

JAMIE WHITEHOUSE, AICP
DIRECTOR OF PLANNING & ZONING
(302) 855-7878 T
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jamie.whitehouse@sussexcountyde.gov



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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JAMIE WHITEHOUSE, AICP, MRTPI
DIRECTOR OF PLANNING & ZONING

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: December 15th, 2022

Application: CU 2343 Turning Point Energy - TPE DE SU163, LLC (Gravel Hill Road)

Applicant: TPE DE SU163, LLC c/o Adam Beal
3720 South Dalia Street
Denver, CO 80237

Owner: Lisa A. Jester
18117 Petty John Road
Milton, DE 19968

Site Location: Lying on the west side of Gravel Hill Road (S.C.R. 248) approximately 0.37-miles northeast of the intersection of Gravel Hill Road and Lewes Georgetown Highway (Route 9).

Current Zoning: Agricultural Residential (AR-1) Zoning District

Proposed Use: Solar Farm consisting of photovoltaic electric generation facility on approximately 25-acres of the parcel.

Comprehensive Land Use Plan Reference: Low Density

Councilmanic District: Mr. Rieley

School District: Cape Henlopen School District

Fire District: Georgetown Fire Department

Sewer: N/A

Water: N/A

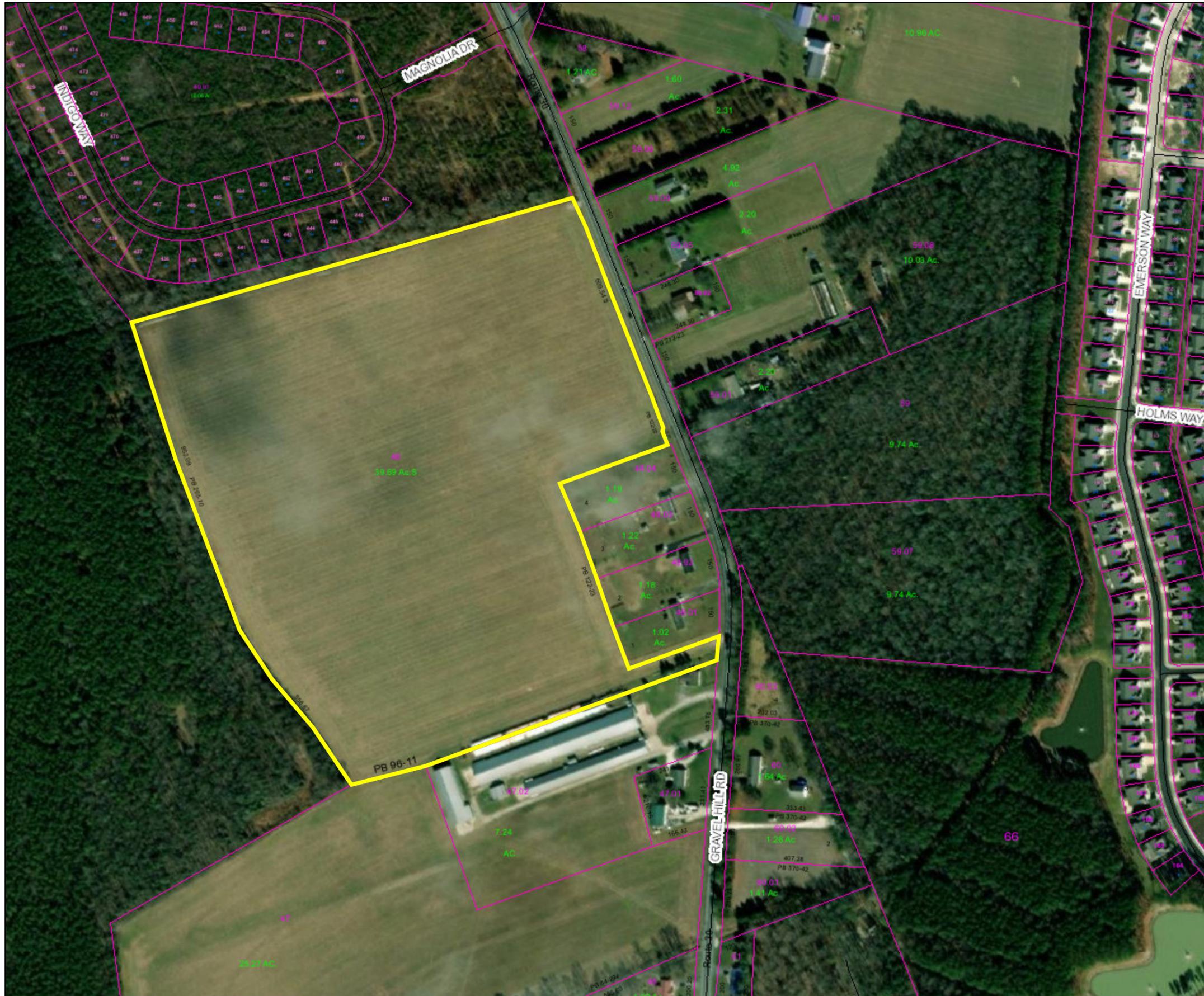
Site Area: 41.08 acres +/- (p/o 25 acres +/-)

Tax Map ID: 135-11.00-48.00





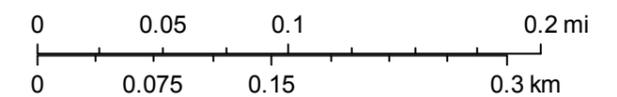
Sussex County



PIN:	135-11.00-48.00
Owner Name	JESTER LISA A
Book	3452
Mailing Address	18117 PETTYJOHN RD
City	MILTON
State	DE
Description	SW/SIDE RT 30
Description 2	421' SE/RD 255
Description 3	N/A
Land Code	

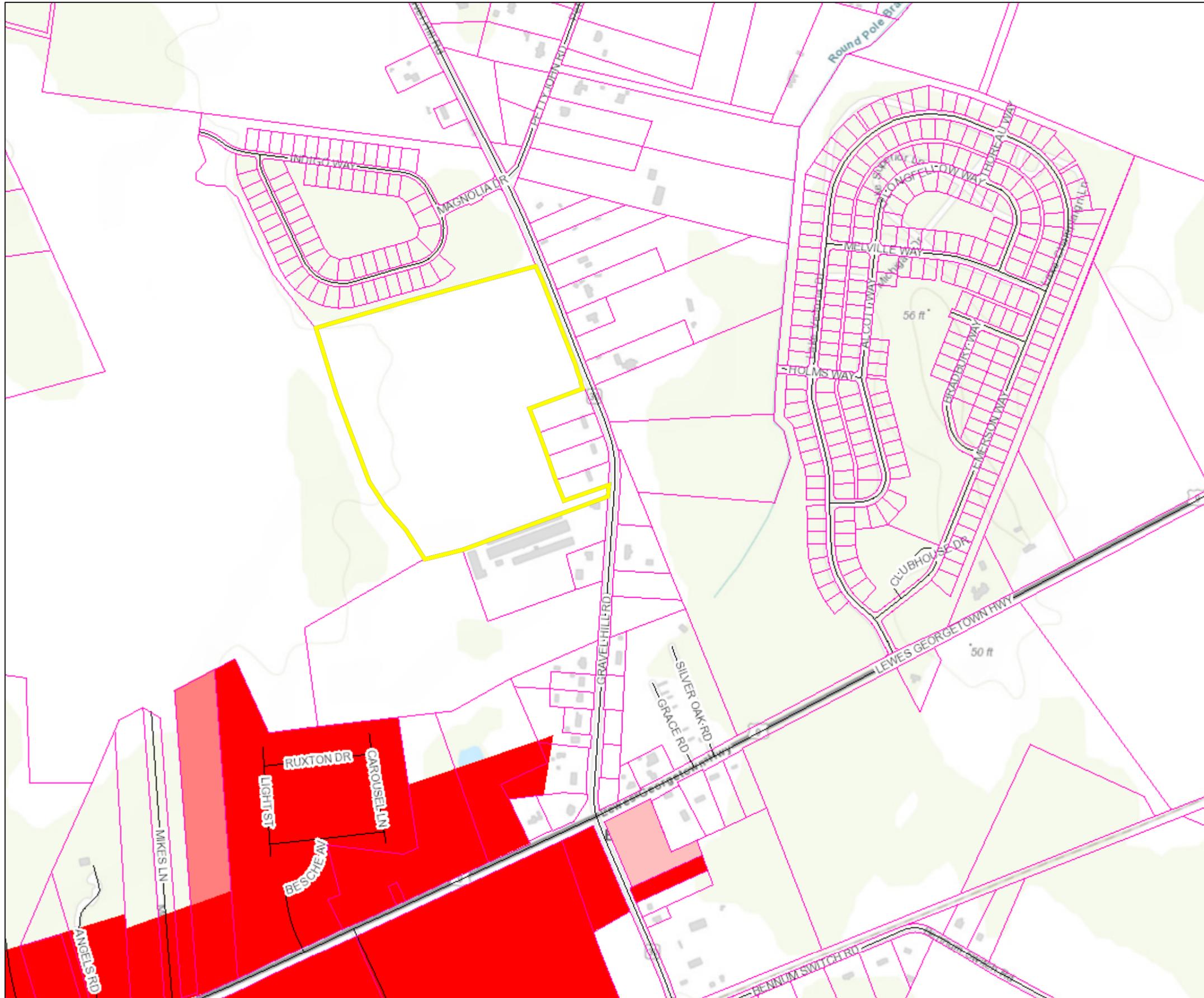
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- Override 1
- polygonLayer**
- Override 1
- Tax Parcels
- Streets
- County Boundaries

1:4,514





Sussex County



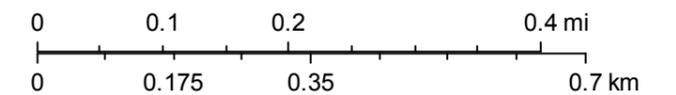
PIN:	135-11.00-48.00
Owner Name	JESTER LISA A
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 - Override 1
- polygonLayer**

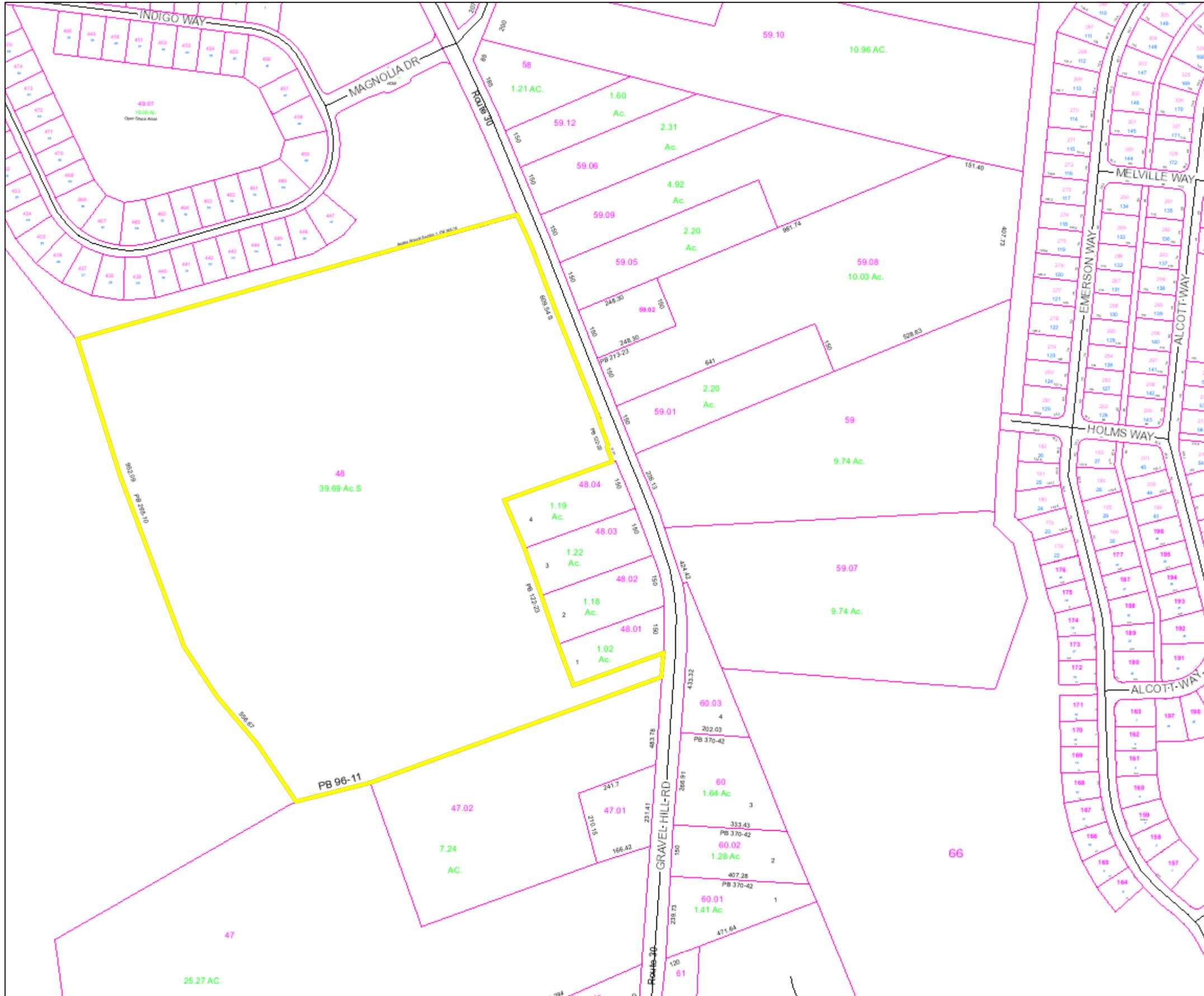
 - Override 1
- Tax Parcels
- Streets

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Sussex County



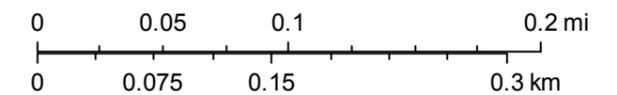
PIN:	135-11.00-48.00
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- polygonLayer**

 - Override 1
- polygonLayer**

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Memorandum

To: Sussex County Planning Commission Members
From: Elliott Young, Planner I
CC: Vince Robertson, Assistant County Attorney, and applicant
Date: December 7th, 2022
RE: Staff Analysis for CU 2343 TPE DE SU163, LLC

This memo is to provide background and analysis for the Planning Commission to consider as a part of application CU 2343 TPE DE SU163, LLC to be reviewed during the December 15th, 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 135-11.00-48.00 to allow for a Conditional Use of land in an Agricultural Residential (AR-1) Zoning District for a solar farm. The parcel is located on the west side of Grave Hill Road. (Rt. 30) in Milton, Delaware. The size of the property is approximately 39.69 acres +/-.

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 "Low Density." The adjacent parcels to the north, south and west of the subject property, also have the Future Land Use Map designation of "Low Density" with properties on the opposite side of Gravel Hill Road (Route 30) also designated as "Low Density."

As outlined within the 2018 Sussex County Comprehensive Plan, Low Density Areas are areas zoned Agricultural Residential (AR-1). The Plan notes that retail and office use in Low Density Areas should be focused on providing "convenience goods and services to nearby residents" as well as indicating that the commercial uses "should be limited in their location, size, and hours of operation." (Sussex County Comprehensive Plan, 4-19) The Plan notes that these policy guidelines are provided to "maintain the rural landscape" in Low Density Areas (Sussex County Comprehensive Plan, 4-18).

Zoning Information

The property is zoned AR-1 (Agricultural Residential Zoning District). The adjoining and surrounding properties located to the north, south, east, and west are all zoned AR-1 (Agricultural Residential Zoning District).



Existing Conditional Uses within the Vicinity of the Subject Site

Since 2011, there has been three (3) Conditional Use applications within a 1-mile radius of the application site. The first application was for Conditional Use No. 2162 to allow for a paving construction business with an office and equipment storage. The application was recommended approval by the Planning and Zoning Commission at their meeting of Thursday, February 14, 2019. The application was approved by the Sussex County Council at their meeting of Tuesday, March 26, 2019, and the use was adopted through Ordinance No. 2641. The second application was for Conditional Use No. 2320 to allow for multi-family structures to be allowed in an MR zoned district (pending CZ 1959). This application has an upcoming Commission hearing date for December 8, 2022. The third and last application is for Conditional Use No. 2371 to allow for a business plaza to include warehouses and office buildings. This application is schedule to be heard by the Commission on February 23, 2022.

Based on the analysis of the land use, surrounding zoning and uses, the Conditional Use to allow for a solar farm, could be considered as being consistent with the land use, area zoning and surrounding uses.

Planning & Zoning Commission Application Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

Type of Application: (please check applicable)

Conditional Use
Zoning Map Amendment

Site Address of Conditional Use/Zoning Map Amendment

Gravel Hill Road, 421' SE/RD 255

Type of Conditional Use Requested:

Solar Energy System

Tax Map #: 135-11.00-48.00 Size of Parcel(s): 41.08 ac

Current Zoning: AR-1 Proposed Zoning: AR-1 Size of Building: _____

Land Use Classification: FG0

Water Provider: N/A Sewer Provider: N/A

Applicant Information

Applicant Name: TPE DE SU163, LLC c/o Adam Beal

Applicant Address: 3720 South Dalia Street

City: Denver State: CO Zip Code: 80237

Phone #: (617) 312-6553 E-mail: jbelknap@tpoint-e.com

Owner Information

Owner Name: Lisa A. Jester

Owner Address: 18117 Petty John Road

City: Milton State: DE Zip Code: 19968

Phone #: _____ E-mail: _____

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: Becker Morgan Group

Agent/Attorney/Engineer Address: 309 South Governors Avenue

City: Dover State: DE Zip Code: 19904

Phone #: (302) 734-7950 E-mail: jfalkowski@beckermorgan.com



202200738

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

- ✓ **Completed Application**
- ✓ **Provide ~~eight (8)~~ ^{four (4)} copies of the Site Plan or Survey of the property**
 - Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
 - Provide a PDF of Plans (may be e-mailed to a staff member)
 - Deed or Legal description
- ✓ **Provide Fee \$500.00**

FUTURE Optional - Additional information for the Commission/Council to consider (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

- ✓ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**

- ✓ **DelDOT Service Level Evaluation Request Response**

N/A PLUS Response Letter (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

I also certify that I or an agent on my behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

Signature of Applicant/Agent/Attorney

Alan M. P.

Date: 1/4/22

Signature of Owner

Christa A. Jester

Date: 1/12/22

For office use only:

Date Submitted: _____

Fee: \$500.00 Check #: _____

Staff accepting application: _____

Application & Case #: _____

Location of property: _____

Subdivision: _____

Date of PC Hearing: _____

Recommendation of PC Commission: _____

Date of CC Hearing: _____

Decision of CC: _____

Sussex County, DE
Treasury
P.O. Box 601
Georgetown, DE 19947
Welcome

33021380-0071 Lindsey \$ 01/19/2022 11:17AM

PERMITS / INSPECTIONS
CONDITIONAL USE - FEE
2022 Item: 202200738|Z010 500.00

500.00

Subtotal 500.00
Total 500.00

CHECK 500.00
Check Number 0393

Change due 0.00

Paid by: TPE DEVELOPMENT LLC

TPE DEVELOPMENT, LLC 204200738 NO. 8 CORPORATION DEWEY, CO. 19947	DATE 12/16/2021	AMOUNT \$ 500.00
PAID TO Sussex County		
FOR DEPOSIT Five hundred & 00/100		
Avidia Bank		
DATE 12/16		

Thank you for your payment

Sussex County, DE COPY
DUPLICATE RECEIPT



LANDS OF: Lisa A. Jester
TAX MAP NO.: 135-11.00-48.00 (portion of)

SU163 Conditional Use Boundary – 25.0 ACRES ±

All that certain lot, piece or parcel of land, situated in Sussex County, State of Delaware, lying west side of Gravel Hill Road and being more particularly described as follows to wit:

Beginning at a corner for this parcel and lands of Dale A. & Kathy H. Phillips and in line with the westerly right of way line of Gravel Hill Road; thence running with said lands of Phillips 1) South 70°08'47" West 1143.33 feet to a point at a corner for this parcel and lands of Azalea Woods LLC, thence with said lands of Azalea Woods 2) North 34°07'48" West 199.63 feet to a point; thence 3) North 40°31'40" West 186.23 feet to a point; thence 4) North 33°24'15" West 170.81 feet to a point; thence 5) North 20°39'29" West 438.84 feet to a point at a corner for this parcel; thence running across residue lands of Lisa A. Jester 6) North 70°08'47" East 1371.60 feet to a point at a corner for this parcel and in line with the westerly right of way line for Gravel Hill Road, thence with said right of way line for Gravel Hill Road 7) South 21°43'51" East 319.74 feet to a point at a corner for this parcel and lands of CMH Homes Inc; thence with said lands of CMH Homes 8) South 70°08'47" West 355.11 feet to a point; thence in part with lands of CMH Homes, lands of Hinton, lands of Tabor and lands of Tolliver 9) South 21°43'51" East 591.80 feet to a point at a corner for this parcel and lands of Tolliver; thence with said lands of Tolliver 10) North 70°08'47" East 285.16 feet to a point at a corner for this parcel and in line with the westerly right of way line for Gravel Hill Road, thence with said right of way line for Gravel Hill Road 11) South 03°52'04" West 67.18 feet to the point and place of beginning, containing 25.0 acres of land be the same, more or less.

Above description prepared by Becker Morgan Group, Inc.:
Jeffrey C. Dodd – P.L.S. 782



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

NICOLE MAJESKI
SECRETARY

December 30, 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 **TPE DE SU163, LLC c/o Adam Beal** proposed land use application, which we received on December 16, 2021. This application is for an approximately 39.69-acre parcel (Tax Parcel: 135-11.00-48.00). The subject land is located on the west side of Gravel Hill Road (Sussex Road 248) about 1,900 ft north of the intersection with Lewes Georgetown Highway (US Route 9). The subject land is currently zoned AR-1 (Agriculture Residential), and the applicant seeks a conditional use approval to build a solar energy system.

Per the 2019 Delaware Vehicle Volume Summary, the annual average daily traffic volumes along Gravel Hill Road from Shingle Point Road (Sussex Road 249) to Lewes Georgetown Highway, is 3,577 vehicles per day.

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.

Mr. Jamie Whitehouse
Page 2 of 2
December 30, 2021

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.

Please contact Ms. Annamaria Furmato, at Annamaria.Furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,



T. William Brockenbrough, Jr.
County Coordinator
Development Coordination

TWB:afm

cc: TPE DE SU163, LLC co Adam Beal, Applicant
Sussex Reviewer, 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

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)

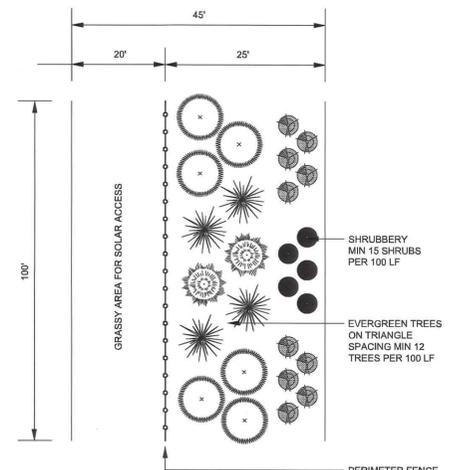
Planner I
Sussex County Government

Conditional Use Number	Tax Parcel # (s)	APPLICANT	911 Address or Road Name	Current Zoning	Proposed Use	Status/Notes	Application Rcvd Date	ER Project	DFW 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 SU124, 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 Hearses 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 SU94, LLC	North Old State Road	AR-1	Community Solar Facility		2/7/2022	NA	None	None
2346	332-7.00-19.00	TPE DE SU114, 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 - SU07, LLC	Elks Rd	AR-1	Community Solar Facility		1/18/2022	DIUFF 2021 Sussex County Solar Generation	Rare Species: Northern Lance (<i>Elliptio fisheriensis</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 Hearses 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, 100-6.00-75.00, 130-6.00-76.00, 130-6.00-92.00, 130-6.00-94.00, 130-6.00-95.00, 130-6.00-96.00, 130-6.00-97.00	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	7/2/2021	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



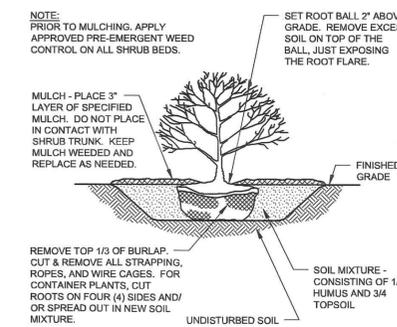
SOLAR BUFFERYARD PLAN VIEW

SCALE: 1" = 100'



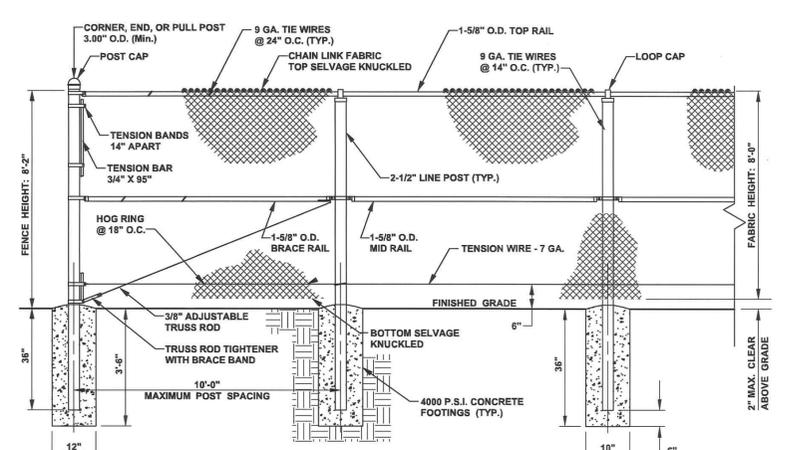
TYPICAL SOLAR BUFFERYARD DETAIL
NO SCALE BMG NO.: L-08

NOTES:
BUFFERYARD PLANTINGS SHALL BE ARRANGED IN A WAY THAT DIAMETER OF TREES SHALL OVERLAP WHEN VIEWED AT A PERPENDICULAR ANGLE TO EFFECTIVELY ACHIEVE AN OPAQUE VISUAL BARRIER.
EVERGREEN TREES SHALL PROVIDE A MINIMUM OF 3 SPECIES PER 100 LF OF BUFFER. NO PLANTED SPECIES SHALL MAKE UP MORE THAN 40% OF THE PLANTINGS.



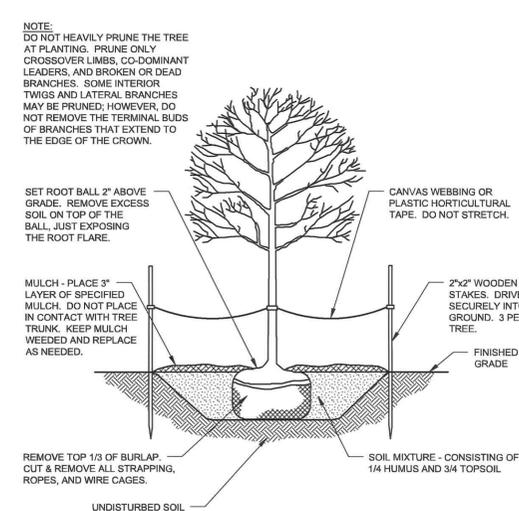
SHRUB PLANTING DETAIL

NO SCALE BMG NO.: L-03



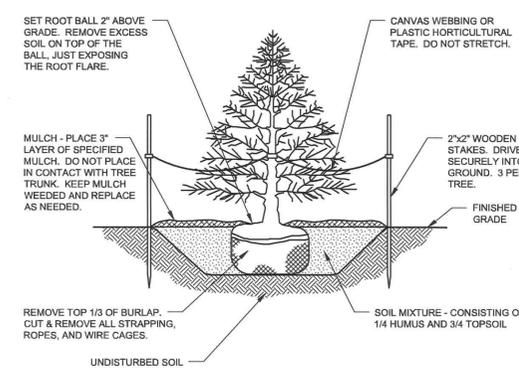
8' HIGH CHAIN LINK FENCE DETAIL
NO SCALE BMG NO.: L-02

NOTES:
1. THE CONTRACTOR SHALL PROVIDE, COMPLETE AND IN PLACE, FENCING AND GATES AS SHOWN ON THE CONTRACT DRAWINGS AND REQUIRED BY THE CONTRACT DOCUMENTS.
2. THE FENCING SHALL BE CHAIN LINK FENCE 8 FEET HIGH, FABRIC TO BE 2" DIAMOND MESH, 9 GAUGE (MIN.) GALVANIZED STEEL. FENCE SHALL BE PROVIDED AND INSTALLED AS SHOWN ON CONSTRUCTION DOCUMENTS.
3. ALL POSTS SHALL BE PLUMB, AND SPACED AT 10' CENTERS MAXIMUM, WITH A TOLERANCE OF MINUS 2". SPACING OF POSTS SHALL BE INSTALLED AT ALL ABRUPT CHANGES IN GRADE, AT CHANGES IN GRADE. ALL POSTS SHALL BE HEAVY WEIGHT GALVANIZED PIPE, SS-40 INDUSTRIAL GRADE FENCE PIPE.
4. ALL RAILS AND MID-BRACING SHALL BE HEAVY WEIGHT GALVANIZED PIPE, SS-40 INDUSTRIAL GRADE FENCE PIPE.
5. GATE SHALL BE DOUBLE SWING TYPE, PROVIDED WITH GATE HOLD BACKS, LOCKABLE GATE LATCH AND DROP BAR INSTALLED IN A MINIMUM OF 1 CUBIC FOOT OF CONCRETE. GATES SHALL BE INSTALLED AND BRACED IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS. ALL GATE POSTS SHALL BE A MINIMUM OF 3" IN DIAMETER OR AS RECOMMENDED BY THE MANUFACTURER.
6. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.



DECIDUOUS TREE PLANTING DETAIL

NO SCALE BMG NO.: L-01



EVERGREEN TREE PLANTING DETAIL

NO SCALE BMG NO.: L-02

TREE DENSITY REQUIREMENTS:

- BUFFER INTENT:** BUFFERING OF NONRESIDENTIAL USES OTHER THAN AGRICULTURE, VISUAL AND SCREENING TO BE PROVIDED ON NONRESIDENTIAL USE PROPERTIES (OTHER THAN AGRICULTURAL USES) WHEN ABUTTING A RESIDENTIAL DWELLING. SCREENING TO CONSIST OF AN VEGETATIVE BARRIER AT LEAST FIVE FEET IN HEIGHT ACCOMPANIED BY LANDSCAPING.
- BUFFER PROVIDED:** DENSE, DURABLE AND CONTINUOUS EVERGREEN TREE PLANTED SCREEN OF AT LEAST FIVE FEET IN HEIGHT AT THE TIME OF PLANTING AND ARRANGED TO EFFECTIVELY ACHIEVE A VISUAL BUFFER.
- BUFFER PROVIDED:** 1094 LF OF OPAQUE EVERGREEN BUFFERING
FOR EACH 100 LF OF BUFFER, THERE SHALL BE AT MINIMUM 12 EVERGREEN TREES. EACH EVERGREEN TREE SHALL BE PLANTED AT A HEIGHT OF NO LESS THAN 5' NO SPECIES SHALL COMPRISE OF MORE THAN 40% OF THE TOTAL WITHIN 100LF. THE FOLLOWING SPECIES OF EVERGREEN TREES ARE ACCEPTABLE:
CHAMAECYPARIS LAWSONIANA
CUPRESSACEAE JUNIPERUS CHINENSIS IOWA
ILEX OPACA
MAGNOLIA GRANDIFLORA 'LITTLE GEM'
PICEA PUNGENS 'BABY BLUE EYES'
THUJA OCCIDENTALIS 'TECHNY'
THUJA OCCIDENTALIS 'EMERALD GREEN'
FOR EACH 100 LF OF BUFFER, THERE SHALL BE AT MINIMUM 15 SHRUBS. PROVIDED SHRUBS SHALL PROVIDE ECOLOGICAL BENEFIT TO WILDLIFE. NO SPECIES SHALL COMPRISE OF MORE THAN 40% OF THE TOTAL WITHIN 100LF. THE FOLLOWING SPECIES OF SHRUBS ARE ACCEPTABLE:
CALYCANTHUS FLORIDUS
HYDRANGEA QUERCIFOLIA
ITEA VIRGINICA
ILEX VERTICULATA
VIBURNUM NUDEM
IN ADDITION TO THE ABOVE PLANTINGS, AT LEAST 1 FLOWERING UNDERSTORY TREE SHALL BE PLANTED PER 100 LF OF BUFFER. THE FOLLOWING SPECIES OF UNDERSTORY TREES ARE ACCEPTABLE:
AMELANCHER CANADENSIS
CERCIS CANADENSIS
CHIONANTHUS VIRGINICUS
CORNUS FLORIDA
MALUS
4. **BUFFER TREES PROVIDED:** 1094 LF / 100 LF @ 25' WIDE = 10.94 BUFFER UNITS
- BUFFER TREES PROVIDED:** EVERGREEN TREES 132
SHRUBS 164
UNDERSTORY TREES 11
- MINIMUM SIZE REQUIREMENTS:** EVERGREEN TREES 5' HGT MINIMUM
SHRUBS #5 CONTAINER / 24" - 38" HGT
UNDERSTORY TREES 1" CALIPER MINIMUM
- SEEDING:** POLLINATOR SEED MIX (ERNST-146 FUZZ & BUZZ OR APPROVED EQUAL) WITH

LANDSCAPING GENERAL NOTES:

- EXISTING TREES TO BE PRESERVED WILL BE MARKED WITH STAKING AND CONTINUOUS RIBBON OUTSIDE THE TREES DRIFLINE TO DELINEATE THE AREAS TO BE PROTECTED. THIS MARKING WILL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION AND WILL REMAIN IN PLACE UNTIL THE FINAL LANDSCAPING IS INSTALLED.
- ALL NEW TREES SHALL BE GUARANTEED TO SURVIVE FOR ONE FULL YEAR AFTER INSTALLATION (FULL COST). ALL STAKES AND GUYS SHALL BE REMOVED FROM TREES AND SITE AT THE END OF THE GUARANTEE PERIOD.
- NO TREE SHALL BE PLANTED CLOSER THAN TEN (10) FEET FROM ANY FIRE HYDRANT.
- ONLY TREES THAT REACH A HEIGHT AND SIZE AT MATURITY OF SMALL TO MEDIUM SHALL BE PLANTED UNDER POWER LINES. NO TREE SHALL BE PLANTED WITHIN FIVE (5) FEET OF UNDERGROUND UTILITIES.

