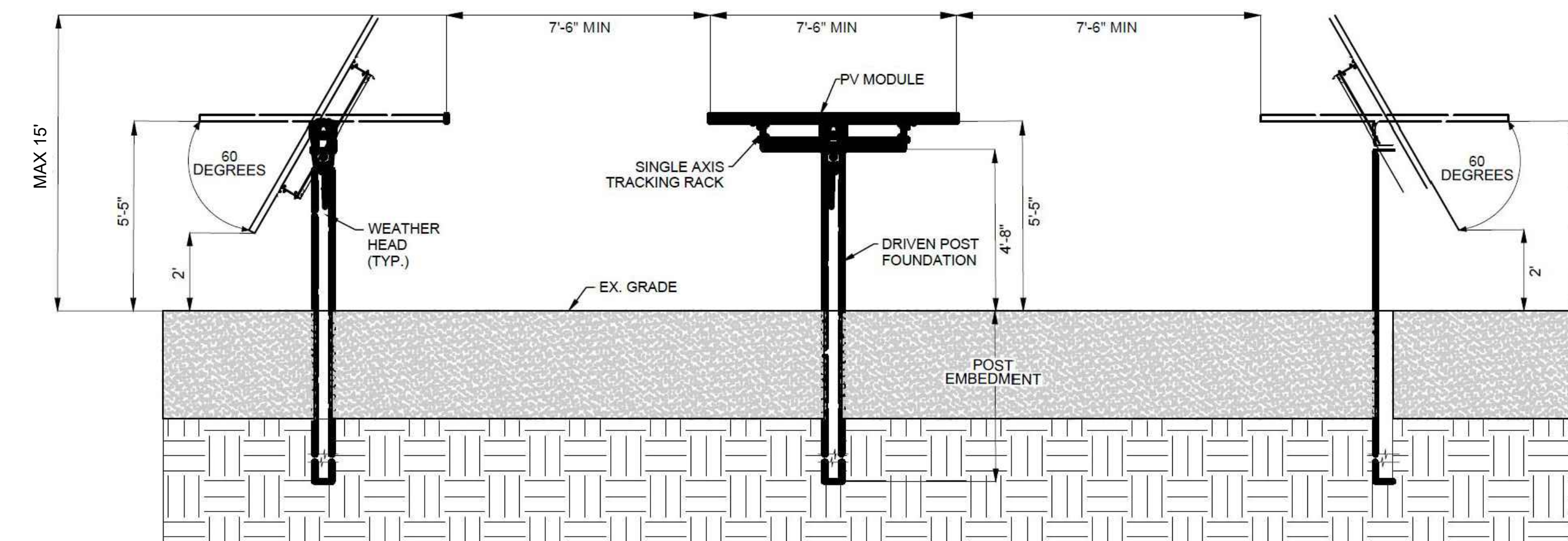
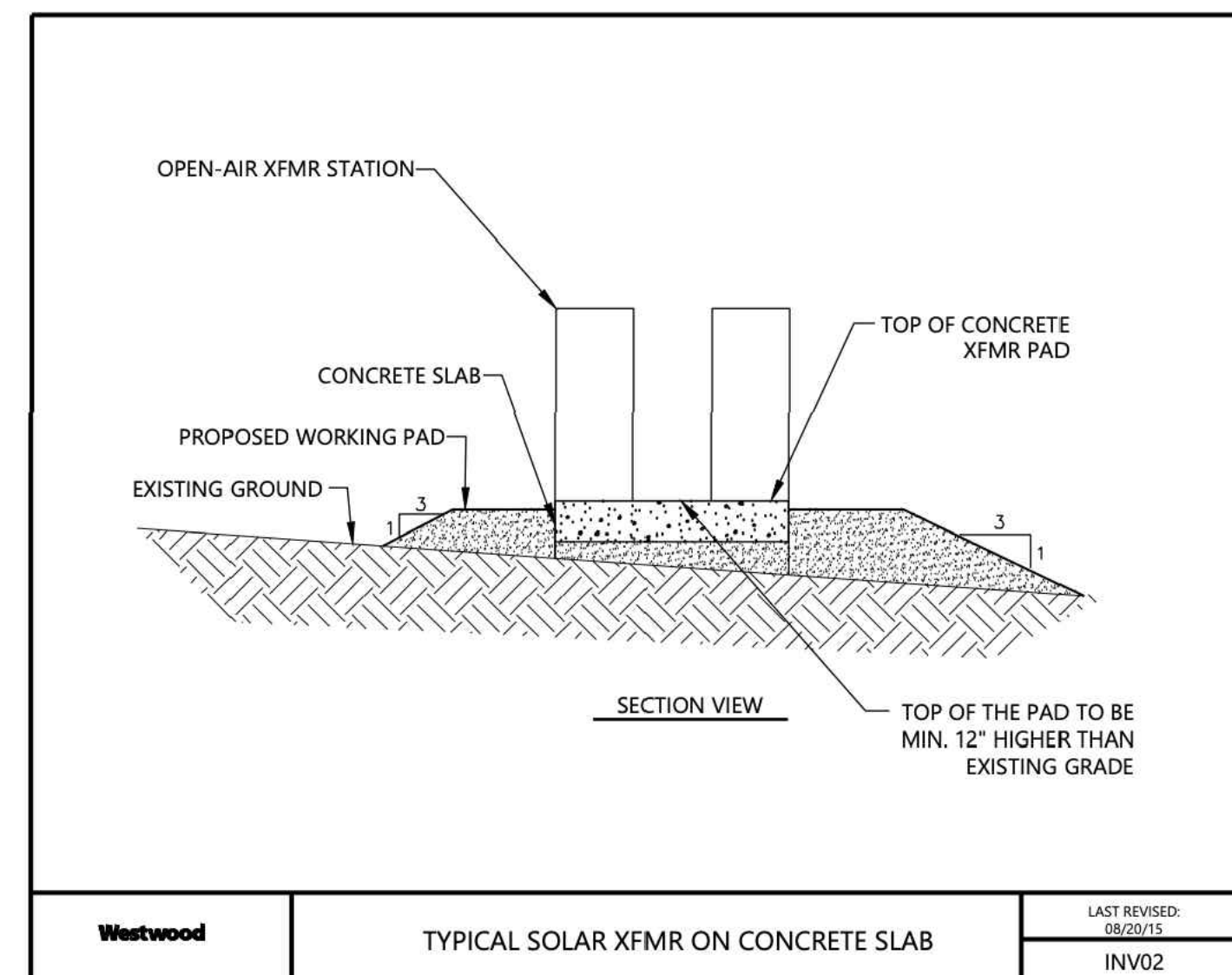
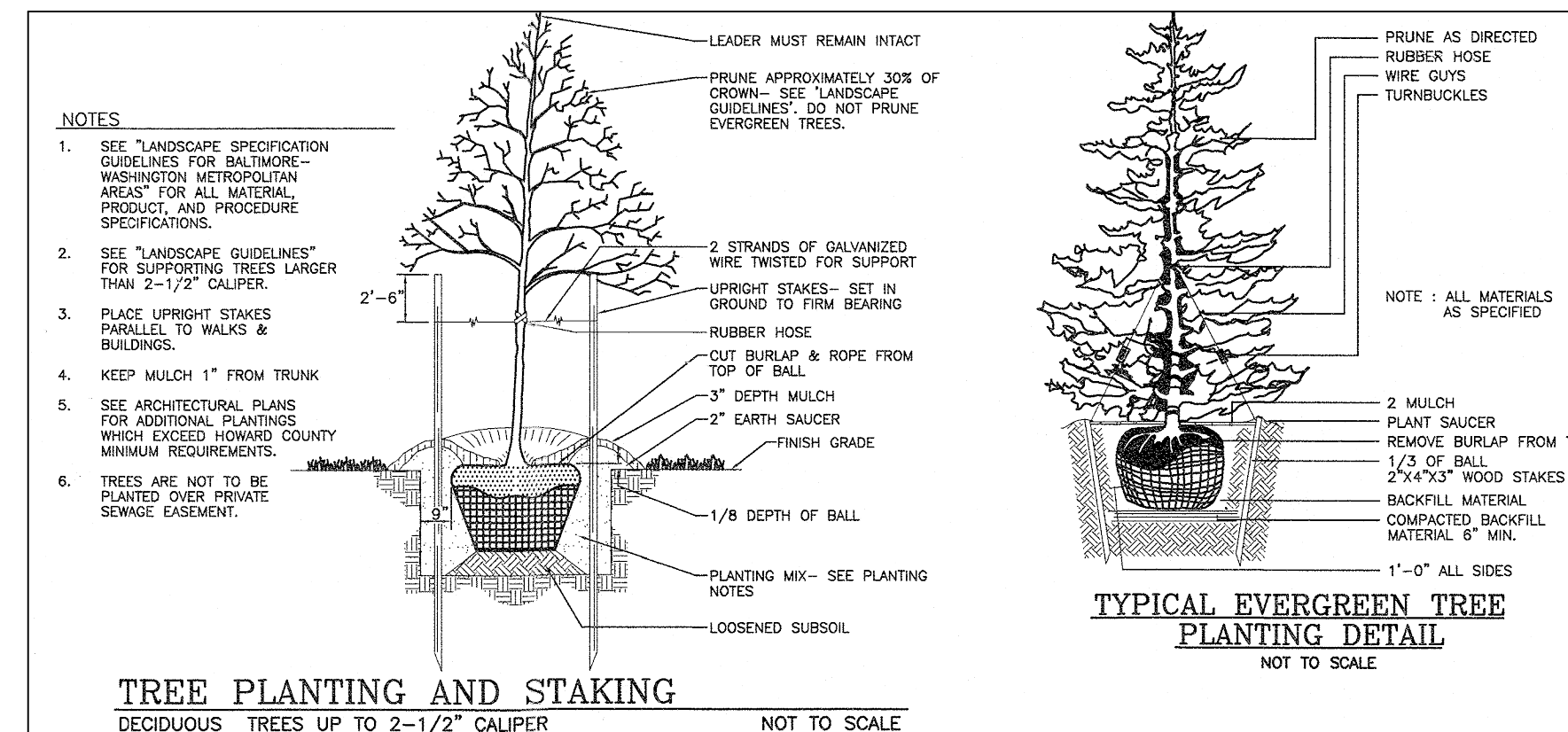
SUSSEX COUNTY STANDARD NOTES

1. The proposed facility is a public utility use under the Sussex County Zoning Code, and it meets the purposes of a Conditional Use in that it is of a public or semi-public character that is essential and desirable for the general convenience and welfare of Sussex County residents.
2. The proposed facility promotes Goal 7.3 of the Sussex County Comprehensive Plan which encourages the use of renewable energy options such as solar farms.
3. With the conditions imposed in this recommendation, the proposed use will not have any adverse impact on the neighboring or adjacent properties.
4. The proposed solar generation facility will not result in any noticeable increase in traffic on adjacent and neighboring roadways. There are no regular employees at the site, only periodic visits for inspections, maintenance, or repair of the solar panels.
5. No significant noise, dust or odor will be generated by the facility.

POLLINATOR MIX - LOW GROWTH/LOW MAINTENANCE GRASS MIX

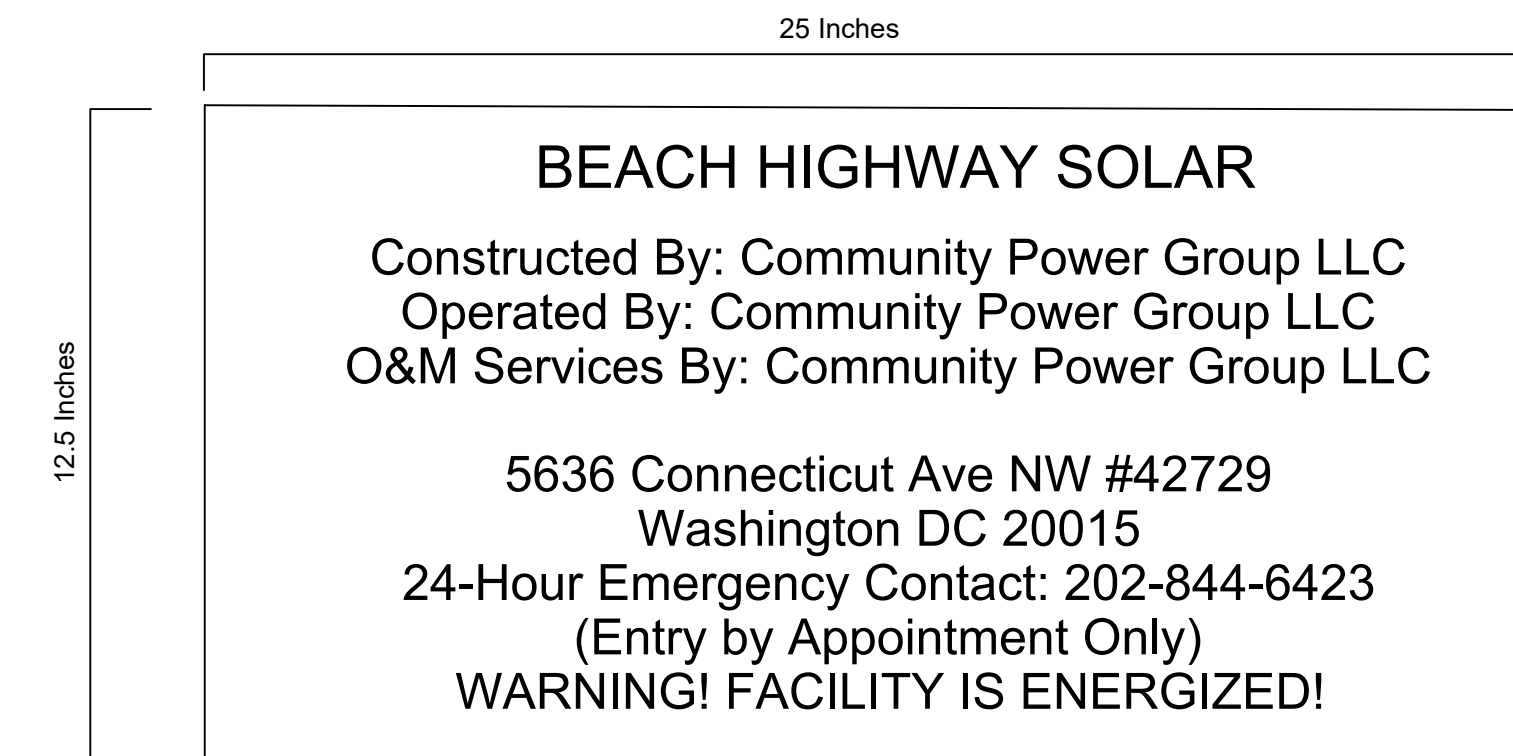
SEED MIX SHALL INCLUDE AT LEAST 40% NATIVE WILDFLOWER SEEDS AND THE REMAINDER SHALL BE NATIVE GRASS MIX.