GENERAL LANDSCAPE NOTES:

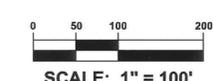
- QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS, AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN "AMERICAN STANDARDS FOR NURSERY STOCK".
EVERGREEN TREES SHALL HAVE A FULL, WELL-BRANCHED, CONICAL FORM TYPICAL OF THE SPECIES.
ALL DECIDUOUS TREES SHALL BE PLANTED AND STAKED IN ACCORDANCE WITH THE DETAIL SHOWN.
PLANT MATERIALS DELIVERED TO THE SITE IN UNCOVERED TRUCKS WILL BE REJECTED.
UNACCEPTABLE PLANT MATERIALS: MATERIALS WHICH HAVE DAMAGED OR CROOKED LEADERS, DEFORMED GROWTH HABIT, ABRASIONS OF THE BARK, SUN SCALD, WINDBURN, DISFIGURING NOT COMPLETELY CALLED WILL BE REJECTED. IN ADDITION, TREES HAVING THEIR CENTRAL LEADERS HEADED BACK WILL ALSO BE REJECTED. PLANTS WITH LOOSE OR CRACKED ROOT BALL OR CONTAINERS WILL BE REJECTED.
- ALL PLANTS SHALL BE PLANTED IN TOPSOIL THAT IS THOROUGHLY WATERED AND TAMPED AS BACKFILLING PROGRESSES. NOTHING BUT SUITABLE TOPSOIL, FREE OF DRY SOIL, STIFF CLAY, LITTER, STONES IN EXCESS OF ONE (1) INCH DIAMETER, ETC. SHALL BE USED FOR PLANTING.
MULCH FOR PLANTING BEDS SHALL BE SHREDDED HARDWOOD BARK MULCH UNLESS OTHERWISE SPECIFIED ON THE PLANS AND SHALL HAVE NO LEAVES, YOUNG GREEN GROWTH, BRANCHES, TWIGGS, GREATER IN DIAMETER OF 1/2", WEEDS, SHAVINGS OR FOREIGN MATERIAL, SUCH AS STONES, ETC. SHALL BE MIXED WITH THE MULCH. ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS WITH A LIGHTLY COMPACTED DEPTH OF THREE (3) INCHES. ALL CONTAINER PLANTS ARE TO HAVE ROOTS CUT ON FOUR SIDES AND/OR SPREAD OUT IN NEW SOIL MIXTURE.
- ALL AREAS NOT STABILIZED IN PAVING OR PLANT MATERIALS SHOULD BE SEEDED AND MULCHED. (SEE EROSION & SEDIMENT CONTROL PLAN AND NOTES).
- LANDSCAPE BEDS NOT DEFINED BY CURBS, SIDEWALKS, WALLS OR OTHER STRUCTURES SHALL BE ENCLOSED BY ALUMINUM EDGING UNLESS OTHERWISE INDICATED.
- AREAS DISTURBED BY LANDSCAPE OPERATIONS SHALL BE GRADED TO MATCH EXISTING TOPSOIL AND SEED OR SOD AS REQUIRED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND MAY MAKE MINOR ADJUSTMENTS IN SPACING AND/OR LOCATION OF PLANT MATERIALS. CONTRACTOR TO VERIFY "AS BUILT" LOCATION OF ALL UTILITIES.
- NO PLANT, EXCEPT GROUNDCOVERS, SHALL BE WITHIN THREE (3) FEET FROM SIDEWALKS.
- NO TREE SHALL BE PLANTED CLOSER THAN TEN (10) FEET FROM ANY STRUCTURE OR BUILDING.
- NO TREE SHALL BE PLANTED WITHIN TEN (10) FEET OF UNDERGROUND UTILITIES OR FIRE HYDRANTS.
- ONLY TREES THAT REACH A HEIGHT AND SIZE AT MATURITY OF SMALL TO MEDIUM SHALL BE PLANTED UNDER POWER LINES.
- THE CONTRACTOR SHALL WATER ALL PLANTS THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING, AND THEN WEEKLY OR MORE OFTEN, IF NECESSARY, DURING THE FIRST GROWING SEASON, UNLESS THE OWNER AGREES TO MAINTAIN AND WATER THEM.
- TREES TO REMAIN ON-SITE SHALL BE PROTECTED WITH SNOW FENCE DURING CONSTRUCTION (SEE DETAIL). SNOW FENCING TO BE MAINTAINED DURING CONSTRUCTION BY CONTRACTOR.
- THE PLANTING PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT QUANTITY DISCREPANCIES OCCUR.
- NO SUBSTITUTIONS SHALL BE MADE WITHOUT APPROVAL OF THE OWNER AND/OR THE LANDSCAPE ARCHITECT.
- ALL NEW TREES SHALL BE GUARANTEED TO SURVIVE FOR ONE FULL YEAR AFTER INSTALLATION (FULL COST). ALL STAKES AND GUYS SHALL BE REMOVED FROM TREES AND SITE AS EARLY AS THREE (3) MONTHS, BUT NO LONGER THAN ONE (1) YEAR AFTER PLANTING.

DELAWARE LANDSCAPE ARCHITECTS CERTIFICATION

I, CHAD D. CARTER, RLA, ASLA, HEREBY CERTIFY THAT I AM A LANDSCAPE ARCHITECT IN THE STATE OF DELAWARE, THAT THE LANDSCAPING INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF, REPRESENTS GOOD LANDSCAPING PRACTICES.

MARK	DATE	DESCRIPTION
DATE:	01/14/2022	PROJECT NO.: 2021294.00
SCALE:	1" = 100'	
DRAWN BY:	M.W. PROJ. MGR.: J.S.F.	
SHEET		
L-001		

CHAD D. CARTER, RLA, ASLA S1-499 DATE



SCALE: 1" = 100'

NO.	DATE	DESCRIPTION

MARK	DATE	DESCRIPTION
DATE:	01/14/2022	PROJECT NO.: 2021294.00
SCALE:	1" = 100'	
DRAWN BY:	M.W. PROJ. MGR.: J.S.F.	
SHEET		
L-001		

CHAD D. CARTER, RLA, ASLA S1-499 DATE

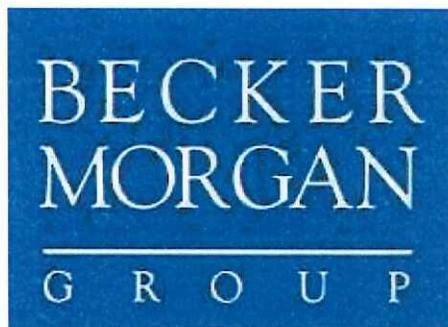
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CONDITIONAL USE 2343

TURNINGPOINT ENERGY – TPE DE SU163, LLC

DECEMBER 2022



PREPARED BY:

**BECKER MORGAN GROUP, INC.
309 S. GOVERNORS AVE.
DOVER, DE 19904**

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1.0 Project Overview – (C/U 2343 – TPE DE SU163, LLC)

1.1 Executive Summary

The subject property is located on Gravel Hill Road in Sussex County Delaware. The existing zoning is AR-1 – Agricultural Residential. The site is located within the Investment level 4 area, per the 2020 Delaware Strategies for State Policies and Spending. The 39.5 acre site is located within a Low Density Area according to the Sussex County Comprehensive Plan for 2018 Future Land Use.

The site fronts on Gravel Hill Road to the East. The site currently operates as agricultural land. The southern portion of the property adjoins 2 pieces of land currently owned by Dale A & Kathy Hamilton Phillips, one is agricultural land, the other currently contains several agricultural buildings and a residential dwelling. The western portion of the property adjoins land currently owned by Azalea Woods LLC, currently forested land. The Northern portion of the property adjoins land currently owned by Azalea Woods, currently forested land. The Eastern portion of the site adjoins Gravel Hill Rd. and several residential outparcels with dwelling units.

The site will be served by Delmarva Power. Sewer, Water & Telephone will not be needed for this project.

The proposed Solar Energy System will occupy approximately 25 +/- Ac. of the parcel. The remaining lands will remain in agricultural use at this time.

1.2 Project Team – (C/U 2343 – TPE DE SU163, LLC)

Applicant / Developer:

TPE DE SU163, LLC

Contact: Adam Beal
3720 South Dalia Street
Denver, Co 80237
Telephone: (617) 312-6553
e-mail: jbelknap@tpoint-e.com

Attorney:

Young Conaway Starhatt & Taylor, LLP

Contact: John E. Tracey, Partner
Rodney Square, 1000 North King
Street
Wilmington, DE 19801
Telephone: (302) 571.6740
e-mail: jtracey@ycst.com

Architect /
Civil Engineer /
Surveyor:

Becker Morgan Group

Contact: Jon Falkowski, P.E.
309 South Governors Avenue

Dover, DE 19904
Jon Falkowski, P.E.
Telephone: (302) 734-7950
Fax: (302) 734-7965
e-mail: jfalkowski@beckermogan.com

1.3 Project Data – (C/U 2343 – TPE DE SU163, LLC)

Total Site Area: 39.5 +/- Acres
Current Zoning District: AR-1 (Agricultural Residential)
Proposed Zoning: AR-1 (Agricultural Residential)
Proposed Use: Community Solar Energy System
Tax Parcel: 135-11.00-48.00

Woodlands: Existing: 0.00 + / - Acres
To Remain: 0.00 + / - Acres

Setbacks: AR-1
Front: 80 ft
Side: 15 ft
Rear: 20 ft

Maximum Building Height: AR-1 42 ft

Utilities:
Sewer: N/A
Water: N/A
Electric: Delmarva Power
Telephone: N/A

Access roads: Gravel Hill Road – (Major Collector)
Floodplain: Zone X is within the subject site.

1.4 Existing Conditions – (C/U 2343 – TPE DE SU163, LLC)

Overview of Current Site Conditions:

The subject property currently consists of all agricultural land. A copy of the aerial photograph taken from Delaware DEMAC 2017 has been provided.

The existing topography indicates that the site is generally flat, however conveys runoff to the northern portion of the parcel.

The USDA Soil Survey of Sussex County, Delaware shows the site to be (31.8%) of Fort Mott Loamy Sand - 0 to 2 percent slopes, (25.3%) Woodstown Sandy Loam – 0 to 2 percent slopes Northern Tidewater Area, (21.5%) Runclint Loamy Sand – 0 to 2 percent slopes, (9.3%) Henlopen Loamy Sand – 0 to 2 percent slopes, (4.7%) Lenni Silt Loam – 0 to 2 percent sloped, (3.3%) Hammonton Loamy Sand – 0 to 2 percent slopes, (2.8%) Udorthents – 0 to 10 percent slopes, (1.2%) Keyport Fine Sandy loam – 0 to 2 percent slopes, A copy of the USDA soil survey has been provided.

1.5 Landscaping and Screening (C/U 2343 – TPE DE SU163, LLC)

A landscape buffer is proposed along the northern and eastern portions of the site, where the parcel is adjacent to and/or visible by residential dwelling units. Screening shall consist of a 25' wide bufferyard, with a mixture of evergreen trees, flowering understory trees and shrubbery. A Landscape plan has been provided. Buffering is not proposed where the parcel abuts nonresidential uses and agricultural land.

1.6 Stormwater Management Regulations– (C/U 2343 – TPE DE SU163, LLC)

A Sediment and Stormwater Management Plan review is required through Sussex Conservation District and will include review of, drainage, and erosion and sediment control. The site currently drains into offsite to Broadkill River within the Delaware Bay.

1.7 Proposed Finding of Facts – (C/U 2343 – TPE DE SU163, LLC)

1. This is an application for the conditional use of AR-1 – Agricultural Residential per Sussex County, DE zoning code
2. The subject property is a 39.5 acre parcel of land located along Gravel Hill Road and owned by Lisa A Jester.
3. The applicant is TPE DE SU163, LLC.
4. The development is proposed on existing agricultural land.
5. The 2018 Sussex County Comprehensive Plan designates the subject parcel as Low Density Area, as shown on the 2045 Future Land Use Map.
6. The State Strategies for Policies and Spending identify the area as Investment Level 4. Level 4 areas are predominantly agricultural.
7. The proposed community solar project generates electricity directly to homes and businesses via local electrical distribution lines compared to larger centralized powerplants; that centralized powerplants push power onto high voltage transmission lines which carry electricity hundreds to thousands of miles away; that a key benefit of

community solar projects such as this is they generate electricity in the communities where the power is consumed; that this reduces the need for long transmission lines and other costly infrastructure; that by providing clean, renewable power close to the end user, it improves the resiliency of the local distribution grid and delivers the power at an all-end lower cost to the user; that community solar projects allow residences and businesses who are customers of the same electric utility the ability to subscribe to the project and receive a credit on their utility electric bill; that another benefit of community solar projects is the smaller footprint of the projects; that this means a smaller impact; and that the proposed site will occupy tens of acres versus hundreds or even thousands of acres.

8. The project area is currently an agricultural field with no existing structures; that the anticipated project will be less than 30-acres; that the capacity to the proposed project is four megawatts of alternating current; that this is considered a relatively small project; that the project is sized to meet the local distribution system; that this type of project is connecting to the distribution grid as opposed to the electrical transmission system; that the point of interconnection will be at the existing electric line running along Gravel Hill Road.
9. The equipment will consist of racking systems, which are mounted on support posts, panels which are installed on top of the racking systems, inverters/transformers, interconnection equipment, which are typical utility poles and a small weather station; that at the end of the proposed access drive there is a turnaround for fire trucks and emergency personnel; that there is proposed fencing surrounding the array; that they are not proposing any grading onsite; that the project is set back 150 feet from the eastern road; that there were no threatened or endangered species observed on the site; that there is low potential of onsite occurrence due to the history of land cultivation; and that there were no cultural or historic resources previously identified onsite.
10. Stormwater runoff will be tightly controlled in accordance with State and local regulations; that there are no impact to drainage patterns anticipated due to the ability of the arrays to conform to the existing topography, as well as the gaps between panels and space between arrays allow infiltration into the ground's surface.
11. Solar panels are constructed of silicon semiconductors, much like a computer chip; that when the sunlight hits the semiconductor material, it creates a charge, which is a direct current; that the direct current is converted to an alternating current through converters so it can be fed into the distribution grid for use in homes and business; that solar creates clean, renewable electricity without the use of water, creating emissions or producing waste products; that its low visual profile and quiet operations makes for a great neighbor; that solar projects place no demand on County infrastructure or services such as roads, water, sewer, emergency services or schools; that construction consist of minimal grading and disturbance; that there are no regular employees on site, only those attending for periodic visits for inspections, maintenance or repair of the solar panels; that the solar projects are built using steel posts or ground sleeves to support the solar panels versus concrete or other foundations; and that this allows the land to return to its

previous agricultural use at the end of the project; that no significant noise or dust will be generated by this facility..

12. Fencing is proposed around the entire perimeter of the project; that the proposed fencing will be a 7 to 8 ft. high, chainlink fencing; that in the agreement with the property owner it is stated that, should the project no longer be needed, TPE would handle the removing of all equipment where it would then be recycled leaving the property back to agricultural land; that the only noise the project would create would be a slight hum when the panel retracts to the sun; that the inverters will create an occasional slight hum; and that the project will operate in conformance to all local noise ordinances.
13. TPE has completed a glare study which has determined that there is no potential for glare or glint spilling off of the project and onto neighboring properties or roadways.
14. TPE has commissioned Cohn Reznick LLP to perform, and it has completed, an Adjacent Property Value Impact Report which has concluded that the property values of adjacent property will not be impacted by this proposed project.

1.8 Proposed Conditions – (C/U 2343 – TPE DE SU163, LLC)

1. No storage facility shall be constructed on the site.
 2. The lighting on the facility shall only consist of lighting needed for security purposes. All lighting shall be downward screened so that it does not shine on neighboring properties or roadways.
 3. One unlighted sign not to exceed 32 sq ft in size shall be permitted.
 4. This site shall be secure by fencing with a gate with a knockbox or similar device to accommodate emergency access by the local fire company or other emergency responders. The fence shall be shown on the final site plan.
 5. Any transformers or similar equipment shall be located on the site away from any nearby residential uses.
 6. All of the grounds including the area outside of the fence shall be maintained so that they do not become overgrown.
 7. All buffering adjacent to neighboring residential uses shall be consistent with that shown on the landscape plan.
 8. The final site plan shall be subject to the review and approval of the Sussex County Planning and Zoning Commission.
-

2.0 List of Exhibits – (C/U 2343 – TPE DE SU163, LLC)

- 2.1 *Developer Summary*
- 2.2 *Application for Planning and Zoning Commission*
- 2.3 *Conditional Use Site Plan and Landscape Plan*
- 2.4 *Aerial Photo & Location*
- 2.5 *Zoning Map*
- 2.6 *Existing Land Use*
- 2.7 *Future Land Use*
- 2.8 *Strategies for State Policies Spending*
- 2.9 *Watersheds Waterways*
- 2.10 *FEMA Flood Insurance Rate Map (FIRM)*
- 2.11 *Soils Map*
- 2.12 *Property Value Impact Report*
- 2.13 *Glare Study*

2.1 Developer Summary



Proposed 4-Megawatt AC Ground-Mount Community Solar Facility
Sussex County, Delaware

TPE DE SU163, LLC
c/o TurningPoint Energy, LLC
3720 South Dahlia Street
Denver, CO 80237

November 30, 2022

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1.0 INTRODUCTION

1.1 Project Overview

TurningPoint Energy, LLC d/b/a TPE Development through its affiliated entity TPE DE SU163, LLC (the "Applicant") proposes the development of a 4-megawatt AC solar photovoltaic system on parcel 135-11.00-48.00 west of Gravel Hill Road, Sussex County Delaware (the "Project"). The Project will consist of a single axis tracking ground-mounted solar array, associated electrical equipment, an access driveway and fence covering approximately 25 acres of parcel (ID 135-11.00-48.00). The Project intends to participate in the Delaware Community Solar Program and will power the equivalent of approximately 600-650 homes. Community Solar allows residents of Delaware to purchase locally generated clean electricity at a discount to current electric rates without having to install panels on their roof.

If approved, the Project would bring significant and consistent benefits to Sussex County and the community surrounding the Project. The Project would create approximately 30-50 jobs during the approximately 4 to 6-month construction period. Unlike nearly all other forms of development (residential, commercial, or industrial), the Project would benefit the community without stressing community infrastructure – no new children in schools, no use of water and sewer systems, extremely limited use of roads, and little to no additional burden for police or fire departments.

1.2 About TurningPoint Energy

Formed in 2014, TPE is a privately held, independent company transforming our energy future by creating freedom to choose a smarter, cleaner, more flexible way forward through community solar. As a privately held and independent company, TPE customizes projects to the unique needs of each client. Our team has financed and/or built over 2 Gigawatts (GW) of the solar projects operating in the U.S. today. Since 2017, TPE has focused these services on the expanding community solar market in states including Delaware, Maine, Maryland, Illinois, Pennsylvania, Texas, and Rhode Island. TPE's development and investment portfolio now includes over 60MW of community solar projects in construction or operation, with more than 600MW under development.

TPE is a "triple bottom line" company; we believe that our business should create financial, environmental, and community value in every project we create. Our intent is to be long term community members. Upon successful permitting and utility interconnection, TPE typically makes donations to local charities and non-profits doing good work in the communities we work in.

2.0 SITE LOCATION & EXISTING CONDITIONS

TPE, in coordination with its engineering consultant, Becker Morgan Group, Inc, has prepared and compiled information from many sources to form the basis of design for the proposed Project. A summary of existing conditions and the design elements that avoid and or minimize impact to the environment and surrounding community is presented below.

2.1 Existing Conditions

The subject property currently consists of all agricultural land. The existing topography indicates that the site is generally flat, however conveys runoff to the northern portion of the parcel.

2.2 Natural Resources

2.2.1 Wetlands and Floodplain

The Project will be designed to avoid impacts to USACE jurisdictional waters.

Per FEMA FIRM Map Panel 10005C0325L, the development is in Zone X, which is considered an area of minimal flood hazard.

2.2.2 Wildlife

The Project will be designed such that no federally listed species will be significantly impacted. There are no critical habitats at the project location.

2.3 Community Outreach & Benefits

TPE plans to hold an in-person informational meeting to inform the public and answer any questions from concerned citizens.

On September 17, 2021, the Governor of the State of Delaware signed into law Senate Bill 2, which amended the Renewable Energy Portfolio Standards Act and the Electric Utility Restructuring Act of 1999 to accelerate the adoption of community-owned solar photovoltaic systems in Delaware.

Community Solar projects such as SU163 enable members of the Sussex County community to receive savings on their electric bills. Residential, commercial, and municipal customers of Delmarva Power can subscribe to solar energy projects to achieve savings on their electric bill. The community solar model allows customers who may not have suitable roofs for solar to participate in the renewable energy economy and purchase green energy at a discount to the utility service offering. Subscribers can participate with no upfront costs or investment in personal infrastructure. This program is especially appealing to renters, low-income households, businesses, and any Delmarva customer who does not have an adequate rooftop to install a solar energy system.

The Project would create approximately 30-50 jobs during the approximate 4 to 6-month construction process. A regional operations and maintenance firm will service the facility over its working life cycle.

Unlike nearly all other forms of development (residential, commercial, or industrial), the community would benefit from the significant economic benefits mentioned above without stressing community

infrastructure – no new children in schools, no use of water and sewer systems, limited use of roads, and little to no additional burden for police or fire departments.

3.0 PERFORMANCE STANDARDS AND SOLAR SITING ORDINANCE REQUIREMENTS

3.1 Project Description & Design Standards

The Project will consist of a ground-mounted solar array. The solar array will consist of solar panels attached to single axis trackers structures attached to driven steel pier foundations or ground screw foundations, depending on the subsurface composition. A Delaware licensed engineer will certify the foundation and design of the solar racking system is suitable to meet local soil and climate conditions.

The Project will be constructed by a licensed Engineering Procurement and Construction (“EPC”) Contractor. The design and construction process will comply with all National, State and local applicable building, electrical and fire codes, as well as the National Electrical Code (“NEC”). The EPC Contractor shall also possess all professional and trade licenses required by the state and local authorities.

The EPC Contractor will create and maintain a health and safety manual in accordance with OSHA requirements which establishes appropriate rules and procedures concerning workplace safety.

Noise from construction activities will be in accordance with all applicable local and state regulations.

The inverter and transformers will be located on one or more concrete pads or piles. Utility poles at the point of interconnection will be above ground.

The panels will be surrounded by a 7-foot-high fence for safety and security purposes. Entry into the fenced areas will be through gates with Knox Boxes for emergency access.

The Project design and planning has focused on minimizing any potential impacts to the surrounding neighborhood. The Project will produce electricity without requiring any combustion of materials; as a result, the community solar array will not cause or emit odors, dust, gas, smoke, or fumes. In addition, the Project will have very few moving parts and will generate electricity primarily in a passive manner – collecting the sun’s rays and converting energy associated with the rays into electricity – so the Project will not produce vibrations, none of which would impact surrounding properties. The array was designed to meet all required setbacks from neighboring properties and incorporate vegetative screening that will grow in over time for the benefit of nearby residences.

A warning sign shall be provided at the facility entrance and along the perimeter fence including the facilities 911 address and a 24-hour emergency contact number. No outdoor storage is planned for the Project at this time.

The scope of work includes but is not limited to:

- Construction of 16-ft wide gravel access roads
- Construction of project equipment pads
- Construction of a temporary staging areas
- Installation of solar panels and associated support equipment and structures
- Installation of buried and overhead collector lines

3.2 Noise

The Project will operate in accordance with the applicable local noise standards. The inverters are rated at 65 dBA at 1 meter. Sound waves diminish with distance in accordance with mathematical principles of sound level drop.

3.3 Air pollution including (a) Visual emissions, (b) Particulate matter emissions; (c) Fugitive particulate matter emissions; (d) Odorous matter; (e) Airborne toxic matter.

The Project will not emit any air pollution of any of the kinds identified in the performance standards. It will in fact provide a net environmental carbon benefit. According to the EPA Clean Energy Equivalencies Calculator the Project will avoid the environmental equivalent of 6,365 metric tons of carbon annually, which is comparable to:

- Carbon sequestered by 7,533 acres of forest
- 716,258 gallons of gasoline consumed each year
- 1,372 passenger vehicles removed from our streets

A commitment to wildlife-sensitive building and management practices during and after construction will allow for increased local biodiversity. TPE proposes to use pollinator friendly ground cover underneath the Project and native plantings around the perimeter. Clover and grass species that promote the establishment and long-term health of bee populations will give bee and small mammal populations a new pollinator friendly habitat.

3.4 Toxic substances

There are no toxic substances in the panels. The Project will incorporate Tier 1 silicon-based PV panels, which have been analyzed as follows by North Carolina State University:

Well over 80% (by weight) of the content of a PV panel is the tempered glass front and the aluminum frame, both of which are common building materials. Most of the remaining portion are common plastics, including polyethylene terephthalate in the back sheet, EVA encapsulation of the PV cells, polyphenol ether in the junction box, and polyethylene insulation on the wire leads. The active, working components of the system are the silicon photovoltaic cells, the small electrical leads connecting them together, and to the wires coming out of the back of the panel. The electricity generating and conducting components makeup less than 5% of the weight of most panels. The PV cell itself is nearly 100% silicon, and silicon is the second most common element in the Earth's crust. The silicon for PV cells is obtained by high-temperature processing of quartz sand (SiO₂) that removes its oxygen molecules. The refined silicon is converted to a PV cell by adding extremely small amounts of boron and phosphorus, both of which are common and of very low toxicity.

3.5 Fire and explosive hazards

The solar panels and racking, which comprise most of the Project's equipment, are not flammable. Tempered glass offers protection from heat and the elements, and the panels are designed to absorb heat as solar energy. From a study by North Carolina State University:

...Concern over solar fire hazards should be limited because only a small portion of materials in the panels are flammable, and those components cannot self-support a significant fire. Flammable components of PV panels include the thin layers of polymer encapsulates surrounding the PV cells, polymer back sheets (framed panels only), plastic junction boxes on rear of panel, and insulation on wiring. The rest of the panel is composed of non-flammable components, notably including one or two layers of protective glass that make up over three quarters of the panel's weight.

3.6 Glare and heat

As explained in the fire and explosive hazards Section 3.5, there is no heat generated by the Project.

A glare study was performed by TPE using ForgeSolar software to assess the possible effects of reflectivity created by the Project. ForgeSolar software incorporates GlareGauge, the leading solar glare analysis tool which meets Federal Aviation Administration ("FAA") standards and is used globally for glare analysis. It is based on the Solar Glare Hazard Analysis Tool licensed from Sandia National Laboratories.

A model of the Project was input to the software, Route Receptors were created along roadways in vicinity of the site. Height was measured at 5' above ground to emulate passengers in cars. Further, Observation Receptors were modeled at specific dwellings located around the perimeter of the solar array. Heights were modeled at 5' above ground to emulate residents on the 1st floor of dwellings and evaluate the glare impact.

A direct line of sight between the Project and the designated Route Receptors and Observation Receptors is required to produce any discernible glint/glare, so if there is existing or proposed vegetation between the receptor and the project, any glint/glare would be eliminated.

The model assumes the sun is shining 100% of the time it is above the horizon (during laylight hours). That is, it does not account for cloudy or overcast conditions when the sun is not shining. The results, therefore, would be the maximum expected glint and glare during any single year. Existing topography is considered in the simulation based on LIDAR ("Light Detection and Ranging") data. Existing and planned vegetation are not considered in the simulation. The model assumed zero vegetation that may screen the Project, so this must be considered when interpreting the study results.

To reduce glare in the east and west directions during low sun periods, a 5-degree tracker resting angle was implemented during these times, which eliminates the main source of glare for solar projects. This lower angle will position the panels in a near flat position, so they face upwards and do not reflect light from the rising or setting sun towards nearby buildings or cars.

Based on the above inputs/assumptions, no potential for glint or glare was identified in the analysis at any of the Route Receptors or neighboring Observation Receptors. While excluded from the analysis, existing and planned vegetation will further shield the view of the project from nearby properties and roadways.

No additional mitigation measures are recommended since no glint or glare is anticipated based on the ForgeSolar Glare results.

3.7 Setback Compliance, Landscape & Buffering Plan

The Project proposes to conform with all applicable County setbacks from neighboring properties and public rights-of-way. A landscape buffer has been proposed where the project abuts existing residential dwellings.

3.8 Safety and Security

The solar arrays will be enclosed by a 7-foot-high security fence and locked gates, as required by the Ordinance and the National Electrical Code (NEC). Emergency access to the fenced areas will be through Knox-Boxes to provide the required 24-hour access. The gravel drives have been designed to allow emergency vehicle access, including fire trucks. There will be a visible "High Voltage" warning sign at the site entrance. The name(s) and phone number(s) for the electric utility provider, site operator, as well as the facility's 911 address and GPS coordinates will be provided at the site entrance.

Emergency responders will be provided with the key/code for the Knox-Boxes.

3.9 Interconnection

The proposed Project will interconnect to Delmarva Power's distribution network on Gravel Hill Road. A new service will be installed by Delmarva power to connect the Project to the network at the project site.

3.10 Operation and Maintenance

Preventive maintenance will be conducted on a schedule based on manufacturer's recommendations and industry best practices and standards of care. Regular maintenance will include vegetation control, fence inspection and physical inspection of all system components. A mowing schedule shall be established based on the plant species in the seed mix that is properly timed to balance avoiding the disturbance of wildlife and native pollinator-friendly vegetation with the need to avoid the establishment of weeds. Vegetation underneath and between the solar panels should be well maintained in the defined lease area to keep vegetation below the low edge of the solar panels at maximum tilt angle. Management should comply with any local ordinances or conditions of approval. Mowing and weed whacking schedules will be adjusted from time to time to allow for flexibility based on rainfall and vegetation growth. Chemical control shall be used in accordance with Delaware noxious weed regulations. The Project will be monitored continuously for system failures via a Supervisory Control and Data Acquisition (SCADA) system. Qualified and insured technicians will be dispatched to address any system failures, including inverter, transformer, or tracker motor malfunctions.

3.11 Decommissioning

At the end of operational life of the Project, the Project will be safely dismantled using conventional construction equipment. The Project consists of numerous materials that can be resold or recycled for significant scrap value, including steel, aluminum, glass, copper and plastics. The solar panels are not

considered hazardous waste. The panels used in the Project will contain silicon, glass, and aluminum, which have value for recycling.

The site will be restored and reclaimed to approximately the pre-construction condition in conformance with the site lease agreement. It is assumed that the site will be returned to agricultural use after decommissioning, and appropriate measures will be implemented to achieve said use.

2.2 Application for Planning and Zoning Commission

Planning & Zoning Commission Application Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

Type of Application: (please check applicable)

Conditional Use
Zoning Map Amendment

Site Address of Conditional Use/Zoning Map Amendment

Gravel Hill Road, 421' SE/RD 255

Type of Conditional Use Requested:

Solar Energy System

Tax Map #: 135-11.00-48.00 Size of Parcel(s): 41.08 ac

Current Zoning: AR-1 Proposed Zoning: AR-1 Size of Building: _____

Land Use Classification: FG0

Water Provider: N/A Sewer Provider: N/A

Applicant Information

Applicant Name: TPE DE SU163, LLC c/o Adam Beal
Applicant Address: 3720 South Dalia Street
City: Denver State: CO ZipCode: 80237
Phone #: (617) 312-6553 E-mail: jbelknap@tpoint-e.com

Owner Information

Owner Name: Lisa A. Jester
Owner Address: 18117 Petty John Road
City: Milton State: DE Zip Code: 19968
Phone #: _____ E-mail: _____

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: Becker Morgan Group
Agent/Attorney/Engineer Address: 309 South Governors Avenue
City: Dover State: DE Zip Code: 19904
Phone #: (302) 734-7950 E-mail: jfalkowski@beckermorgan.com



Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

- ✓ Completed Application
- ✓ Provide ~~eight (8)~~ ^{four (4)} copies of the Site Plan or Survey of the property
 - Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
 - Provide a PDF of Plans (may be e-mailed to a staff member)
 - Deed or Legal description
- ✓ Provide Fee \$500.00

FUTURE Optional - Additional information for the Commission/Council to consider (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.

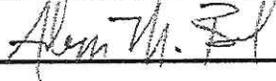
- ✓ Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.
- ✓ DeIDOT Service Level Evaluation Request Response

N/A PLUS Response Letter (if required)

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

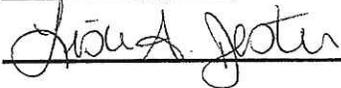
I also certify that I or an agent on my behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

Signature of Applicant/Agent/Attorney



Date: 1/4/22

Signature of Owner



Date: 1/12/22

For office use only:

Date Submitted: _____ Fee: \$500.00 Check #: _____
Staff accepting application: _____ Application & Case #: _____
Location of property: _____

Subdivision: _____
Date of PC Hearing: _____ Recommendation of PC Commission: _____
Date of CC Hearing: _____ Decision of CC: _____

2.3 Conditional Use Site Plan and Landscape Plan



GRAVEL HILL ROAD
60' RIGHT OF WAY (MAJOR COLLECTOR)

PROPOSED OVERHEAD
ELECTRIC

POWER INVERTER

PROPOSED COMMUNITY
SOLAR ENERGY SYSTEM

LANDS NFI
LISA A. JESTER
P.L. 1351 1004900
DEED FOR REC. 342, P. 279
ZONING: AGR-1
39.5 ACRES ±

26' WIDE LANDSCAPE BUFFERYARD
SEE DETAIL, SHEET L-001

26' WIDE LANDSCAPE BUFFERYARD
SEE DETAIL, SHEET L-001

CONDITIONAL USE AREA
(25.0 ACRES ±)

6' CHAINLINK FENCE

15' B.R.L.

15' B.R.L.

15' B.R.L.

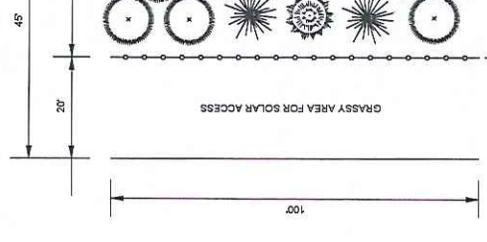
20' B.R.L.

20' W PERIMETER ACCESS

PROPOSED 16'



LANDS N/F
 LISA A. JESTER
 T.P. 13511004800
 DEED REF. PB: 3452, PG. 279
 ZONING - AR-1-M
39.5 ACRES ±



NOTES:
 BUFFERYARD PLANTINGS SHALL BE TREES SHALL OVERLAP WHEN VIEW EFFECTIVELY ACHIEVE AN OPAQUE EVERGREEN TREES SHALL PROVIDE BUFFER. NO PLANTED SPECIES SHALL PLANTINGS.

TYPICAL SOLAR BUFFER
 NO SCALE

NOTE:
 PRIOR TO MULCHING, APPLY APPROVED PRE-EMERGENT W CONTROL ON ALL SHRUB BEDS

MULCH - PLACE 3" LAYER OF SPECIFIED MULCH. DO NOT PLACE MULCH OVER SHRUB TRUNK. KEEP SHRUBS WEEDED AND REPLACE AS NEEDED.

REMOVE TOP 1/2" OF BURLAP CUT & WEAVE INTO ROPES AND WIRE CAGES. FOI CONTAINER PLANTS, CUT ROOTS ON FOUR (4) SIDES AND MIXTURE.

SHRUB PLANTING
 NO SCALE



SOLAR BUFFERYARD PLAN VIEW

SCALE: 1" = 100'

2.4 Aerial Photo and Location



LAYER STATE: Aerial Map-163

AERIAL MAP - SITE LOCATION
SU163

SUSSEX COUNTY / DELAWARE

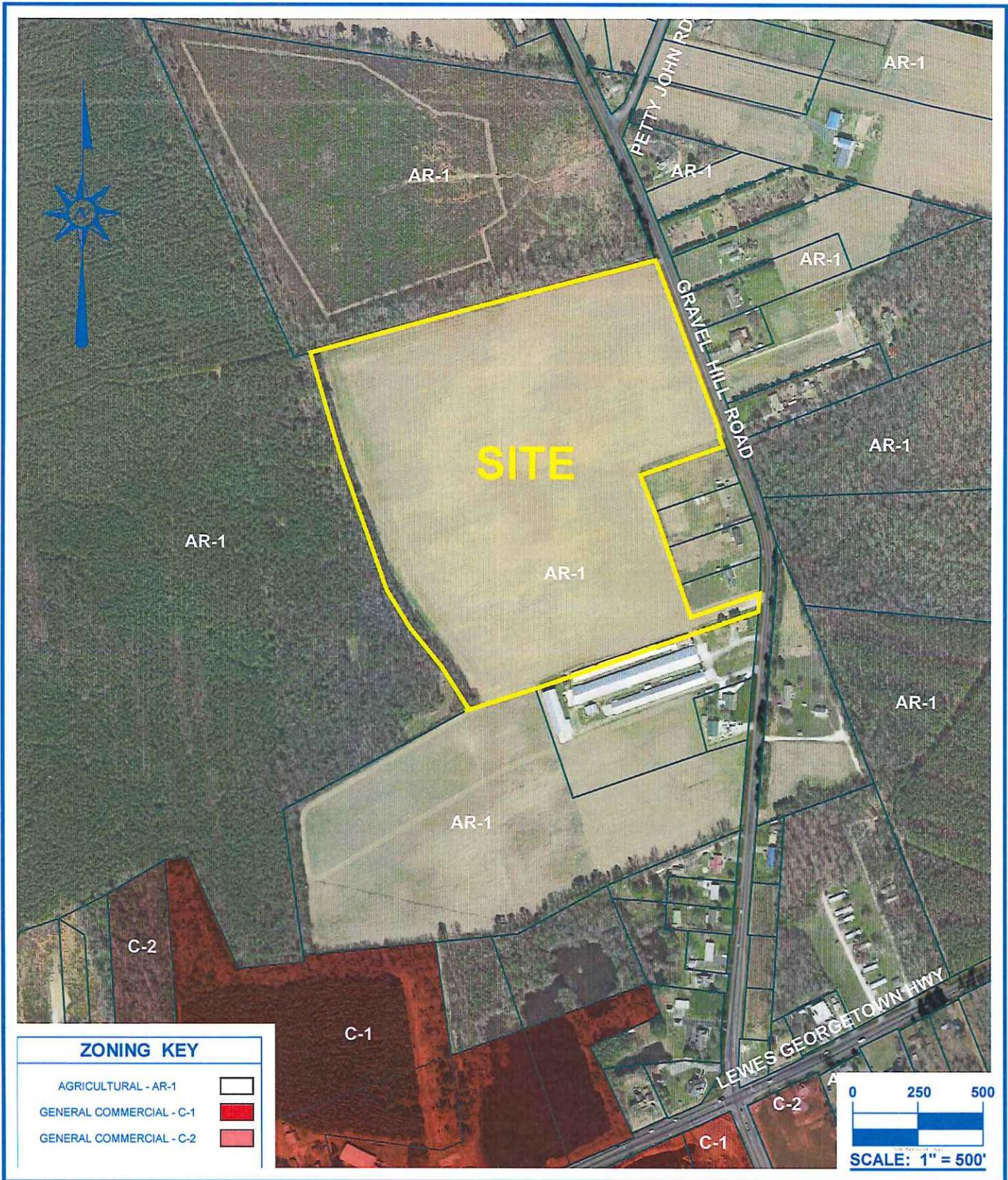
BECKER
MORGAN
GROUP

ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

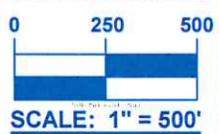
BMG: 2021294.00
SCALE: 1" = 500'
DATE: 11/22/2022
DRAWN BY: J.A.M.

AERIAL

2.5 Zoning Map



ZONING KEY	
AGRICULTURAL - AR-1	
GENERAL COMMERCIAL - C-1	
GENERAL COMMERCIAL - C-2	



LAYER STATE: Zoning Map-163

**ZONING MAP
SU163**

SUSSEX COUNTY / DELAWARE

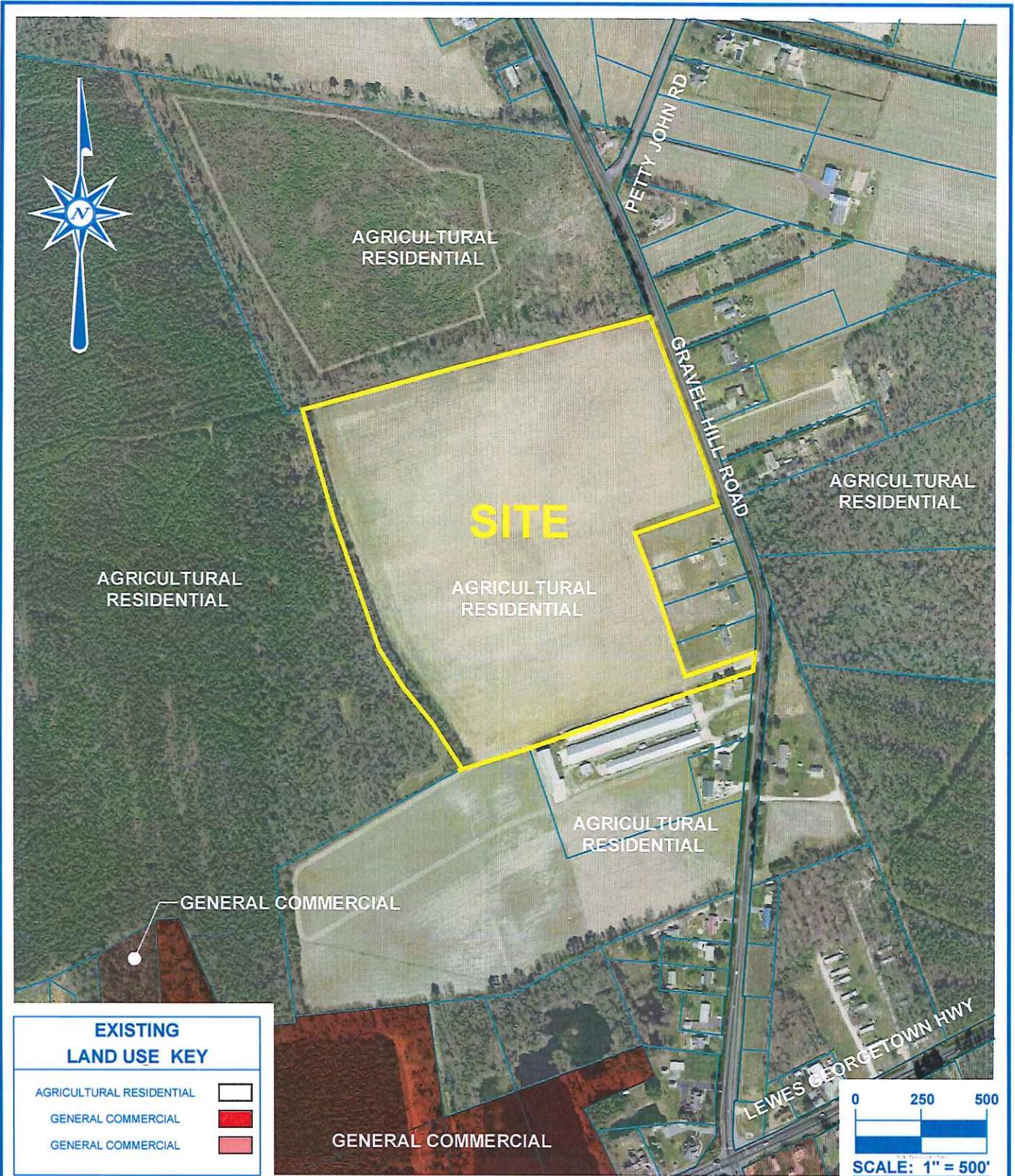
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MORGAN**
GROUP

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ENGINEERING
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309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG: 2021294.00
SCALE: 1" = 500'
DATE: 11/22/2022
DRAWN BY: J.A.M.

ZONING

2.6 Existing Land Use



LAYER STATE: Existing Land Use-163

EXISTING LAND USE
SU163

SUSSEX COUNTY / DELAWARE

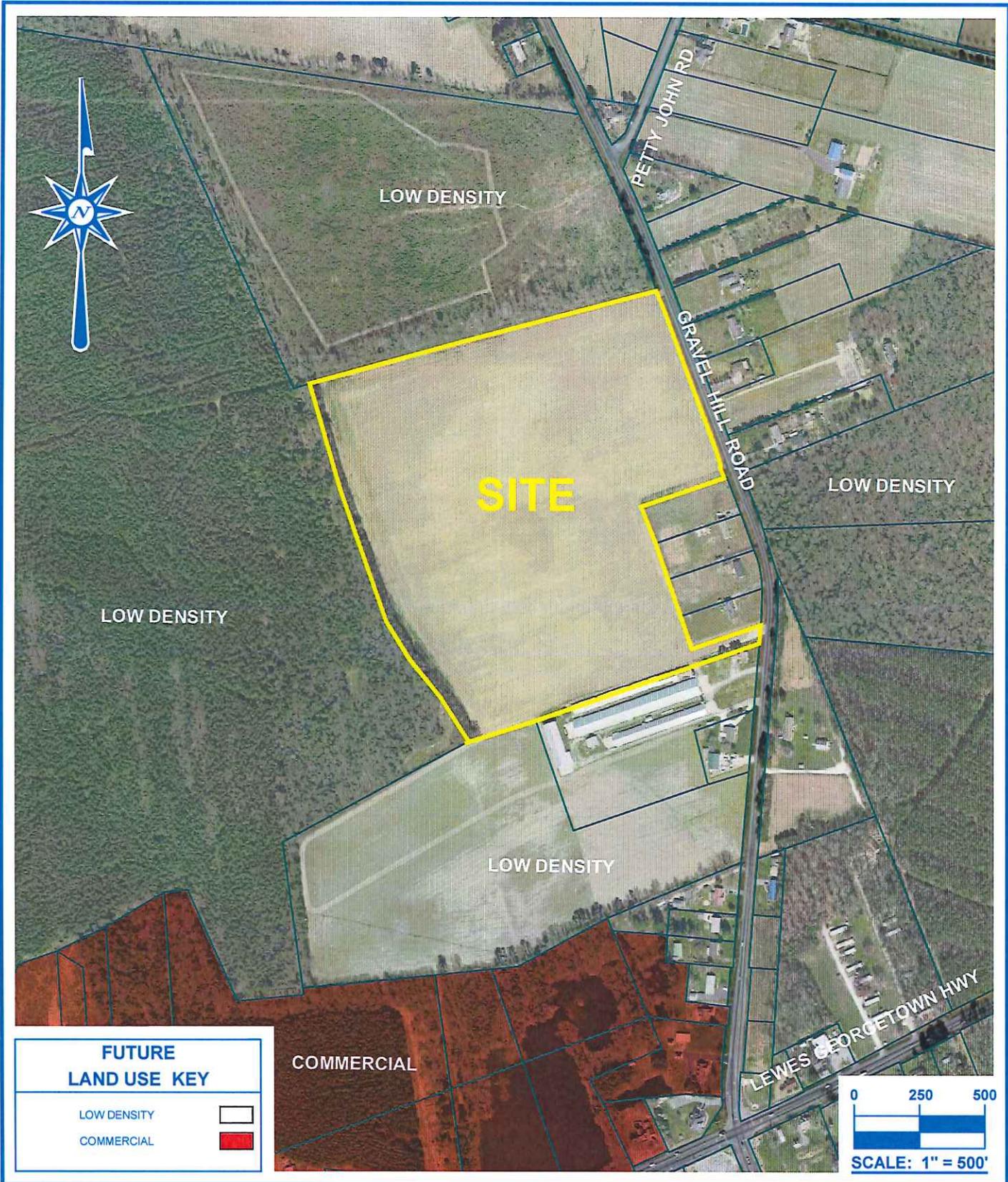


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Fax 302.734.7965

BMG: 2021294.00
SCALE: 1" = 500'
DATE: 11/22/2022
DRAWN BY: J.A.M.

1

2.7 Future Land Use



LAYER STATE: Proposed Land Use-163

**FUTURE LAND USE
SU163**

SUSSEX COUNTY / DELAWARE

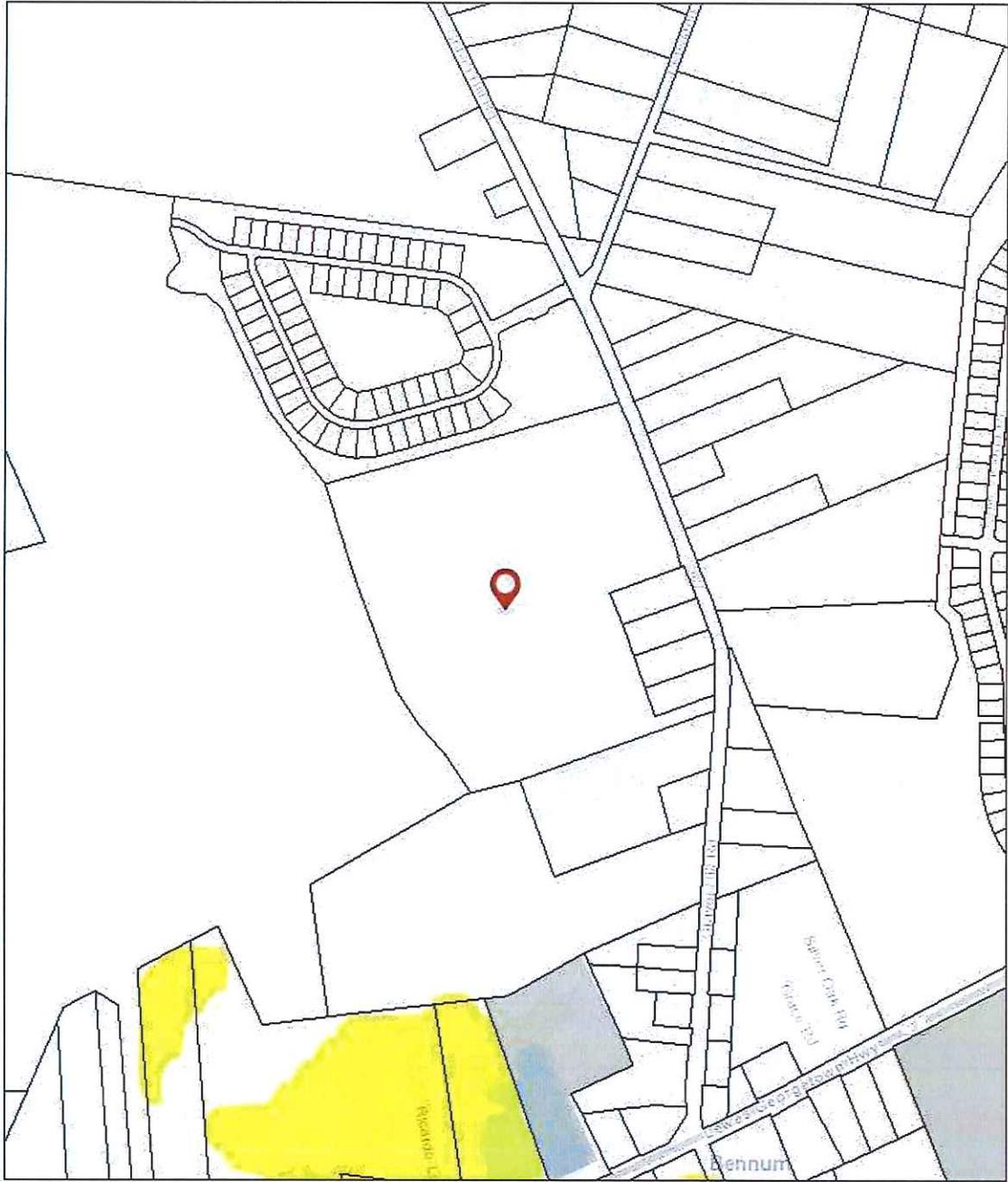


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Fax 302.734.7965

BMG: 2021294.00
SCALE: 1" = 500'
DATE: 11/22/2022
DRAWN BY: J.A.M.

1

2.8 Strategies for State Policies Spending



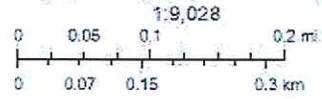
DE_StateParcels - State Parcels

2020 State Strategies

3

4

Out of Play



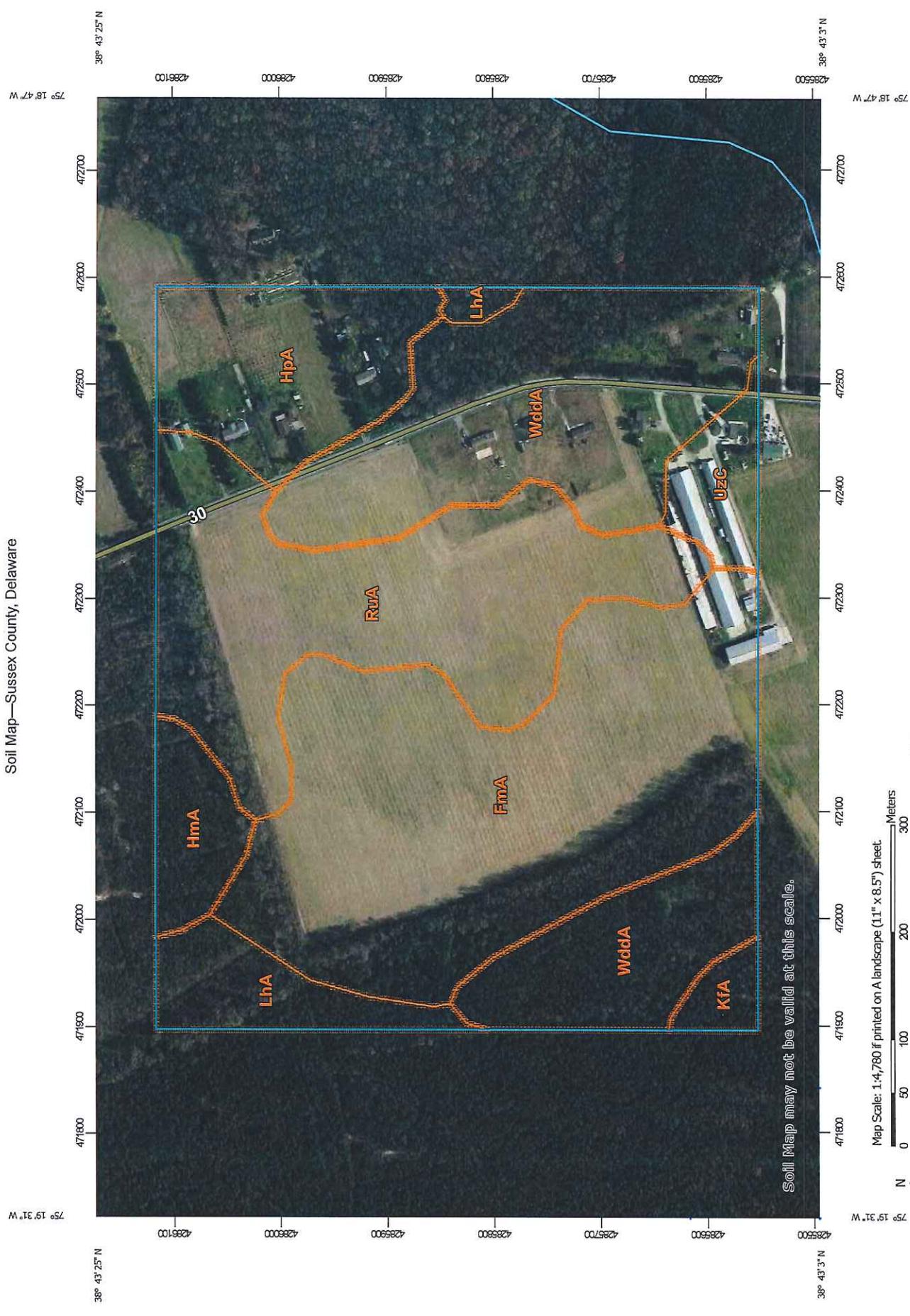
Delaware State Office of Planning Coordination County of Sussex DE
 Delaware FirstMap, VITA, Esri, HERE, Garmin, GeoTechnologies, Inc.
 Intermap, USGS, MET/NASA, EPA, USDA

2.9 Watersheds / Waterways

2.10 FEMA Flood Insurance Rate Map (FIRM)

2.11 Soils Map

Soil Map—Sussex County, Delaware



Map Scale: 1:4,780 if printed on A landscape (11" x 8.5") sheet.
 Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



Natural Resources
 Conservation Service

Web Soil Survey
 National Cooperative Soil Survey

MAP LEGEND

- Area of Interest (AOI)**
 - Area of Interest (AOI)
- Soils**
 - Soil Map Unit Polygons
 - Soil Map Unit Lines
 - Soil Map Unit Points
- Special Point Features**
 - Blowout
 - Borrow Pit
 - Clay Spot
 - Closed Depression
 - Gravel Pit
 - Gravelly Spot
 - Landfill
 - Lava Flow
 - Marsh or swamp
 - Mine or Quarry
 - Miscellaneous Water
 - Perennial Water
 - Rock Outcrop
 - Saline Spot
 - Sandy Spot
 - Severely Eroded Spot
 - Sinkhole
 - Slide or Slip
 - Sodic Spot
- Water Features**
 - Streams and Canals
- Transportation**
 - Rails
 - Interstate Highways
 - US Routes
 - Major Roads
 - Local Roads
- Background**
 - Aerial Photography
- Other**
 - Spoil Area
 - Stony Spot
 - Very Stony Spot
 - Wet Spot
 - Other
 - Special Line Features

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
 Survey Area Data: Version 23, Sep 14, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FmA	Fort Mott loamy sand, 0 to 2 percent slopes	30.9	31.8%
HmA	Hammonton loamy sand, 0 to 2 percent slopes	3.2	3.3%
HpA	Henlopen loamy sand, 0 to 2 percent slopes	9.1	9.3%
KfA	Keyport fine sandy loam, 0 to 2 percent slopes	1.2	1.2%
LhA	Lenni silt loam, 0 to 2 percent slopes	4.5	4.7%
RuA	Runclint loamy sand, 0 to 2 percent slopes	20.9	21.5%
UzC	Udorthents, 0 to 10 percent slopes	2.8	2.8%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	24.6	25.3%
Totals for Area of Interest		97.2	100.0%

2.12 Property Value Impact Report

REAL ESTATE

ADJACENT PROPERTY VALUE IMPACT REPORT:

**Academic and Peer Authored Property Value Impact Studies,
Research and Analysis of Existing Solar Facilities, and
Market Participant and Assessor Interviews**

Prepared For:

TPE Development, LLC

Submitted By:

CohnReznick LLP
Valuation Advisory Services
200 S. Wacker Drive, Suite 2600
Chicago, Illinois 60606
(312) 508-5900

Patricia L. McGarr, MAI, CRE, FRICS
Andrew R. Lines, MAI
Erin C. Bowen, MAI

October 5, 2022



LETTER OF TRANSMITTAL

October 5, 2022

Adam Beal
Executive Vice President of Development
TPE Development, LLC
3720 South Dahlia Street
Denver, CO 80237

SUBJECT: Property Value Impact Report
An Analysis of Existing Solar Farms

To Whom it May Concern:

CohnReznick is pleased to submit the accompanying property values impact report for proposed solar energy uses in the Mid Atlantic. Per the client’s request, CohnReznick researched property transactions adjacent to existing solar farms, researched and analyzed articles and other published studies, and interviewed real estate professionals and Township/County Assessors active in the market where solar farms are located, to gain an understanding of actual market transactions in the presence of solar energy uses.

The purpose of this consulting assignment is to determine whether proximity to a renewable energy use (solar farm) has an impact on adjacent property values. The intended use of our opinions and conclusions is to assist the client in addressing local concerns and to provide information that local bodies are required to consider in their evaluation of solar project use applications. We have not been asked to value any specific property, and we have not done so.

The client and intended user for the assignment is TPE Development, LLC (“Turning Point”). Additional intended users of our findings include Turning Point’s designated project companies, all relevant permitting authorities for Turning Point’s proposed solar projects in Delaware, Maryland and New Jersey. The report may be used only for the aforementioned purpose and may not be distributed without the written consent of CohnReznick LLP (“CohnReznick”).

This consulting assignment is intended to conform to the Uniform Standards of Professional Appraisal Practice (USPAP), the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute, as well as applicable state appraisal regulations.

Based on the analysis in the accompanying report, and subject to the definitions, assumptions, and limiting conditions expressed in the report, our findings are:

Disclaimer: This report is limited to the intended use, intended users (TPE Development, LLC, and its designated project companies and others stated in the report as it relates to the evaluation of a proposed solar energy generating facility in Delaware, Maryland and New Jersey), and purpose stated within. No part of this report may otherwise be reproduced or modified in any form, or by any means, without the prior written permission of CohnReznick LLP.



FINDINGS

- I. Academic Studies (pages 21-23): CohnReznick reviewed and analyzed published academic studies that specifically analyzed the impact of solar facilities on nearby property values. These studies include multiple regression analyses of hundreds and thousands of sales transactions, and opinion surveys, for both residential homes and farmland properties in rural communities, which concluded existing solar facilities have had no negative impact on adjacent property values.

Peer Authored Studies: CohnReznick also reviewed studies prepared by other real estate valuation experts that specifically analyzed the impact of solar facilities on nearby property values. These studies found little to no measurable or consistent difference in value between the Test Area Sales and the Control Area Sales attributed to the proximity to existing solar farms and noted that solar energy uses are generally considered a compatible use.

- II. CohnReznick Studies (pages 24-76): Further, CohnReznick has performed 29 studies in over 15 states, of both residential and agricultural properties, in which we have determined that the existing solar facilities have not caused any consistent and measurable negative impact on property values.

For this Project, we have included 8 of these studies which are most similar to the subject in terms of general location and size, summarized as follows:

CohnReznick - Existing Solar Farms Studied						
	Solar Farm	Location	Site Area (Acres)	Power Output (MW AC)	Date Project Completed	Impact on Surrounding Property Values
1	Upper Marlboro	Prince George's County, MD	31	2.0	Dec-19	No Impact
2	Lapeer (Demille & Turrill Solar)	Lapeer County, MI	270	48.0	May-17	No Impact
3	Woodland Solar	Isle of Wight County, VA	204	19.0	Dec-16	No Impact
4	Sunfish Farm Solar	Wake County, NC	50	2.0	Dec-15	No Impact
5	Call Farms 3 Solar	Genesee County, NY	82	2.0	Jul-18	No Impact
6	Jefferson County Community	Jefferson County, CO	13	1.2	May-16	No Impact
7	Whitetail	Franklin County, PA	130	13.5	Dec-19	No Impact
8	New Road Solar	Middlesex County, NJ	8	10.0	Jun-18	No Impact

It is noted that proximity to the solar farms has not deterred sales of nearby agricultural land and residential single-family homes nor has it deterred the development of new single-family homes on adjacent land.

This report also includes two "Before and After" analysis, in which sales that occurred prior to the announcement and construction of the solar farm project were compared with sales that occurred after completion of the solar farm project, for both adjoining and non-adjoining properties. No measurable impact on property values was demonstrated.

- III. Market Participant Interviews (pages 77-80): Our conclusions also consider interviews with over 45 County and Township Assessors, who have at least one solar farm in their jurisdiction, and in which they have determined that solar farms have not negatively affected adjacent property values.

Disclaimer: This report is limited to the intended use, intended users (TPE Development, LLC, and its designated project companies and others stated in the report as it relates to the evaluation of a proposed solar energy generating facility in Delaware, Maryland and New Jersey), and purpose stated within. No part of this report may otherwise be reproduced or modified in any form, or by any means, without the prior written permission of CohnReznick LLP.



With regards to the Project, we specifically interviewed Assessors in Delaware, New Jersey and Maryland:

- Cheryl Bundek, the Supervisor of Assessments of Kent County, Delaware, reported that when she worked in the city of Dover's tax assessor's office, they had never received a complaint or appeal request about assessed values from home owners in nearby manufactured home communities regarding the Dover Sun Park solar farm.
- Nancy Cook in the South Brunswick Township tax assessor's office, in Middlesex County, New Jersey, said that to her recollection there had been no complaints or appeals filed about the presence of the New Road Solar facility in the township from nearby subdivision homeowners.
- Braxton McNeil, a supervisor in the Howard County, Maryland tax assessor's office, said that they have not had appeals or complaints filed due to the recently constructed solar farms, Nautilus Solar farm and Snowden River Solar farm, from nearby residential homeowners. Additionally, they have not seen an impact on sales prices of residential property surrounding solar farms in the County.
- Shannon Porter, a supervisor in the Prince George's County, Maryland tax assessor's office, reported that they have not received complaints or appeals to lower assessed values on homes near the Synergen Panorama Solar farm. They have also noted that their has not been a negative impact on sales prices of residential property surrounding solar farms in the county.

To give us additional insight as to how the market evaluates farmland and single-family homes with views of solar farms, we interviewed numerous real estate brokers and other market participants who were party to actual sales of property adjacent to solar; these professionals also confirmed that solar farms did not diminish property values or marketability in the areas they conducted their business.

- IV. Solar Farm Factors on Harmony of Use (*pages 81-87*): In the course of our research and studies, we have recorded information regarding the compatibility of these existing solar facilities and their adjoining uses, including the continuing development of land adjoining these facilities.

CONCLUSION

Considering all of the preceding, the data indicates that solar facilities do not have a negative impact on adjacent property values.

Disclaimer: This report is limited to the intended use, intended users (TPE Development, LLC, and its designated project companies and others stated in the report as it relates to the evaluation of a proposed solar energy generating facility in Delaware, Maryland and New Jersey), and purpose stated within. No part of this report may otherwise be reproduced or modified in any form, or by any means, without the prior written permission of CohnReznick LLP.

CohnReznick 

If you have any questions or comments, please contact the undersigned. Thank you for the opportunity to be of service.

Very truly yours,

CohnReznick LLP



Andrew R. Lines, MAI
Principal
Certified General Real Estate Appraiser
Illinois License No. 553.001841
Expires 9/30/2023
Indiana License No. CG41500037
Expires 6/30/2024
New Jersey License No. 42RG00238700
Expires 12/31/2023
New York License No. 46000051059
Expires 6/16/2024



Patricia L. McGarr, MAI, CRE, FRICS
National Director - Valuation Advisory Services
Certified General Real Estate Appraiser
Illinois License No. #553.000621
Expires 9/30/2023
Indiana License No. #CG49600131
Expires 6/30/2024
Michigan License No. 1201072979
Expires 7/31/2024



Erin C. Bowen, MAI
Senior Manager
Certified General Real Estate Appraiser
Arizona License No. 32052
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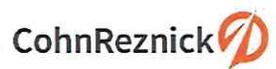
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SCOPE OF WORK

CLIENT AND INTENDED USERS

The client and intended user of this report is TPE Development, LLC and its designated project companies; other intended users may include the client's legal and site development professionals. Additional intended users of our findings include all relevant permitting authorities for Turning Point's proposed solar projects in Delaware, New Jersey and Maryland.

INTENDED USE

The intended use of our findings and conclusions is to address certain criteria required for the granting of approvals for proposed solar energy uses. We have not been asked to value any specific property, and we have not done so. The report may be used only for the aforementioned purpose and may not be distributed without the written consent of CohnReznick LLP ("CohnReznick").

PURPOSE

The purpose of this consulting assignment is to determine whether proximity to the proposed solar facility will result in an impact on adjacent property values.

DEFINITION OF VALUE

This report utilizes Market Value as the appropriate premise of value. Market value is defined as:

"The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition are the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

1. Buyer and seller are typically motivated;
2. Both parties are well informed or well advised, and acting in what they consider their own best interests;
3. A reasonable time is allowed for exposure in the open market.
4. Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
5. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale."¹

¹ Code of Federal Regulations, Title 12, Chapter I, Part 34.42[h]

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EFFECTIVE DATE & DATE OF REPORT

October 5, 2022 (Paired sale analyses contained within each study are periodically updated.)

PRIOR SERVICES

USPAP requires appraisers to disclose to the client any services they have provided in connection with the subject property in the prior three years, including valuation, consulting, property management, brokerage, or any other services.

This report is a compilation of the Existing Solar Farms which we have studied, and is not evaluating a specific subject site. In this instance, there is no “subject property” to disclose.

INSPECTION

Patricia L. McGarr, MAI, CRE, FRICS, Andrew R. Lines, MAI, and Erin C. Bowen, MAI have viewed the exterior of all comparable data referenced in this report in person, via photographs, or aerial imagery.

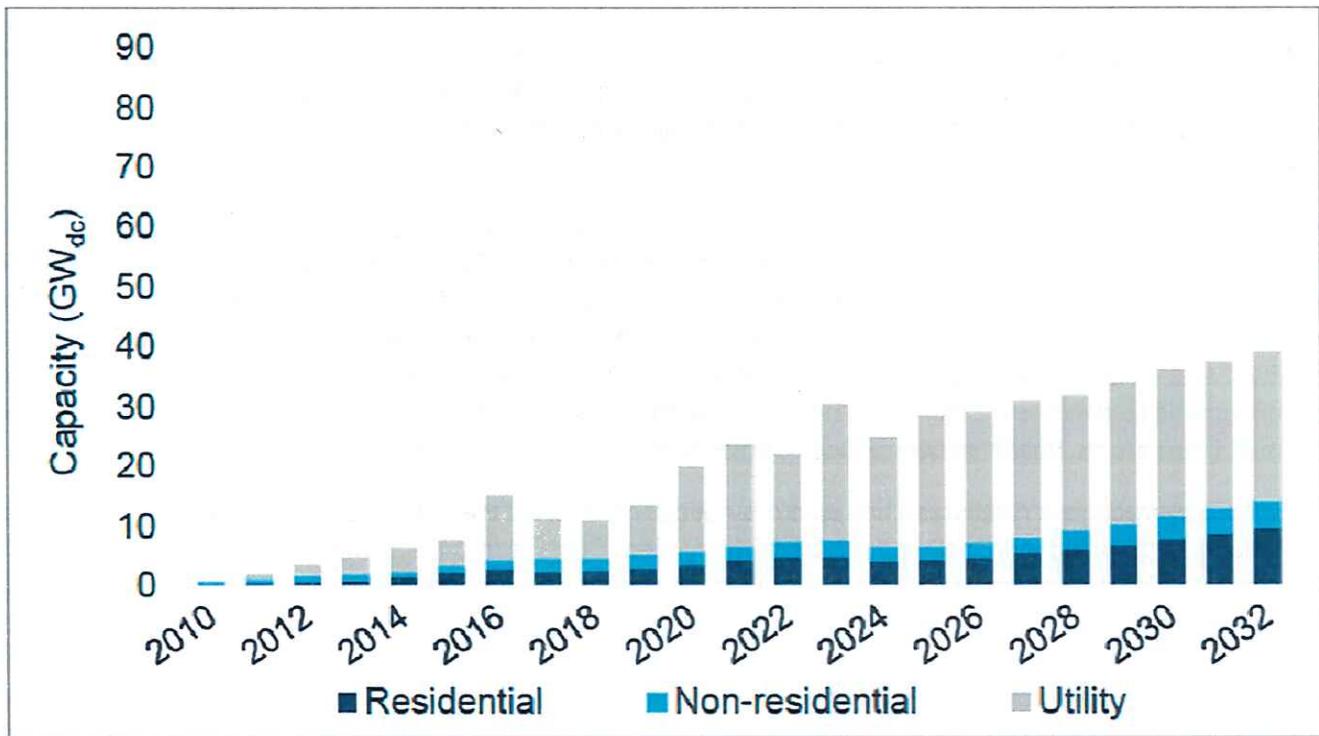
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OVERVIEW OF SOLAR DEVELOPMENT IN THE UNITED STATES

Solar development increased almost exponentially over the past ten years in the United States as technology and the economic incentives (Solar Investment Tax Credits or ITC) made the installation of solar farms economically reasonable. The cost to install solar panels has dropped nationally by 70 percent since 2010, which has been one cause that led to the increase in installations. A majority of these solar farm installations are attributed to larger-scale solar farm developments for utility purposes. The chart below portrays the historical increase on an annual basis of solar installations in the US as a whole, courtesy of research by Solar Energy Industries Association (SEIA) and Wood Mackenzie, and projects solar photovoltaic (PV) deployment for the next ten years through 2032, with the largest percentage of installations attributed to utility-scale projects.

US PV installation historical data and forecast, 2010-2032





©2022

The United States installed 3.9 Gigawatts (GW) DC of solar photovoltaic capacity for all the sectors, residential, commercial, community solar and utility-scale solar projects in Q1 2021, a 24 percent decrease from Q1 2021 and a 52 percent decrease from Q4 2021, representing the weakest quarter for United States solar installations in two years. Due to the anti-circumvention investigation instigated by Auxin Solar’s petition to the Department

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of Commerce, most manufacturers have simply stopped shipping equipment to the United States to avoid tariff risk. As a result of the uncertainty created by the anti-circumvention investigation, expectations for 2022 solar installations have been reduced to 15.6 GWdc, a 29 percent reduction from the previous quarter, which had already been reduced due to supply chain constraints. Most of the reduction comes from the utility-scale solar segment, which had decreased by more than 40 percent from the previous quarter's outlook.

The beginning dates for operation of multiple gigawatts of projects have been pushed from 2022 into 2023 or later. The projects likely to come online in 2022 already have secured equipment, as of the end of 2021.

However, solar power generation still accounted for 50 percent of all new electricity-generating capacity additions in Q1 2022 and continues to make up the largest share of new generating capacity in the U.S.

As of August 12, 2022, the Inflation Reduction Act was passed in the Senate and The House of Representatives, which includes long-term solar incentives and investment in domestic solar manufacturing. Included in the bill, a 10-year extension and expansion of the Investment Tax Credit (ITC) and Production Tax Credit (PTC) will provide tax credits for solar manufacturing and direct payment options for tax credits. While the uncertainty of the anti-circumvention investigation remains present, the passage of the Inflation Reduction Act gives the solar industry long-term market certainty.