1. SEEDING TO BE COMPLETED USING A DRILL SEED METHOD WHERE FEASIBLE WHERE DRILL SEEDING IS NOT FEASIBLE. THE APPLICATION OF SEED VIA ALTERNATE METHODS INCLUDING BUT NOT LIMITED TO, BROADCAST OR HYDROSEEDING.
2. BROADCAST SEEDING SHALL BE COMPLETED IF AMBIENT SOIL TEMPERATURE IS CONSISTENTLY 60 DEGREES F OR LOWER
3. IF NOT FROST SEEDING, DRILLING SHOULD OCCUR BETWEEN APRIL 1ST AND JUNE 1ST
4. THE CONTRACTOR SHALL NOT TILL OR FERTILIZE THE FIELDS, IF THE GROUND NEEDS TO BE TILLED, CONTRACTOR SHALL USE A VERTICAL PLOW



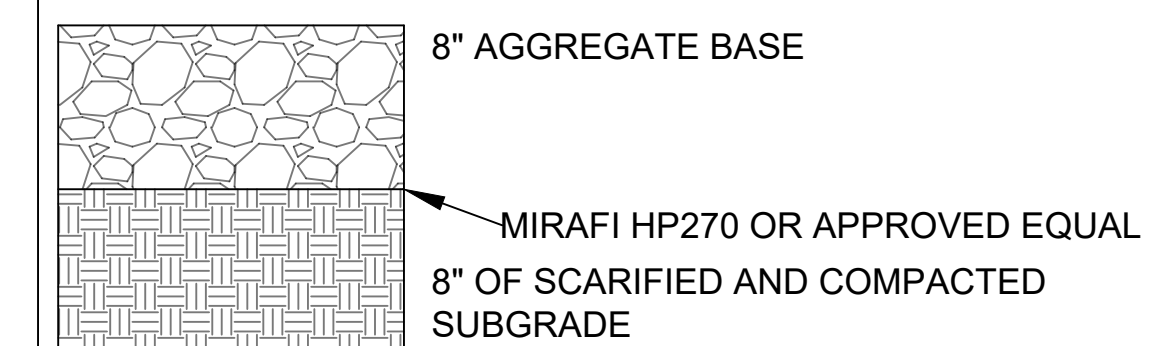
NOTE: Details shown for reference only. Construction details to be provided with site development plan and building permit documents.

Fence Sign Detail

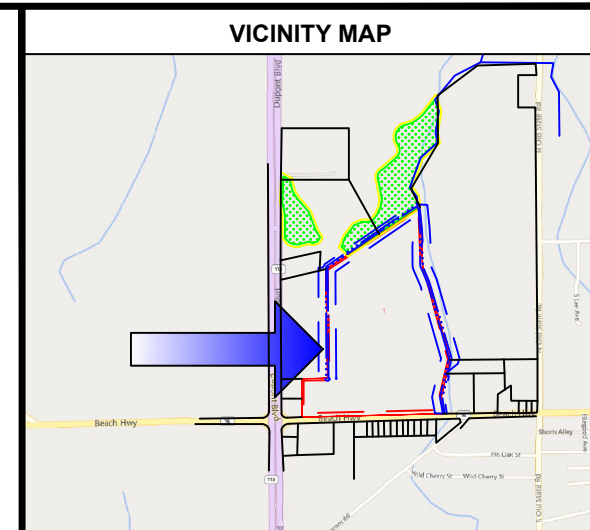


1. Sign to be installed on game fence near gate.
2. Sign will be constructed of aluminum or polyethylene material with UV-resistant ink.

Access Road Detail



- NOTES:**
1. STRUCTURAL SECTIONS SHOWN ARE THE MINIMUM THICKNESS REQUIREMENTS DURING NORMAL FIELD CONDITIONS. THE SECTIONS MAY NEED TO BE INCREASED BASED ON ACTUAL FIELD CONDITIONS AT THE TIME OF CONSTRUCTION. CONDITIONS INCLUDE BUT ARE NOT LIMITED TO CONSTRUCTION DURING UNUSUALLY WET PERIODS, OR IN LOW/WET AREAS.



PROJECT

BEACH HIGHWAY SOLAR: 4MWac

PROJECT ADDRESS

18019 BEACH HIGHWAY ELLENDALE, DE 19941
SUSSEX COUNTY
PARCEL 230-26.00-39.00
ZONE: AR-1

REVISION LIST

6/1/22	TAX DITCH ROW
10/26/22	ADDED DETAILS

PROJECT INFORMATION

Project Latitude	38.806715
Project Longitude	-75.436411
Utility Name	DELMARVA
Min. Ambient Temperature	0°C
Max. Ambient Temperature	40°C
Meter Number	OPEN

ARRAY 1

Module Name	JINKO 535W
Inverter	SUNSGROW 250
Tilt Angle	SAT
No. of Modules	11,421
DC String Length	27
No. of Strings	423

ARRAY 2

Module Name	
Inverter	
Tilt Angle	
No. of Modules	
DC String Length	
No. of Strings	

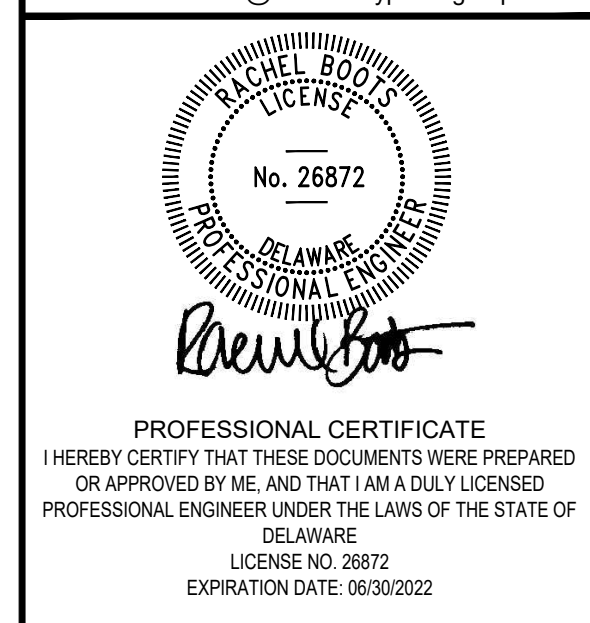
ARRAY 3

Module Name	
Inverter	
Tilt Angle	
No. of Modules	
DC String Length	
No. of Strings	



COMPANY CONTACT INFO

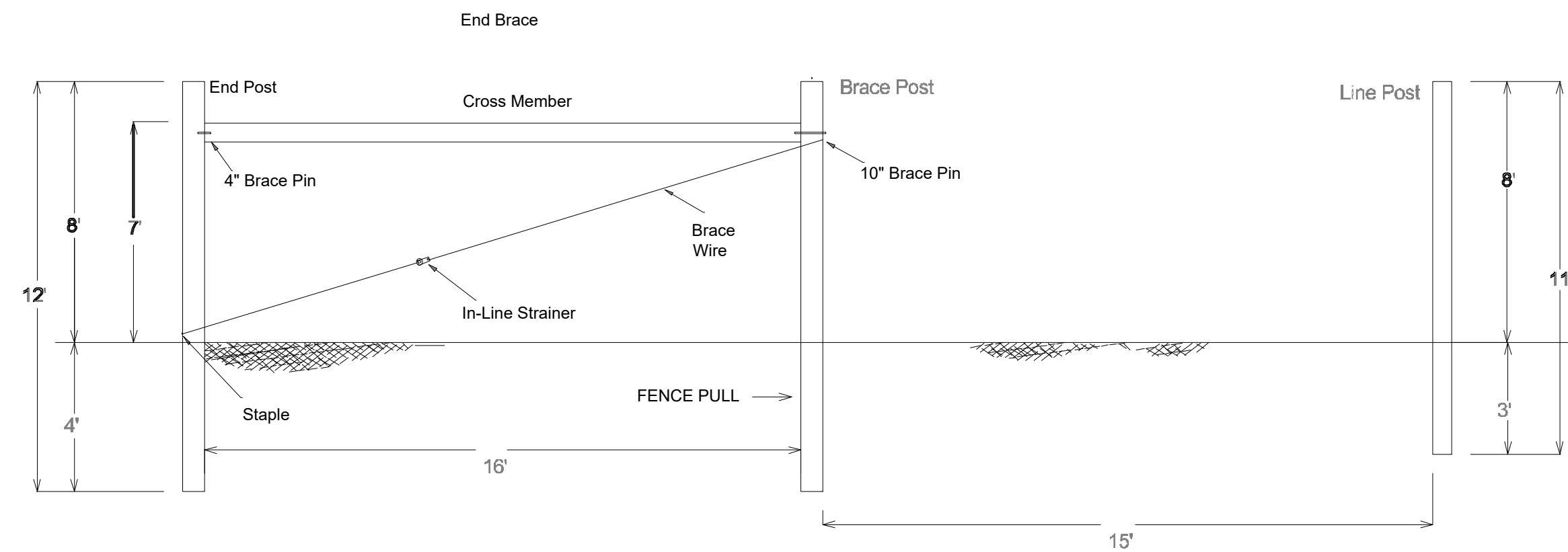
COMPANY NAME: Community Power Group
COMPANY ADDRESS: 5636 Connecticut Ave #42729 Washington, DC 20015
COMPANY PHONE: 202-844-6423
EMAIL: mborkowski@communitypowergroup.com



SHEET NAME

DETAILS AND NOTES C102

SCALE: N.T.S. | DATE: 10/26/2022



End Brace Material Specifications		
Item	Quantity	Description
Brace Posts	2	12' x 7" Pressure Treated Wood Posts
Cross Members	1	16' x 5" Pressure Treated Wood Posts*
Brace Pins	1	1/2" x 4" Galvanized Pin
Brace Pins	2	1/2" x 10" Galvanized Pin
Brace Wire		Double Wrap 12 1/2 ga Class 3 High Tensile Wire
Wire Strainer	1	Ratchet Type Inline Strainer
Staples	2	1 3/4" Class 3 Double Barbed

*2 3/8" Sch 40 Galvanized Pipe may also be used for Cross Members.