Recent articles show that over the past decade, the solar industry has experienced unprecedented growth. Among the factors contributing to its growth were government incentives, significant capacity additions from existing and new entrants and continual innovation. Solar farms offer a wide array of economic and environmental benefits to surrounding properties. Unlike other energy sources, solar energy does not produce emissions that may cause negative health effects or environmental damage. Solar farms produce a lower electromagnetic field exposure than most household appliances, such as TV and refrigerators, and studies have confirmed there are no health issues related to solar farms.²

Solar farm construction in rural areas has also dramatically increased the tax value of the land on which they are built, which has provided a financial boost to some counties. CohnReznick has studied real estate tax increases due to the installation of solar, which can range up to 10-12 times the rate for farmland. A majority of tax revenue is funneled back into the local area, and as much as 50 percent of increased tax revenue can typically be allocated to the local school district. By converting farmland to a passive solar use for the duration of the system's life, the solar energy use does not burden school systems, utilities, traffic, nor infrastructure as it is a passive use that does not increase population as say a residential subdivision would.

Beyond creating jobs, solar farms are also benefiting the overall long-term agricultural health of the community. The unused land, and also all the land beneath the solar panels, will be left to rejuvenate naturally. In the long run this is a better use of land since the soil is allowed to recuperate instead of being ploughed and fertilized

² "Electromagnetic Field and Public Health." Media Centre (2013): 1-4. World Health Organization.

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year after year. A solar farm can offer some financial security for the property owner over 20 to 25 years. Once solar panel racking systems are removed, the land can revert to its original use.³

³ NC State Extension. (May 2016). Landowner Solar Leasing: Contract Terms Explained. Retrieved from: <https://content.ces.ncsu.edu/landowner-solar-leasing-contract-terms-explained>

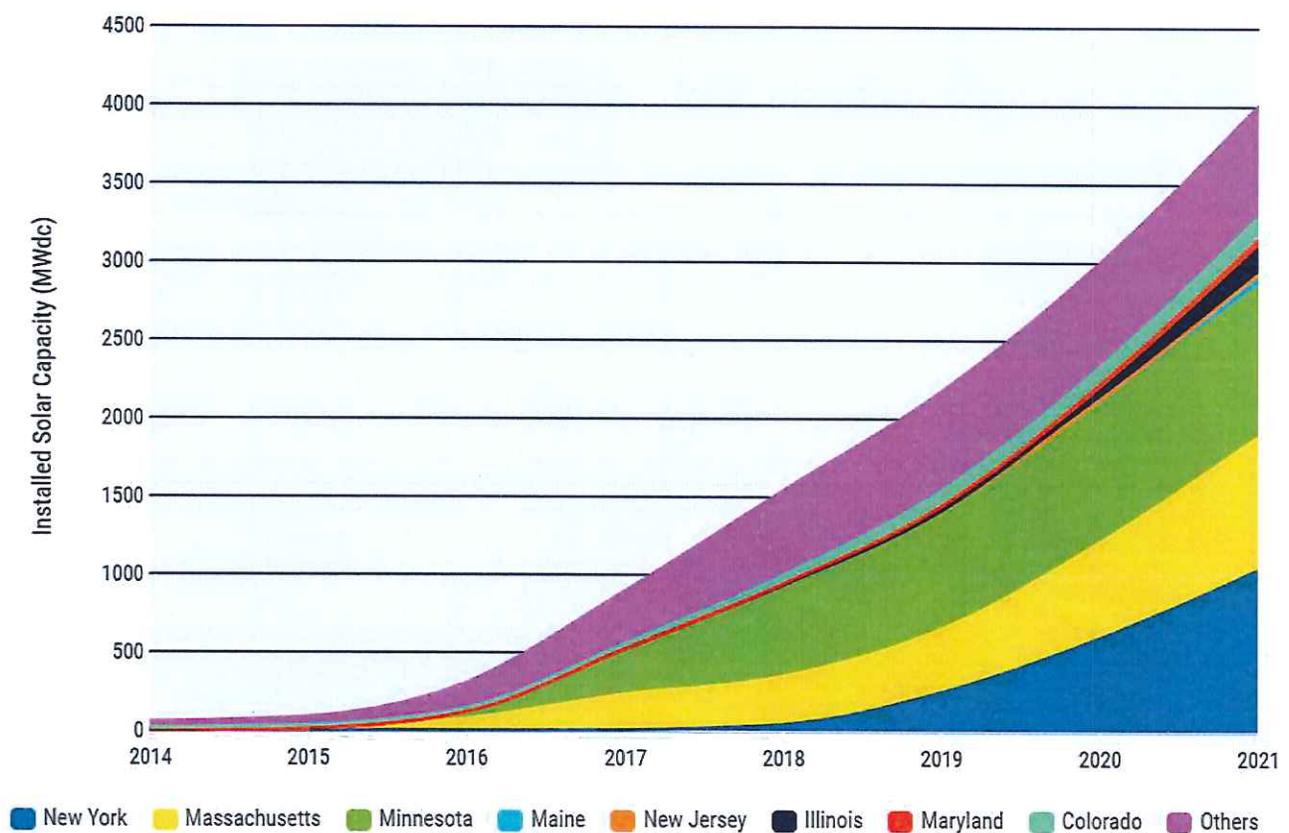
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NATIONAL COMMUNITY SOLAR ENERGY PRODUCTION

Community solar projects (facilities that generate 5 MW AC or less of power) account for 4,900 MWdc of installed power in the U.S. as of the second quarter 2022, according to SEIA data. The community solar industry had a record setting year in 2021 with 957 MWdc installed, according to SEIA data. According to the U.S. Energy Information Administration (EIA) through June 2022, there are over 4,133 community solar facilities in operation across the country.

Community solar installations significantly grew year-over-year as of first quarter 2022, however, installations are down 59 percent from the fourth quarter 2021. Due to uncertainty around the anti-circumvention investigation, supply chain issues, and long timelines for new community solar policies, community solar installations are expected to contract in 2022. The growth of community solar installations from 2014 to 2021 is presented in the chart below.

Cumulative U.S. Community Solar Installations



Source: SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight Q2 2022



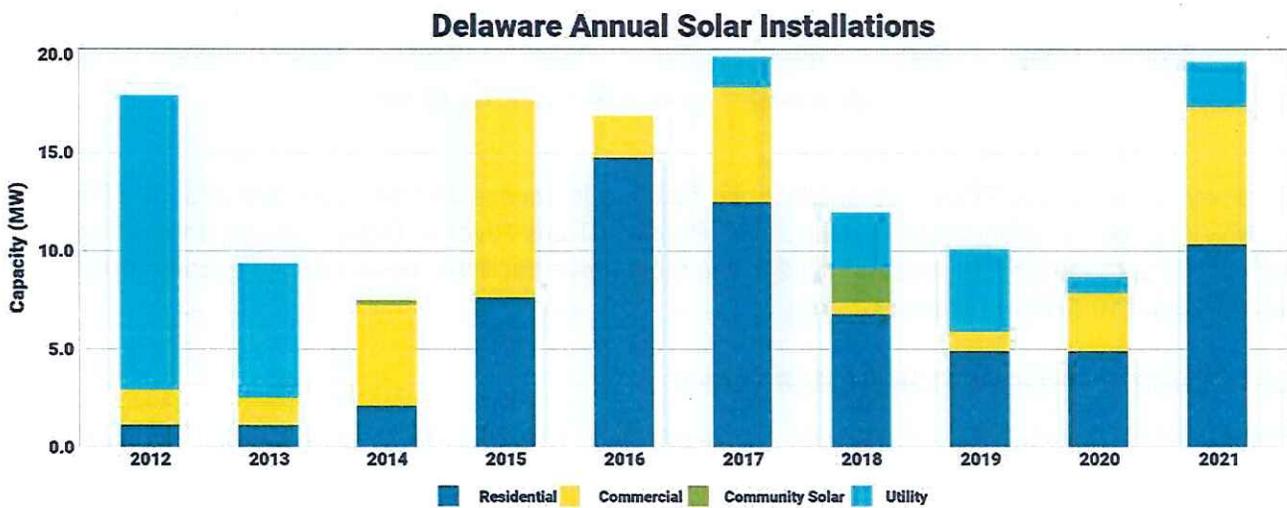
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While early growth for community solar installations was led primarily by three key markets - New York, Minnesota, and Massachusetts - a growing list of states with community solar programs have helped diversify the market, creating large pipelines set to come to fruition over the next several years.

SOLAR ENERGY PRODUCTION IN DELAWARE

As of the end of the first quarter of 2022, Delaware had 171 MW AC of power overall, ranking forty-first in the U.S. for the capacity of solar installed. There have been only 9.8 MW of solar power installed in the state since 2015. However, significantly more utility investments in clean energy are on the horizon, with 341 MW AC of solar power planned for installation over the next five years. The largest new solar facility in Delaware will be a 114 MW AC utility scale installation projected to become operational in December 2024 in New Castle County, that is being developed by Cedar Creek Solar. The total planned solar facilities will increase solar power generation in the state by approximately 199 percent.



Delaware currently has 12 non-residential solar facilities in service and two generate over 5 MW, totaling 21.8 MW of power in utility-scale facilities. Milford Solar Farm in Kent County generates the most power at 11.8 MW and was developed in 2012. The most recent facility to be developed became operational in 2021 with 1.3 MW in suburban Wilmington on the JP Morgan Chase office campus.

SOLAR ENERGY PRODUCTION IN NEW JERSEY

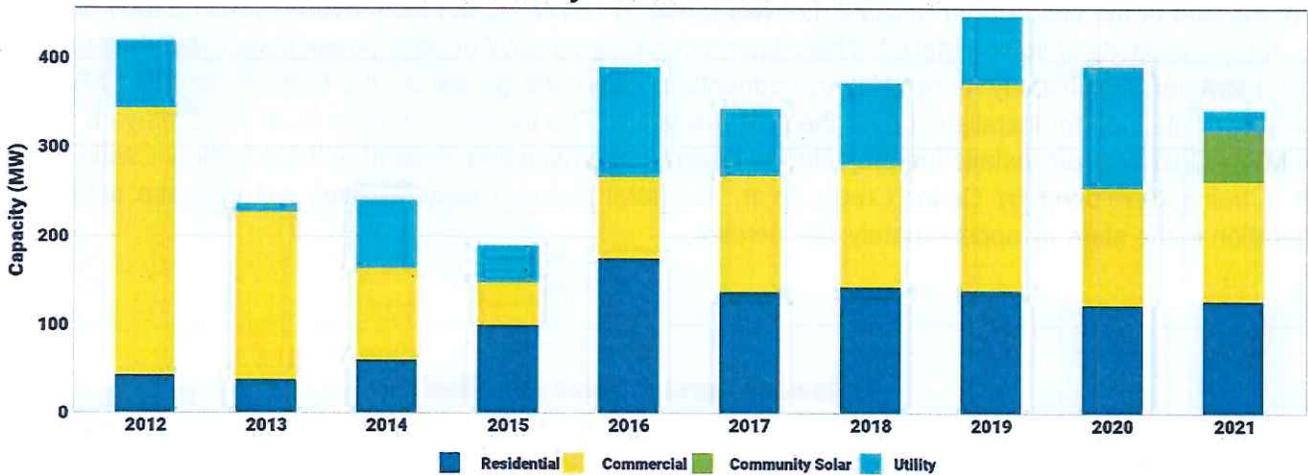
As of the end of the first quarter of 2022, New Jersey had 3,992 MW AC of power overall, ranking eighth in the U.S. for the capacity of solar installed. There have been 502.9 MW of solar power installed in the state since 2015 and significantly more investments in clean energy are on the horizon, with 1,963 MW AC of solar power

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planned for installation over the next five years. The largest new solar facility in Delaware will be a 19.8 MW AC utility scale installation projected to become operational in November 2022 in Morris County, that is being developed by NJR Clean Energy Ventures Corporation. The total planned solar facilities will increase solar power generation in the state by approximately 190 percent.

New Jersey Annual Solar Installations



New Jersey currently has 61 non-residential solar facilities in service and two generate over 20 MW, totaling 545.9 MW of power in utility-scale facilities. EDF Phase 1 Toms River in Ocean County generates the most power at 21.3 MW and was developed in 2021. The most recent facility to be developed became operational in March 2022 with 10.5 MW in Mercer County.

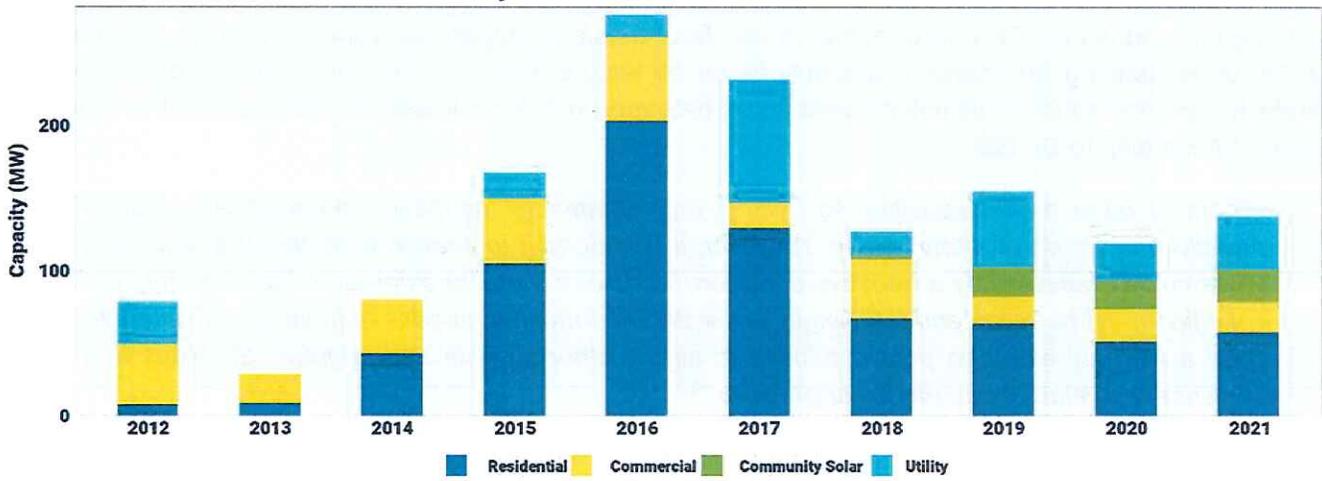
SOLAR ENERGY PRODUCTION IN MARYLAND

As of the end of the first quarter of 2022, Maryland had 1,459 MW AC of power overall, ranking eighteenth in the U.S. for the capacity of solar installed. There have been 298.3 MW of solar power installed in the state since 2015. However, significantly more utility investments in clean energy are on the horizon, with 1,050 MW AC of solar power planned for installation over the next five years. The largest new solar facility in Maryland will be an 80 MW AC utility scale installation projected to become operational in October 2022 in Queen Annes County, that is being developed by Bluegrass Solar. The total planned solar facilities will increase solar power generation in the state by approximately 256 percent.

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Maryland Annual Solar Installations



Maryland currently has 15 non-residential solar facilities in service and two generate over 20 MW, totaling 241.3 MW of power in utility-scale facilities. Great Bay Solar 1 in Somerset County generates the most power at 75 MW and was developed in 2018. The most recent facility to be developed became operational in December 2021, which generates 6 MW of power and is located in Carroll County.

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APPRAISAL THEORY – ADJACENT PROPERTY’S IMPACT ON VALUE

According to Randall Bell, PhD, MAI, author of text *Real Estate Damages*, published by the Appraisal Institute in 2016, understanding the market’s perceptions on all factors that may have an influence on a property’s desirability (and therefore its value) is essential in determining if a diminution or enhancement of value has occurred.⁴ According to Dr. Bell:

“There is often a predisposition to believe that detrimental conditions automatically have a negative impact on property values. However, it is important to keep in mind that if a property’s value is to be affected by a negative condition, whether internal or external to the property, that condition must be given enough weight in the decision-making process of buyers and sellers to have a material effect on pricing relative to all the other positive and negative attributes that influence the value of that particular property.”⁵

Market data and empirical research through the application of the three traditional approaches to value should be utilized to estimate the market value to determine if there is a material effect on pricing due, to the influence of a particular characteristic of or on a property.

A credible impact analysis is one that is logical, innate, testable and repeatable, prepared in conformity with approved valuation techniques. In order to produce credible assignment results, more than one valuation technique should be utilized for support for the primary method, or a check of reasonableness, such as utilization of more than one approach to value, conducting a literature review, or having discussions (testimony) with market participants.⁶ CohnReznick implemented the scientific method⁷ to determine if a detrimental condition of proximity to a solar farm exists, further described in the next section.

⁴ Bell, Randall, PhD, MAI. *Real Estate Damages. Third ed.* Chicago, IL: Appraisal Institute, 2016. (Pages 1-2)

⁵ Ibid, Page 314

⁶ Ibid, Pages 7-8

⁷ The scientific method is a process that involves observation, development of a theory, establishment of a hypothesis, and testing. The valuation process applies principles of the scientific method as a model, based upon economic principles (primarily substitution) as the hypothesis. The steps for the scientific method are outlined as follows:

1. Identify the problem.
2. Collect relevant data.
3. Propose a hypothesis.
4. Test the hypothesis.
5. Assess the validity of the hypothesis.

Bell, Randall, PhD, MAI. *Real Estate Damages. Third ed.* Chicago, IL: Appraisal Institute, 2016. (Pages 314-316)

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METHODOLOGY

The purpose of this report is to determine whether proximity to the solar facility resulted in any measurable and consistent impact on adjacent property values. To test this hypothesis, CohnReznick identified three relevant techniques to test if a detrimental condition exists.

- (1) A review of published studies;
- (2) Paired sale analysis of properties adjacent to existing solar generating facilities, which may include repeat sale analyses or “Before and After” analyses; and,
- (3) Interviews with real estate professionals and local real estate assessors.

The paired sales analysis is an effective method of determining if there is a detrimental impact on surrounding properties.

*“One of the most useful applications of the sales comparison approach is paired sale analysis. This type of analysis may compare the subject property or similarly impacted properties called **Test Areas** (at Points B, C, D, E, or F) with unimpaired properties called **Control Areas** (Point A). A comparison may also be made between the unimpaired value of the subject property before and after the discovery of a detrimental condition. If a legitimate detrimental condition exists, there will likely be a **measurable and consistent difference** between the two sets of market data; if not, there will likely be no significant difference between the two sets of data. This process involves the study of a group of sales with a detrimental condition, which are then compared to a group of otherwise similar sales without the detrimental condition.”⁸*

As an approved method, paired sales analysis can be utilized to extract the effect of a single characteristic on value. By definition, paired data analysis is “a quantitative technique used to identify and measure adjustments to the sale prices or rents of comparable properties; to apply this technique, sales or rental data on nearly identical properties is analyzed to isolate a single characteristic’s effect on value or rent.”⁹ The text further describes that this method is theoretically sound when an abundance of market data, or sale transactions, is available for analysis.

Where data is available, CohnReznick has also prepared “Before and After” analyses or a Repeat Sale Analysis,¹⁰ to determine if a detrimental impact has occurred.

⁸ Bell, Randall, PhD, MAI. *Real Estate Damages. Third ed.* Chicago, IL: Appraisal Institute, 2016. (Page 33)

⁹ *The Appraisal of Real Estate 14th Edition.* Chicago, IL: Appraisal Institute, 2013.

¹⁰ Another type of paired sales analysis involves studying the sale and subsequent resale of the same property. This method is used to determine the influence of time on market values or to determine the impact of a detrimental condition by comparing values before and after the discovery of the condition.

Bell, Randall, PhD, MAI. *Real Estate Damages. Third ed.* Chicago, IL: Appraisal Institute, 2016. (Page 35)

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SCOPE OF WORK

The scope of work utilized to test the hypothesis stated on the prior page is as follows:

1. Review published studies, assess credibility, and validity of conclusions;
2. Prepare paired sale analyses for existing solar farms as follows:
 - 2.1. Identify existing solar farms comparable to the proposed project to analyze;
 - 2.2. Define Test Area Sales and Control Areas Sales;
 - 2.3. Collect market data (sale transactions) for both Test Area and Control Area Sales;
 - 2.4. Analyze and confirm sales, including omission of sales that are not reflective of market value;
 - 2.5. Prepare comparative analysis of Test Area and Control Area sales, adjusting for market conditions;
 - 2.6. Interpret calculations; and
3. Conduct interviews with real estate professionals and local real estate assessors who have evaluated real property adjacent to existing solar farms.

It should be noted that our impact report data and methodology have been previously reviewed by our peer in the field – Kirkland Appraisals, LLC – as well as by the Solar Energy Industries Association (SEIA).

The following bullet points summarize important elements to consider in our scope of work:

- Due to the limited number of community solar projects that qualified for study in the state of Illinois, we have incorporated some regional utility scale projects and community solar projects in other states.
- Test Area Sales consists of sales that are adjacent to an existing solar facility. Ownership and sales history for each adjoining property to an existing solar farm through the effective date of this report is maintained within our workfile. Adjoining properties with no sales data or that sold prior to the announcement of the solar farm were excluded from further analysis.
- Control Area Sales are generally located in the same market area, although varies based on the general location of the existing solar farm under analysis. In rural areas, sales are identified first within the township, and expands radially outward through the county until a reliable set of data points is obtained.
- Control Area Sales are generally between 12 and 18 months before or after the date of the Test Area Sale(s), and are comparable in physical characteristics such as age, condition, style, and size.
- Sales of properties that sold in a non-arm's length transaction (such as a transaction between related parties, bank-owned transaction, or between adjacent owners) were excluded from analysis as these are not considered to be reflective of market value, as defined earlier in this report. The sales that remained after exclusions were considered for a paired sale analysis.

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- The methodology employed in this report for paired sale analysis does not rely on multiple subjective adjustments that are typical in many appraisals and single-paired sales analyses. Rather, the methodology remains objective, and the only adjustment required is for market conditions.¹¹ The analysis relies upon market conditions trends tracked by credible agencies such as the Federal Housing Finance Agency (“FHFA”), who maintains a House Price Index (“HPI”)¹² for macro and micro regions in the United States. A market conditions adjustment is a variable that affects all properties similarly and can be adjusted for in an objective manner.
- To make direct comparisons, the sale price of the Control Area Sales was adjusted for market conditions to a common date. In this analysis, the common date is the date of the Test Area Sale(s). After adjustment, any measurable difference between the sale prices would be indicative of a possible price impact by the solar facility.
- If there is more than one Test Area Sale to evaluate, the sales are grouped if they exhibit similar transactional and physical characteristics; otherwise, they are evaluated separately with their own respective Control Area Sale groups.

¹¹ Adjusting for market conditions is necessary as described in The Appraisal of Real Estate 14th Edition as follows: “Comparable sales that occurred under market conditions different from those applicable to the subject on the effective date of appraisal require adjustment for any differences that affect their values. An adjustment for market conditions is made if general property values have increased or decreased since the transaction dates.”

¹² The FHFA HPI is a weighted, repeat-sales index, meaning that it measures average price changes in repeat sales or refinancings on the same properties. This information is obtained by reviewing repeat mortgage transactions on single-family properties whose mortgages have been purchased or securitized by Fannie Mae or Freddie Mac since January 1975. The FHFA HPI serves as a timely, accurate indicator of house price trends at various geographic levels. Because of the breadth of the sample, it provides more information than is available in other house price indexes.

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TECHNIQUE 1: REVIEW OF PUBLISHED STUDIES

The following is a discussion of various studies that consider the impact of solar farms on surrounding property values. The studies range from quantitative analysis to survey-based formal research to less formal analyses.

ACADEMIC REPORTS

There have been three academic reports that attempt to quantify the effect on property values due to proximity to solar.

- i. The first report is a study completed by **The University of Texas at Austin**, published in May 2018.¹³ The portion of the study focusing on property impact was an Opinion Survey of Assessors with no sales data or evidence included in the survey. The opinion survey was sent to 400 assessors nationwide and received only 37 responses. Of those 37 assessors, only 18 had assessed a home near a utility-scale solar installation, the remainder had not. Of the 18 assessors with experience in valuing homes near solar farms, 17 had not found any impact on home values near solar. Those are the actual facts in the study. A small number of those assessor respondents hypothetically surmised an impact, but none had evidence to support such statements.

The paper admits that there is no actual sales data analyzed, and further denotes its own areas of weakness, including “This study did not differentiate between ground-mounted and rooftop installations.” The author states on the last line of page 22: ***“Finally, to shift from perceived to actual property value impacts, future research can conduct analyses on home sales data to collect empirical evidence of actual property value impacts.”***

The paper concludes with a suggestion that a statistic hedonic regression model may better identify impacts. It should be noted that the type of statistical analysis that the author states is required to determine “*actual property value impacts*” was completed two years later by the following Academic Studies.

- ii. The second report is a study prepared by a team at the **University of Rhode Island**, published in September 2020, “*Property Value Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island.*”¹⁴ The study utilized a hedonic pricing model, or multiple regression analysis, to quantify the effect of proximity on property values due to solar by studying existing solar installations in Massachusetts and Rhode Island. The study evaluated 208 solar facilities, 71,373 housing sales occurring within one-mile of the solar facilities (Test Group), and 343,921 sales between one-to-three

¹³ Al-Hamoodah, Leila, et al. An Exploration of Property-Value Impacts Near Utility-Scale Solar Installations. Policy Research Project (PRP), LBJ School of Public Affairs, The University of Texas at Austin, May 2018, emp.lbj.gov/sites/default/files/property-value_impacts_near_utility-scale_solar_installations.pdf.

¹⁴ Gaur, V. and C. Lang. (2020). Property Value Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island. Submitted to University of Rhode Island Cooperative Extension on September 29, 2020. Accessed at <https://web.uri.edu/coopext/valuing-sitingoptions-for-commercial-scale-solar-energy-in-rhode-island/>.

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miles (Control Group). Because it is a hedonic regression model, it allowed them to isolate specific variables that could impact value, including isolating rural and non-rural locations. The study defines “Rural,” as an area having a “population density of 850 people per square mile or fewer.”

The study provides data which found no negative impact to residential homes near solar arrays in rural areas: “these results suggest that [the Test Area] in rural areas *is effectively zero* (a statistically insignificant 0.1%), and that the negative externalities of solar arrays are only occurring in non-rural areas.”¹⁵ Further, the study tested to determine if the size of the installation impacted values, and found no evidence of differential property values impacts by the solar installation’s size.

Thus, not only are there no impacts to homes in similar areas as the proposed Project, but any differences in the size of a solar farm are similarly not demonstrating an impact.

- iii. The third report is a published study prepared by Dr. Nino Abashidze, School of Economics, Georgia Institute of Technology, dated October 20, 2020, entitled “*Utility Scale Solar Farms and Agricultural Land Values.*” Abashidze examined 451 solar farms in North Carolina. “Across many samples and specifications, we find ***no direct negative or positive spillover effect of a solar farm construction on nearby agricultural land values.*** Although there are no direct effects of solar farms on nearby agricultural land values, we do find evidence that suggests construction of a solar farm may create a small, positive, option-value for land owners that is capitalized into land prices. Specifically, after construction of a nearby solar farm, we find that agricultural land that is also located near transmission infrastructure may increase modestly in value.”

VALUATION EXPERT REPORTS

We have similarly considered property value impact studies prepared by other experts, which have also noted that the installation of utility-scale solar on a property has no measurable or consistent impact on adjoining property value. According to a report titled “Mapleton Solar Impact Study” from Kirkland Appraisals, LLC, conducted in Murfreesboro, North Carolina in September 2017, which studied 13 existing solar farms in the state, found that the solar farms had no impact on adjacent vacant residential, agricultural land, or residential homes. The paired sales data analysis in the report primarily consisted of low density residential and agricultural land uses and included one case where the solar farm adjoined to two dense subdivisions of homes.

Donald Fisher, ARA who has served six years as Chair of the American Society of Farm Managers and Rural Appraisers, and has prepared several market studies examining the impact of solar on residential values was quoted in a press release dated February 15, 2021 stating, “Most of the locations were in either suburban or

¹⁵ The University of Rhode Island study’s conclusion that there may be an impact to non-rural communities is surmised is that “land is abundant in rural areas, so the development of some land into solar does little to impact scarcity, whereas in non-rural areas it makes a noticeable impact.

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rural areas, and all of these studies found either a neutral impact or, ironically, a positive impact, where values on properties after the installation of solar farms went up higher than time trends.”

REAL ESTATE ASSESSOR SOLAR IMPACT REPORTS

The Chisago County (Minnesota) Assessor’s Office conducted their own study on property prices adjacent to and in the close vicinity of the North Star solar farm in Chisago County, Minnesota. At the November 2017 Chisago County Board meeting, John Keefe, the Chisago County Assessor, presented data from his study. He concluded that the North Star solar farm had, “no adverse impact” on property values. His study encompassed 15 parcels that sold and were adjacent or in the close vicinity to the solar farm between January 2016 and October 2017; the control group used for comparison comprised of over 700 sales within the county. Almost all of the [Test Area] properties sold were at a price above the assessed value. He further stated that, “It seems conclusive that valuation has not suffered.”¹⁶

Furthermore, Grant County, Kentucky Property Value Administrator, Elliott Anderson, stated that Duke Energy built a solar farm near Crittenden, adjacent to existing homes on Claiborne Drive in December 2017. At the time of the interview, there have been nine arm’s length homes sales on that street since the solar farm commenced operations. Each of those nine homes sold higher than its assessed value, and one over 32 percent higher. At the time, Anderson noted that several more lots were for sale by the developer and four more homes were currently under construction. Anderson said that the solar farm had no impact either on adjoining home values or on marketability or desirability of those homes adjacent to the solar farm.

CONCLUSION

These published studies and other valuation expert opinions conclude that there is no impact to property adjacent to established solar farms. These conclusions have been confirmed by academic studies utilizing large sales databases and regression analysis investigating this uses’ potential impact on property values. Further, the conclusion has been confirmed by county assessors who have also investigated this adjacent land use’ potential impact on property values.

¹⁶ Chisago County Press: County Board Real Estate Update Shows No “Solar Effects” (11/03/2017)

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TECHNIQUE 2: PAIRED SALE ANALYSIS

SOLAR FARM 1: UPPER MARLBORO 1 CSG SOLAR FARM, PRINCE GEORGES COUNTY, MD

Coordinates: Latitude 38.789216, Longitude -76.800910

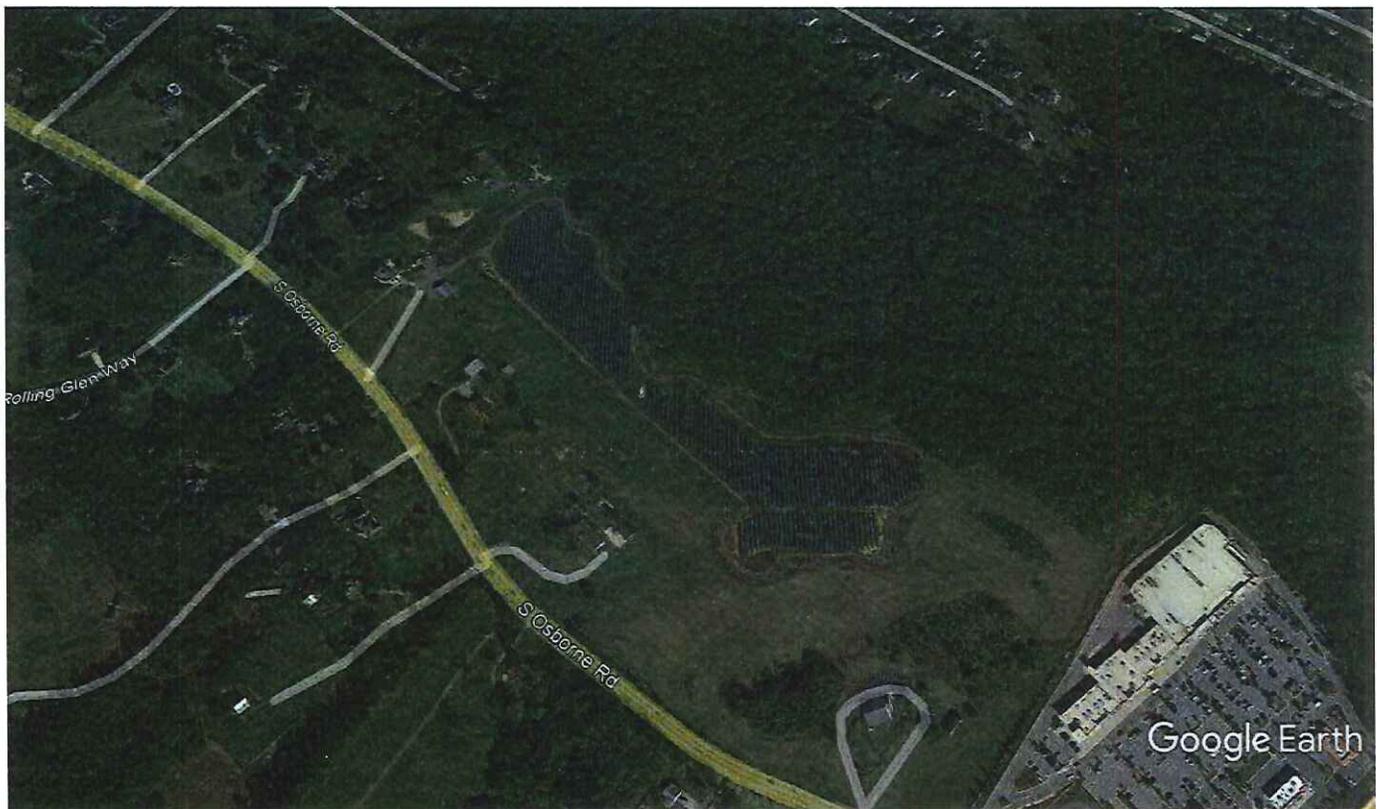
PIN: 0109-00E2-0036

Total Land Size: 31.16 acres

Date Project Announced: April 2018

Date Project Completed: December 2019

Output: 2.0 MW AC



The Upper Marlboro 1 CSG Solar use is located in Upper Marlboro, Maryland at 7420 South Osborne Road. The current owner of the solar farm is Nautilus Solar Solutions while Turning Point Energy and Cypress Creek Renewables developed the solar facility. The owner, Nautilus Solar Energy, has a 25-year lease on the solar

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farm site with a possible 5-year extension. The solar farm went into operation November/December 2019 and is comprised of 6,000 panels held up by 1,000 I-beams and more than 4,000 feet of perimeter fencing.

The Surrounding Area: The Upper Marlboro 1 CSG solar installation is located in Upper Marlboro, in the central portion of Prince George’s County, Maryland. Prince George’s County is located just east of Washington D.C. and the State of Virginia. The Upper Marlboro 1 CSG Solar Farm is approximately 17 miles southeast of Washington D.C. and approximately 8 miles southeast of the U.S. Military’s Joint Base Andrews.

The Upper Marlboro 1 CSG solar installation is one of sixteen solar farms located within Prince George’s County, the largest of which, Synergen Panorama solar farm, generates 5 MW AC and was completed in July 2019.

The Immediate Area: The solar installation is located on the northern side of South Osborne Road. The immediate area is primarily single-family residential and agricultural with supporting commercial uses nearby. Surrounding the solar farm to the north, south and west are single-family residential uses, a day care center to the south and a shopping center anchored by Safeway to the east.

A fence and native pollinating plants line the perimeter of the solar farm. A dense tree line to the north and east of the solar farm blocks visibility from adjacent properties. Additionally, the solar farm is located on higher elevation land from the South Osborne Road and is only visible from directly adjacent single-family residential properties to the west and south.

Real Estate Tax Info: Prior to the development of the solar, the land under the Upper Marlboro 1 CSG solar installation was assessed at \$7,600 and paid real estate taxes of \$110 in the 2019-2020 fiscal year. After the solar farm was developed, in late 2019, real estate taxes increased to \$6,049, a 5,412 percent increase in tax revenue for the site. The assessed value of the underlying land the panels sit on increased by 5,412 percent to \$418,000 after the solar farm was completed in late 2019.

Pin	Acres
Prince Georges County, MD 0109-00E2-0036	31.16
Total	31.16

2019/20 Taxes Paid	2020/21 Taxes Paid	Tax Increase
\$110	\$6,049	5,412.05%
\$110	\$6,049	

2019/20 Assessed Value	2020/21 Assessed Value	Value Increase
\$7,600	\$418,900	5,411.84%
\$7,600	\$418,900	

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The following map displays the parcels within the solar farm is located (outlined in blue). Properties adjoining the solar parcels (outlined in yellow) are numbered for subsequent analysis.



Upper Marlboro CSG 1 Solar – Adjoining Properties

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PAIRED SALES ANALYSIS

We have considered only one type of paired sales analysis, which was comparing sales of properties not proximate to the solar farm (Control Area Sales) to the sales of adjoining properties after the completion of the solar farm project (Test Area Sales). We identified two groups of Test Area Sales based primarily on location and date sold. The first group comprises the one sale at 7400 South Osborne Road that occurred after the completion of the solar farm. We also identified a transaction that occurred during the project construction, 7304 South Osborne Road which sold in August 2019, and comprises Group 2.

Group 1 – Improved Single-Family Residential Properties

Adjoining Property 2 to the Upper Marlboro CSG 1 Solar project was considered for a paired sales analysis. We have analyzed Adjoining Property 2 as single-family home use in Group 1. The improvements on this property are located 265 feet to the nearest solar panel. Adjoining Property 2 is located along South Osborne Road, along the southwestern boundary of the solar farm.

SUMMARY OF TEST AREA SALE										
Group 1 - Upper Marlboro										
Adj. Property #	Address	Sale Price	Beds	Baths	Year Built	Home Size (SF)	Improvements	Site Size (AC)	Sale Price / SF	Sale Date
2	7400 South Osborne Road	\$550,000	4	3	1979	1,300	Single-Family Home	5.07	\$423.08	4/26/2022

We analyzed ten Control Area Sales of single-family homes with similar construction and use that were not located in close proximity to the solar farm, that sold within a reasonable time frame from the median sale date of the Test Area Sales in Group 1. The Control Area Sales for Group 1 are single-family homes with two to four bedrooms and two to three baths, consist of between 936 square feet and 1,704 square feet of gross living area above grade, built between 1955 and 1978 with finished basements and with lot sizes ranging from 1.0 to 5.29 acres. Additionally, the Control Area Sales for Group 1 are all located within the Prince George’s County School District.

The Control Area Sales were adjusted for market conditions using the Federal Housing Finance Agency’s House Price Index (HPI), a weighted, repeated-sales index measuring the average price changes in repeat sales or refinancing of the same properties. The result of our analysis for the Upper Marlboro Solar Project – Group 1 is presented below.

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CohnReznick Paired Sale Analysis Upper Marlboro 1 CSG Solar		
No. of Sales	Potentially Impacted by Solar Farm	Adjusted Median Price Per SF
Test Area Sale (1)	Adjoining solar farm	\$423.08
Control Area Sales (10)	No: Not adjoining solar farm	\$384.46
Difference between Unit Price of Test Area Sale and Adjusted Median Unit Price of Control Area Sales		10.04%

We note that the relative size of the subject's acreage is a bit larger than the typical estate home lot in the Test Area Sale's area; the larger differential is likely due to the Test Area Sale's slightly larger than average acreage.

Noting no negative price differential, it does not appear that the Upper Marlboro Solar use impacted the sale price of the Test Area Sale, Adjoining Property 2.

Group 2 – Improved Single-Family Residential Properties

Adjoining Property 1 to the Upper Marlboro CSG 1 Solar project was considered for a paired sales analysis. We have analyzed Adjoining Property 1 as single-family home use in Group 2. The improvements on this property is located 307 feet to the nearest solar panel. Adjoining Property 1 is located along South Osborne Road, along the southwestern boundary of the solar farm.

SUMMARY OF TEST AREA SALE Group 2 - Upper Marlboro										
Property #	Address	Sale Price	Beds	Baths	Year Built	Home Size (SF)	Improvements	Site Size (AC)	Sale Price / SF	Sale Date
1	7304 South Osborne Road	\$386,375	3	2.5	2004	1,916	Single-Family Home	4.58	\$201.66	Aug-19

We analyzed eight Control Area Sales of single-family homes with similar construction and use that were not located in close proximity to the solar farm, that sold within a reasonable time frame from the median sale date of the Test Area Sale in Group 2. The Control Area Sales for Group 1 are single-family homes with two to four bedrooms and two to three baths, consist of between 1,980 square feet and 2,472 square feet of gross living area above grade, built between 1990 and 2007 and with lot sizes ranging from 1.0 to 6.18 acres. Additionally, the Control Area Sales for Group 2 are all located within the Prince Georges County School District.

The Control Area Sales were adjusted for market conditions using the Federal Housing Finance Agency's House Price Index (HPI), a weighted, repeated-sales index measuring the average price changes in repeat sales or

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refinancing of the same properties. The result of our analysis for the Upper Marlboro Solar Project – Group 2 is presented below.

CohnReznick Paired Sale Analysis Upper Marlboro 1 CSG Solar		
No. of Sales	Potentially Impacted by Solar Farm	Adjusted Median Price Per SF
Test Area Sale (1)	Adjoining solar farm	\$201.66
Control Area Sales (8)	No: Not adjoining solar farm	\$189.75
Difference between Unit Price of Test Area Sale and Adjusted Median Unit Price of Control Area Sales		5.91%

We note that the relative size of the subject's acreage is a bit larger than the typical estate home lot in the Test Area Sale's area; the larger differential is likely due to the Test Area Sale's slightly larger than average acreage.

Noting no negative price differential. it does not appear that the Upper Marlboro Solar use impacted the sale price of the Test Area Sale, Adjoining Property 1.

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SOLAR FARM 2: SUNSHINE FARMS SOLAR FARM, CURRITUCK COUNTY, NC

Coordinates: Latitude 36.234042, Longitude -75.880074

PINs: 0108000095H0000, 0108000095G0000

Total Land Size: 121.44 acres

Date Project Announced: January 2016

Date Project Completed: February 2020

Output: 20 MW AC



The Sunshine Farms Solar use is located in Grandy, North Carolina at 180 Uncle Graham Road and 6562 Caratoke Highway. The current owner of the solar farm is Paloma Solar & Wind, LLC while Exoplexus Incorporated developed the solar facility. The solar farm went into operation in February 2020 and can generate power for approximately 2,900 homes. Nearly 55,000 panels comprise the farm.

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The Surrounding Area: The Sunshine Farms solar installation is located in Grandy Township, in the southern portion of Currituck County, North Carolina. Currituck County is located in the northeast corner of North Carolina. Sunshine Farms is one of four solar farms located within Currituck County and the only solar farm within the town of Grandy. Sunshine Farms is the smallest solar farm in the county at 20 MW, along with Shawboro Solar which also produces an output capacity of 20 MW AC and is located Crawford Township, approximately 20 miles north of Sunshine Farms.

The two larger solar farms in Currituck County are adjacent to one another in Moyock Township, approximately 25 miles north of Sunshine Farms, producing a combined output of 124.4 MW AC and are adjacent to residential homes and agricultural use land.

The Immediate Area: Surrounding land uses consist of residential homes and vacant residential lots to the north, west, and south; and commercial uses and vacant commercial lots to the east. The project site was previously the site of the Goose Creek Golf and Country Club and sits just south of the Carolina Club Community.

The solar farm is surrounded by landscaped buffers, with a denser landscaped buffer along the north, west, and south borders of the site adjacent to residential uses.

Carolina Club Community: The Carolina Club Community is comprised of 220 single-family residential lots and residences surrounding an 18-hole golf course and amenities including a swimming pool, tennis courts, a clubhouse, and a community boat ramp. While the golf course within the community is open to the public, all other amenities in the Carolina Club Community are only available to Carolina Club Association Property Owners and their families and guests.

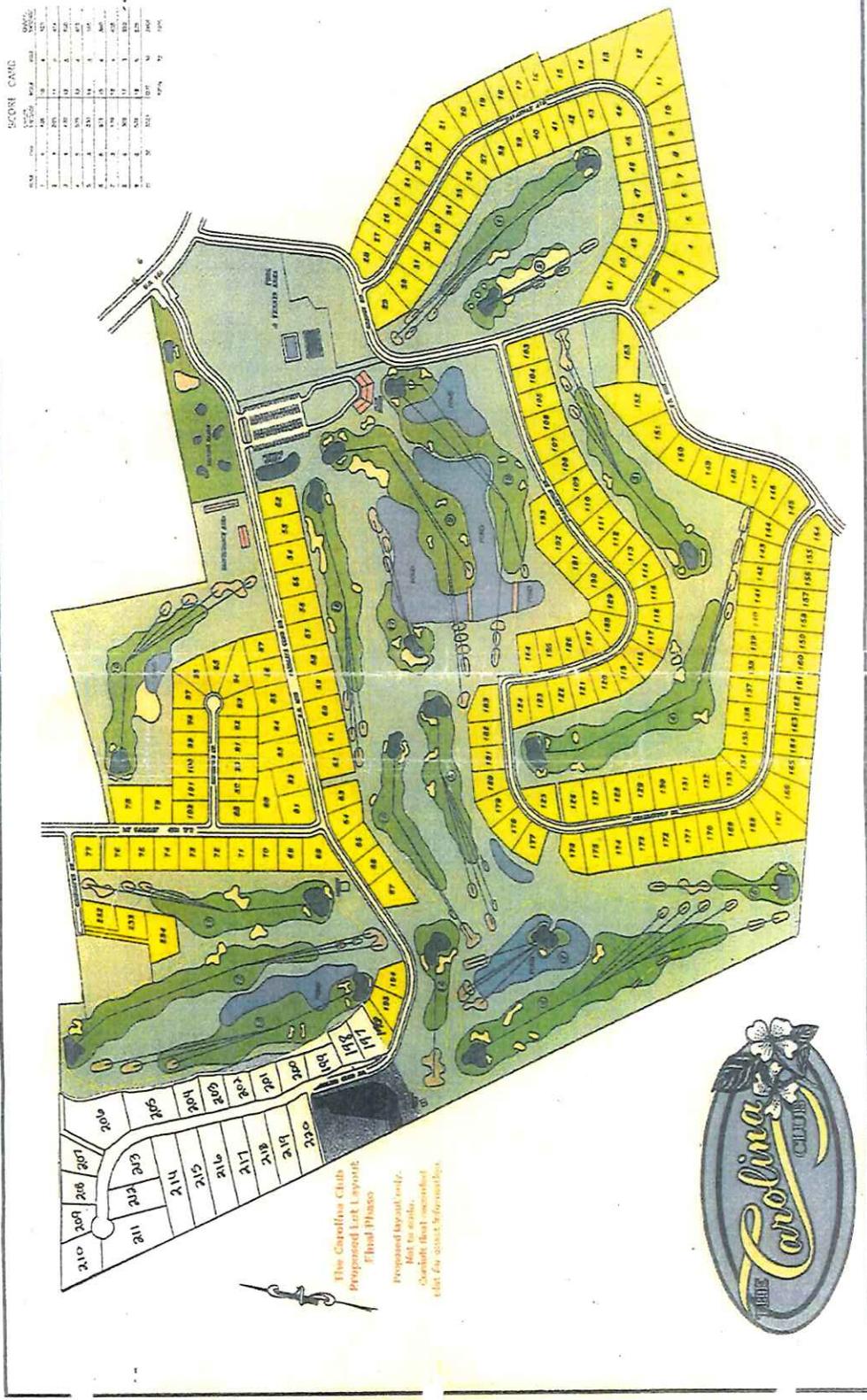
The Carolina Club is operated by The Carolina Club Owners Association, Inc. and every person or entity who is a record owner of a fee simple interest in any lot in the community are subject to architectural control and homeowner's association dues every quarter. The homeowner's association dues are determined annually with the minimum annual assessment being between \$350 and \$500 per year. However, "special assessments" for capital improvements to the Association's common properties allows annual dues to exceed \$500 per year.

Property owners are limited to construct one single-family dwelling per lot that may not cover more than 25 percent of the total lot size. The minimum required living area for dwellings in the community is 1,500 square feet for one-story dwellings and 1,800 square feet for two-story dwellings. Additionally, dwellings must have setbacks of 25 feet in the front yard, 15 feet on the side yards, and 25 feet in the rear yard.

A map of the Carolina Club Community is presented on the following page.

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Real Estate Tax Info: In Currituck County, North Carolina, real property is assessed every 8 years, with the two most recent reassessments in 2013 and 2021. However, the parcel on which Sunshine Farms is constructed on has been split, merged and subdivided several times since 2013, therefore, we have presented historical real estate tax assessments and payments for the parcel dating back to only 2019. The parcel has not been split, merged or subdivided since this time.

Solar farms in North Carolina are assessed as personal property, separate from the land assessment. After the solar farm was placed into service, there was an increase of 628.65 percent in total assessed value, and a 597.99 percent increase in total taxes paid.

In 2019, prior to the property being assessed as a solar farm, the assessed value of the land was \$517,200 and ownership paid \$2,483 in real estate taxes. In 2021, the assessed value increased to \$708,100 and the real estate tax increased to \$3,257, an increase in tax revenue of 31.17 percent.

Pin	Acres
Currituck County, NC 0108000095H0000 Personal Property Tax	118.02
Total	118.02

2019 Taxes Paid	2021 Taxes Paid	Tax Increase
\$2,483 \$0	\$3,257 \$14,074	31.17%
\$2,483	\$17,331	597.99%

2019 Assessed Value	2021 Assessed Value	Value Increase
\$517,200 \$0	\$708,100 \$3,059,520	36.91%
\$517,200	\$3,767,620	628.65%

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The following map displays the parcels developed with the solar farm (outlined in red). Properties immediately adjoining the solar parcels (outlined in yellow) are numbered for subsequent analysis.



Sunshine Farms Solar – Adjoining Properties

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PAIRED SALES ANALYSIS

In reviewing Adjoining Properties to study in a Paired Sale Analysis, several properties and sales were considered but eliminated from further consideration as discussed below.

We identified seven Adjoining Properties that sold since the solar farm started operation in February 2020: Three single-family residential properties have sold since the solar farm started operation, Adjoining Properties 4, 9, and 12. We have not included the sale of Adjoining Property 12 in our analysis as it sold between related parties. Additionally, four vacant land parcels that can be developed with single-family homes, Adjoining Properties 1, 21, 29, and 35, have sold since the solar farm started operation. We have not included the sale of Adjoining Property 29 as it was an off-market transaction, per the Currituck County Assessor’s Office. Additionally, we have not included the sale of Adjoining properties 21 and 35 due to a lack of comparable transactions in the local market. Adjoining properties 21 and 35 are located along Grandy Road and Uncle Graham Road, respectively, and do not have community clubhouse, swimming pool, tennis courts, or community boat ramp privileges. In our search of comparable vacant lot sales, other lots that have sold in the area during the same time frame either have those privileges or are waterfront properties. Therefore, there was insufficient comparable control transactions.

Group 1 – Improved Single-Family Residential Properties

Adjoining Properties 4, 9, and 12 to the Sunshine Farms Solar project were considered for a paired sales analysis. We have not included the sale of Adjoining Property 12 in our analysis as it sold between related parties. We have analyzed Adjoining Properties 4 and 9 as single-family home uses in Group 1. The improvements on these properties are located between 388 and 535 feet to the nearest solar panel. Adjoining Properties 4 and 9 are both located within the Carolina Club Community of Grandy. The Carolina Club Community surrounds The Carolina Club public golf course, with many residences having frontage along the golf course.

SUMMARY OF TEST AREA SALE										
Group 1 - Sunshine Farms										
Adj .Property #	Address	Sale Price	Beds	Baths	Year Built	Home Size (SF)	Improvements	Site Size (AC)	Sale Price / SF	Sale Date
4	141 Savannah Avenue	\$433,000	3	4.0	1998	2,481	Single-Family Home	0.46	\$174.53	Mar-22
9	151 Savannah Avenue	\$367,000	3	2.0	1996	1,744	Single-Family Home	0.71	\$210.44	Aug-21

We analyzed six Control Area Sales of single-family homes with similar construction and use that were not located in close proximity to the solar farm, that sold within a reasonable time frame from the median sale date of the Test Area Sales in Group 1. The Control Area Sales for Group 1 are single-family homes with three bedrooms and two to three baths, consist of between 1,500 square feet and 3,000 square feet of gross living area, and built between 1990 and 2005. Additionally, the Control Area Sales for Group 1 are all located within the Carolina Club Community of Grandy.

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The Control Area Sales were adjusted for market conditions using the Federal Housing Finance Agency’s House Price Index (HPI), a weighted, repeated-sales index measuring the average price changes in repeat sales or refinancing of the same properties. The result of our analysis for Sunshine Farms Solar Project – Group 1 is presented below.

CohnReznick Paired Sale Analysis Sunshine Farms Solar		
No. of Sales	Potentially Impacted by Solar Farm	Adjusted Median Price Per SF
Test Area Sale (2)	Adjoining solar farm	\$192.48
Control Area Sales (6)	No: Not adjoining solar farm	\$190.99
Difference between Unit Price of Test Area Sale and Adjusted Median Unit Price of Control Area Sales		0.78%

The days on market for the two Test Area Sales had a median of 69 days on market, while the median days on market for the Control Area sales was 86 days (ranging from 56 to 140 days), **and we note no significant marketing time differential.**

Noting no negative price differential, it does not appear that the Sunshine Farms Solar use impacted the sale price of the two Test Area Sales, Adjoining Properties 4 and 9.

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Group 2 – Vacant Residential Lots, Carolina Club Community

Adjoining Properties 1, 21, 29 and 35 to the Sunshine Farms Solar project were considered for a paired sales analysis. We have not included the sale of Adjoining property 29 as it was an off-market transaction. Additionally, we have not included the sale of Adjoining properties 21 and 35 due to a lack of comparable transactions in the local market.

We have analyzed Adjoining Property 1 as a vacant residential lot use in Group 2. The property boundary of Adjoining Property 1 is located 397 feet to the nearest solar panel. Adjoining Property 1 is located within the Carolina Club Community of Grandy which surrounds the Carolina Club public golf course, with many residences having frontage along the golf course.

Bill Hogan, the listing agent of 135 Savannah Avenue (Adjoining Property 1), indicated that vacant lots within the Carolina Club Community are valued predominantly on a per lot basis as the Carolina Club Declaration of Covenants, Conditions, and Restrictions limit owners to one dwelling per lot. It was also noted that larger lots still attract a higher sale price but will reflect a lower sale price per square foot due to economies of scale and the limit on dwelling units per lot to one. Given that the marketplace analyzes the lots on a per lot sale basis, this is the method we will use in determining any differences in sale prices between target and control data.

SUMMARY OF TEST AREA SALE					
Group 2 - Sunshine Farms					
Property #	Address	Sale Price	Improvements	Site Size (AC)	Sale Date
1	135 Savannah Avenue	\$67,500	Vacant Residential Lot	0.99	Mar-22

We analyzed nine Control Area sales of vacant residential lots with similar site size that were not located in close proximity to the solar farm, and that sold within a reasonable time frame from the sale date of the Test Area Sale in Group 2. The Control Area sales for group 2 are vacant residential lots located within the Carolina Club Community, which are subject to homeowner’s association fees, and that did not have golf course frontage, similar to the Test Area Sale.

The Control Area Sales were adjusted for market conditions using the Federal Housing Finance Agency’s House Price Index (HPI), a weighted, repeated-sales index measuring the average price changes in repeat sales or refinancing of the same properties. The result of our analysis for Sunshine Farms Solar Project – Group 2 is presented below.

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CohnReznick Paired Sale Analysis Sunshine Farms Solar		
No. of Sales	Potentially Impacted by Solar Farm	Adjusted Median Price Per Lot
Test Area Sale (1)	Adjoining solar farm	\$67,500
Control Area Sales (9)	No: Not adjoining solar farm	\$49,900
Difference between Unit Price of Test Area Sale and Adjusted Median Unit Price of Control Area Sales		26.07%

The days on market for the Test Area Sale was 69 days, while the median days on market for the Control Area sales was 273 days (ranging from 37 to 358 days), **and we note no significant marketing time differential.**

Noting no negative price differential. it does not appear that the Sunshine Farms Solar use impacted the sale price of the Test Area Sale, Adjoining Property 1. This was confirmed by the real estate agent who marketed and sold this vacant residential lot.

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SOLAR FARM 3: SHOREHAM SOLAR COMMONS, SUFFOLK COUNTY, NY**Coordinates:** Latitude 40.94, Longitude -72.89**PIN:** 0200126000200002001**Recorded Owner:** PHIE Shoreham LLC**Total Land Size:** 149.62 Acres**Date Project Announced:** May 2016**Date Project Completed:** July 2018**Output:** 24.9 MW AC

This solar farm is located on the former "Tallgrass Golf Course" located in an unincorporated area of Suffolk County, in the Hamlet of Brookhaven (The mailing city is "Shoreham"). The solar farm was developed by Invenergy. This solar farm is ground mounted and has the capacity for 24.9 Megawatts (MW) AC of power.

The Surrounding Area: Shoreham is a coastal area just south of the Long Island Sound in the State of New York. Surrounding land uses consist of residential and forest land to the north; forest and agricultural land to the east; vacant, forest, and residential land to the south; and residential, industrial, vacant, and forest land to the west.

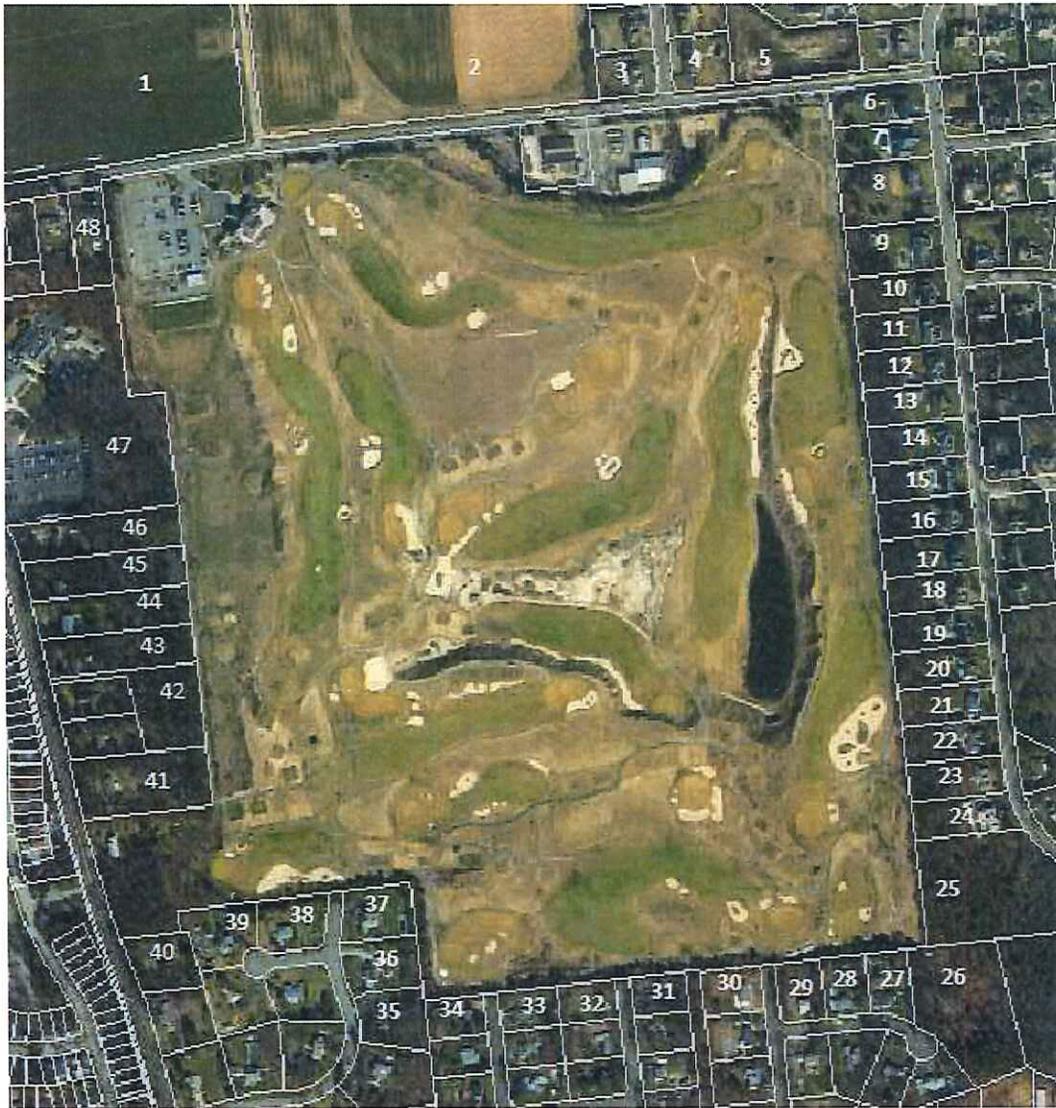
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The Immediate Area: It is primarily surrounded by residential homes. The solar farm is situated on a former golf course.

Real Estate Tax Info: Shoreham Solar Commons is located on municipal land which is exempt from property taxes.

The following map identifies the adjacent parcels. This assessor's aerial image was taken prior to the solar farm's construction, reflecting the closed golf course.



Shoreham Solar Commons Adjoining Properties

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Paired Sales Analysis

We have identified Adjoining Property 8 as having sold after announcement of the solar farm. However, the marketing comments advertised the house as backing to a golf course, which indicates that the sale may have transacted without a solar farm external influence factor, and so it was excluded from this analysis. We have also identified Adjoining Properties 19, 32, and 35 as selling during construction of the solar farm. We have reviewed the marketing comments and found no mention of either the golf course or the solar farm. We did analyze these sales and they do not show a negative price differential; however, as these sales occurred prior to the opening and operations of the solar farm, any influence may not have been demonstrated yet, so we have excluded these from the paired sales analysis.

We analyzed five Control Area Sales that sold within a reasonable time frame from the median sale date of Adjoining Property 43, which sold after the solar farm was in operation, in August 2018.

TEST AREA SALE Shoreham Solar Commons										
Adjoining Property #	Address	Sale Price	Bedrooms	Bathrooms	Year Built	Home Size (SF)	Improvements	Site Size (AC)	Price PSF	Sale Date
43	121 Randall Rd	\$400,000	4	2.0	1977	2,400	2-Story SFR	0.57	\$166.67	Aug-18

For Adjoining Property 43, we analyzed six Control Area Sales that sold within a reasonable time frame from the sale date of Adjoining Property 43. All Control Area Sales were adjusted for market conditions using regression analysis to identify the appropriate monthly market conditions adjustment.

The Control Area Sales are 1 and 2 story homes with three or four bedrooms, and one to three baths. We excluded sales that were bank-owned, and those between related parties.

The Control Area Sales were adjusted for market conditions using a regression analysis to identify the appropriate monthly market conditions adjustment. The result of our analysis for Shoreham Solar Commons is presented below.

CohnReznick Paired Sales Analysis Shoreham Solar Commons		
No. of Sales	Potentially Impacted by Solar Farm	Adjusted Median Price Per SF
Test Area Sales (1)	Adjoining solar farm	\$166.67
Control Area Sales (6)	No: Not adjoining solar farm	\$161.08
Difference between Unit Price of Test Area Sales and Adjusted Median Unit Price of Control Area Sales		3.47%

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The days on market for the Test Area Sale was 2 days (less than 1 month). The Control Area Sales ranged from 2 to 209 days on market (0-8 months).

Noting no negative price differential, it does not appear that the Shoreham Solar Commons impacted the sales price of the Test Sale, Adjoining Property 43.

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SOLAR FARM 4: SUNFISH FARM SOLAR, WAKE COUNTY, NORTH CAROLINA

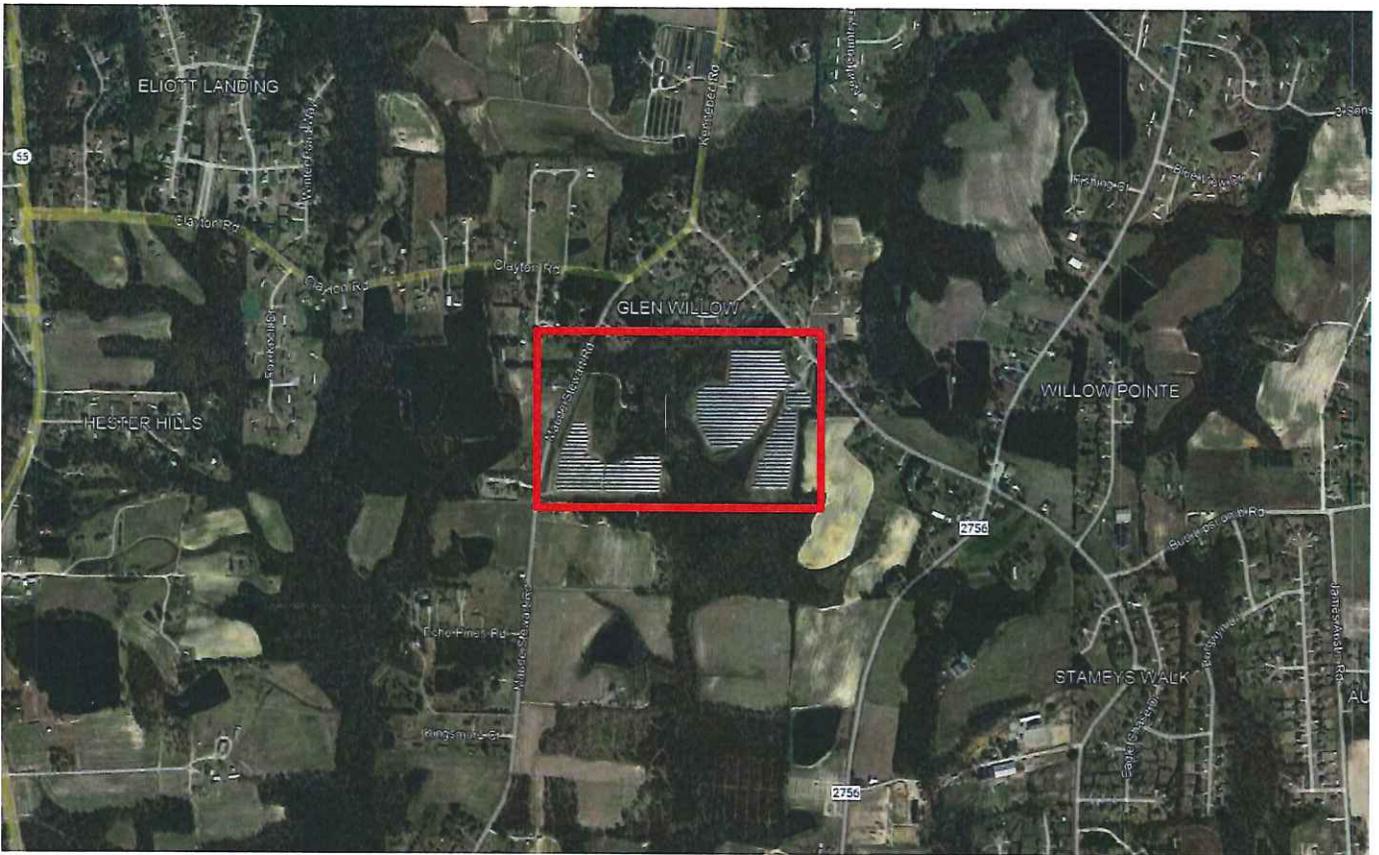
Coordinates: Latitude 35 33.457, Longitude 78 44.190

PIN: 675874971

Total Land Size: Approximately 49.6 acres

Date Project Completed: December 2015

Output: 5 MW AC



This Sunfish Farm solar facility is located in the southern portion of Wake County, North Carolina, approximately 16 miles south of Raleigh. The solar facility was placed into service in December 2015 and has a power generating capacity of 5 MW AC. The solar facility was developed by Cypress Creek Renewables, which has built several community-scale solar farms in North Carolina.

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The Surrounding Area: The Sunfish Farm solar facility is surrounded by single family homes, some of which are in subdivisions, as well as agricultural and forest land. The local area is accessible from Raleigh via Fayetteville Road (US Hwy 401) and Interstate 40. The Sunfish Farm solar farm is located southwest of the town of Fuquay-Varina, which has experienced considerable population growth over the past 10 years due to the area’s proximity to Research Triangle Park (Raleigh, Durham, Chapel Hill).

The Immediate Area: The solar farm is buffered from residences and road frontages by trees and is surrounded by fencing. The solar farm is clearly visible from the roadways. Immediate land uses surrounding the solar farm include residential homes to the north, some residential homes (some that also contain commercial uses) to the west, agricultural land to the south, and agricultural land and residential homes to the east.

There is an 11.25-acre carve-out of land in the original, larger farmland parcel that was split from the parent parcel in 2014, as pictured below. Both the carved out parcel and the solar farm parcel are owned by an individual who leases the land for the solar farm use.

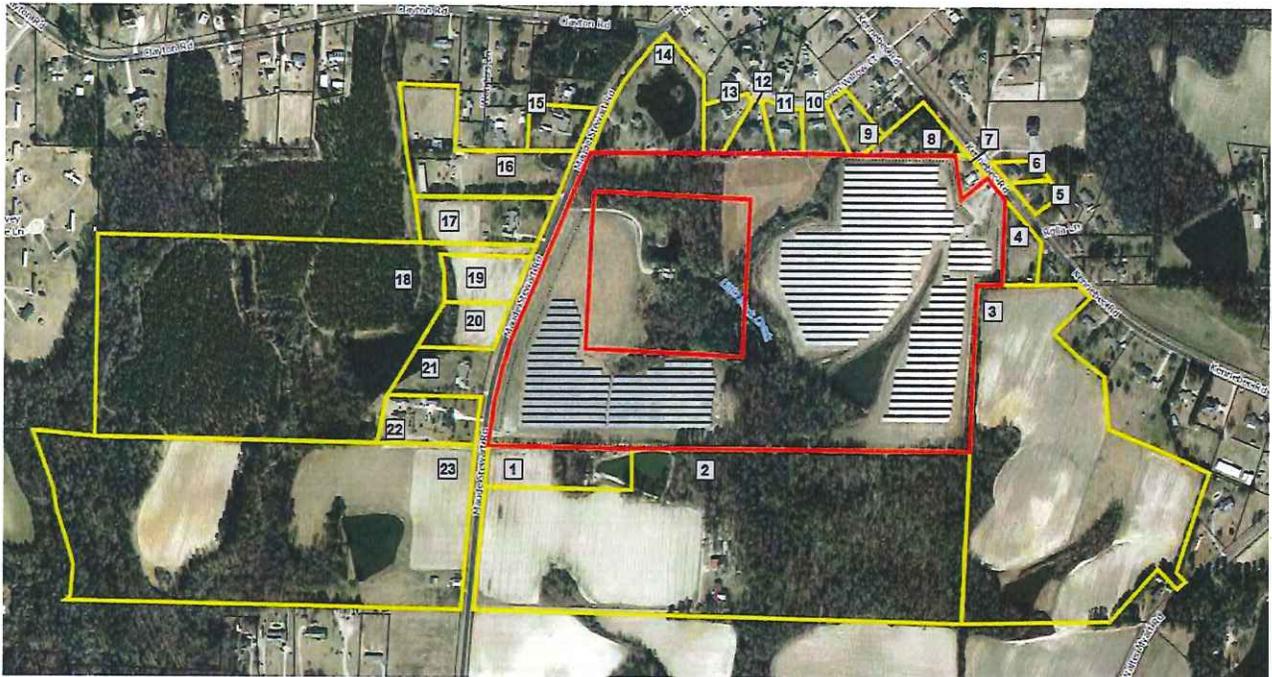


Real Estate Tax Information: Solar farms in North Carolina are assessed as personal property, separate from the land assessment. After the solar farm was placed into service, there was an increase of 180 percent in total assessed value, and 203 percent increase in total taxes paid.

PIN	Acres	2013 Taxes Paid (Per Acre)	2016 Taxes Paid (Per Acre)	Tax Increase	2013 Assessed Value (Per Acre)	2016 Assessed Value (Per Acre)	Value Increase
Wake County, NC 675874971 (Post 2015 Split) Personal Property Tax	49.60	\$ 119.52 \$ -	\$ 105.33 \$ 256.81		\$ 18,589 \$ -	\$ 15,123 \$ 36,871	
TOTAL	49.60	\$ 119.52	\$ 362.14	203%	\$ 18,588.83	\$ 51,994.82	180%

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The map below displays the properties adjoining the solar arrays and are numbered for subsequent analysis (outlined in yellow).