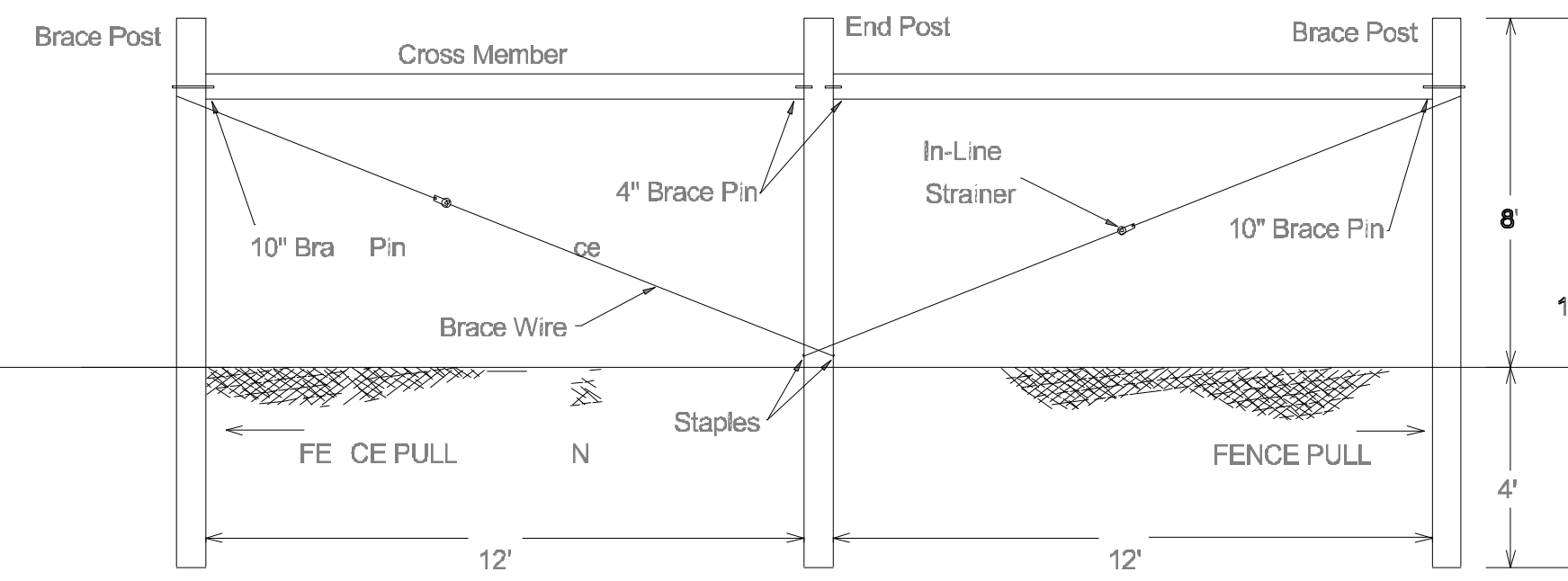
END BRACE CONSTRUCTION

1. DRIVE IN OR AUGER AND TAMP END POST TO DEPTH SHOWN IN DETAIL.
2. TIE OFF A GUIDE WIRE TO END POST AT GROUND LEVEL. PULL WIRE TO END POST OF NEXT BRACE AND TIE OFF AT GROUND LEVEL. SET ALL OTHER T-POSTS, LINE POSTS, BRACE POSTS AND END POSTS ALONG THIS GUIDE WIRE.
3. SET OTHER BRACE POST OF THE END BRACE AT A MINIMUM OF 16' FROM END POST.
4. TO ESTABLISH LOCATION OF CROSS MEMBER, MEASURE THE DISTANCE FROM THE BOTTOM OF FENCE FABRIC TO A POINT MIDWAY BETWEEN 2ND AND 3RD WIRE FROM THE TOP (APPROX. 67 1/2"). USING THIS MEASUREMENT, MARK THE INSIDE OF BOTH BRACE POSTS.
5. AT MARKINGS, DRILL A 1/2" HOLE 2" DEEP ON INSIDE OF END POST AND DRILL A 1/2" HOLE THROUGH THE OPPOSITE BRACE POST. SET 4" BRACE PIN AT END POST AND START 10" BRACE PIN IN BRACE POST.
6. DRILL PILOT HOLES IN ENDS OF CROSS MEMBER. SET ONE END OF CROSS MEMBER ON 4" PIN, THEN LIFT OPPOSITE END TO

ALIGN WITH 10" PIN. USING A HAMMER, DRIVE THE 10" PIN INTO BRACE POST, LEAVING 1" EXPOSED FOR INSTALLATION OF BRACE WIRE.

7. DRIVE A BARBED STAPLE PARTIALLY IN AT GROUND LEVEL ON THE BACK SIDE OF END POST. HANG ANOTHER STAPLE OVER TOP LEG OF DRIVEN STAPLE TO PREVENT BRACE WIRE FROM BINDING AND BITING INTO END POST.
8. GUIDE BRACE WIRE THROUGH DRIVEN STAPLE AND UP AND OVER 10" BRACE PIN, BACK DOWN THROUGH STAPLE AND OVER 10" PIN AGAIN. THIS IS THE DOUBLE WRAP FOR THE BRACE WIRE.
9. INSTALL WIRE STRAINER ON BRACE WIRE ON OPPOSITE SIDE OF BRACE AWAY FROM STAY-TUFF. USE STRAINER TO TIGHTEN BRACE WIRE UNTIL BRACE POST MOVES ABOUT 1/4" AWAY FROM SOIL.

In-Line Brace



Line Post Specifications	
Line Posts	11' x 6" Pressure Treated Wood Posts

LINE POST CONSTRUCTION

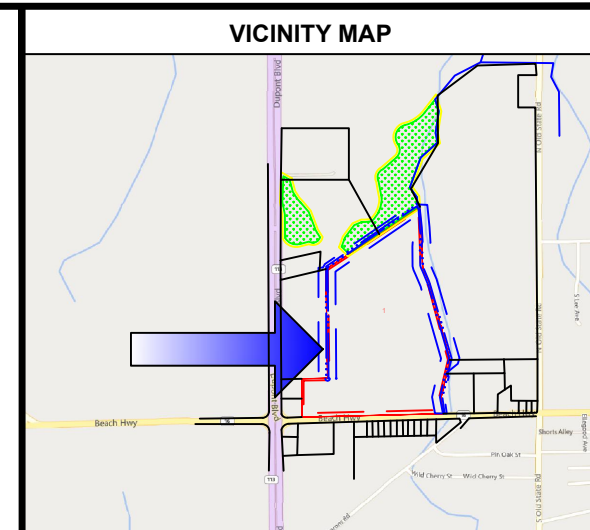
1. SET LINE POSTS ALONG GUIDE WIRE USING A 15' SPACING.
2. USE 15' POST SPACING AS A GUIDELINE. IN ROUGH TERRAIN A CLOSER POSTS SPACING WILL BE REQUIRED.
3. A LINE POST SHOULD BE PLACED ON TOP OF HIPS AND IN BOTTOM OF ALL DIPS.

In-Line Brace Material Specifications		
Item	Quantity	Description
Brace Posts	3	12' x 7" Pressure Treated Wood Posts
Cross Members	2	12' x 6" Pressure Treated Wood Posts
Brace Pins	2	1/2" x 4" Galvanized Pin
Brace Pins	2	1/2" x 10" Galvanized Pin
Wire Strainer	2	Double Wrap 12 1/2 ga Class 3 High Tensile Wire
Wire Strainer	2	Ratchet Type Inline Strainer
Staples	4	1 3/4" Class 3 Double Barbed

*2 3/8" Sch 40 Galvanized Pipe may also be used for Cross Members.

IN-LINE BRACE CONSTRUCTION

1. DRIVE OR AUGER AND TAMP END POST ALONG GUIDE WIRE TO DEPTH SHOWN IN DETAIL.
2. SET BRACE POSTS ALONG GUIDE WIRE 12' ON EITHER SIDE OF END POST.
3. TO ESTABLISH LOCATION OF CROSS MEMBERS, MEASURE THE DISTANCE FROM THE BOTTOM OF FENCE FABRIC TO A POINT MIDWAY BETWEEN 2ND AND 3RD WIRE FROM THE TOP (APPROX. 67 1/2"). USING THIS MEASUREMENT, MARK THE INSIDE OF END POST AND BOTH BRACE POSTS.
4. AT MARKINGS, DRILL A 1/2" HOLE 2" DEEP ON BOTH SIDES OF END POST AND DRILL A 1/2" HOLE THROUGH BOTH BRACE POSTS. SET ONE 4" BRACE PIN IN EACH HOLE IN END POST AND START 10" BRACE PINS IN BRACE POSTS.
5. DRILL PILOT HOLES IN ENDS OF CROSS MEMBERS. SET ONE END OF CROSS MEMBER ON 4" PIN, THEN LIFT OPPOSITE END TO ALIGN WITH 10" PIN. USING A HAMMER, DRIVE THE 10" PIN INTO BRACE POST, LEAVING 1" EXPOSED FOR INSTALLATION OF BRACE WIRE. REPEAT THIS STEP FOR SECOND CROSS MEMBER.
6. DRIVE A BARBED STAPLE PARTIALLY IN AT GROUND LEVEL ON BOTH SIDES OF END POST. HANG ANOTHER STAPLE OVER TOP LEG OF EACH DRIVEN STAPLE TO PREVENT BRACE WIRE FROM BINDING AND BITING INTO END POST.
7. GUIDE BRACE WIRE THROUGH DRIVEN STAPLE AND UP AND OVER 10" BRACE PIN, BACK DOWN THROUGH STAPLE AND OVER 10" PIN AGAIN. THIS IS THE DOUBLE WRAP FOR THE BRACE WIRE. REPEAT THIS STEP FOR THE OTHER END OF THE IN-LINE BRACE.
8. INSTALL ONE WIRE STRAINER ON EACH BRACE WIRE ON OPPOSITE SIDE OF BRACE AWAY FROM STAY-TUFF FABRIC. USE STRAINERS TO TIGHTEN BRACE WIRES UNTIL BRACE POSTS MOVE ABOUT 1/4" AWAY FROM SOIL.



PROJECT
BEACH HIGHWAY SOLAR: 4MWac

PROJECT ADDRESS
18019 BEACH HIGHWAY ELLENDALE, DE 19941
SUSSEX COUNTY
PARCEL 230-26.00-39.00
ZONE: AR-1

REVISION LIST	
6/1/22	TAX DITCH ROW
10/26/22	ADDED DETAILS

PROJECT INFORMATION	
Project Latitude	38.806715
Project Longitude	-75.436411
Utility Name	DELMARVA
Min. Ambient Temperature	0°C
Max. Ambient Temperature	40°C
Meter Number	OPEN

ARRAY 1	
Module Name	JINKO 535W
Inverter	SUNGROW 250
Tilt Angle	SAT
No. of Modules	11,421
DC String Length	27
No. of Strings	423

ARRAY 2	
Module Name	
Inverter	
Tilt Angle	
No. of Modules	
DC String Length	
No. of Strings	

ARRAY 3	
Module Name	
Inverter	
Tilt Angle	
No. of Modules	
DC String Length	
No. of Strings	



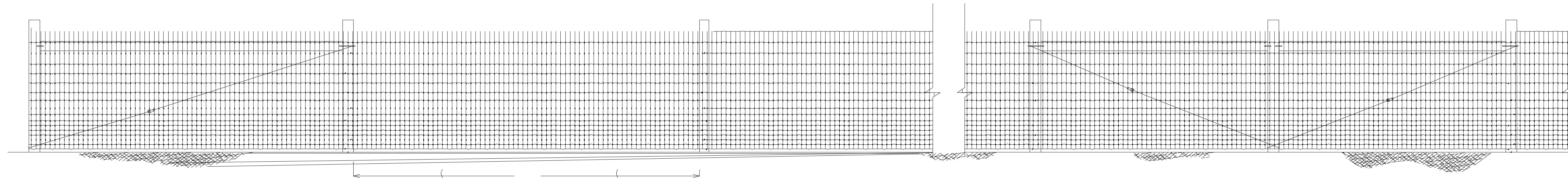
COMPANY CONTACT INFO
COMPANY NAME: Community Power Group
COMPANY ADDRESS: 5636 Connecticut Ave #42729 Washington, DC 20015
COMPANY PHONE: 202-844-6423
EMAIL: mborkowski@communitypowergroup.com

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF DELAWARE
LICENSE NO. 26872
EXPIRATION DATE: 06/30/2022