Sunfish Farm Solar - Adjoining Properties

PAIRED SALES ANALYSIS

We have considered only one type of paired sales analysis, comparing sales of properties not proximate to the solar farm (Control Area Sales) to the sales of adjoining properties (Test Area Sales) after the completion of the solar farm project. We were able to identify two Adjoining Properties to the Sunfish Farm solar facility that sold after the solar installation was placed into service (Adjoining Properties 10 and 15). These sales were analyzed in separate Test Area Sale groups based on home type (conventional single-family home and manufactured single-family home) and sale dates.

We collected Control Area Sale data from the Wake County Real Estate database which summarizes data directly from the Real Estate Assessor website for the county. We have also reviewed other public records and verified marketing information through online sources such as Zillow.com, Redfin.com, Realtor.com and Estately.com. We have verified these sales through county records, conversations with brokers, and the County Assessor's Office. We excluded sales that were not arm's length, such as REO sales or bank-owned properties, or those between related parties.

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GROUP 1

Adjoining Property 10 (Test Area Sale 1) was considered for a paired sales analysis, and we analyzed this property as a single-family home use. The property is a single-story 1,470 square foot home located on a 0.79-acre lot that sold in September 2017. This property line is approximately 50 feet from the closest solar panel, and the improvements are approximately 200 feet from the closest solar panel. The following table outlines the other important characteristics of Adjoining Property 10.

SUNFISH FARM SOLAR TEST AREA SALE GROUP 1										
Property #	Address	Sale Price	Site Size (AC)	Beds	Baths	Year Built	Home Size (SF)	Improvements	Sale Price/SF	Sale Date
Test Sale 1 Adjoining Property 10	7513 Glen Willow Court	\$188,000	0.79	3	2	1989	1,470	One-Story, No Basement	\$127.89	Sep-17

We have identified 14 single-family home sales in the Control Area Sale group that are located within Wake County, either in Middle Creek Township or Panther Branch Township. They were built generally from 1989 to 1999 and are each similar in square footage and layout, as well as quality of construction, to the Test Area Sale and they sold within a reasonable time frame from the sale date of the Test Area Sale.



Sunfish Farm Solar - Group 1: Test Area Sale Map

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It is informative to note that the marketing time (from list date to closing date) for Control Area Sales ranged from 30 to 127 days on market, and the marketing time for Adjoining Property 10 was 98 days, which is within the range of the Control Area Sales. This is an indication that the marketability of the Test Area Sale was not negatively influenced by proximity to the solar farm.

We adjusted the Control Area Sales for market conditions using the compounded monthly growth rate exhibited in the FHFA House Price Index, for the period from December 2015 to the end of December 2018 (36 months).

When adjusting sales prices for market conditions (time between date of Test Area Sale and Control Area Sales date) throughout this analysis we have used regression analysis to identify the appropriate monthly market conditions adjustment. We utilized the Federal Housing Finance Agency House Price Index (FHFA HPI) for the 27592 zip code to determine the average monthly rate of appreciation. The FHFA HPI is a broad measure of the movement of single-family house prices. The FHFA HPI is a weighted, repeat-sales index, meaning that it measures average price changes in repeat sales or re-financings on the same properties. The FHFA HPI serves as a timely, accurate indicator of house price trends at various geographic levels.¹⁷

The results of the paired sales analysis for Adjoining Property 10 are presented below.

CohnReznick Paired Sales Analysis Sunfish Farm Solar GROUP 1 - Adjoining Property 10		
No. of Sales	Potentially Impacted by Solar Farm	Adjusted Median Price Per SF
Test Area Sale (1)	Yes: Adjoining solar farm	\$127.89
Control Area Sales (14)	No: Not adjoining solar farm	\$124.86
Difference between Unit Price of Test Area Sale and Adjusted Median Unit Price of Control Area Sales		2.43%

The difference between the unit price of the Test Area Sale and the Adjusted Median Unit Price of the Control Area Sales is considered within the range for a typical market area.

Noting no negative price differential, it does not appear that the Sunfish Farm solar installation impacted the sale price of the Test Area Sale, Adjoining Property 10.

¹⁷ <https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index.aspx>

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GROUP 2

Adjoining Property 15 (Test Area Sale) was considered for a paired sales analysis, and we analyzed this property as a manufactured single-family home use, with 1,860 square feet of improvements, on a parcel of 1.24-acres, that sold in October 2019. The property line for this property is approximately 665 feet from the closest solar panel, and the improvements are approximately 760 feet from the closest solar panel. The following table outlines the other important characteristics of Adjoining Property 15.

SUNFISH FARM SOLAR TEST AREA SALE GROUP 2										
Property #	Address	Sale Price	Site Size (AC)	Beds	Baths	Year Built	Home Size (SF)	Improvements	Sale Price/SF	Sale Date
Test Sale 1 Adjoining Property 15	7608 Maude Stewart Road	\$125,000	1.24	2	2	1990	1,860	One-Story, Manufactured, No Basement	\$67.20	Oct-19

In Group 2, we have studied only homes on lots between 0.50 and 1.60 acres and homes that are greater than 1,750 square feet, built between 1990 and 2003, so as to be comparable to the Test Area Sale home. The Control Area Sales sold within a reasonable time frame from the sale date of the Test Area Sale and are similar to the Test Area Sale in physical characteristics, that is they are one-story manufactured homes with no basements, that are located in Wake County, either in Middle Creek Township or Panther Branch Township.



Sunfish Farm Solar - Group 2: Test Area Sale Map

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We analyzed the eight Control Area Sales and adjusted the Control Area Sales for market conditions using the compounded monthly growth rate exhibited in the FHFA House Price Index, for the period from December 2018 to December 2020 (24 months).

The results of the paired sales analysis for Adjoining Property 15 are presented below.

CohnReznick Paired Sales Analysis Sunfish Farm Solar GROUP 2 - Adjoining Property 15		
No. of Sales	Potentially Impacted by Solar Farm	Adjusted Median Price Per SF
Test Area Sale (1)	Yes: Adjoining solar farm	\$67.20
Control Area Sales (8)	No: Not adjoining solar farm	\$66.23
Difference between Unit Price of Test Area Sale and Adjusted Median Unit Price of Control Area Sales		1.47%

The unit sale price of the Test Area Sale was slightly higher than the median adjusted unit sale price of the Control Area Sales and is considered within the range for a typical market area.

Noting no negative price differential, it does not appear that the Sunfish Farm solar installation impacted the sale price of the Test Area Sale, Adjoining Property 15.

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SOLAR FARM 5: CALL FARMS 3 SOLAR, BATAVIA, GENESSEE COUNTY, NEW YORK**Coordinates:** Latitude 43.02305, Longitude -78.1812**PIN:** 1824004-1-26.111/A**Total Land Size:** ± 81.6 Acres**Date Project Announced:** May 2017**Date Project Completed:** July 2018**Output:** 2 MW AC

This solar facility was put into operation in July 2018 and has a power output capacity of 2 MW AC, enough to power 300 homes. The solar farm is currently owned by AES Distributed Energy. The project was initially being developed by Forefront, and was known as Spring Sun South, until AES acquired it in August 2017 just prior to construction. The facility was built by Expy Energy and features two inverters, fixed tilt ground racking and over 8,700 solar panels.

The Surrounding Area: The Call Farms 3 solar farm is located in the town of Batavia, that surrounds the outskirts of the City of Batavia, in Genesee County, New York. Roughly equidistant from Buffalo to the west and Rochester to the east, the solar farm is centrally located in the county, and the county is in the northwestern tip of the state of New York.

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The Immediate Area: The solar farm is located along State Street Road, near the interchange of the New York State Thruway (I-90) and Oak Orchard Road. The solar farm is immediately surrounded by agricultural land to the north, west, and south. To the northeast of the solar farm are two commercial properties, Battery Systems of Batavia and an Ashley Home Furniture distribution center. To the south there is a landscape company with a parcel that houses equipment storage and parking. To the east there a few residential properties on the east side of State Street Road, across the road from the solar parcel.

Real Estate Tax Information: After development of the solar farm, a sub-parcel number was created for the solar farm and a parent parcel number retained that was taxable at the agricultural land rate. By 2019 the solar parcel started being assessed and taxed separately in addition to the parent land parcel. The addition of the solar farm increased the taxes collected on the land by 18 percent.

PIN	Acres	2017 Taxes Paid	2019 Taxes Paid	Tax Increase	2017 Assessed Value	2019 Assessed Value	Value Increase
Genesee, NY							
1824004-1-26.111 (Parent)		\$ 11,646	\$ 11,540		\$ 327,900	\$ 327,300	
1824004-1-26.111/A (Solar Parcel)	81.60		\$ 2,106			\$ 900,000	
TOTAL	81.60	\$ 11,540	\$ 13,647	18%	\$ 327,300	\$ 1,227,300	275%

The map below displays the parcels containing the solar farm and adjoining properties (outlined in yellow). Properties adjoining this parcel are numbered for subsequent analysis (boxed in red).



Call Farms 3 Solar Farm - Adjoining Properties

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One adjoining residential property, Adjoining Property 4, (300 feet from the house to the nearest solar panel) was sold on April 5, 2018, which was after the solar farm was built and just before the solar farm became operational. We spoke to the selling broker, John Gerace of Gerace Realty, who was under the impression that the solar farm was operational prior to closing because the construction appeared complete prior to the closing date. We note this to illustrate that the market reacted as if the solar farm were operational at the time of sale. Gerace said that interested buyers, including the eventual buyer, expressed relief that the home would no longer face agricultural land with unknown development potential, and that there was no glare from the panels.

In addition to being an active broker in the community, Mr. Gerace previously sat on the zoning board, and he frequently attends town hall meetings. He said that typically a portion of the community expresses concerns about potential solar farms, but he never noticed a decrease in value or marketability for solar farm proximity.

PAIRED SALES ANALYSIS

Adjoining Property 4 was considered for a paired sales analysis, and we analyzed this property as a single family home use. The following table outlines the other important characteristics of Adjoining Property 4.

Call Farms 3 Solar Test Area Sale									
Adj. Property #	Address	Sale Price	Site Size (AC)	Beds	Baths	Year Built	Square Feet	Sale Price per SF	Sale Date
4	8053 State St Rd, Batavia	\$155,000	1.00	5	2.0	1967	2,636	\$58.80	Apr-18

We analyzed five Control Area Sales with similar construction and characteristics that sold within a reasonable time frame relative to the sale date of Adjoining Property 4. We adjusted the Control Area Sales for market conditions using a regression analysis to identify the appropriate monthly market conditions adjustment.

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Call Farms 3 Solar Farm – Test Area Sale Map

The result of our analysis for the Call Farms 3 solar farm is presented below.

CohnReznick Paired Sale Analysis Call Farms 3 Solar		
No. of Sales	Potentially Impacted by Solar Farm	Adjusted Median Price Per SF
Test Area Sale (1)	Adjoining solar farm	\$58.80
Control Area Sales (5)	No: Not adjoining solar farm	\$58.62
Difference between Unit Price of Test Area Sale and Adjusted Median Unit Price of Control Area Sales		0.31%

Noting no negative price differential, with the Test Area Sale having a higher unit sale price than the Control Area Sales, it does not appear that the Call Farms 3 Solar Farm had any negative impact on adjacent property values.

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SOLAR FARM 6: JEFFERSON COUNTY COMMUNITY SOLAR GARDEN, JEFFERSON COUNTY, COLORADO

Coordinates: Latitude 39.859564, Longitude -105.1497

PIN: 29-194-01-037

Total Land Size: 13.63 acres

Date Project Announced: November 2013

Date Project Completed: May 2016

Output: 1.2 MW AC

The Jefferson County Community Solar Garden is adjacent to the Whisper Creek residential subdivision, just outside the City of Arvada, and was developed by SunShare Management. This solar farm has the capacity for 1.2 Megawatts (AC) of power, which is enough to power 300 homes. After two months of operation, the solar farm was 100 percent subscribed and its three largest customers are the cities of Arvada and Northglenn, as well as the Green Mountain Water and Sanitation District.

The Surrounding Area: The Whisper Creek subdivision is located between the Welton Reservoir to the west and Standley Lake to the east. To the northwest of the subdivision lies the Colorado Hills Open Space and the Rocky Flats national Wildlife Refuge. The subdivision is primarily in the City of Arvada city limits, but the municipal boundary splits the street the Test Area Sales are located on, West 89th Loop, some are in Arvada and some are in unincorporated Jefferson County. Arvada is a northwestern suburb of the City of Denver and is accessible via Interstate-25 and Interstate-70 and Interstate-76.

The Immediate Area: The immediate area has uses that consist of vacant land to the north and east, a horse and alpaca farm to the south, known as Evening Star Farms, and single-family homes and a municipal police station and vacant land to the west.

Real Estate Tax Information: In 2017, real estate taxes totaled \$79.10 for the entire parcel for the year, which is slightly less than taxes billed in 2016 and 2015.

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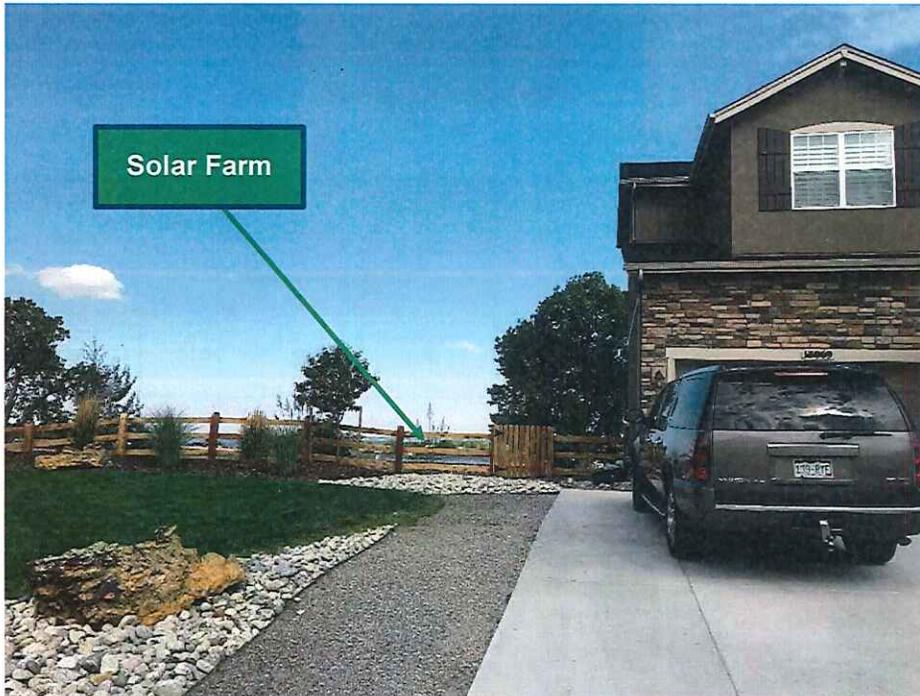
PAIRED SALES ANALYSIS

We found three Adjoining Properties that qualified for a paired sales analysis. The map below displays the solar farm parcel (outlined in yellow) and the Adjoining Properties (outlined in red) are numbered for subsequent analysis



Jefferson County Community Solar Garden - Adjoining Properties
(Q2 2016 imagery date)
(Green Arrow – Direction of Photos on Following Page)

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View from 89th Loop towards Solar Farm at rear of home



View from the rear of a Test Area Sale, towards Solar Farm

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Adjoining Properties 9, 10, and 13 (Test Area Sales 1, 2, and 3, respectively), were considered for a paired sales analysis. The Test Area Sales are two-story, single-family residential homes with four bedrooms and three and a half bathrooms, between 3,000 and 4,000 square feet of gross living area, on less than 0.30 acre of land, and each sold in 2016 as new construction homes.

Jefferson County Community Solar Garden Test Area Sales									
Adj. Property #	Address	Median Sale Price	Median Site Size (AC)	Median Beds	Median Baths	Median Year Built	Median Square Feet	Median Sale Date	Median Price PSF
9, 10, 13	13929 W 89TH LOOP, 13919 W 89TH LOOP, 13889 W 89TH LOOP	\$635,500	0.23	4	3.5	2016	3,848	Jun-16	\$165.15

The Test Area Sales are located between 595 feet and 720 feet from the house to the solar panels. We analyzed six Control Area Sales of single-family homes that are included in this analysis that sold within a reasonable time frame from the median sale date of the Test Area Sales and are similar to the Test Area Sales in physical characteristics. The Control Area Sales are removed from the solar panels in other areas of the Whisper Creek subdivision.



Jefferson County Community Solar Garden – Test Area Sales Map

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All Control Area Sales were adjusted for market conditions using regression analysis to identify the appropriate monthly market conditions adjustment.

The results of our analyses for the Jefferson County Community Solar Garden are presented below.

CohnReznick Paired Sale Analysis Jefferson County Community Solar Garden		
No. of Sales	Potentially Impacted by Solar Farm	Adjusted Median Price Per SF
Test Area Sales (3)	Adjoining solar farm	\$165.15
Control Area Sales (6)	No: Not Adjoining solar farm	\$164.36
Difference between Unit Price of Test Area Sales and Adjusted Median Unit Price of Control Area Sales		0.48%

Noting no negative price differential, it does not appear that the Jefferson County Community Solar Garden had any negative impact on adjacent property values.

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SOLAR FARM 7: WHITETAIL SOLAR 1, FRANKLIN COUNTY, PENNSYLVANIA

Coordinates: Latitude 40.141803, Longitude -77.609787

PINs: 13-0G08.-020, 13-0G08.-032

Population Density (2021): 168 people per square mile (Franklin County)

Total Land Size: approximately 130 acres

Date Project Completed: December 2019

Output: 13.5 MW AC



The Whitetail Solar 1 project is located in the northeast portion of Franklin County, Pennsylvania, in Lurgan Township. The 13.5 MW AC solar facility became operational in December 2019 and sits on approximately 90 acres. The site was previously used as agricultural land. Whitetail Solar 1 is the first of three sites spread across 500 acres built to supply renewable energy for Pennsylvania State University. The project features 50,000 mono-facial solar modules and 617 single-axis trackers. When the three sites are complete, they will provide 25% of Pennsylvania State University's state-wide electricity use.

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The 49,000 solar panels are owned, operated, and maintained by Lightsource bp, a global leader in the development and management of solar energy projects and the project was built in partnership with Penn State University.

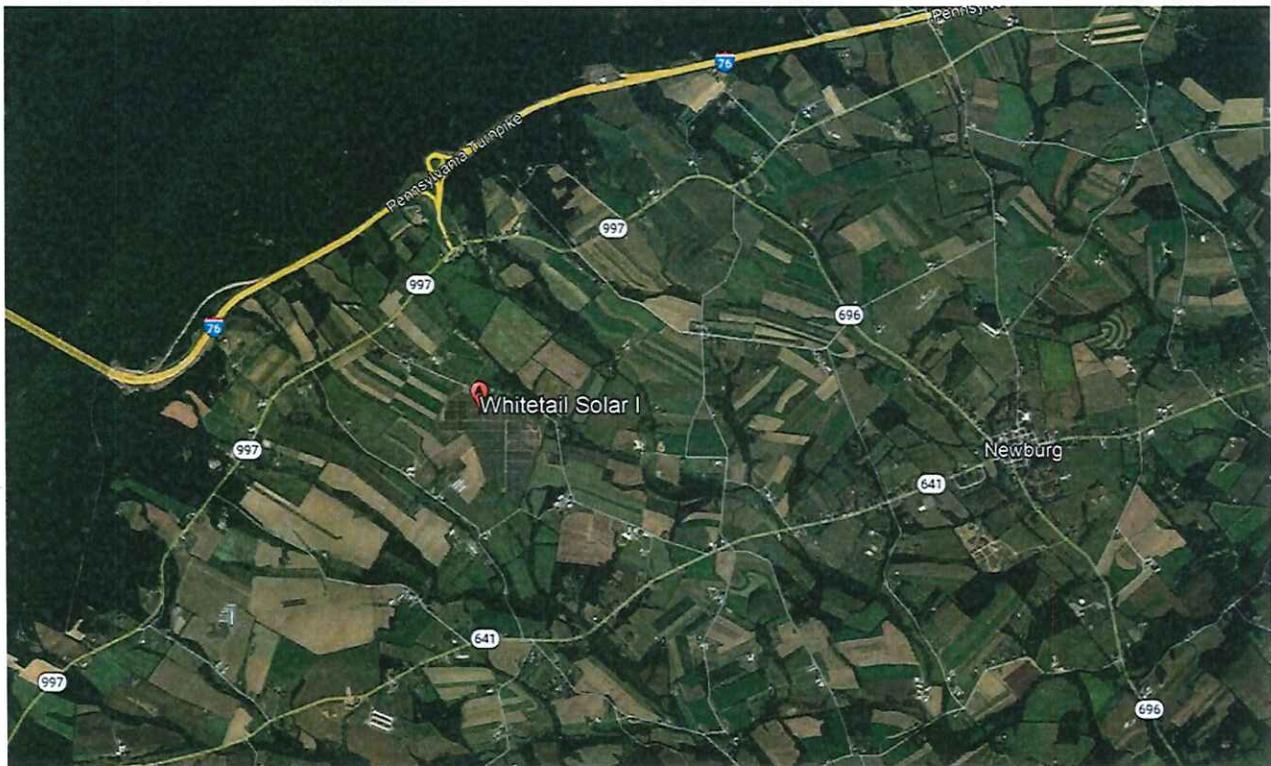
The Surrounding Area: The Whitetail Solar 1 installation is in Lurgan Township, an unincorporated community in northern Franklin County, PA. Much of the township of Lurgan's 32.8 square miles remain undeveloped and there is significant amounts of wetlands, woodlands, and agricultural space within the community.

The solar site is approximately two miles south of I-76 which serves as the Pennsylvania Turnpike, 3.4 miles west of Newburg and 18 miles north of Chambersburg. Shippensburg University is also located 10 miles south of the project.

The Immediate Area: The immediate area is primarily agricultural and single-family residential, with very little commercial use. The nearest commercial area is the town of Newburg.

The solar site is on the west side of Mowersville Road that runs roughly north-south between PA-641 and PA-997 (Cumberland Highway), which connects directly to Interstate 76 at the Blue Mountain Interchange.

The solar site is buffered from neighboring residential uses by farmland, as seen in the image below.



Whitetail Solar 1 – Overview Map of Surrounding Area

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Real Estate Tax Information: The assessed value in Beaver County has not changed for the solar parcel since 1997. Prior to development of the solar installation, in 2011, the owner of this 30.30-acre site paid real estate taxes of \$9,169 annually. In the year following the solar farm development, 2013, real estate taxes increased to approximately \$9,414, an increase of three percent, due to an increase in the millage tax rate that is determined by the local municipality, the school system, and the county.

PIN	Acres	2011 Taxes Paid	2013 Taxes Paid	Tax Increase	2011 Assessed Value	2013 Assessed Value	Value Increase
Beaver County, PA 540070200.000	30.30	\$ 9,169	\$ 9,414	3%	\$ 87,570	\$ 87,570	0%
TOTAL	30.30	\$ 9,169	\$ 9,414	3%	\$ 87,570	\$ 87,570	0%

The map below displays the properties adjoining the solar arrays and are numbered for subsequent analysis in red boxes.



Whitetail Solar 1 –Map of Adjoining Properties

Paired Sales Analysis

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We have considered only one type of paired sales analysis, which was comparing sales of properties not proximate to the solar farm (Control Area Sales) to the sales of adjoining properties after the completion of the solar farm project (Test Area Sales). We identified two groups of Test Area Sales based on primarily on location and home type. We have analyzed sales of homes that occurred after the completion of the solar farm, starting in June 2018. The first and only group comprises the one sale in the at 9824 Mowersville Road that occurred after the completion of the solar farm.

We have excluded one home sale that was initially considered for a Test Area Sale, the home located at 9631 Mowersville Road, Adjoining Property 7. We were unable to confirm the sale details of the home and to the best of our knowledge, the property was not actively marketed for sale. Public records indicate that it is a 0 bedroom and 1 bathroom home. As such, we have excluded the sale from our analysis.

We have found Control Area Sale data through the MLS database which aggregates real estate sales from public records and verified marketing information through the network of listing brokers. We have verified these sales through county records, and conversations with brokers and sellers. We excluded sales that were not arm’s length, such as REO sales or bank-owned properties, or those between related parties.

It is important to note that these Control Area Sales are not adjoining to any solar farm, nor do they have a view of one from the property. Therefore, the announcement nor the completion of the solar farm use could not have impacted the sales price of these properties.

Group 1

Adjoining Property 5 (Test Area Sale) was considered for a paired sales analysis, and we analyzed this property as a single-family home use, a one-story, three bedroom and one bathroom, 1,107 square foot home located on a 0.94- acre parcel that sold in December 2021. The property line is approximately 219 feet from the closest solar panel, and the improvements are approximately 333 feet from the closest solar panel. The following table outlines the other important characteristics of Adjoining Property 5.

Whitetail Solar Test Area Sales - Group 1									
Adj. Property #	Address	Sale Price	Site Size (AC)	Beds	Baths	Year Built	GLA (SF)	Sale Date	Price PSF
5	9824 Mowersville Road	\$196,400	0.94	3	1	1970	1,107	Dec-21	\$177.42

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We have utilized one-story single-family home sales for Control Area Sales also located in Franklin County with similar age, style, and bedroom count as the Test Area Sale.

We analyzed 12 Control Area Sales and adjusted the Control Area Sales for market conditions using the compounded monthly growth rate exhibited in the FHFA House Price Index, for the period from January 2020 to the end of December 2021, the most recent data available, (24 months).

When adjusting sales prices for market conditions (time between date of Test Area Sale and Control Area Sale date) throughout this analysis we have used regression analysis to identify the appropriate monthly market conditions adjustment. We utilized the Federal Housing Finance Agency House Price Index (FHFA HPI) for Franklin County for the average monthly rate of appreciation. The FHFA HPI is a broad measure of the movement of single-family house prices. The FHFA HPI is a weighted, repeat-sales index, meaning that it measures average price changes in repeat sales or re-financings on the same properties. The FHFA HPI serves as a timely, accurate indicator of house price trends at various geographic levels.¹⁸

The results of the paired sales analysis for Group 1 - Adjoining Property 5 are presented below.

¹⁸ <https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index.aspx>

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CohnReznick Paired Sale Analysis Whitetail Solar Group 1		
No. of Sales	Potentially Impacted by Solar Farm	Adjusted Median Price Per SF
Test Area Sales (1)	Adjoining solar farm	\$177.42
Control Area Sales (12)	No: Not adjoining solar farm	\$168.57
Difference between Unit Price of Test Area Sale and Adjusted Median Unit Price of Control Area Sales		5.25%

The difference between the unit price of the Test Area Sale and the Adjusted Median Unit Price of the Control Area Sales is considered reasonable.

Noting no negative price differential. it does not appear that the Whitetail Solar 1 installation impacted the sale price of the Test Area Sale, Adjoining Property 5. We note that the distance from the panels to the Test Area Sale is only 219 linear feet and that a tree line slightly interrupts views from the house to the solar panels.

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SOLAR FARM 8: NEW ROAD SOLAR, MIDDLESEX COUNTY, NEW JERSEY

Coordinates: Latitude 40.403238, Longitude -74.56779

PINs: 1221_96_39.03, 1221_96_39.01, 1221_96_43.01, 1221_96_36

Population Density (2021): 1,112 people per square mile (Largest City = New Brunswick)

Total Land Size: approximately 68 acres

Date Project Completed: June 2018

Output: 10 MW AC



The New Road Solar project is located in the southwest portion of Middlesex County, New Jersey, in South Brunswick Township. The 10 MW AC solar facility became operational in June 2018 and sits on approximately 68 acres. The site was a landfill from 1959 to 1979. From 1982 to 1985, it underwent remediation to rid the area of any hazardous materials. The Superfund site had remained unused until it was redeveloped with the solar facility. Given the length of time between closure of the previous use and the development of the solar facility,

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we believe enough time passed that the market regards the site as a passive, open space use; thus, no original negative influence was perceived to persist that might otherwise taint the study.

The 40,000 solar panels are owned, operated, and maintained by CEV, the renewable energy subsidiary of New Jersey Resources and the project was redeveloped in partnership with CEP Renewables, a firm specializing in remediated sites.

The Surrounding Area: The New Road solar installation is in Kendall Park, a census designated place, in South Brunswick Township. Much of the town of South Brunswick's 42 square miles remain undeveloped and there are still significant amounts of wetlands, woodlands, and open space within the community.

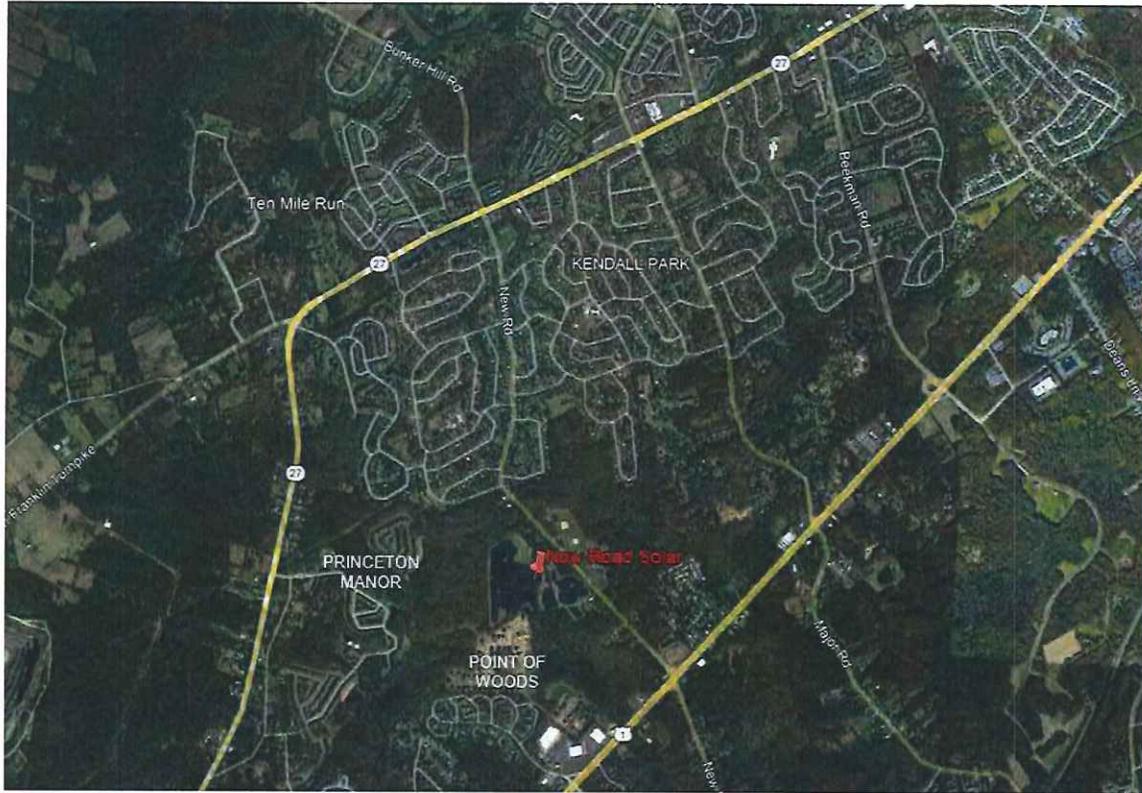
The solar site is approximately nine miles southwest of New Brunswick, nine miles northeast of Princeton and 17 miles from Trenton, the state capital. New Jersey Transit's northeast corridor trains stop in Princeton and a new station is being built in North Brunswick that will take commuters directly into New York City's Penn Station.

The Immediate Area: The immediate area is primarily residential with supporting commercial uses, and there are some industrial warehouse uses to the southeast of the site in Dayton. In neighboring Franklin Township, there is an active quarry approximately four miles southwest of the solar site.

The solar site is on the west side of New Road that runs roughly north-south between NJ-27 and US Route 1. Along New Road is the Kendall Park First Aid and Rescue Squad facility, a preschool, and across the New Road from the solar site is the municipal Woodlot Park with baseball fields, tennis courts and a recreation center.

The solar site is buffered from neighboring residential developments by thick groves of woodlands, as seen in the image below.

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New Road Solar – Overview Map of Surrounding Subdivisions

Kendall Park is a planned residential community of 1,500 houses built between 1956 and 1961, adjacent to the north and northeast of the solar site. The development was built in three stages: the initial development in 1956-67 (between New Road and Sand Hill Road-the middle section), the Constable development in 1959 (south of New Road-the south section), followed by the Greenbrook development (north of Sand Hill Road-the north section) in 1961. The initial development offered two styles of three-bedroom, one and a half bath ranch-style homes, mostly built on one third-acre lots. The subsequent sections offered a wider selection of styles, including four-bedroom ranches and four-bedroom colonial-style homes. The development of Kendall Park doubled the population of South Brunswick Township and marked the beginning of its transformation from a rural farming area to a suburban bedroom community. Several other nearby tracts developed after Kendall's original development are also part of the Census Designated Place known as Kendall Park.

National homebuilders, Toll Brothers, developed the luxury active adult age restricted community (55+) of single family homes to the west of the solar site, called Princeton Manor. Sales of the 349-home community started in 2006 and the last homes, closest to the solar site, were built circa 2015-2017. Home models range from 1,814 to 2,821 square feet, and some homes had an additional basement option. The community includes an 11,000 square foot clubhouse with spa facilities, bocce and tennis courts, billiards, an outdoor swimming pool and spa, and jogging and bicycle trails. The homeowner's association handles exterior maintenance of homes and mows lawns and handles snow removal for all homes. Monthly homeowner's fees are in the \$300s.

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Point of Woods is a luxury home subdivision of 72 single family homes built in the last several years by the Kaplan Companies that is adjacent to the solar site to the south. The community has homes with four different floorplans. The houses feature four or five bedrooms, three or four bathrooms, two- or three-car garages and full basements, as well as custom options. Floorplans range from 3,638 to 4,291 square feet of above grade living space and prices ranged from \$900,000 to recent home sales of over \$1.3 million.

The homes in the Point of Woods subdivision that are the closest to the solar site there are approximately 150 to 250 feet between the homes and the panels.

The detailed descriptive data on the homes backing to the solar site that details square footage and bedrooms and bathrooms is not publicly available and was not able to be obtained from the developer. The homes were not listed on the Multiple Listing Service (MLS) at the time of sale; therefore, we could not reliably conduct a paired sale analysis on them. However, in public recording documents the sale prices for the five homes sold adjacent to the solar site, since development of the solar facility, range from \$998,778 to \$1,336,613. Given the difficulty in obtaining the official home and lot sizes of the recent sales within the Point of Woods subdivision, we have not performed a paired sales analysis of these homes. However, we do note the relatively large sale prices of the homes in this subdivision are approximately 150 to 250 away from solar panels.

Real Estate Tax Information: The solar farm is located on municipal government owned land and is not subject to real estate taxation.

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The map below displays the properties adjoining the solar arrays and are numbered for subsequent analysis in red boxes.



New Road Solar –Map of Adjoining Properties

Paired Sales Analysis

We have considered only one type of paired sales analysis, which was comparing sales of properties not proximate to the solar farm (Control Area Sales) to the sales of adjoining properties after the completion of the solar farm project (Test Area Sales). We identified two groups of Test Area Sales based on primarily on location and home type. We have analyzed sales of homes that occurred after the completion of the solar farm, starting in June 2018. The first group comprises the one sale in the Princeton Manor subdivision that occurred after the completion of the solar farm. The second group consists of homes in the Kendall Park subdivision.

We have excluded one home sale that was initially considered for a Test Area Sale, the home located at 12 Wheeler Road in the Kendall Park subdivision, Adjoining Property 27. After speaking with the listing broker, we determined that the condition of this home at sale was far inferior to all others in the marketplace. The broker commented that the home needed at least \$30,000 of repairs to cure deferred maintenance, (for example, the roof needed replacement, the foundation had shifted, and the kitchen floor was slanted), and the interior finishes had never been updated since construction in 1958. Additionally, the garage had been illegally converted to living space with poor construction, so the property did not have covered parking unlike virtually every other home in the Kendall Park market. The seller made a \$10,000 concession at closing to cover more issues

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discovered at inspection as well. Due to the inferior condition of the home, we considered it to be an outlier and could not find comparable properties to use as Control Area Sales.