SHEET NAME
FENCE DETAILS C103

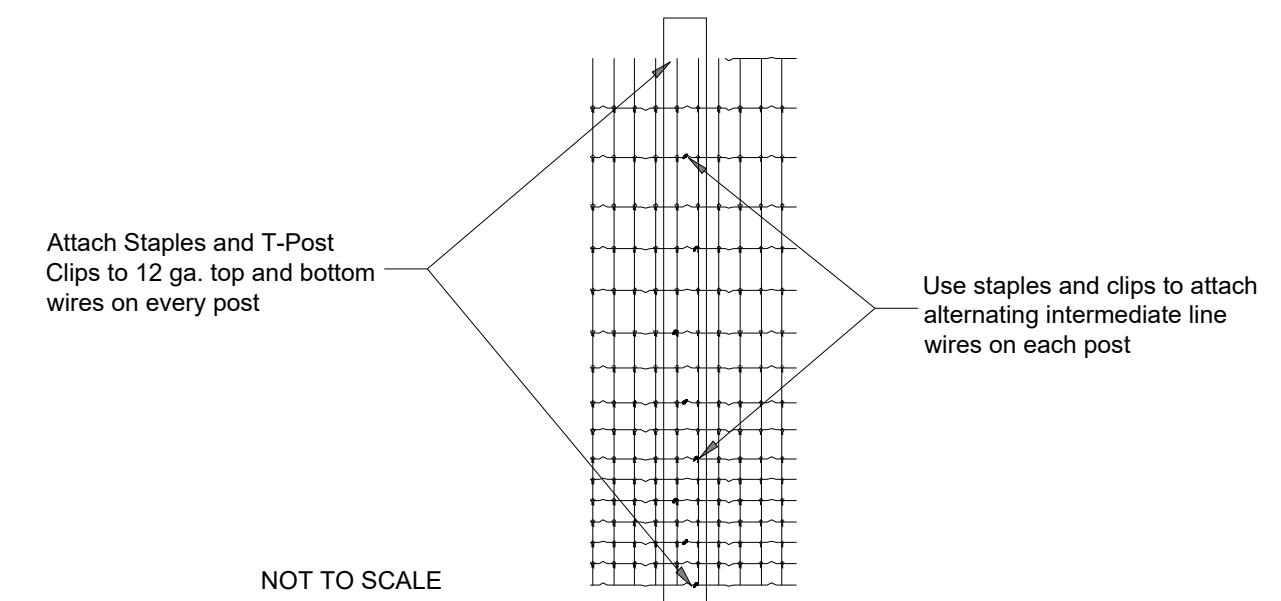
SCALE: N.T.S. DATE: 10/26/2022

1 STAY-TUFF FENCE 1775-3 WOOD BRACE CONSTRUCTION
NOT TO SCALE

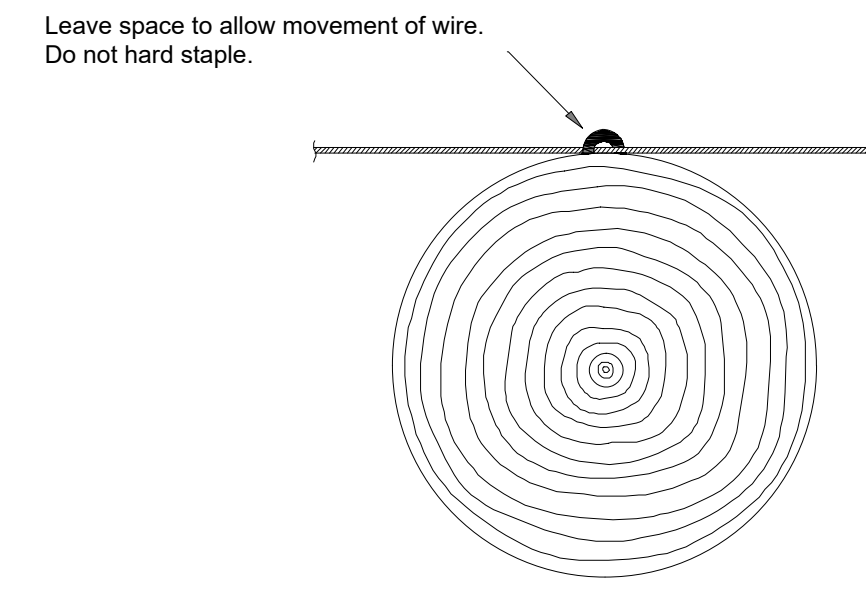


2 STAY-TUFF FENCE 1775-3 FIXED KNOT FENCE
NOT TO SCALE

- GENERAL NOTES**
1. ALL WOVEN WIRE FENCE FABRIC SHALL BE CONTINUOUS STAY FIXED KNOT JOINT STYLE FABRIC
 2. DESIGN NO. 1775-3 AND SHALL MEET OR EXCEED ASTM A 116 FOR NO. 12 1/2 GRADE 175.
 3. TOP AND BOTTOM LINE WIRES SHALL BE 12 GAGE GRADE 175 AND INTERMEDIATE LINE WIRES SHALL BE 12 1/2 GAGE GRADE 175. VERTICAL STAY WIRES SHALL BE 12 1/2 GAGE GRADE 125. KNOT WIRES SHALL BE 13 GAGE GRADE 60. ALL WIRES SHALL HAVE TYPE 2 CLASS 3 COATING.
 4. VERTICAL STAY WIRES SHOULD BE SPACED EVERY 3' AND HORIZONTAL LINE WIRES SHOULD BE SPACED AS SHOWN IN DETAIL.
 5. INSTALL 1775-6 FABRIC SO THAT 3"x3" OPENINGS ARE ON BOTTOM.
 6. ATTACH FENCE FABRIC ON INSIDE OF BRACES AND POSTS. FABRIC SHALL BE ATTACHED TO END OF POSTS OF END BRACES AND IN-LINE BRACES BY WRAPPING AND TIEING WIRE WITH A HIGH TENSILE SLIP KNOT.
 7. TENSION FABRIC BY PULLING TO CENTER OF PULL USING STRETCHER BARS AND STRETCHER BAR PULLERS. TENSION FABRIC UNTIL TENSION CRIMPS ARE FLATTENED 25 TO 50% FROM ORIGINAL HEIGHT. DO NOT OVER TENSION.
 8. SPLICES IN FABRIC SHALL BE MADE WITH 12 1/2 - 16 GAGE LONG CRIMP SLEEVES WITH STATED HOLDING STRENGTH OF 1500 LBS MINIMUM. SLEEVES SHOULD BE CRIMPED USING APPROVED CRIMP TOOL.
 9. SLEEVES SHOULD BE CRIMPED WORKING FROM END CLOSEST TO THE KNOT OUTWARD AND COMPRESSED ALONG ENTIRE LENGTH OF SLEEVE.
 10. FINISHED WIRE SPLICES SHALL NOT HAVE LOOSE WIRE TAILS EXTENDING MORE THAN 1/4" IN LENGTH.
 11. FENCE SHALL GENERALLY FOLLOW THE CONTOUR OF THE GROUND. BOTTOM WIRE OF FENCE SHOULD BE NO MORE THAN 3" ABOVE GROUND LEVEL.
 12. ATTACH FABRIC TO WOODEN POSTS USING 1 3/4" DOUBLE BARBED STAPLES. STAPLES SHALL BE MADE OF 8 GAGE CLASS 3 GALVANIZED WIRE AND SHALL BE DOUBLE BARBED.
 13. STAPLE 12 GAGE TOP AND BOTTOM WIRES ON EACH POST AS SHOWN IN DETAIL. STAPLES SHALL BE DRIVEN INTO POSTS WITH THE TOP STAPLE LEG ANGLED TO THE RIGHT AS SHOWN. STAGGER STAPLES ACROSS WOODEN POSTS AS SHOWN IN DETAIL. STAPLES SHOULD NOT BE HARD DRIVEN AGAINST FENCE WIRE. LEAVE A 1/8" TO 1/4" GAP BETWEEN STAPLE AND FENCE WIRE TO ALLOW FOR WIRE MOVEMENT.
 14. CONTRACTOR TO PROVIDE A 24" WIDE DOUBLE SWING GATE TO MATCH THE FENCE.



3 WIRE ATTACHMENT TO WOODEN POSTS
NOT TO SCALE



4 WIRE SPACING AND GAGES
NOT TO SCALE

NOTE: Details shown for reference only. Construction details to be provided with site development plan and building permit documents.

Conditional Use Permit Application

Beach Highway Solar

Ellendale, Delaware



Applicant:

Community Power Group, LLC
5636 Connecticut Ave #42729
Washington, DC 20015

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Section A - DeIDOT Service Level Request Form

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STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. Box 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

November 15, 2021

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
P.O. Box 417
Georgetown, DE 19947

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Community Power Group, LLC** proposed land use application, which we received on November 5, 2021. This application is for an approximately 52.23-acre parcel (Tax Parcel: 230-26.00-39.00). The subject land is located on the north side of Beach Highway (State Route 16) about 250 feet east of the intersection with DuPont Boulevard (US Route 113). The subject land is currently split zoned C-1 (General Commercial) and GR (General Residential), the applicant seeks a conditional use approval to build a community solar farm.

Per the 2019 Delaware Vehicle Volume Summary, the annual and summer average daily traffic volumes along Beach Highway from Old State Road (Sussex Road 213) to DuPont Highway, are 6,935 and 8,917 vehicles per day, respectively.

Based on our review, we estimate that the above land use will generate fewer than 50 vehicle trips per day. This number of trips is below DeIDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. DeIDOT's regulations specify the minimum TIS warrants as 50 vehicle trips in any hour and/or 500 vehicle trips per day. Because the proposed land use would generate fewer than 50 vehicle trips per day, we consider the development's traffic impact to be **diminutive** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DeIDOT's description of this application as diminutive with regard to warranting a TIS does not mean that it is diminutive in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

If the County approves this application, the applicant should be reminded that DeIDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Mr. Jamie Whitehouse
Page 2 of 2
November 15, 2021

Please contact Ms. Annamaria Furmato, at (302) 760-2710, if you have questions concerning this correspondence.

Sincerely,



T. William Brockenbrough, Jr.
County Coordinator
Development Coordination

TWB:afm

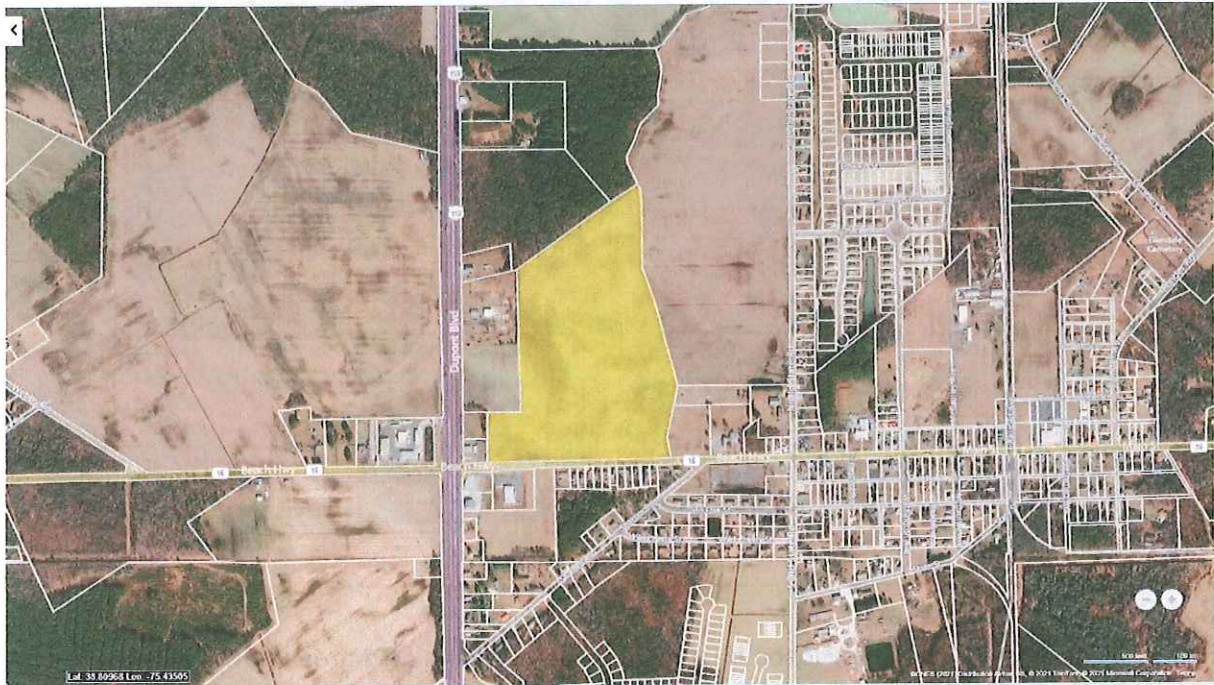
cc: Community Power Group, LLC, Applicant
Elliot Young, Sussex County Planning & Zoning
David Edgell, Coordinator, Cabinet Committee on State Planning Issues
Todd Sammons, Assistant Director, Development Coordination
Scott Rust, South District Public Works Manager, Maintenance & Operations
Steve McCabe, Sussex County Review Coordinator, Development Coordination
Derek Sapp, Subdivision Manager, Development Coordination
Kevin Hickman, Subdivision Manager, Development Coordination
Brian Yates, Subdivision Manager, Development Coordination
John Andrescavage, Subdivision Manager, Development Coordination
James Argo, South District Project Reviewer, Maintenance & Operations
Claudy Joinville, Project Engineer, Development Coordination
Annamaria Furmato, Project Engineer, Development Coordination

Section B - Application for Conditional Use Permit

Section C - Project Overview

C.1 General Overview

The Community Power Group, LLC (“CPG”) is developing a 4MW community solar farm located at 18019 Beach Highway, Ellendale, DE 19941 in Sussex County (“County”). The project has been designed to meet the required setbacks and zoning requirements for the AR-1 and C-1 zones. Included in this application is a Decommissioning Plan and a Glare Study, which determined no glare associated with this proposed project.

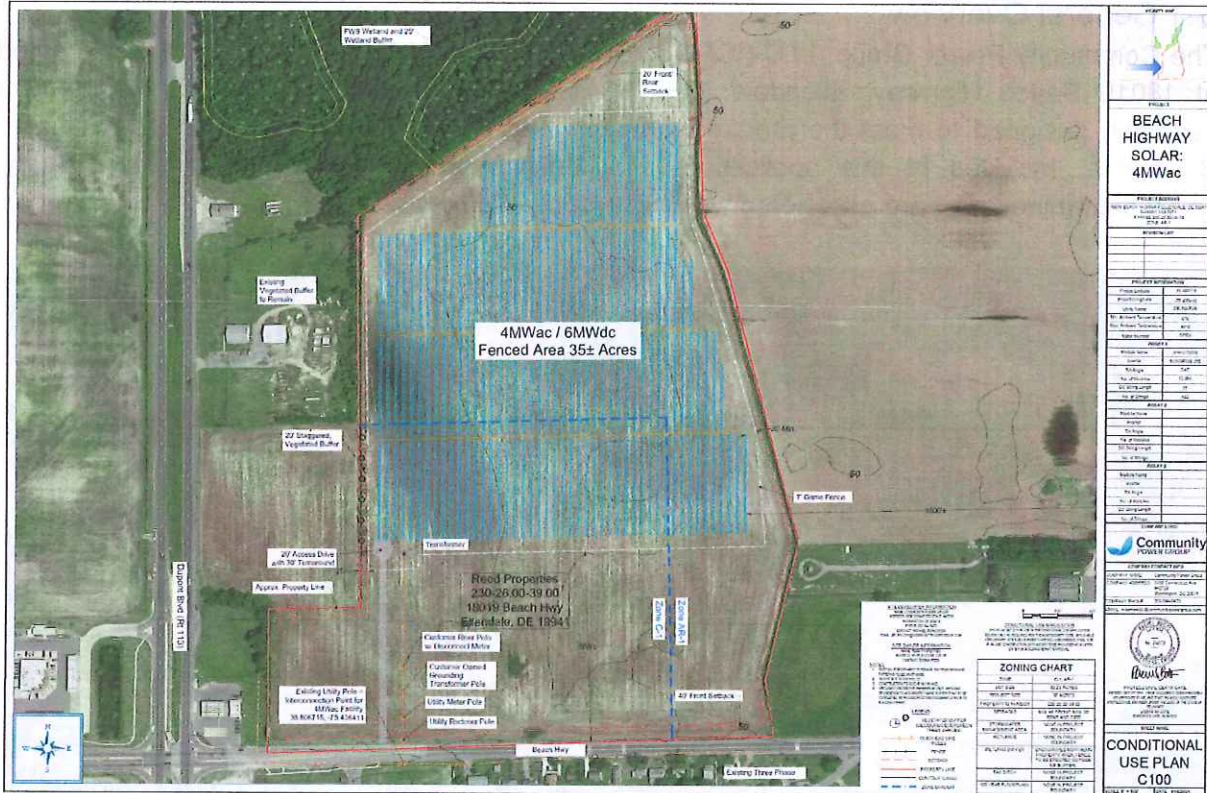


General Information:

- Parcel Address: 18019 Beach Highway, Ellendale, DE 19941
- Sussex County Parcel ID: 230-26.00-39.00
- Total parcel size: 52.23 acres
- Solar Project Size: 4 MWs AC (~35-acre facility)
- Solar Project Coordinates: 38.809318°, -75.434858°
- Parcel District: General Commercial (C-1) & Agricultural-Residential 1 (AR-1)

C.2 Site Plan

See image below for reference. Full size Conditional Use Plan provided with this application.



C.3 Site Characteristics

The solar array area will be enclosed by a game fence, and the field area under the array will be covered with pollinator-friendly ground-cover. Emergency and maintenance access will be provided with an access road that leads to the array entrance. CPG has conducted a glare analysis of this project through ForgeSolar, an FAA analysis tool for determining glare from a solar array, and it was concluded that no glare will be produced from this solar array. The project will also be decommissioned upon the end of the facility's life (approximately 25-30 years). Please see the Decommissioning Plan for more information regarding the terms of decommissioning of the solar array.

CPG used the Information for Planning and Consultation (IPaC) desktop review tool from the U.S. Fish and Wildlife Service to identify if any critical habitats exist on site for threatened and endangered species. It was determined that there are no critical habitats within the project area. The project area was also reviewed by the U.S. Fish and Wildlife Service Chesapeake Bay Ecological Services Field Office, and the species list stated that there were no critical habitats and no refuge lands or fish hatcheries within the project area. Please see Attachment III to read more.



This property borders a wetland to the north of the property line, but there are no other wetlands on site, and we do not intend to develop on top of any wetlands. The site does not contain any historic properties and the project does not physically impact any historic properties on the national register according to the Delaware Division of Historical and Cultural Affairs National Register-Listed Properties' online mapper.

C.4 Zoning Standards

§ 115-22 & § 115-79 *Conditional Uses* provides for the conditional use standards for public utilities or public service uses, generating or treatment plants in AR-1 and C-1 districts, as defined in § 115-4 *Definitions and Word Usage*. See Section D for a full breakdown of this project's code compliance.

C.5 Interconnection

Community Power Group has submitted an application with Delmarva Power & Light Co. on November 1st, 2021 and expects to have the full interconnection study completed by April 2022.

Section D - Compliance with Standards

D.1 - Conditional Use Compliance

Sussex County provides a complete code of ordinances for Conditional Use Permits in AR-1 (Agricultural Residential-1) and C-1 (General Commercial) districts. Solar Farms currently require a Conditional Use permit within any Zoning District of Sussex County.

A solar photovoltaic system falls under the definition provided in § 115-4 *Definitions and Word Usage* for a Public Utility Service. It reads as follows, "The generation, transmission, and/or distribution of electricity, gas, steam, communications, and water; the collection and treatment of sewage and solid waste; and the provision of mass transit to the public." A Public Utility Service Facility also applies to a solar photovoltaic system, and its definition states that it applies to, "any use or structure associated with the provision of utility services." This solar farm project has been developed as a community solar generation facility and therefore, meets the definition of a Public Utility Service/Service Facility.

Per the recommendations of the Sussex County Council Planning and Zoning Department and the definitions set forth in the Sussex County zoning ordinance codes, CPG shall comply with any applicable standards set forth in pursuit of a Conditional Use Permit (CUP).

D.2 - AR-1 Agricultural Residential 1 District Compliance

Article IV: AR-1 and AR-2 Agricultural Residential Districts, § 115-19 Purpose

The purpose of these districts is to provide for a full range of agricultural activities and to protect agricultural lands, as one of the county's most valuable natural resources, from the depreciating effect of objectionable, hazardous and unsightly uses. They should also protect established agricultural operations and activities. These districts are also intended for protection of watersheds, water resources, forest areas and scenic values and, at the same time, to provide



for low-density single-family residential development, together with such churches, recreational facilities and accessory uses as may be necessary or are normally compatible with residential surroundings. The AR regulations seek to prevent untimely scattering of more-dense urban uses, which should be confined to areas planned for efficient extension of public services.

§ 115-22 Conditional uses

Conditional Uses in an AR-1 District are provided in this section stating, "Public utilities or public service uses, buildings, generating or treatment plants, pumping or regulator stations or substations, but not telephone central offices," may be permitted as a conditional use when approved in accordance with the provisions of this chapter.

§ 115-25 Height, Area, & Bulk Requirements

C. Minimum yard requirements. Minimum yard requirements set forth for AR-1 and AR-2 districts are as follows; Depth of front yard: 40 feet, Width of side yard: 15 feet, Depth of rear yard: 20 feet, Minimum lot width: 100 feet; Minimum area: 20,000 square feet; Minimum depth: 100 feet.

The proposed project has a front setback of 558 feet from property line to fence and a minimum of 20 feet side and rear yard setbacks as shown on the Site Plan. The lot width is greater than 100 feet.

D. Maximum height requirements. Maximum height requirements set forth for AR-1 and AR-2 districts shall be 42 feet.

The proposed solar facility and associated fencing will not exceed 15 feet in height at any location.

The following table was used to design the site layout: Zoning 115 Attachment 1: General Table of Height, Area and Bulk Requirements:

<https://ecode360.com/attachment/SU1223/SU1223-115a%20Table%20I.pdf>

§ 115-173 Preliminary site plan

A preliminary site plan complying with the requirements of Article XXVIII shall accompany an application for approval of a conditional use under this Article, together with such information as may be required for a determination of the nature of the proposed use and its effect on the Comprehensive Plan, the neighborhood and surrounding properties. Procedures for approval of a conditional use and approval and amendment of site plans are contained in Article XXVIII.

Please see Conditional Use Plan as included with this application.

D.3 - C-1 General Commercial District Compliance

Article XI: C-I General Commercial District, § 115-76 Purpose

The purpose of this district is to provide for retail shopping, personal services and a wide variety of commercial and miscellaneous service activities generally serving a community-wide area.

Such uses are generally located along major arterial roadways where a general mixture of commercial and service activity now exists. Such uses shall not be characterized by extensive warehousing, frequent heavy trucking activity, open storage of materials or the nuisance factors of dust, odor and noise associated with manufacturing.

§ 115-79. Conditional uses

Conditional Uses in a C-1 District are provided in this section stating, "Public utilities or public service uses, buildings, generating or treatment plants, pumping or regulator stations or substations, but not telephone central offices," may be permitted as a conditional use when approved in accordance with the provisions of this chapter.

§ 115-82. Height, area and bulk requirements

A. Minimum lot sizes shall be as follows: Minimum lot width: 75 feet; Minimum area: 10,000 square feet; Minimum depth: 100 feet.

The proposed project has a front setback of 558 feet from property line to fence and a minimum of 20 feet side and rear yard setbacks as shown on the Site Plan. The lot width is greater than 75 feet.

B. Minimum yard requirements. Minimum yard requirements set forth for C-1 districts are as follows: Depth of front yard: 60 feet; Width of side yard: 5 feet; Depth of rear yard: 5 feet.

The proposed project is well within the minimum yard requirements of this section, and there are no buildings/dwellings proposed for this project.

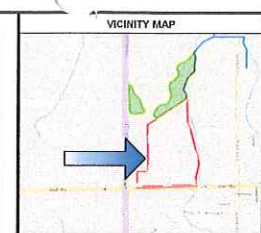
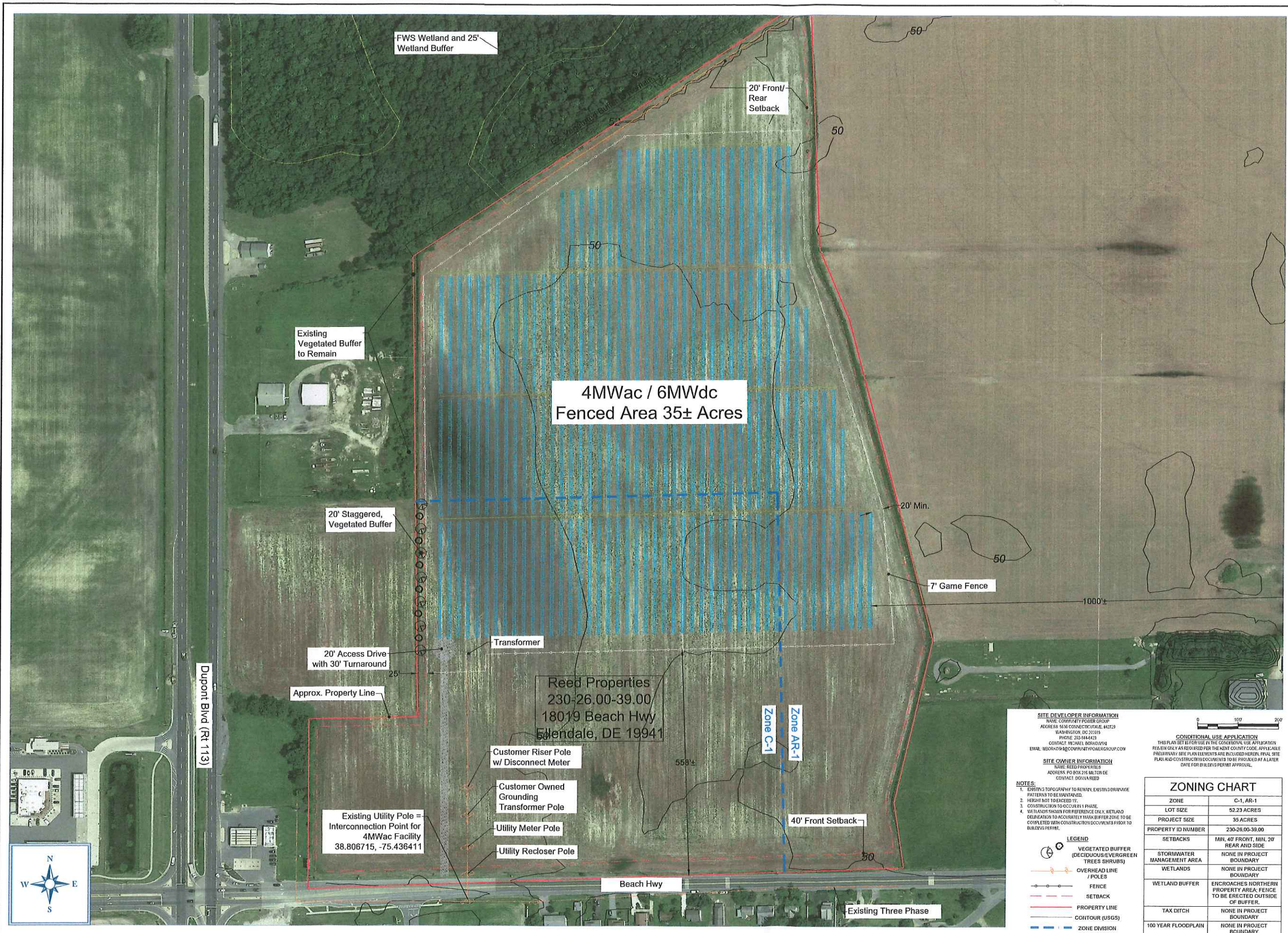
C. Maximum height: 42 feet.