We have found Control Area Sale data through the RealQuest database which aggregates real estate sales from public records and verified marketing information through online sources such as Zillow.com, Redfin.com and Realtor.com. We have verified these sales through county records, and conversations with brokers and sellers. We excluded sales that were not arm’s length, such as REO sales or bank-owned properties, or those between related parties.

It is important to note that these Control Area Sales are not adjoining to any solar farm, nor do they have a view of one from the property. Therefore, the announcement nor the completion of the solar farm use could not have impacted the sales price of these properties.

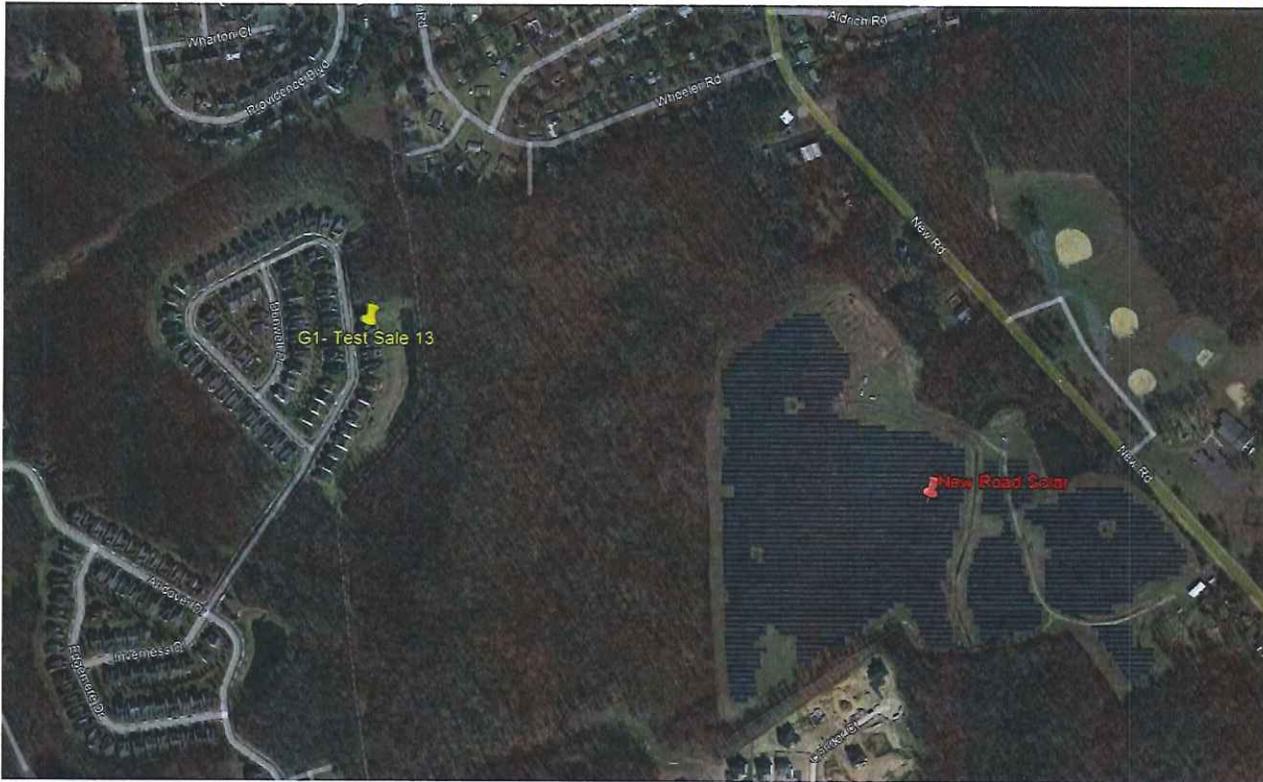
Group 1

Adjoining Property 13 (Test Area Sale) was considered for a paired sales analysis, and we analyzed this property as a single-family home use, a two-story, four bedroom and three bathroom, 2,884 square foot home located on a 0.15- acre parcel that sold in July 2020. This home is in the Princeton Manor subdivision. The property line is approximately 1,492 feet from the closest solar panel, and the improvements are approximately 1,520 feet from the closest solar panel. The following table outlines the other important characteristics of Adjoining Property 13.

New Road Solar Test Area Sales - Group 1									
Adj. Property #	Address	Sale Price	Site Size (AC)	Beds	Baths	Year Built	GLA (SF)	Sale Date	Price PSF
13	54 Inverness Drive	\$630,000	0.15	4	3	2016	2,884	Jul-20	\$218.45

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We have utilized two-story single-family home sales for Control Area Sales also located exclusively in the Princeton Manor subdivision as those are each similar in square footage and layout, as well as quality of construction as the Test Area Sale.

We analyzed nine Control Area Sales and adjusted the Control Area Sales for market conditions using the compounded monthly growth rate exhibited in the FHFA House Price Index, for the period from January 2019 to the end of December 2020, the most recent data available, (24 months).

When adjusting sales prices for market conditions (time between date of Test Area Sale and Control Area Sale date) throughout this analysis we have used regression analysis to identify the appropriate monthly market conditions adjustment. We utilized the Federal Housing Finance Agency House Price Index (FHFA HPI) for Middlesex County for the average monthly rate of appreciation. The FHFA HPI is a broad measure of the movement of single-family house prices. The FHFA HPI is a weighted, repeat-sales index, meaning that it measures average price changes in repeat sales or re-financings on the same properties. The FHFA HPI serves as a timely, accurate indicator of house price trends at various geographic levels.¹⁹

The results of the paired sales analysis for Group 1 - Adjoining Property 13 are presented below.

¹⁹ <https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index.aspx>

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CohnReznick Paired Sale Analysis New Road Solar Group 1		
No. of Sales	Potentially Impacted by Solar Farm	Adjusted Median Price Per SF
Test Area Sales (1)	Adjoining solar farm	\$218.45
Control Area Sales (9)	No: Not adjoining solar farm	\$201.78
Difference between Unit Price of Test Area Sale and Adjusted Median Unit Price of Control Area Sales		8.26%

The difference between the unit price of the Test Area Sale and the Adjusted Median Unit Price of the Control Area Sales is considered reasonable, especially given the age of the home, which was built in 2016. Out of nine Control Area Sales only two were built after 2013 (2015 and 2016, respectively), and the median year built was 2012.

Noting no negative price differential, it does not appear that the New Road Solar installation impacted the sale price of the Test Area Sale, Adjoining Property 13. We note that the distance from the panels to the Test Area Sale is over 1,500 linear feet and that heavy woods interrupts any views from the house to the solar panels. Given these characteristics, we have excluded this paired sales analysis from our reconciliation at the end of this report but have retained the analysis for information purposes.

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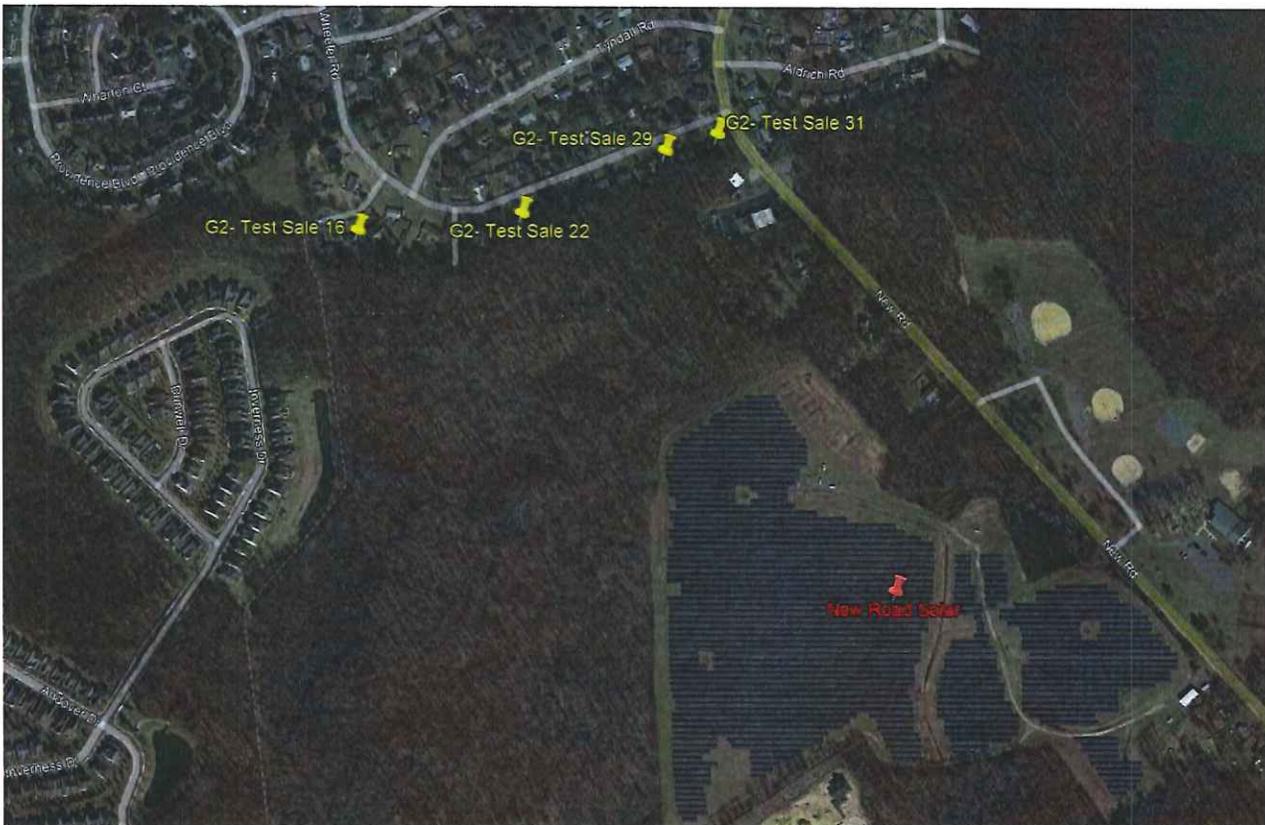


Group 2

We have grouped four home sales in the Kendall Park subdivision that sold after the completion of the solar farm and studied them together. The single-story ranch homes had either three or four bedrooms and either two or three bathrooms, and ranged in size from 1,572 to 2,464 square feet. Because these homes were built over a four year period (1958 to 2018) and are similar in style, we considered them on the whole comparable to 20 Control Area Sales in the same subdivision that share the range of physical characteristics. The solar panels range from 905 feet from panel to property line of the Test Area Sales to 1,370 feet, and 945 feet to 1,483 feet from solar panel to home improvement. The homes are separated from solar panels by dense woodlands.

The table below outlines the other important characteristics of the homes in Group 2.

New Road Solar Test Area Sales - Group 2									
Adj. Property #	Address	Sale Price	Site Size (AC)	Beds	Baths	Year Built/ Renovated	GLA (SF)	Sale Date	Price PSF
16	6 Quentin Road	\$485,000	0.42	4	3.0	1958/2018	2,464	Jul-18	\$196.83
22	22 Wheeler Road	\$380,500	0.31	4	3.0	1958	1,959	Aug-20	\$194.23
29	8 Wheeler Road	\$358,000	0.31	4	2.0	1958	2,220	Nov-19	\$161.26
31	2 Wheeler Road	\$365,000	0.51	3	2.0	1958	1,572	Jun-18	\$232.19
Median		\$372,750	0.37	4	2.5	1958	2,090	Mar-19	\$195.53



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We have utilized single-family home sales for Control Area Sales also located exclusively in the Kendall Park subdivision as those were built during the same time-frame and are each similar in square footage and layout, as well as quality of construction as the Test Area Sales. In Group 2, we have excluded homes that had an in-ground pool.

We analyzed 18 Control Area Sales and adjusted the Control Area Sales for market conditions using the compounded monthly growth rate exhibited in the FHFA House Price Index, for the period from January 2018 to the end of December 2020, the latest data available (36 months).

The results of the paired sales analysis for Group 2 are presented below.

CohnReznick Paired Sale Analysis New Road Solar Group 2		
No. of Sales	Potentially Impacted by Solar Farm	Adjusted Median Price Per SF
Test Area Sales (4)	Adjoining solar farm	\$195.53
Control Area Sales (18)	No: Not adjoining solar farm	\$199.89
Difference between Unit Price of Test Area Sales and Adjusted Median Unit Price of Control Area Sales		-2.18%

The small differential between the Test Area Sales and the Control Area Sales is within the range of normal market variance, and therefore it does not appear that the New Road Solar installation impacted the sale price of the Test Area Sales in the Kendall Park subdivision. We note that the control data had a smaller median home size, which likely explains the relative difference in adjusted median price per square foot. Again, we note that the linear distance from the Test Area Sales to the adjacent panels is over 900 feet and that there is heavy wooded screening between the Test Area Sales and the solar facility. Given these physical characteristics, we have included this paired sales analysis as an additional consideration in our analysis but have excluded it from the reconciliation at the end of this report.

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TECHNIQUE 3: MARKET COMMENTARY

Additionally, we have contacted market participants such as appraisers, brokers, and developers familiar with property values around solar farms. Commentary from our conversations with these market participants is recorded below.

Cheryl Bundek, the Supervisor of Assessments of Kent County, Delaware, reported that when she worked in the city of Dover's tax assessor's office, they had never received a complaint or appeal request about assessed values from home owners in nearby manufactured home communities regarding the Dover Sun Park solar farm.

Nancy Cook in the South Brunswick Township tax assessor's office, in Middlesex County, New Jersey, said that to her recollection there had been no complaints or appeals filed about the presence of the New Road Solar facility in the township from nearby subdivision homeowners.

The Interim Assessor for the town of Whitestown in Oneida County, New York, Frank Donato, stated that he has seen no impact on property values of properties nearby solar farms.

Steve Lehr at the Department of Assessment for Tompkins County, New York, mentioned that the appraisal staff has made no adjustments regarding assessed values of properties surrounding solar farms. Marketing times for properties have also stayed consistent. Lehr noted that a few of the solar farms in Tompkins County are on land owned by colleges and universities and a few are in rural areas.

At this point in time, Al Fiorille, Senior Valuation Specialist in the Tompkins County Assessment department in New York, reported that he cannot measure any negativity from the solar farms and arrays that have been installed within the county.

Mason Hass, the Riverhead Assessor in Suffolk County, on Long Island, New York stated that the solar farms in his town are in industrial zoned areas, and he has not seen any impact on adjacent properties.

The Assessor for the town of Smithtown in Suffolk County, New York, Irene Rice, has not seen any impact on property values as a result of their location near the newly built solar farms in her town.

In the Assessor's office in the town of Seneca, Ontario County, New York, Shana Jo Hamilton stated that she has seen no impact on property values of properties adjacent to solar farms.

Michael Zazzara, Assessor of the City of Rochester in Monroe County, New York commented that the City has a couple of solar farms, and they have seen no impact on nearby property values and have received no complaints from property owners.

While there are one or two homes nearby to existing solar farms in the town of Lisbon in St. Lawrence County, New York, Assessor Stephen Teele has not seen any impact on property values in his town. The solar farms in the area are in rural or agricultural areas in and around Lisbon.

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The Assessor for the Village of Whitehall in Washington County, New York, Bruce Caza, noted that there are solar farms located in both rural and residential areas in the village and he has seen no impact on adjacent properties, including any concerns related to glare from solar panels.

Laurie Lambertson, the Town Assessor for Bethlehem, in Albany County, New York noted that the solar farms in her area are tucked away in rural or industrial areas. Lambertson has seen no impact on property values in properties adjacent to solar farms.

A Miami Dade County, Florida Assessor stated that they do not reduce assessed property values for adjacency to solar farms.

A Putnam County, Florida Assessor stated that they have not seen a reduction in assessed value for adjacency to solar farms.

Renee Davis, Tax Administrator for Bladen County, North Carolina, stated that she has not seen any effect on property values due to proximity to a solar farm.

We spoke with Jim Brown, an appraiser for Scotland County, North Carolina, who stated that he has seen no effect on property values due to proximity to a solar farm.

We spoke with Gary Rose, a tax assessor for Duplin County, North Carolina, who stated that he has seen no effect on property values with regard to proximity to a solar farm.

Kathy Renn, a property Valuation Manager for Vance County, North Carolina, stated that she has not noticed any effect on property values due to proximity to a solar farm.

Larry Newton, a Tax Assessor for Anson County, North Carolina, stated that there are six solar farms in the county ranging from 20 to 40 acres and he has not seen any evidence that solar farms have had any effect on property values due to proximity to a solar farm.

We spoke with Patrice Stewart, a Tax Administrator for Pasquotank County, North Carolina, and she has seen no effect on land or residential property values due to proximity to the solar farms in Pasquotank County.

We spoke with the selling broker of the Adjoining Property for Elm City Solar, in North Carolina, Selby Brewer, who said the solar farm did not impact the buyer's motivation.

We spoke with Amy Carr, Commissioner of Revenue in Southampton County, Virginia, who stated that most of the solar farms are in rural areas, but she has not seen any effect or made any adjustments on property values. They have evaluated the solar farmland considering a more intense use, which increased the assessed value.

Lisa Ruhlen, Real Estate Clerk in the Hardin County, Ohio Auditor's office reported that as of first quarter 2022, there have been no complaints or petitions to lower assessed values on homes near the Hardin Solar farm. Primarily because the solar facility went into operation in 2021 and there has not been a tri-annual reassessment of the county yet. However, in the northern part of the county, where solar facilities have been in operation longer, there have still been no complaints about property value impacts.

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Bill Nichols, Chief Appraiser with the Trumbull County Auditor in Ohio, stated that he has seen no effect on property values in properties near a solar farm and no one has come in to complain to the Auditor's office about an impact on their property value.

Beth Fritz, the Valuation Specialist in the Wood County, Ohio Auditor's office has seen no effect or impact on residential, commercial, or agricultural property values on any properties with proximity to a solar farm.

Jarra Underwood, Wayne County Auditor in Ohio reported that she has seen no impact on property values due to their location near a solar farm. There is one solar farm in the county near residential properties and while it is not a highly sought after location, Underwood has still not seen an effect on those property values due to the nearby solar farm.

We spoke with Ken Surface, a Senior Vice President of Nexus Group. Nexus Group is a large valuation group in Indiana and has been hired by 20 counties in Indiana regarding property assessments. Mr. Surface is familiar with the solar farm sites in Harrison County (Lanesville Solar Farm) and Monroe County (Ellettsville Solar Farm) and stated he has noticed no impact on property values from proximity to these sites.

We interviewed Missy Tetrick, a Commercial Valuation Analyst for the Marion County Indiana Assessor. She mentioned the Indy Solar III sites and stated that she saw no impact on land or property prices from proximity to this solar farm.

We spoke with Dorene Greiwe, Decatur County Indiana Assessor, and she stated that solar farms have only been in the county a couple of years, but she has seen no impact on land or property prices due to proximity to this solar farm.

Connie Gardner, First Deputy Assessor for Madison County Indiana, stated that there are three solar farms in her county, and she has seen no impact on land or property prices due to proximity to these solar farms.

We spoke with Tara Shaver, Director of Administration for Marion County, Indiana Assessor/Certified Assessor, and she stated that she has seen no impact on land or property prices due to proximity to solar farms.

Candace Rindahl of ReMax Results, a real estate broker with 16 years of experience in the North Branch, Minnesota area, said that she has been in most of the homes surrounding the North Star Solar Farm and personally sold two of them. She reported that the neighboring homes sold at market rates comparable to other homes in the area not influenced by the solar farm, and they sold within 45 days of offering, at the end of 2017, which was in line with the market.

Dan Squires, Chisago County Tax Assessor, confirmed that the Chisago County Assessor's Office completed their own study on property values adjacent to and in close vicinity to the solar farm from January 2016 to October 2017. From the study, the assessor determined the residential homes adjacent to the North Star Solar Farm were in-line with the market and were appreciating at the same rate as the market.²⁰

²⁰ Chisago County Press: County Board Real Estate Update Shows No "Solar Effects" (11/03/2017)

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A Clark County, Kentucky Property Valuation Administrator, Jason Neely, noted there have been no complaints regarding East Kentucky Power Cooperative, Inc.'s Cooperative Solar One project installed in November 2017 located in the county, which has a capacity to generate 8.5 MW of electricity. Additionally, Neely stated he has not seen any evidence of lowered property values in the area and no reduction in assessed property values has been made due to proximity to the solar farm.

A Grant County, Kentucky Assessor stated that they have not seen a reduction in assessed property values or market values for adjacency to solar farms.

A McNairy County, Tennessee Assessor stated that they have not applied reductions to assessed value for adjacency to solar farms.

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SOLAR FARM FACTORS ON HARMONY OF USE

Zoning changes and conditional use permits often require that the proposed use is compatible with surrounding uses.

The following section analyzes specific physical characteristics of solar farms and is based on research and CohnReznick's personal solar farm site visits and indicate that solar farms are generally harmonious with surrounding property and compliant with most zoning standards.

Appearance: Most solar panels have a similar appearance to a greenhouse or single-story residence can range from 8 to 20 feet but are usually not more than 15 feet high. As previously mentioned, developers generally surround a solar farm with a fence and often leave existing perimeter foliage, which minimizes the visibility of the solar farm. The physical characteristics of solar farms are compatible with adjoining agricultural and residential uses.

Sound: Solar panels in general are effectively silent and sound levels are minimal, like ambient sound. There are limited sound-emitting pieces of equipment on-site, which only produce a quiet hum (e.g., inverters). However, these sources are not typically heard outside the solar farm perimeter fence.

Odor: Solar panels do not produce any byproduct or odor.

Greenhouse Gas (GHG) Emissions: Much of the GHG produced in the United States is linked to the combustion of fossil fuels, such as coal, natural gas, and petroleum, for energy use. Generating renewable energy from operating solar panels for energy use does not have significant GHG emissions, promoting cleaner air and reducing carbon dioxide (CO₂) emissions to fight climate change.

Traffic: The solar farm requires minimal daily onsite monitoring by operational employees and thus minimal operational traffic.

Hazardous Material: Modern solar panel arrays are constructed to U.S. government standards. Testing shows that modern solar modules are both safe to dispose of in landfills and are also safe in worst case conditions of abandonment or damage in a disaster.²¹ Reuse or recycling of materials would be prioritized over disposal. Recycling is an area of significant focus in the solar industry, and programs for both batteries and solar panels are advancing every year. While the exact method of recycling may not be known yet as it is dependent on specific design and manufacturer protocol, the equipment is designed with recyclability of its components in mind, and it is likely that solar panel and battery energy storage recycling and reuse programs will only improve in 25 years' time.

Examples of homes built adjoining to solar farms are presented on the following pages.

²¹ Virginia Solar Initiative - Weldon Cooper Center for Public Service – University of Virginia (<https://solar.coopercenter.org/taxonomy/term/5311>)

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For the Dominion Indy III solar farm, the adjacent land to the west was acquired and subsequently developed with a large estate home – after the solar panels had been in operation for years.



*Dominion Indy III Solar Farm
September 2014*



*Dominion Indy III Solar Farm
October 2016*



Estate home adjacent to Dominion Indy III Solar Farm

In ground pool and attached garage (home cost estimated at \$450,000 - October 2015)

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Innovative Solar 42 (2017)
Cumberland County, NC

<p>Single Family Home Development (1)</p> <ul style="list-style-type: none"> - End-user built - 2,933 SF - Completed on 3/1/2019 - Cost estimate: \$170,300 		<p>Single Family Home Development (2)</p> <ul style="list-style-type: none"> - Developer built - 4 Bedroom - 3 Bathroom - 2,401 SF - Sold 6/18/19 for \$265,900 (\$110.75/sf)
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Innovative Solar 42 (2019)
Cumberland County, NC

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Developer Built Home

Sold 6/18/19 for \$265,900 (\$110.75/sf)

Cumberland County, NC (adjacent to Innovative 42 solar farm)

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Portage Solar Farm, IN
October 2015



Portage Solar Farm, IN
October 2016



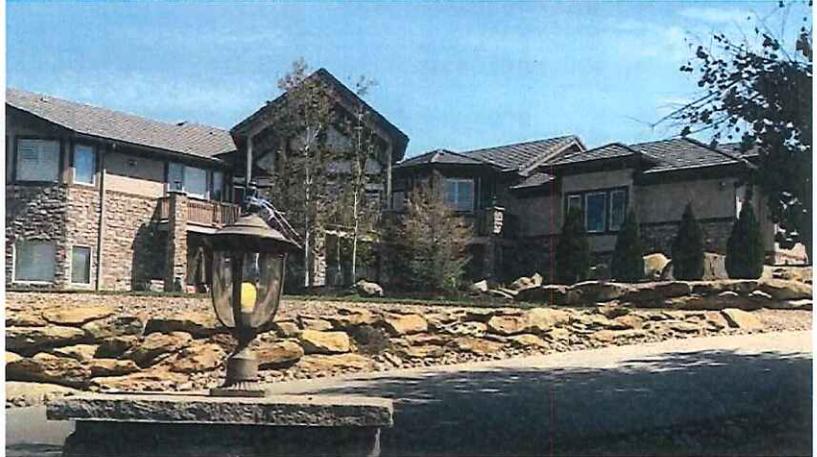
4,255 square foot estate home under construction, adjacent to Portage Solar Farm located in Indiana

On-site pond and attached garage (cost estimated at \$465,000) April 2018

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The Brighton PV Solar farm became operational in December 2012. Located in Adams County, north of Denver, CO, this solar farm has a capacity of 1.8 MW AC and is located on a triangular parcel of land east of an area of existing custom-built estate homes. A photo of one home (15880 Jackson Street) located directly north of the circled area below, is presented to the right.



In December 2012, the 2.55-acre lot circled in red below (15840 Jackson Street) was purchased for future development of a single-family home. This home was built in 2017, and per the county assessor, the two-story home is 3,725 square feet above ground with 4 bedrooms and 3.5 bathrooms. According to the building permit issued in August 2016, the construction cost was budgeted at \$410,000.



Brighton PV Solar, Adams County, CO
June 2016



Brighton PV Solar, Adams County, CO
June 2017

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SUMMARY OF ADJOINING USES

The table below summarizes each Existing Solar Farm’s adjoining uses.

Composition of Surrounding Uses (% of Surrounding Acreage)							
Solar Farm #	Solar Farm	Acreage % of Surrounding Agricultural Uses	Acreage % of Surrounding Residential Uses	Acreage % of Surrounding Industrial Uses	Acreage % of Surrounding Office Uses	Acreage % of Surrounding Other Uses	Avg. Distance from Panels to Improvements (Feet)
1	Upper Marlboro	45.00%	45.00%	0.00%	0.00%	10.00%	285
2	Sunshine Farms	0.00%	80.20%	0.00%	0.00%	19.80%	590
3	Shoreham Solar Commons	52.70%	30.90%	8.30%	0.00%	8.10%	275
4	Sunfish Farm Solar	87.70%	12.30%	0.00%	0.00%	0.00%	380
5	Call Farms 3 Solar	64.00%	25.00%	3.00%	0.00%	8.00%	328
6	Jefferson County Community	73.00%	10.00%	0.00%	0.00%	16.67%	790
7	Whitetail	97.70%	2.30%	0.00%	0.00%	0.00%	334
8	New Road Solar	0.00%	51.90%	0.00%	0.00%	48.10%	1,078

Overall, the vast majority of the surrounding acreage for each comparable solar farm is made up of agricultural land, some of which have homesteads. There are also smaller single-family home sites that adjoin the solar farms analyzed in this report. Generally, these solar farms are sound comparables to Turning Point Energy’s proposed solar project in terms of adjoining uses, location, and size.

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SUMMARY AND FINAL CONCLUSIONS

The purpose of this property value impact report is to determine whether the presence of a solar farm has caused a measurable and consistent impact on adjacent property values. Under the identified methodology and scope of work, CohnReznick reviewed published methodology for measuring impact on property values as well as published reports that analyzed the impact of solar farms on property values. These studies found little to no measurable and consistent difference between Test Area Sales and Control Area Sales attributed to the solar farms.

A summary of the chosen CohnReznick impact studies prepared is presented below.

CohnReznick Solar Analysis Conclusions									
Solar Farm No.	Solar Farm	Number of Test Area Sales	Number of Control Area Sales	Median Adjoining Property Sale Price per Unit (Test Area Sales)	Median Control Area Sales Price per Unit	Difference (%)	Avg. Feet from Panel to Lot	Avg. Feet from Panel to House	Impact Found
Single-Family Residential									
1	Upper Marlboro Solar Group 1	1	10	\$423.08	\$384.08	+10.04%	250	265	No Impact
	Upper Marlboro Solar Group 2	1	8	\$201.66	\$189.75	+5.91%	80	307	No Impact
2	Sunshine Solar Farms Group 1	2	6	\$192.48	\$190.99	+0.78%	348	462	No Impact
3	Shoreham Solar Commons	1	6	\$166.67	\$161.08	+3.47%	110	480	No Impact
4	Sunfish Farm Solar Group 1	1	14	\$127.89	\$124.86	+2.43%	50	200	No Impact
	Sunfish Farm Solar Group 2	1	10	\$67.20	\$66.23	+1.47%	665	760	No Impact
5	Call Farms 3 Solar	1	5	\$58.80	\$58.62	+0.31%	200	297	No Impact
6	Jefferson Community Solar Garden	3	6	\$165.15	\$164.36	+0.48%	609	658	No Impact
7	Whitetail Solar	1	12	\$177.42	\$168.57	+5.25%	219	333	No Impact
8	New Road Solar Group 1	1	9	\$218.45	\$201.78	+8.26%	1,492	1,520	No Impact
	New Road Solar Group 2	4	18	\$195.53	\$199.89	-2.18%	1,054	1,113	No Impact
Median Variance in Sale Prices for Test Area Sales to Control Area Sales						+2.43%			
<i>17 Adjoining Test Area Sales studied and compared to 104 Control Area Sales</i>									
Land (Agricultural/Single Family Lots)									
2	Sunshine Solar Farms Group 1	1	9	\$67,500	\$49,900	+26.07%	320	-	No Impact
Median Variance in Sale Prices for Test to Control Areas						+26.07%			
<i>1 Adjoining Test Area Sale studied and compared to 9 Control Area Sales</i>									

As summarized above, we evaluated 17 property sales adjoining existing solar facilities (Test Area Sales) and 104 Control Area Sales

The solar farms analyzed reflected sales of property adjoining an existing solar farm (Test Area Sales) in which the unit sale prices were effectively the same or higher than the comparable Control Area Sales that were not near a solar farm. The conclusions support that there is no negative impact for improved residential homes adjacent to solar, nor agricultural acreage. This was confirmed with market participants interviews, which provided additional insight as to how the market evaluates farmland and single-family homes with views of the solar farm.

It can be concluded that since the Adjoining Property Sales (Test Area Sales) were not adversely affected by their proximity to the solar farm, that properties surrounding other proposed solar farms operating in compliance with all regulatory standards will similarly not be adversely affected, in either the short or long term periods.

Based upon the examination, research, and analyses of the existing solar farm uses, the surrounding areas, and an extensive market database, we have concluded that **no consistent negative impact has occurred to**

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adjacent property values that could be attributed to proximity to the adjacent solar farm, with regard to unit sale prices or other influential market indicators. Additionally, in our workfile we have retained analyses of additional existing solar farms, each with their own set of matched control sales, which had consistent results, indicating no consistent and measurable impact on adjacent property values. This conclusion has been confirmed by numerous county assessors who have also investigated this use's potential impact on property values.

If you have any questions or comments, please contact the undersigned. Thank you for the opportunity to be of service.

Respectfully submitted,

CohnReznick LLP



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Principal
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Indiana License No. CG41500037
Expires 6/30/2024
New Jersey License No. 42RG00238700
Expires 12/31/2023
New York License No. 46000051059
Expires 6/16/2024



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CERTIFICATION

We certify that, to the best of our knowledge and belief:

1. The statements of fact and data reported are true and correct.
2. The reported analyses, findings, and conclusions in this consulting report are limited only by the reported assumptions and limiting conditions, and are our personal, impartial, and unbiased professional analyses, findings, and conclusions.
3. We have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
4. We have performed no services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
5. We have no bias with respect to the property that is the subject of this report or the parties involved with this assignment.
6. Our engagement in this assignment was not contingent upon developing or reporting predetermined results.
7. Our compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value finding, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this report.
8. Our analyses, findings, and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute, which includes the Uniform Standards of Professional Appraisal Practice (USPAP).
9. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
10. Patricia L. McGarr, MAI, CRE, FRICS, Andrew R. Lines, MAI, and Erin C. Bowen, MAI have viewed the exterior of all comparable data referenced in this report in person, via photographs, or aerial imagery.
11. We have not relied on unsupported conclusions relating to characteristics such as race, color, religion, national origin, gender, marital status, familial status, age, and receipt of public assistance income, handicap, or an unsupported conclusion that homogeneity of such characteristics is necessary to maximize value.
12. Joseph P. B. Ficenc provided significant appraisal consulting assistance to the persons signing this certification, including data verification, research, and administrative work all under the appropriate supervision.
13. We have experience in reviewing properties similar to the subject and are in compliance with the Competency Rule of USPAP.
14. As of the date of this report, Patricia L. McGarr, MAI, CRE, FRICS, Andrew R. Lines, MAI, and Erin C. Bowen, MAI have completed the continuing education program for Designated Members of the Appraisal Institute.

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ASSUMPTIONS AND LIMITING CONDITIONS

The fact witness services will be subject to the following assumptions and limiting conditions:

1. No responsibility is assumed for the legal description provided or for matter pertaining to legal or title considerations. Title to the property is assumed to be good and marketable unless otherwise stated. The legal description used in this report is assumed to be correct.
2. The property is evaluated free and clear of any or all liens or encumbrances unless otherwise stated.
3. Responsible ownership and competent management are assumed.
4. Information furnished by others is believed to be true, correct and reliable, but no warranty is given for its accuracy.
5. All engineering studies are assumed to be correct. The plot plans and illustrative material in this report are included only to help the reader visualize the property.
6. It is assumed that there are no hidden or unapparent conditions of the property, subsoil, or structures that render it more or less valuable. No responsibility is assumed for such conditions or for obtaining the engineering studies that may be required to discover them.
7. It is assumed that the property is in full compliance with all applicable federal, state, and local and environmental regulations and laws unless the lack of compliance is stated, described, and considered in the evaluation report.
8. It is assumed that the property conforms to all applicable zoning and use regulations and restrictions unless nonconformity has been identified, described and considered in the evaluation report.
9. It is assumed that all required licenses, certificates of occupancy, consents, and other legislative or administrative authority from any local, state, or national government or private entity or organization have been or can be obtained or renewed for any use on which the value estimate contained in this report is based.
10. It is assumed that the use of the land and improvements is confined within the boundaries or property lines of the property described and that there is no encroachment or trespass unless noted in this report.
11. The date of value to which the findings are expressed in this report apply is set forth in the letter of transmittal. The appraisers assume no responsibility for economic or physical factors occurring at some later date which may affect the opinions herein stated.
12. Unless otherwise stated in this report, the existence of hazardous materials, which may or may not be present on the property, was not observed by the appraisers. The appraisers have no knowledge of the existence of such substances on or in the property. The appraisers, however, are not qualified to detect such substances. The presence of substances such as asbestos, urea-formaldehyde foam insulation, radon gas, lead or lead-based products, toxic waste contaminants, and other potentially hazardous materials may affect the value of the property. The value estimate is predicated on the assumption that there is no such material on or in the property that would cause a loss in value. No

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- responsibility is assumed for such conditions or for any expertise or engineering knowledge required to discover them. The client is urged to retain an expert in this field, if desired.
13. The forecasts, projections, or operating estimates included in this report were utilized to assist in the evaluation process and are based on reasonable estimates of market conditions, anticipated supply and demand, and the state of the economy. Therefore, the projections are subject to changes in future conditions that cannot be accurately predicated by the appraisers and which could affect the future income or value projections.
 14. Fundamental to the appraisal analysis is the assumption that no change in zoning is either proposed or imminent, unless otherwise stipulated. Should a change in zoning status occur from the property's present classification, the appraisers reserve the right to alter or amend the value accordingly.
 15. It is assumed that the property does not contain within its confined any unmarked burial grounds which would prevent or hamper the development process.
 16. The Americans with Disabilities Act (ADA) became effective on January 26, 1992. We have not made a specific compliance survey and analysis of the property to determine if it is in conformance with the various detailed requirements of the ADA. It is possible that a compliance survey of the property, together with a detailed analysis of the requirements of the ADA, could reveal that the property is not in compliance with one or more of the requirements of the Act. If so, this fact could have a negative effect on the value of the property. Unless otherwise noted in this report, we have not been provided with a compliance survey of the property. Any information regarding compliance surveys or estimates of costs to conform to the requirements of the ADA are provided for information purposes. No responsibility is assumed for the accuracy or completeness of the compliance survey cited in this report, or for the eventual cost to comply with the requirements of the ADA.
 17. Any value estimates provided in this report apply to the entire property, and any proration or division of the total into fractional interests will invalidate the value estimate, unless such proration or division of interests has been set forth in this report.
 18. Any proposed improvements are assumed to have been completed unless otherwise stipulated; any construction is assumed to conform with the building plans referenced in this report.
 19. Unless otherwise noted in the body of this report, this evaluation assumes that the subject does not fall within the areas where mandatory flood insurance is effective.
 20. Unless otherwise noted in the body of this report, we have not completed nor are we contracted to have completed an investigation to identify and/or quantify the presence of non-tidal wetland conditions on the subject property.
 21. This report should not be used as a basis to determine the structural adequacy/inadequacy of the property described herein, but for evaluation purposes only.