The proposed solar facility and associated fencing will not exceed 15 feet in height at any location.

Section E - Attachments



Attachment I - Site Plans



PROJECT

BEACH HIGHWAY SOLAR: 4MWac

PROJECT ADDRESS
 18019 BEACH HIGHWAY ELLENDALE, DE 19941
 SUSSEX COUNTY
 PARCEL 230-26.00-39.00
 ZONE: AR-1

REVISION LIST

NO.	DESCRIPTION

PROJECT INFORMATION

Project Latitude	38.80715
Project Longitude	-75.436411
Utility Name	DELMARVA
Min. Ambient Temperature	0°C
Max. Ambient Temperature	40°C
Meter Number	OPEN

ARRAY 1

Module Name	JHKO 535W
Inverter	SUNGROW 250
Tilt Angle	SAT
No. of Modules	10,854
DC String Length	27
No. of Strings	402

ARRAY 2

Module Name	
Inverter	
Tilt Angle	
No. of Modules	
DC String Length	
No. of Strings	

ARRAY 3

Module Name	
Inverter	
Tilt Angle	
No. of Modules	
DC String Length	
No. of Strings	

COMPANY LOGO

COMPANY CONTACT INFO

COMPANY NAME: Community Power Group
 COMPANY ADDRESS: 5638 Connecticut Ave #42729 Washington, DC 20015
 COMPANY PHONE: 202-844-6423
 EMAIL: mboikovskij@communitypowergroup.com

SITE DEVELOPER INFORMATION
 NAME: COMMUNITY POWER GROUP
 ADDRESS: 5638 CONNECTICUT AVE #42729
 WASHINGTON, DC 20015
 PHONE: 202-844-6423
 CONTACT: MICHAEL BOROZOVNIK
 EMAIL: MBOROZOVNIK@COMMUNITYPOWERGROUP.COM

SITE OWNER INFORMATION
 NAME: REED PROPERTIES
 ADDRESS: PO BOX 26 MILTON DE
 CONTACT: DONALD REED

- NOTES:**
- EXISTING TOPOGRAPHY TO REMAIN EXISTING DRAINAGE PATTERNS TO BE MAINTAINED.
 - HEIGHT NOT TO EXCEED 15'
 - CONSTRUCTION TO OCCUR IN 1 PHASE.
 - WETLANDS SHOWN FOR REFERENCE ONLY. WETLAND DELINEATION TO ACCURATELY MARK BUFFER ZONE TO BE COMPLETED WITH CONSTRUCTION DOCUMENTS FROM A BULLETPROOF FIRM.

CONDITIONAL USE APPLICATION
 THIS PLAN SET IS FOR USE IN THE CONDITIONAL USE APPLICATION REVIEW ONLY AS REQUIRED FOR THE NEXT COUNTY CODE. AVAILABLE PRELIMINARY SITE PLAN ELEMENTS ARE INCLUDED HEREIN. FINAL SITE PLAN AND CONSTRUCTION DOCUMENTS IS TO BE PROVIDED AT A LATER DATE FOR BUILDING PERMIT APPROVAL.

ZONING CHART

ZONE	C-1, AR-1
LOT SIZE	52.23 ACRES
PROJECT SIZE	35 ACRES
PROPERTY ID NUMBER	230-26.00-39.00
SETBACKS	MIN. 40' FRONT, MIN. 20' REAR AND SIDE
STORMWATER MANAGEMENT AREA	NONE IN PROJECT BOUNDARY
WETLANDS	NONE IN PROJECT BOUNDARY
WETLAND BUFFER	ENCROACHES NORTHERN PROPERTY AREA. FENCE TO BE ERECTED OUTSIDE OF BUFFER.
TAX DITCH	NONE IN PROJECT BOUNDARY
100 YEAR FLOODPLAIN	NONE IN PROJECT BOUNDARY

- LEGEND**
- VEGETATED BUFFER (DECIDUOUS/EVERGREEN TREES SHRUBS)
 - OVERHEAD LINE / POLES
 - FENCE
 - SETBACK
 - PROPERTY LINE
 - CONTOUR (USGS)
 - ZONE DIVISION

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF DELAWARE.
 MICHAEL BOOZ
 LICENSE NO. 21192
 EXPIRATION DATE: 05/31/2022

CONDITIONAL USE PLAN C100

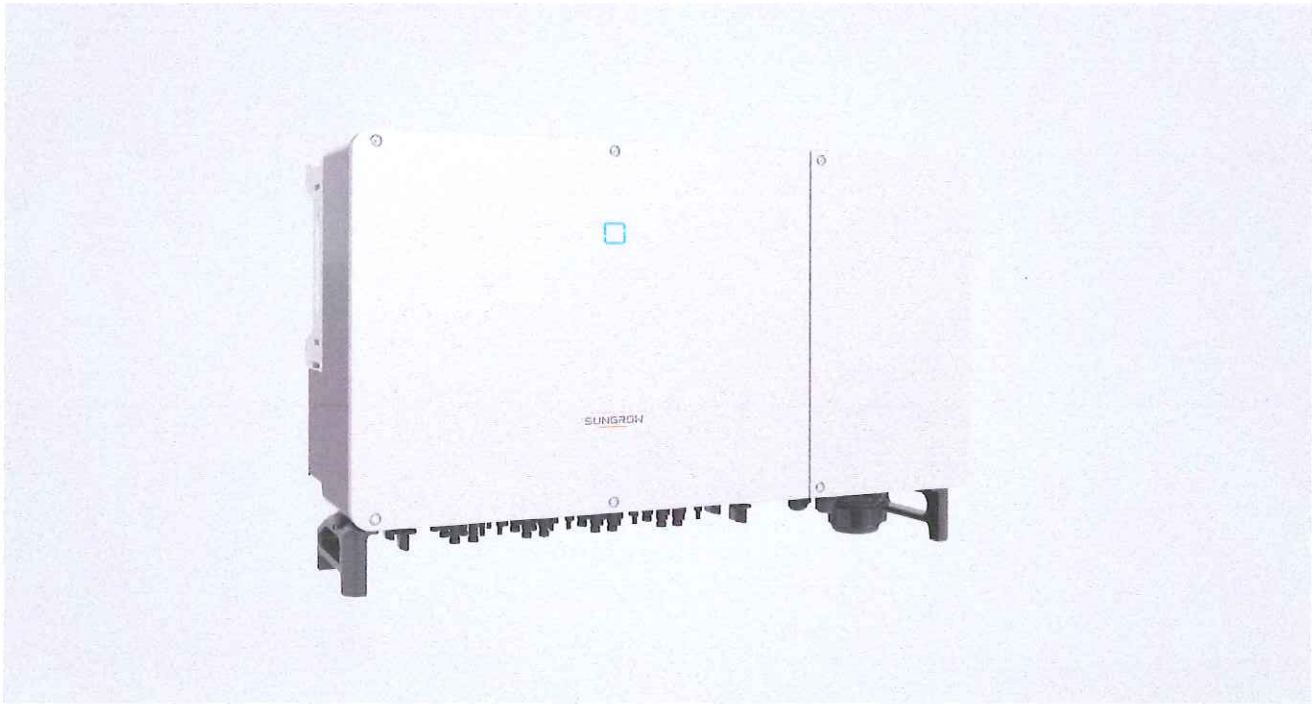
SCALE 1" = 100' DATE 11/9/2021



Attachment II - System Components

SG250HX-US

Multi-MPPT String Inverter for 1500 Vdc System



HIGH YIELD

- 12 MPPTs with max. efficiency 99%
- Compatible with bifacial module
- Built-in Anti-PID and PID recovery function



SMART O&M

- Touch free commissioning and remote firmware upgrade
- Online IV curve scan and diagnosis*
- Fuse free design with smart string current monitoring



LOW COST

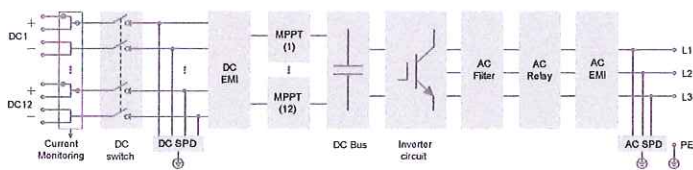
- Compatible with Al and Cu AC cables
- DC 2 in 1 connection enabled
- Power line communication (PLC)
- Reactive power at night function



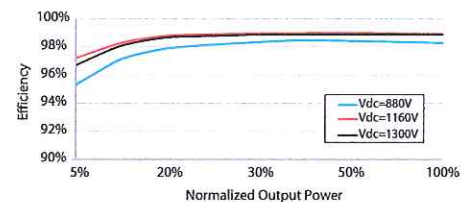
PROVEN SAFETY

- Integrated Arc fault circuit protection
- NEMA 4X protection and C5 anti-corrosion grade
- Type II SPD for both DC and AC

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG250HX-US
Input (DC)	
Max. PV input voltage	1500 V
Min. PV input voltage / Startup input voltage	600 V / 600 V
Nominal PV input voltage	1080 V
MPP voltage range	600 V – 1500 V
MPP voltage range for nominal power	860 V – 1300 V
No. of independent MPP inputs	12
Max. PV input current	26 A * 12
Max. DC short-circuit current	50 A * 12
Output (AC)	
AC output power	250 kVA @ 30 °C / 225 kVA @ 40 °C / 200 kVA @ 50 °C
Max. AC output current	180.5 A
Nominal AC voltage	3 / PE, 800 V
AC voltage range	680 – 880V
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 57 – 63 Hz
THD	< 3 % (at nominal power)
DC current injection	< 0.5 % I _n
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / connection phases	3 / 3
Efficiency	
Max. efficiency	99.0 %
CEC efficiency	98.5 %
Protection	
DC reverse connection protection	Yes
AC short circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
Ground fault monitoring	Yes
DC switch	Yes
AC switch	No
Arc fault circuit interrupter (AFCI)	Yes
PV String current monitoring	Yes
Reactive power at night function	Yes
PID protection	An-ti PID or PID recovery
Overvoltage protection	DC Type II and AC Type II
General Data	
Dimensions (W*H*D)	1051 * 660 * 363 mm (41.4" * 26" * 14.3")
Weight	99 kg (218.25 lbs)
Isolation method	Transformerless
Ingress protection rating	NEMA 4X
Night power consumption	< 2 W
Operating ambient temperature range	-30 to 60 °C (-22 to 140 °F)
Allowable relative humidity range (non-condensing)	0 – 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	5000 m (> 4000 m derating) 16404 ft (> 13123 ft derating)
Display	LED, Bluetooth+APP
Communication	RS485 / PLC
DC connection type	Amphenol UTX (Max. 6 mm ² 10AWG)
AC connection type	OT / DT terminal (Max. 300 mm ² 600 Kcmil)
Compliance	UL1741, UL1741SA, IEEE1547, IEEE1547.1, CSA C22.2 107.1-01-2001, FCC Part15 Sub-part B Class A Limits, California Rule 21,UL 1699B
Grid Support	Reactive power at night function, LVRT, HVRT, active & reactive power control and power ramp rate control, Volt/Watt, Frequency/Watt

*: Only compatible with Sungrow logger and iSolarCloud

TR Bifacial 72M 515-535 Watt

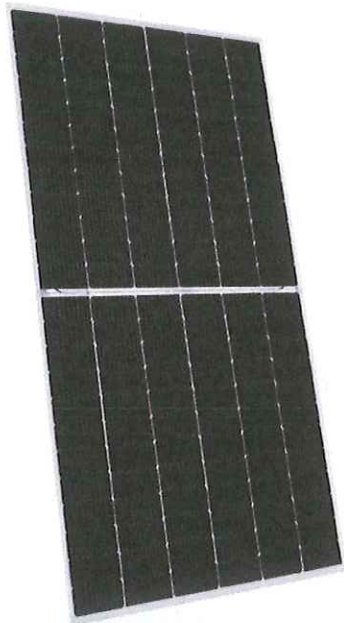
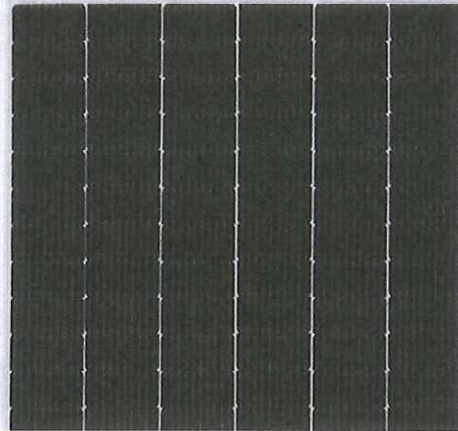
Tiling Ribbon (TR) Technology

Positive power tolerance of 0~+3%

ISO9001:2015, ISO14001:2015, ISO45001:2018
certified factory

IEC61215, IEC61730 certified product

TIGER Pro



KEY FEATURES



TR technology + Half Cell

TR technology with Half cell aims to eliminate the cell gap to increase module efficiency (bi-facial up to 21.16%)



MBB instead of 5BB

MBB technology decreases the distance between bus bars and finger grid line which is benefit to power increase.



Higher lifetime Power Yield

2% first year degradation,
0.45% linear degradation



Best Warranty

12 year product warranty,
30 year linear power warranty



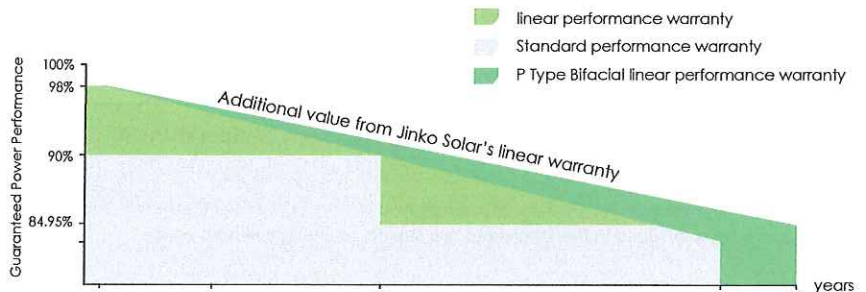
Strengthened Mechanical Support

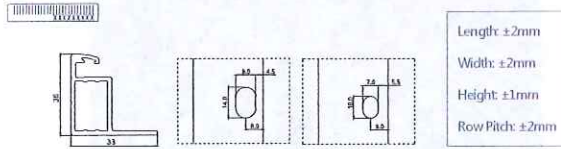
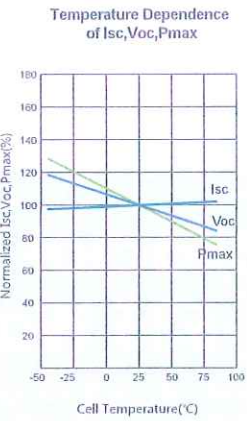
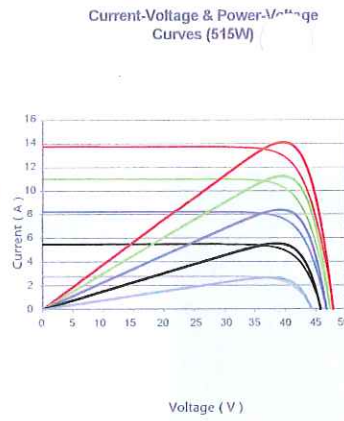
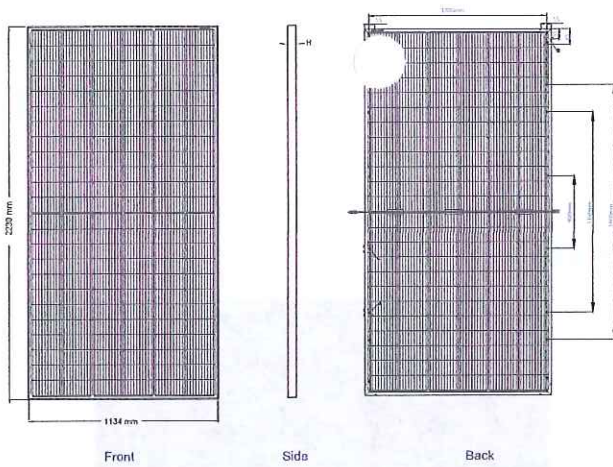
5400 Pa snow load, 2400 Pa wind load



LINEAR PERFORMANCE WARRANTY

12 Year Product Warranty • 30 Year Linear Power Warranty
0.45% Annual Degradation Over 30 years





Mechanical Characteristics	
Cell Type	P type Mono-crystalline
No. of cells	144 (2×72)
Dimensions	2230×1134×35mm (87.80×44.65×1.38 inch)
Weight	28.9 kg (63.71 lbs)
Front Glass	3.2mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Output Cables	TUV 1×4.0mm' (+): 290mm, (-): 145mm or Customized Length

Packaging Configuration
 (Two pallets = One stack)
 31pcs/pallets, 62pcs/stack, 620pcs/ 40'HQ Container

SPECIFICATIONS

Module Type	JKM515M-7TL4-TV		JKM520M-7TL4-TV		JKM525M-7TL4-TV		JKM530M-7TL4-TV		JKM535M-7TL4-TV	
	SCT	NOCT	SCT	NOCT	SCT	NOCT	SCT	NOCT	SCT	NOCT
Maximum Power (Pmax)	515Wp	383Wp	520Wp	387Wp	525Wp	391Wp	530Wp	394Wp	535Wp	398Wp
Maximum Power Voltage (Vmp)	40.08V	37.27V	40.22V	37.42V	40.36V	37.56V	40.49V	37.70V	40.63V	37.84V
Maximum Power Current (Imp)	12.85A	10.28A	12.93A	10.34A	13.01A	10.40A	13.09A	10.46A	13.17A	10.52A
Open-circuit Voltage (Voc)	48.58V	45.85V	48.72V	45.99V	48.86V	46.12V	48.99V	46.24V	49.13V	46.37V
Short-circuit Current (Isc)	13.53A	10.93A	13.61A	10.99A	13.69A	11.06A	13.77A	11.12A	13.85A	11.19A
Module Efficiency STC (%)	20.37%		20.56%		20.76%		20.96%		21.16%	
Operating Temperature(°C)	-40°C~+85°C									
Maximum system voltage	1500VDC (IEC)									
Maximum series fuse rating	25A									
Power tolerance	0~+3%									
Temperature coefficients of Pmax	-0.35%/°C									
Temperature coefficients of Voc	-0.28%/°C									
Temperature coefficients of Isc	0.048%/°C									
Nominal operating cell temperature (NOCT)	45±2°C									
Refer. Bifacial Factor	70±5%									

BIFACIAL OUTPUT-REAR SIDE POWER GAIN

		5%		15%		25%	
		Maximum Power (Pmax)	Module Efficiency STC (%)	Maximum Power (Pmax)	Module Efficiency STC (%)	Maximum Power (Pmax)	Module Efficiency STC (%)
5%	Maximum Power (Pmax)	541Wp	546Wp	551Wp	557Wp	562Wp	
	Module Efficiency STC (%)	21.38%	21.59%	21.80%	22.01%	22.21%	
15%	Maximum Power (Pmax)	592Wp	598Wp	604Wp	610Wp	615Wp	
	Module Efficiency STC (%)	23.42%	23.65%	23.87%	24.10%	24.33%	
25%	Maximum Power (Pmax)	644Wp	650Wp	656Wp	663Wp	669Wp	
	Module Efficiency STC (%)	25.46%	25.70%	25.95%	26.20%	26.45%	

* STC: ☀ Irradiance 1000W/m² 📱 Cell Temperature 25°C ☁ AM=1.5
 NOCT: ☀ Irradiance 800W/m² 📱 Ambient Temperature 20°C ☁ AM=1.5 🌬 Wind Speed 1m/s

Attachment III - Environmental Reviews

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Sussex County, Delaware



Local office

Chesapeake Bay Ecological Services Field Office

☎ (410) 573-4599

📠 (410) 266-9127

177 Admiral Cochrane Drive
Annapolis, MD 21401-7307

<http://www.fws.gov/chesapeakebay/>

<http://www.fws.gov/chesapeakebay/endsppweb/ProjectReview/Index.html>

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act requires Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Insects

NAME	STATUS
<p>Monarch Butterfly <i>Danaus plexippus</i></p> <p>Wherever found</p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none"> The monarch is a candidate species and not yet listed or proposed for listing. There are generally no section 7 requirements for candidate species (FAQ found here: https://www.fws.gov/savethemonarch/FAQ-Section7.html). <p>No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743</p>	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>

- Nationwide conservation measures for birds

<http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasu>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Breeds Oct 15 to Aug 31

Black-billed Cuckoo *Coccyzus erythrophthalmus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9399>

Breeds May 15 to Oct 10

Blue-winged Warbler *Vermivora pinus* Breeds May 1 to Jun 30

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Kentucky Warbler *Oporornis formosus* Breeds Apr 20 to Aug 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prairie Warbler *Dendroica discolor* Breeds May 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prothonotary Warbler *Protonotaria citrea* Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-headed Woodpecker *Melanerpes erythrocephalus* Breeds May 10 to Sep 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood Thrush *Hylocichla mustelina* Breeds May 10 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee

- was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
 - The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (☀)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

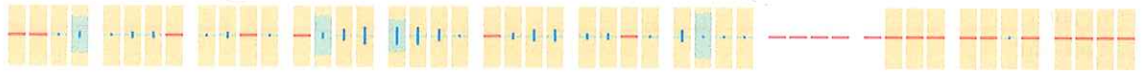
Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

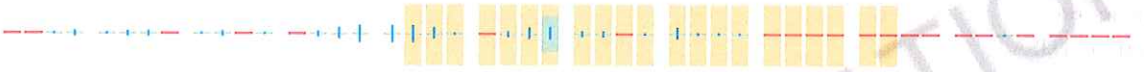
■ probability of presence
 ■ breeding season
 | survey effort
 - no data

SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

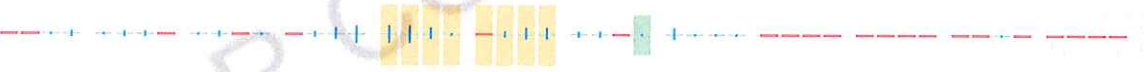
Bald Eagle
 Non-BCC
 Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



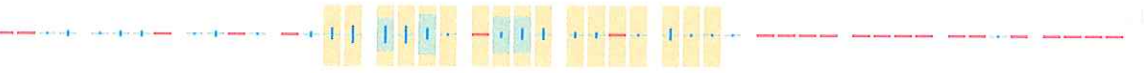
Black-billed Cuckoo
 BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Blue-winged Warbler
 BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

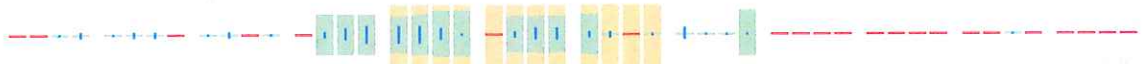


Kentucky Warbler
 BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

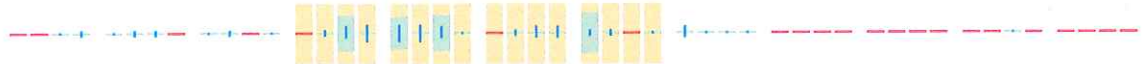


NOT FOR CONSULTATION

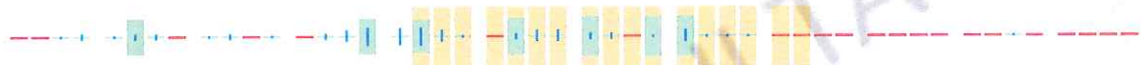
Prairie Warbler
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



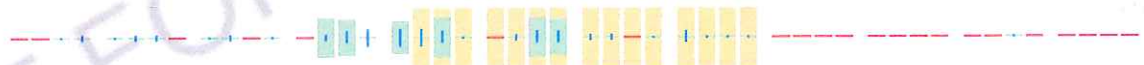
Prothonotary
 Warbler
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



Red-headed
 Woodpecker
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



Wood Thrush
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPAC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFW [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cells(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, are [Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPAC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the [Probability of Presence Summary](#) and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds Guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPAC fall into the following distinct categories of concern:

1. "BCC Range-wide" birds are [Birds of Conservation Concern \(BCC\)](#) that are of concern throughout their range anywhere within the USA including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands); 2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibility in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of range-wide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or

products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307

Phone: (410) 573-4599 Fax: (410) 266-9127

<http://www.fws.gov/chesapeakebay/>

<http://www.fws.gov/chesapeakebay/endsppweb/ProjectReview/Index.html>

In Reply Refer To:

November 04, 2021

Consultation Code: 05E2CB00-2022-SLI-0252

Event Code: 05E2CB00-2022-E-00656

Project Name: Beach Highway

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office

177 Admiral Cochrane Drive

Annapolis, MD 21401-7307

(410) 573-4599

Project Summary

Consultation Code: 05E2CB00-2022-SLI-0252

Event Code: Some(05E2CB00-2022-E-00656)

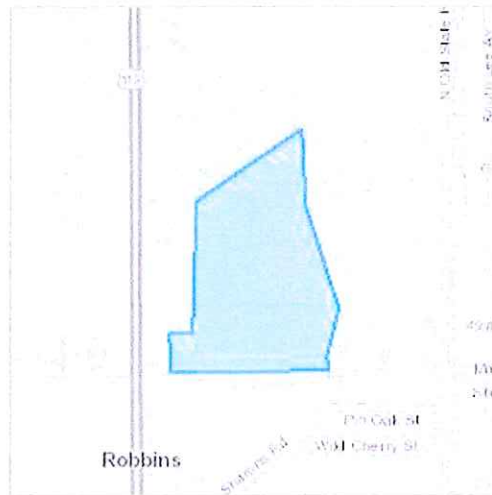
Project Name: Beach Highway

Project Type: POWER GENERATION

Project Description: 4MW community solar farm

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.80988465,-75.43492441430577,14z>



Counties: Sussex County, Delaware

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ The monarch is a candidate species and not yet listed or proposed for listing. There are generally no section 7 requirements for candidate species (FAQ found here: https://www.fws.gov/savethemonarch/FAQ-Section7.html). Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT [HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML](https://www.fws.gov/wetlands/data/mapper.html) OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.



U.S. Fish and Wildlife Service

National Wetlands Inventory



Beach Highway Solar






November 2, 2021

Wetlands

-  Estuarine and Marine Deepwater
-  Estuarine and Marine Wetland

-  Freshwater Emergent Wetland
-  Freshwater Forested/Shrub Wetland
-  Freshwater Pond

-  Lake
-  Other
-  Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Attachment IV - Decommissioning Plan

Community Power Group
10000
10000

10000

10000

10000

Beach Highway Road Solar
Decommissioning Plan

November 2021

Prepared For:
Sussex County, DE





1. Executive summary

The Beach Highway Solar Farm is proposed to be a 4 Megawatt (MW) solar energy conversion system located at 18019 Beach Highway, Ellendale, DE 19941. The facility will use solar photovoltaic technology and a single axis tracking racking system. The project will cover approximately 25 acres. As noted in this report the estimated cost of decommissioning the system is \$144,250. These amounts do not include the salvage value of the components, which has been provided in a separate document.

2. Project information

Solar Project Address:	18019 Beach Highway, Ellendale, DE 19941
Parcel ID:	230-26.00-39.00
Solar Project Size:	up to 4 MWs AC (~35 acre facility)
Solar Project Type:	Community Solar
Land Agreement:	Solar Lease Agreement with Reed Properties

3. Decommissioning of the Solar Facility

At the time of decommissioning, the installed components will be removed, reused, disposed of, and recycled, where possible. The Facility Site will be restored to a state similar to its pre-construction condition. All removal of equipment will be done in accordance with any applicable regulations and manufacturer recommendations. All applicable permits will be acquired.

3.1 Equipment Dismantling and Removal

Generally, the decommissioning of a Solar Facility proceeds in the reverse order of the installation.

1. The Solar Facility shall be disconnected from the utility power grid.
2. PV modules shall be disconnected, collected, and disposed at an approved solar module recycler or reused / resold on the market. Although the PV modules will not be cutting edge technology at the time of decommissioning, they are estimated to still produce 80% of the original electricity output at year 25 and add value for many years.
3. All aboveground and underground electrical interconnection and distribution cables shall be removed and disposed off-site by an approved facility.
4. Galvanized steel PV module support and racking system support posts shall be removed and disposed off-site by an approved facility.
5. Electrical and electronic devices, including transformers and inverters shall be removed and disposed off-site by an approved facility.
6. Concrete foundations shall be removed and disposed off-site by an approved facility.
7. Fencing shall be removed and will be disposed off-site by an approved facility.

3.2 Environmental Effects

Decommissioning activities, particularly the removal of project components could result in environmental effects similar to those of the construction phase. Mitigation measures similar to those employed during the construction phase of the Solar Facility will be implemented. These will remain in place until the site is stabilized in order to mitigate erosion and silt/sediment runoff and any impacts on the significant natural features or water bodies located adjacent to the Facility Site.

Road traffic will temporarily increase due to the movement of decommissioning crews and equipment. There may be an increase in particulate matter (dust) in adjacent areas during the decommissioning phase. Decommissioning activities may lead to temporary elevated noise levels from heavy machinery and an increase in trips to the project location. Work will be undertaken during daylight hours and conform to any applicable restrictions.

3.3 Site Restoration

Through the decommissioning phase, the Facility Site will be restored to a state similar to its pre-construction condition. All project components will be removed. Rehabilitated lands may be seeded with a low-growing species such as clover to help stabilize soil conditions, enhance soil structure, and increase soil fertility.

3.4 Managing Materials and Waste

During the decommissioning phase a variety of excess materials and wastes will be generated. Most of the materials used in a Solar Facility are reusable or recyclable and some equipment may have manufacturer take-back and recycling requirements. Any remaining materials will be removed and disposed of off-site at an appropriate facility. CPG will establish policies and procedures to maximize recycling and reuse and will work with manufacturers, local subcontractors, and waste firms to segregate material to be disposed of, recycled, or reused.

CPG will be responsible for the logistics of collecting and recycling the PV modules and to minimize the potential for modules to be discarded in the municipal waste stream.

3.5 Decommissioning During Construction or Abandonment Before Maturity

In case of abandonment of the Solar Facility during construction or before its 25 year maturity, the same decommissioning procedures as for decommissioning after ceasing operation will be undertaken and the same decommissioning and restoration program will be honored, in as far as construction proceeded before abandonment. The Solar Facility will be dismantled, materials removed and disposed, the soil that was removed will be graded and the site restored to a state similar to its pre-construction condition.

3.6 Decommissioning Notification

Decommissioning activities may require the notification of stakeholders given the nature of the works at the Facility Site. The local municipality in particular will be notified prior to commencement of any decommissioning activities. Six months prior to decommissioning, CPG will update their list of stakeholders and notify appropriate municipalities of decommissioning activities.

4. Management of Excess Materials and Waste

Material / Waste	Means of Managing Excess Materials and Waste
PV panels	If there is no possibility for reuse, the panels will either be returned to the manufacturer for appropriate disposal or will be transported to a recycling facility where the glass, metal and semiconductor materials will be separated and recycled.
Metal array mounting racks and steel supports	These materials will be disposed off-site at an approved facility.
Transformers and substation components	The small amount of oil from the transformers will be removed on-site to reduce the potential for spills and will be transported to an approved facility for disposal. The substation transformer and step-up transformers in the inverter units will be transported off-site to be sent back to the manufacturer, recycled, reused, or safely disposed off-site in accordance with current standards and best practices.
Inverters, fans, fixtures	The metal components of the inverters, fans and fixtures will be disposed of or recycled, where possible. Remaining components will be disposed of in accordance with the standards of the day.
Gravel (or other granular)	It is possible that the municipality may accept uncontaminated material without processing for use on local roads, however, for the purpose of this report it is assumed that the material will be removed from the project location by truck to a location where the aggregate can be processed for salvage. It will then be reused as fill for construction. It is not expected that any such material will be contaminated.
Geotextile fabric	It is assumed that during excavation of the aggregate, a large portion of the geotextile will be “picked up” and sorted out of the aggregate at the

	aggregate reprocessing site. Geotextile fabric that is remaining or large pieces that can be readily removed from the excavated aggregate will be disposed of off-site at an approved disposal facility.
Concrete inverter/transformer Foundations	Concrete foundations will be broken down and transported by certified and licensed contractors to a recycling or approved disposal facility.
Cables and wiring	The electrical line that connects the substation to the point of common coupling will be disconnected and disposed of at an approved facility. Support poles, if made of untreated wood, will be chipped for reuse. Associated electronic equipment (isolation switches, fuses, metering) will be transported off-site to be sent back to the manufacturer, recycled, reused, or safely disposed off-site in accordance with current standards and best practices.
Fencing	Fencing will be removed and recycled at a metal recycling facility.
Debris	Any remaining debris on the site will be separated into recyclables/residual wastes and will be transported from the site and managed as appropriate.

5. Costs of decommissioning

The costs below are the current estimated costs to decommission a 4 MWac Solar Facility, based on guidance from consulting engineering firms and estimates from the Delaware solar market. The salvage values of valuable recyclable materials (aluminum, steel, copper, etc) are not factored into the below costs. The scrap value will be determined on current market rates at the time of salvage.

Tasks	Estimated Cost (\$)
Remove Panels	\$4,920
Dismantle Racks	\$24,680
Remove and Load Electrical Equipment	\$3,680
Break up Concrete Pads	\$3,000
Remove Racks	\$15,600



Remove Cable	\$13,000
Remove Ground Screws and Power Poles	\$27,680
Remove Fence	\$9,840
Grading	\$8,000
Seed Disturbed Areas	\$520
Truck to Recycling Center	\$5,600
Total	\$91,600

Attachment V - Glare Study





FORGESOLAR GLARE ANALYSIS

Project: **Beach Highway**

Site configuration: **Beach Highway**

Analysis conducted by michael borkowski (mborkowski247@gmail.com) at 18:47 on 19 Nov, 2021.

U.S. FAA 2013 Policy Adherence

The following table summarizes the policy adherence of the glare analysis based on the 2013 U.S. Federal Aviation Administration Interim Policy 78 FR 63276. This policy requires the following criteria be met for solar energy systems on airport property:

- No "yellow" glare (potential for after-image) for any flight path from threshold to 2 miles
- No glare of any kind for Air Traffic Control Tower(s) ("ATCT") at cab height.
- Default analysis and observer characteristics (see list below)

ForgeSolar does not represent or speak officially for the FAA and cannot approve or deny projects. Results are informational only.

COMPONENT	STATUS	DESCRIPTION
Analysis parameters	PASS	Analysis time interval and eye characteristics used are acceptable
2-mile flight path(s)	N/A	No flight paths analyzed
ATCT(s)	N/A	No ATCT receptors designated

Default glare analysis parameters and observer eye characteristics (for reference only):

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

FAA Policy 78 FR 63276 can be read at <https://www.federalregister.gov/d/2013-24729>

SITE CONFIGURATION

Analysis Parameters

DNI: peaks at 1,000.0 W/m²
 Time interval: 1 min
 Ocular transmission coefficient: 0.5
 Pupil diameter: 0.002 m
 Eye focal length: 0.017 m
 Sun subtended angle: 9.3 mrad
 Site Config ID: 61202.10896



PV Array(s)

Name: PV array 1
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0°
Tracking axis tilt: 0.0°
Tracking axis panel offset: 0.0°
Max tracking angle: 52.0°
Resting angle: 52.0°
Rated power: 4000.0 kW
Panel material: Smooth glass without AR coating
Reflectivity: Vary with sun
Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.811050	-75.436728	48.48	8.00	56.48
2	38.812187	-75.434689	47.11	8.00	55.11
3	38.812187	-75.433616	47.90	8.00	55.90
4	38.811100	-75.433616	48.12	8.00	56.12
5	38.808592	-75.432608	47.63	8.00	55.63
6	38.808199	-75.432597	47.62	8.00	55.62
7	38.808241	-75.436706	48.98	8.00	56.98

Route Receptor(s)

Name: Beach Highway
Path type: Two-way
Observer view angle: 50.0°

Note: Route receptors are excluded from this FAA policy review. Use the 2-mile flight path receptor to simulate flight paths according to FAA guidelines.



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.806998	-75.428470	48.27	5.00	53.27
2	38.806714	-75.441602	49.31	5.00	54.32

Name: Dupont Blvd
Path type: Two-way
Observer view angle: 50.0°

Note: Route receptors are excluded from this FAA policy review. Use the 2-mile flight path receptor to simulate flight paths according to FAA guidelines.



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.814138	-75.438877	47.46	5.00	52.46
2	38.802952	-75.438748	48.88	5.00	53.88

Name: Route 3
Path type: Two-way
Observer view angle: 50.0°

Note: Route receptors are excluded from this FAA policy review. Use the 2-mile flight path receptor to simulate flight paths according to FAA guidelines.



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.814405	-75.429242	48.53	5.00	53.53
2	38.803219	-75.429092	47.75	5.00	52.75

GLARE ANALYSIS RESULTS

Summary of Glare

PV Array Name	Tilt (°)	Orient (°)	"Green" Glare min	"Yellow" Glare min	Energy kWh
PV array 1	SA tracking	SA tracking	0	0	12,230,000.0

Total annual glare received by each receptor

Receptor	Annual Green Glare (min)	Annual Yellow Glare (min)
Beach Highway	0	0
Dupont Blvd	0	0
Route 3	0	0

Results for: PV array 1

Receptor	Green Glare (min)	Yellow Glare (min)
Beach Highway	0	0
Dupont Blvd	0	0
Route 3	0	0

Route: Beach Highway

0 minutes of yellow glare
0 minutes of green glare

Route: Dupont Blvd

0 minutes of yellow glare
0 minutes of green glare

Route: Route 3

0 minutes of yellow glare
0 minutes of green glare

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.

"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.

Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.

Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.

Several calculations utilize the PV array centroid, rather than the actual glare spot location, due to V1 algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.

The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size.

Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)

Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.

Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.

The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual results and glare occurrence may differ.

Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.

Refer to the Help page at www.forgesolar.com/help/ for assumptions and limitations not listed here.

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Attachment VI - Deed

ASAMPT022A