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22. It is assumed that the subject structure meets the applicable building codes for its respective jurisdiction. We assume no responsibility/liability for the inclusion/exclusion of any structural component item which may have an impact on value. It is further assumed that the subject property will meet code requirements as they relate to proper soil compaction, grading, and drainage.
23. The appraisers are not engineers, and any references to physical property characteristics in terms of quality, condition, cost, suitability, soil conditions, flood risk, obsolescence, etc., are strictly related to their economic impact on the property. No liability is assumed for any engineering-related issues.

The evaluation services will be subject to the following limiting conditions:

1. The findings reported herein are only applicable to the properties studied in conjunction with the Purpose of the Evaluation and the Function of the Evaluation as herein set forth; the evaluation is not to be used for any other purposes or functions.
2. Any allocation of the total value estimated in this report between the land and the improvements applies only to the stated program of utilization. The separate values allocated to the land and buildings must not be used in conjunction with any other appraisal and are not valid if so used.
3. No opinion is expressed as to the value of subsurface oil, gas or mineral rights, if any, and we have assumed that the property is not subject to surface entry for the exploration or removal of such materials, unless otherwise noted in the evaluation.
4. This report has been prepared by CohnReznick under the terms and conditions outlined by the enclosed engagement letter. Therefore, the contents of this report and the use of this report are governed by the client confidentiality rules of the Appraisal Institute. Specifically, this report is not for use by a third party and CohnReznick is not responsible or liable, legally or otherwise, to other parties using this report unless agreed to in writing, in advance, by both CohnReznick and/or the client or third party.
5. Disclosure of the contents of this evaluation report is governed by the by-laws and Regulations of the Appraisal Institute has been prepared to conform with the reporting standards of any concerned government agencies.
6. The forecasts, projections, and/or operating estimates contained herein are based on current market conditions, anticipated short-term supply and demand factors, and a continued stable economy. These forecasts are, therefore, subject to changes with future conditions. This evaluation is based on the condition of local and national economies, purchasing power of money, and financing rates prevailing at the effective date of value.
7. This evaluation shall be considered only in its entirety, and no part of this evaluation shall be utilized separately or out of context. Any separation of the signature pages from the balance of the evaluation report invalidates the conclusions established herein.
8. **Possession of this report, or a copy thereof, does not carry with it the right of publication, nor may it be used for any purposes by anyone other than the client without the prior written consent of the appraisers, and in any event, only with property qualification.**

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9. The appraisers, by reason of this study, are not required to give further consultation or testimony or to be in attendance in court with reference to the property in question unless arrangements have been previously made.
10. Neither all nor any part of the contents of this report shall be conveyed to any person or entity, other than the appraiser's client, through advertising, solicitation materials, public relations, news, sales or other media, without the written consent and approval of the authors, particularly as to evaluation conclusions, the identity of the appraisers or CohnReznick, LLC, or any reference to the Appraisal Institute, or the MAI designation. Further, the appraisers and CohnReznick, LLC assume no obligation, liability, or accountability to any third party. If this report is placed in the hands of anyone but the client, client shall make such party aware of all the assumptions and limiting conditions of the assignment.
11. This evaluation is not intended to be used, and may not be used, on behalf of or in connection with a real estate syndicate or syndicates. A real estate syndicate means a general or limited partnership, joint venture, unincorporated association or similar organization formed for the purpose of, and engaged in, an investment or gain from an interest in real property, including, but not limited to a sale or exchange, trade or development of such real property, on behalf of others, or which is required to be registered with the United States Securities and Exchange commissions or any state regulatory agency which regulates investments made as a public offering. It is agreed that any user of this evaluation who uses it contrary to the prohibitions in this section indemnifies the appraisers and the appraisers' firm and holds them harmless from all claims, including attorney fees, arising from said use.

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**ADDENDUM A:
APPRAISER QUALIFICATIONS**

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Patricia L. McGarr, MAI, CRE, FRICS, CRA
Principal and CohnReznick Group –
Valuation Advisory National Director

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Patricia L. McGarr, MAI, CRE, FRICS, CRA, is a principal and National Director of CohnReznick Advisory Group's Valuation Advisory Services practice. Pat's experience includes market value appraisals of varied property types for acquisition, condemnation, mortgage, estate, ad valorem tax, litigation, zoning, and other purposes. Pat has been involved in the real estate business since 1980. From June 1980 to January 1984, she was involved with the sales and brokerage of residential and commercial properties. Her responsibilities during this time included the formation, management, and training of sales staff in addition to her sales, marketing, and analytical functions. Of special note was her development of a commercial division for a major Chicago-area brokerage firm.

Since January 1984, Pat has been exclusively involved in the valuation of real estate. Her experience includes the valuation of a wide variety of property types including residential (SF/MF/LIHTC), commercial, industrial, and special purpose properties including such diverse subjects as quarries, marinas, riverboat gaming sites, shopping centers, manufacturing plants, and office buildings. She is also experienced in the valuation of leasehold and leased fee interests. Pat has performed appraisal assignments throughout the country, including the Chicago Metropolitan area as well as New York, New Jersey, California, Nevada, Florida, Utah, Texas, Wisconsin, Indiana, Michigan, and Ohio. Pat has gained substantial experience in the study and analysis of the establishment and expansion of sanitary landfills in various metropolitan areas including the preparation of real estate impact studies to address criteria required by Senate Bill 172. She has also developed an accepted format for allocating value of a landfill operation between real property, landfill improvements, and franchise (permits) value.

Over the past several years, Pat has developed a valuation group that specializes in the establishment of new utility corridors for electric power transmission and pipelines. This includes determining acquisition budgets, easement acquisitions, corridor valuations, and litigation support. Pat has considerable experience in performing valuation impact studies on potential detrimental conditions and has studied properties adjoining solar farms, wind farms, landfills, waste transfer stations, stone quarries, cellular towers, schools, electrical power transmission lines, "Big Box" retail facilities, levies, properties with restrictive covenants, landmark districts, environmental contamination, airports, material defects in construction, stigma, and loss of view amenity for residential high rises. Most recently, the firm has studied property values adjacent to Solar Farms to address criteria required for special use permits across the Midwest.

Pat has qualified as an expert valuation witness in numerous local, state, and federal courts.

Pat has participated in specialized real estate appraisal education and has completed more than 50 courses and seminars offered by the Appraisal Institute totaling more than 600 classroom hours, including real estate transaction courses as a prerequisite to obtaining a State of Illinois Real Estate Salesman License.

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Pat has earned the professional designations of Counselors of Real Estate (CRE), Member of the Appraisal Institute (MAI), Fellow of Royal Institution of Chartered Surveyors (FRICS) and Certified Review Appraiser (CRA). She has also been a certified general real estate appraiser in 21 states (see below).

Education

- North Park University: Bachelor of Science, General Studies

Professional Affiliations

- National Association of Realtors
- CREW Commercial Real Estate Executive Women
- IRWA International Right Of Way Association

Licenses and Accreditations

- Member of the Appraisal Institute (MAI)
- Counselors of Real Estate, designated CRE
- Fellow of Royal Institution of Chartered Surveyors (FRICS)
- Certified Review Appraiser (CRA)
- Alabama State Certified General Real Estate Appraiser
- California State Certified General Real Estate Appraiser
- Connecticut State Certified General Real Estate Appraiser
- Colorado State Certified General Real Estate Appraiser
- District of Columbia Certified General Real Estate Appraiser
- Illinois State Certified General Real Estate Appraiser
- Indiana State Certified General Real Estate Appraiser
- Louisiana State Certified General Real Estate Appraiser
- Maryland State Certified General Real Estate Appraiser
- Massachusetts Certified General Real Estate Appraiser
- Michigan State Certified General Real Estate Appraiser
- North Carolina State Certified General Real Estate Appraiser
- New Jersey State Certified General Real Estate Appraiser
- Nevada State Certified General Real Estate Appraiser
- New York State Certified General Real Estate Appraiser
- Pennsylvania State Certified General Real Estate Appraiser
- South Carolina State Certified General Real Estate Appraiser
- Tennessee State Certified General Real Estate Appraiser
- Texas State Certified General Real Estate Appraiser
- Virginia State Certified General Real Estate Appraiser
- Wisconsin State Certified General Real Estate Appraiser

Appointments

- Appointed by two Governors of Illinois to the State Real Estate Appraisal Board (2017 & 2021)
- Chairperson of the State of Illinois Real Estate Appraisal Board (2021)

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Andrew R. Lines, MAI

Principal, CohnReznick Advisory

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Andrew R. Lines is a principal in CohnReznick's Valuation Advisory Services group where he specializes in Real Estate, Affordable Housing, Cannabis and Renewable Energy. Andrew leads a group of appraisers across the country performing valuations on a wide variety of real estate property types including residential, commercial, industrial, hospitality and special purpose properties: landfills, waste transfer stations, marinas, hospitals, universities, self-storage facilities, racetracks, CCRCs, and railroad corridors. Affordable Housing experience includes Market Studies, Rent Compatibility Studies and Feasibility Analysis for LIHTC and mixed-income developments. Cannabis assignments have covered cultivation, processing and dispensaries in over 10 states, including due diligence for mergers and acquisitions of multi-state operational and early stage companies. Renewable Energy assignments have included preparation of impact studies and testimony at local zoning hearings in eight states.

Andrew is experienced in the valuation of leasehold, leased fee, and partial interests and performs appraisals for all purposes including financial reporting, litigation, and gift/estate planning. Andrew is a State Certified General Real Estate Appraiser in the states of Illinois, Indiana, Maryland, Georgia, Florida, Ohio, New York, New Jersey, Arizona, Kentucky, and the District of Columbia.

Before joining CohnReznick, Andrew was with Integra Realty Resources, starting as analyst support in 2002 and leaving the firm as a director in late 2011 (including two years with the Phoenix branch). His real estate experience also includes one year as administrator for the residential multifamily REIT Equity Residential Properties Trust (ERP), in the transactions department, where he performed due diligence associated with the sale and acquisition of REIT properties and manufactured home communities.

Education

- Syracuse University: Bachelor of Fine Arts
- MAI Designation (Member of the Appraisal Institute)

Professional Affiliations

- Chicago Chapter of the Appraisal Institute
 - Alternate Regional Representative (2016 - 2018)
 - MAI Candidate Advisor (2014 - Present)
- International Real Estate Management (IREM)
- National Council of Real Estate Investment Fiduciaries (NCREIF)

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Community Involvement

- Syracuse University Regional Council – Active Member
- Syracuse University Alumni Association of Chicago, Past Board member
- Chicago Friends School – Treasurer & Board Member

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Erin Bowen, MAI

Senior Manager, Valuation Advisory Services

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Erin Bowen, MAI is a Senior Manager with CohnReznick in Valuation Advisory Services. Ms. Bowen is based in Phoenix, Arizona, with presence covering the west coast. Ms. Bowen's work in Commercial Real Estate valuation spans over 11 years.

Ms. Bowen specializes in lodging, cannabis, seniors housing, large scale retail and multifamily conversion properties. Lodging work includes all hotel property types and brand segments including limited, full service and resort properties; additionally, Ms. Bowen has appraised numerous hotel to multifamily conversion properties including market rate and affordable housing. Cannabis work includes dispensaries, cultivation facilities including specialized indoor facilities and greenhouse properties, processing and manufacturing facilities. Seniors housing assignments include assisted living, skilled nursing facilities and rehabilitation centers. Retail work spans power centers, lifestyle centers, outlet centers and malls. She has appraised numerous additional properties including multifamily, office, medical office, industrial, churches, and vacant land.

Ms. Bowen has expertise in appraising properties at all stages of development, including existing as is, proposed, under construction, renovations and conversion to alternate use. Valuations have been completed nationwide for a variety of assignments including mortgage financing, litigation, tax appeal, estate gifts, asset management, as well as valuation for financial reporting including purchase price allocations (ASC 805). Impact Study Reports have also been generated for zoning hearings related to the development of solar facilities, wind powered facilities

Education

- University of California, San Diego: Bachelor of Arts in Psychology and Theater; College Honors

Professional Affiliations

- Appraisal Institute, Designated Member

Licenses

- Certified General Real Estate Appraiser licensed in New Mexico, Arizona, California, and Nevada

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2.13 Glare Study



GLARE STUDY ANALYSIS

TPE DE SU163, LLC (SOLAR FARM)

11/18/2022

Introduction:

A glare study was performed by TPE Development, LLC (“TPE”) using ForgeSolar software to assess the possible effects of reflectivity created by the proposed solar project located at Gravel Hill Road, Sussex County DE (the “Project”). This report interprets and explains the inputs, assumptions and results of the study.

ForgeSolar software incorporates GlareGauge, the leading solar glare analysis tool which meets Federal Aviation Administration (“FAA”) standards and is used globally for glare analysis. It is based on the Solar Glare Hazard Analysis Tool licensed from Sandia National Laboratories. The tool assesses the possible effects of reflectivity, both glint and glare, from a proposed solar photovoltaic installation. The tool can take topography into account; however, the tool is not able to take existing vegetation (trees, shrubs, etc) or structures (fences, buildings, etc) into account. If there is a tree line or fence obstructing visibility of the array, the tool may incorrectly report glare for which the user must adjust based on site specific vegetation or structures.

A model of the Project was input into the software along with a number of user defined observation points or paths (“Receptors”). The software calculates the sun’s position relative to the Project for every minute of the year. Results are charted displaying annual glare duration and potential ocular impact type and duration for each Receptor.

Sun reflection is most noticeable when the sun is low on the horizon and sunlight reflects off the panels at a very low angle along the horizon where it can be seen by an observer standing next to the solar farm, driving along a road, or a neighboring dwelling. The assessment will capture all the possible reflection coming from the solar farm.

Reflectivity Summary:

The term ‘reflectivity’ is used in this report to refer to both reflection types (i.e. glint and glare). The definition of glint and glare can vary; however, the definitions used in this report is aligned with the FAA and are detailed below:

- Glint: A momentary flash of bright light typically received by moving receptors or from moving reflectors. Example: a momentary solar reflection from a moving car.
- Glare: A continuous source of bright light typically received by static Receptors or from large reflective surfaces. Glare is generally associated with stationary objects, which, due to the slow relative movement of the sun, reflect sunlight for a longer duration.

The primary difference between glint and glare is duration. The Forge Solar GlareGauge tool captures both types of reflection on the surrounding roads and dwellings.

To limit reflection and maximize conversion to electricity, solar PV panels are constructed of dark silicon wafers/cells with light-absorbing materials and the glass is covered with an anti-reflective

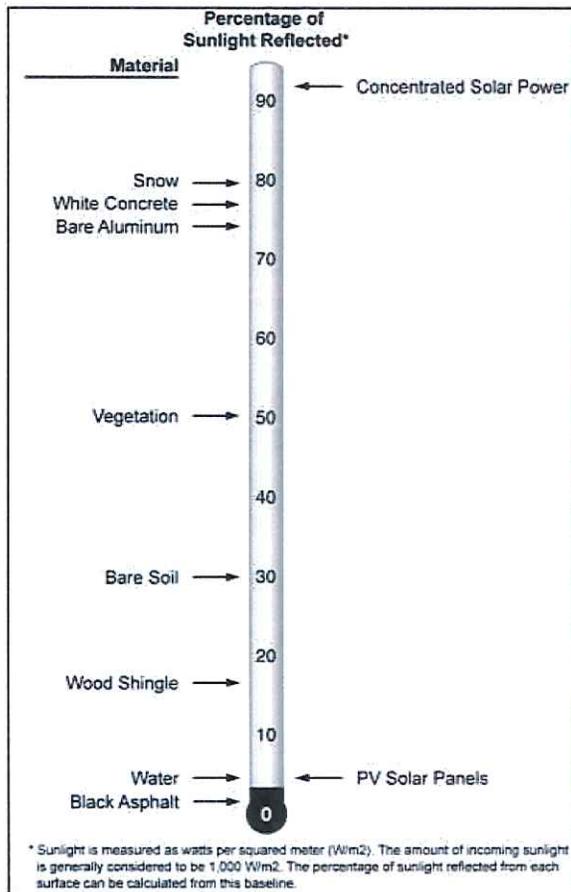
coating (ARC) as shown in Figure 1 below. These design features limit sunlight reflectance and maximize sunlight absorption.

Figure 1: Deconstructed Solar Panel



To calculate diffuse and specular reflectance of solar modules, TUV Rheinland (NRTL) performed a test using the ISO 9050 (External Light Reflectance) standards and the results are shown in Figure 2 below. The reflectivity of a typical mono-crystalline photovoltaic solar panel is approximately 5.7%, which is well below the other control samples included in the test.

Figure 2: Reflectivity of Solar Cells



ForgeSolar GlareGauge Analysis:

Inputs and Modeling Assumptions:

As input to the software, (6) Route Receptors were created along roadways in vicinity of the site. Height was measured at 5’ above ground to emulate passengers in cars. Further, (15) Observation Receptors were modeled at specific dwellings located around the perimeter of the solar array. Heights were modeled at 5’ above ground to emulate residents on the 1st floor of dwellings and evaluate the glare impact.

The model assumes the sun is shining 100% of the time it is above the horizon (during laylight hours). That is, it does not account for cloudy or overcast conditions when the sun is not shining, therefore the results presented would be the maximum expected glint and glare during any single year.

Existing topography is taken into account in the simulation based on LIDAR (“Light Detection and Ranging”) data. Existing and planned vegetation are not considered in the simulation. The model assumed zero vegetation that may screen the Project, so this must be considered when interpreting the study results. A direct line of sight between the Project and the designated Route Receptors and Observation Receptors is required to produce any discernible glint/glare, so if there is existing or proposed vegetation between the receptor and the project, any glint/glare would be eliminated.

Solar panels will be mounted on single axis trackers with a southern azimuth and the panels will track the sun to capture as much sunlight as possible. Therefore, glare is typically not experienced during normal operational hours since any reflection would be back toward the location of the sun. Potential glare is most noticeable when the sun is low on the horizon, early in the morning or late in the afternoon, when sunlight reflects off the panels in a horizontal position (stow mode) at the opposite low angle along the horizon to the east or the west. To reduce glare in the east and west directions during these low sun periods, a 5-degree tracker resting angle was implemented during these times which avoids the main source of glare for solar projects.

Results:

Based on the project specific location, sun position throughout the year, and the above inputs/assumptions, no potential for glint or glare was identified in the analysis at any of the Route Receptors or the neighboring Observation Receptors. While excluded from the analysis, existing and planned vegetation will further shield the view of the project from nearby properties and roadways.

No additional mitigation measures are recommended since no glint or glare is anticipated based on the ForgeSolar GlareGauge results.

FORGESOLAR GLARE ANALYSIS

Project: **SU163**
 Site configuration: **SU163**

Created 23 May, 2022
 Updated 18 Nov, 2022
 Time-step 1 minute
 Timezone offset UTC-5
 Site ID 69492.12292
 Category 1 MW to 5 MW
 DNI peaks at 1,000.0 W/m²
 Ocular transmission coefficient 0.5
 Pupil diameter 0.002 m
 Eye focal length 0.017 m
 Sun subtended angle 9.3 mrad
 Methodology V2



Summary of Results No glare predicted

PV Array	Tilt °	Orient °	Annual Green Glare		Annual Yellow Glare		Energy kWh
			min	hr	min	hr	
PV array 1	SA tracking	SA tracking	0	0.0	0	0.0	-

Total annual glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Route 1	0	0.0	0	0.0
Route 2	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

Component Data

PV Arrays

Name: PV array 1
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0°
Max tracking angle: 60.0°
Resting angle: 5.0°
Ground Coverage Ratio: 0.4
Rated power: -
Panel material: Smooth glass with 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	38.721713	-75.317499	36.17	5.00	41.17
2	38.720470	-75.321775	39.47	5.00	44.47
3	38.719617	-75.321378	39.14	5.00	44.14
4	38.719324	-75.321195	38.65	5.00	43.65
5	38.719022	-75.320820	38.13	5.00	43.13
6	38.718662	-75.320530	38.16	5.00	43.16
7	38.718319	-75.320219	38.05	5.00	43.05
8	38.719123	-75.317429	35.59	5.00	40.59
9	38.720864	-75.318245	36.42	5.00	41.42
10	38.721157	-75.317177	36.25	5.00	41.25
11	38.721715	-75.317484	36.15	5.00	41.15

Route Receptors

Name: Route 1
 Path type: Two-way
 Observer view angle: 50.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.725317	-75.319165	36.88	5.00	41.88
2	38.724380	-75.318586	36.63	5.00	41.63
3	38.723609	-75.318114	36.68	5.00	41.68
4	38.722789	-75.317685	37.05	5.00	42.05
5	38.720843	-75.316686	37.73	5.00	42.73
6	38.720290	-75.316440	38.00	5.00	43.00
7	38.719822	-75.316311	38.07	5.00	43.07
8	38.719344	-75.316343	37.68	5.00	42.68
9	38.715026	-75.316708	39.12	5.00	44.12
10	38.714314	-75.316740	38.87	5.00	43.87

Name: Route 2
 Path type: Two-way
 Observer view angle: 50.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.718525	-75.306083	38.25	5.00	43.25
2	38.714525	-75.315781	37.87	5.00	42.87
3	38.710875	-75.326424	43.72	5.00	48.72
4	38.708146	-75.337539	41.04	5.00	46.04

Discrete Observation Point Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
OP 1	1	38.723087	-75.316962	35.27	5.00
OP 2	2	38.722573	-75.316866	36.51	5.00
OP 3	3	38.722154	-75.316796	37.39	5.00
OP 4	4	38.721504	-75.316297	37.94	5.00
OP 5	5	38.720473	-75.316970	36.56	5.00
OP 6	6	38.720129	-75.316756	36.41	5.00
OP 7	7	38.719644	-75.316798	36.66	5.00
OP 8	8	38.719145	-75.316744	36.74	5.00
OP 9	9	38.718392	-75.316883	36.93	5.00
OP 10	10	38.718082	-75.317066	36.04	5.00
OP 11	11	38.718442	-75.316025	37.02	5.00
OP 12	12	38.718266	-75.315585	36.23	5.00
OP 13	13	38.718384	-75.319233	37.98	5.00
OP 14	14	38.718660	-75.318085	36.93	5.00
OP 15	15	38.716791	-75.316222	37.44	5.00
OP 16	16	38.716662	-75.316979	37.95	5.00
OP 17	17	38.716360	-75.317021	38.00	5.00
OP 18	18	38.716092	-75.317021	38.03	5.00
OP 19	19	38.715699	-75.317075	38.70	5.00
OP 20	20	38.715431	-75.317107	38.32	5.00

Glare Analysis Results

Summary of Results No glare predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
PV array 1	SA tracking	SA tracking	0	0.0	0	0.0	-

Total annual glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Route 1	0	0.0	0	0.0
Route 2	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV: PV array 1 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Route 1	0	0.0	0	0.0
Route 2	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV array 1 and Route 1

Receptor type: Route
No glare found

PV array 1 and Route 2

Receptor type: Route
No glare found

PV array 1 and OP 1

Receptor type: Observation Point
No glare found

PV array 1 and OP 2

Receptor type: Observation Point
No glare found

PV array 1 and OP 3

Receptor type: Observation Point
No glare found

PV array 1 and OP 4

Receptor type: Observation Point
No glare found

PV array 1 and OP 5

Receptor type: Observation Point
No glare found

PV array 1 and OP 6

Receptor type: Observation Point
No glare found

PV array 1 and OP 7

Receptor type: Observation Point
No glare found

PV array 1 and OP 8

Receptor type: Observation Point
No glare found

PV array 1 and OP 9

Receptor type: Observation Point
No glare found

PV array 1 and OP 10

Receptor type: Observation Point
No glare found

PV array 1 and OP 11

Receptor type: Observation Point
No glare found

PV array 1 and OP 12

Receptor type: Observation Point
No glare found

PV array 1 and OP 13

Receptor type: Observation Point
No glare found

PV array 1 and OP 14

Receptor type: Observation Point
No glare found

PV array 1 and OP 15

Receptor type: Observation Point
No glare found

PV array 1 and OP 16

Receptor type: Observation Point
No glare found

PV array 1 and OP 17

Receptor type: Observation Point
No glare found

PV array 1 and OP 18

Receptor type: Observation Point
No glare found

PV array 1 and OP 19

Receptor type: Observation Point
No glare found

PV array 1 and OP 20

Receptor type: Observation Point
No glare found

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.

The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year.

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

Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.

The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.

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.)

The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.

The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.

The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.

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.

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

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

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

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3.0 List of Letters – (C/U 2343 – TPE DE SU163, LLC)

- 3.1 Legal Description and Deed*
- 3.2 Conditional Use #2343 – Letter to Engineer*
- 3.3 DelDOT Service Level Evaluation Response*
- 3.4 Public Outreach Correspondence*

3.1 Legal Description and Deed



LANDS OF: Lisa A. Jester
TAX MAP NO.: 135-11.00-48.00 (portion of)

SU163 Conditional Use Boundary – 25.0 ACRES ±

All that certain lot, piece or parcel of land, situated in Sussex County, State of Delaware, lying west side of Gravel Hill Road and being more particularly described as follows to wit:

Beginning at a corner for this parcel and lands of Dale A. & Kathy H. Phillips and in line with the westerly right of way line of Gravel Hill Road; thence running with said lands of Phillips 1) South 70°08'47" West 1143.33 feet to a point at a corner for this parcel and lands of Azalea Woods LLC, thence with said lands of Azalea Woods 2) North 34°07'48" West 199.63 feet to a point; thence 3) North 40°31'40" West 186.23 feet to a point; thence 4) North 33°24'15" West 170.81 feet to a point; thence 5) North 20°39'29" West 438.84 feet to a point at a corner for this parcel; thence running across residue lands of Lisa A. Jester 6) North 70°08'47" East 1371.60 feet to a point at a corner for this parcel and in line with the westerly right of way line for Gravel Hill Road, thence with said right of way line for Gravel Hill Road 7) South 21°43'51" East 319.74 feet to a point at a corner for this parcel and lands of CMH Homes Inc; thence with said lands of CMH Homes 8) South 70°08'47" West 355.11 feet to a point; thence in part with lands of CMH Homes, lands of Hinton, lands of Tabor and lands of Tolliver 9) South 21°43'51" East 591.80 feet to a point at a corner for this parcel and lands of Tolliver; thence with said lands of Tolliver 10) North 70°08'47" East 285.16 feet to a point at a corner for this parcel and in line with the westerly right of way line for Gravel Hill Road, thence with said right of way line for Gravel Hill Road 11) South 03°52'04" West 67.18 feet to the point and place of beginning, containing 25.0 acres of land be the same, more or less.

Above description prepared by Becker Morgan Group, Inc.:
Jeffrey C. Dodd – P.L.S. 782

Date: 05/22/2007
 County: 00
 State: 00
 Total: 00

Consideration: \$0.00
 Exempt Code: A

Parcel No. 1-35 11.00 48.00
 Prepared by:
 Sergovic & Ellis, P.A.(SPE)
 9 North Front Street
 Georgetown, DE 19947-0875

This Corrective Deed, made this 16th day of May, 2007,

BETWEEN Barbara A. Manship as Successor Trustee of the William H. Pettyjohn Irrevocable Trust and the Hilda Mae Pettyjohn Irrevocable Trust and as Executrix of the Estate of Arthur H. Pettyjohn, of 16771 Gravel Hill Road, Milton, Delaware 19968, party of the first part,

- A N D -

Lisa Jester, of 18117 Pettyjohn Road, Milton, Delaware 19968, party of the second part,

WITNESSETH, that the said party of the first part, for and in consideration of the sum of **One Dollar and 00/100 (\$1.00)**, lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grants and conveys unto the said party of the second part, her successors and assigns,

ALL that certain tract, piece and parcel of land situate, lying and being on the road leading from Milton, Delaware to Georgetown, Delaware, adjoining lands now or formerly of the heirs of Lloyd Davidson, lands now or formerly of Nina Moore, lands now or formerly of Henry Graves, and lands now or formerly of Houston and White and said to contain 66 acres of land, more or less.

BEING the same lands conveyed to Arthur H. Pettyjohn, Trustee, by deeds of: 1) William H. Pettyjohn, dated November 17, 1982 and recorded on November 18, 1982 in the Office of the Recorder of Deeds, in and for Sussex County, Delaware, in Deed Book 1148, Page 131 and 2) Hilda Mae Pettyjohn, dated November 17, 1982 and recorded on November 18, 1982 in the Office of the Recorder of Deeds, in and for Sussex County, Delaware in Deed Book 1148, Page 134.

William H. Pettyjohn died on December 26, 1986 and in accordance with Article IV of his Irrevocable Trust Agreement, upon his death, the herein described real estate was directed to be distributed to Arthur H. Pettyjohn. Hilda Mae Pettyjohn died on May 13, 1994 and in accordance with Article IV of her Irrevocable Trust Agreement, upon her death, the herein described real estate was directed to be distributed to Arthur H. Pettyjohn. Arthur H. Pettyjohn died testate a resident of Delaware on June 1, 2005 and Barbara A. Manship was appointed Executrix of his estate by the Register of Wills, in and for Sussex County. Articles IV of the William H. Pettyjohn and Hilda Mae Pettyjohn Irrevocable Trust Agreements dated November 17, 1982 appointed Barbara A. Manship as Successor Trustee. The Last Will and Testament of Arthur H. Pettyjohn was admitted to probate in the Office of the Register of Wills, in and for Sussex County. Paragraph Sixth of said Will directed the distribution of the real estate herein to his granddaughter, Lisa Jester.



000024720
 BK03452 PG00279



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

NICOLE MAJESKI
SECRETARY

December 30, 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 **TPE DE SU163, LLC c/o Adam Beal** proposed land use application, which we received on December 16, 2021. This application is for an approximately 39.69-acre parcel (Tax Parcel: 135-11.00-48.00). The subject land is located on the west side of Gravel Hill Road (Sussex Road 248) about 1,900 ft north of the intersection with Lewes Georgetown Highway (US Route 9). The subject land is currently zoned AR-1 (Agriculture Residential), and the applicant seeks a conditional use approval to build a solar energy system.

Per the 2019 Delaware Vehicle Volume Summary, the annual average daily traffic volumes along Gravel Hill Road from Shingle Point Road (Sussex Road 249) to Lewes Georgetown Highway, is 3,577 vehicles per day.

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.



3.3 DeIDOT Service Level Evaluation Response

JAMIE WHITEHOUSE, AICP
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
(302) 854-5079 F
jamie.whitehouse@sussexcountyde.gov



Sussex County

DELAWARE
sussexcountyde.gov

November 17, 2022

Becker Morgan Group
309 South Governors Avenue
Dover, DE 19904

Email: jfalkowski@beckermorgan.com

Dear Becker Morgan Group:

C/U 2343 Turning Point Energy - TPE DE SU163, LLC

AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT FOR A SOLAR FARM TO BE LOCATED ON A CERTAIN PARCEL OF LAND LYING AND BEING IN GEORGETOWN HUNDRED, SUSSEX COUNTY, CONTAINING 25.00 ACRES, MORE OR LESS. The property is lying on the west side of Gravel Hill Road (S.C.R. 248) approximately 0.37 mile north of the intersection of Gravel Hill Road (S.C.R. 248) and Lewes Georgetown Highway (Rt. 9). 911 Address: N/A. Tax Parcel: 135-11.00-48.00 (p/o).

The **Planning and Zoning Commission** will hold a Public Hearing on **Thursday, December 15, 2022, at 5:00 pm** in the Sussex County Council Chambers located in the County Administrative Office at 2 The Circle Georgetown, DE, 19947.

The **Sussex County Council** will hold a Public Hearing on **Tuesday, February 21, 2023, at 1:30 pm** in the Sussex County Council Chambers located in the County Administrative Office at 2 The Circle Georgetown, DE, 19947.

It will be necessary for you the applicant to participate at the hearings before both the Commission and County Council. If you do not participate or are not represented, the Commission and/or County Council reserve the right to refuse to act on your application and may require that a new application be filed, and fees paid at your expense.

If an attorney, or agent, will be representing you, the applicant, it is your duty to notify them as to the dates and times of the hearings as herein set forth, as the Commission and County Council will not notify your counsel.

Further instructions describing the method of public participation and the manner of viewing the hearings will be contained within the Agendas for both of these meetings that will be posted at least 7 days in advance of each meeting at sussexcountyde.gov.

Sincerely,
Planning and Zoning Department



COUNTY ADMINISTRATIVE OFFICES
2 THE CIRCLE | PO BOX 417
GEORGETOWN, DELAWARE 19947

3.2 Letter to Engineer

Mr. Jamie Whitehouse
Page 2 of 2
December 30, 2021

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.

Please contact Ms. Annamaria Furmato, at Annamaria.Furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,



T. William Brockenbrough, Jr.
County Coordinator
Development Coordination

TWB:afm

cc: TPE DE SUI 63, LLC co Adam Beal, Applicant
Sussex Reviewer, 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

3.4 Public Outreach Correspondence

November 15, 2022

Hello,

My name is Jordan Belknap. I am writing on behalf of TPE DE SU163, LLC, an affiliate of TurningPoint Energy (TPE). TPE is proposing to develop a Community Solar Energy Facility located on county tax parcel 135-11.00-48.00 west of Gravel Hill Road, Georgetown DE 19947 (the "Facility"). The proposed Facility would be located on an approximately 25-acre portion of the parcel west of Gravel Hill Road.

The proposed Facility will consist of a fenced in solar array and components to connect the Facility to the Delmarva Power's electric grid. The proposed Facility is designed to participate in Delaware's Community Solar Program. The Community Solar Facility will allow residents of Georgetown and Sussex County, who are customers of Delmarva Power, to save financially by subscribing to the Facility to receive credits on their electric bills. I would like to share some details about the Facility and design considerations that will be incorporated. The 4-Megawatt AC Facility would provide:

- Clean Energy Benefits: ~ 8,982,000 kWh of energy production per year will reduce pollutants emitted compared to generating the same amount of energy from a fossil fuel, equivalent to:
 - ~ 6,365 tons of carbon avoided annually
 - ~ 1,372 cars taken off the road for one year
 - ~ 1,239 US homes powered for one year
- Buffer & Array Landscaping: The Facility will install and maintain a vegetative buffer between the solar array and abutting properties. It will also incorporate native and pollinator friendly plantings.
- No Ongoing Noise and Traffic: Beyond short-term construction traffic, only a few trips are required per year for maintenance.
- Project Oversight: The Facility will comply with all County and State permitting requirements to ensure no adverse impacts to neighboring properties or the natural environment.
- Local benefits:
 - Sussex County residents can subscribe to receive credits from locally produced, clean energy at a discount from Delmarva Power's retail standard offer residential rate.
 - Approximately 30-50 development and construction jobs over a 24-month period.
 - The TPE team is already using local companies for initial development support and plans to use local services and providers for completion of the Facility when available.

Should you have any questions or would like any additional information, please contact me. I may be reached by phone at 617-312-6553 or e-mail at jbelknap@tpoint-e.com. If you would like to learn more about the project or ask questions in person, I will be hosting a Community Meeting to discuss the project at the CHEER Community Center (20520 Sand Hill Rd, Georgetown, DE 19947) on Monday December 5th, from 7-9 p.m.

Sincerely,



Jordan Belknap
Director of Development

BECKER
MORGAN

G R O U P

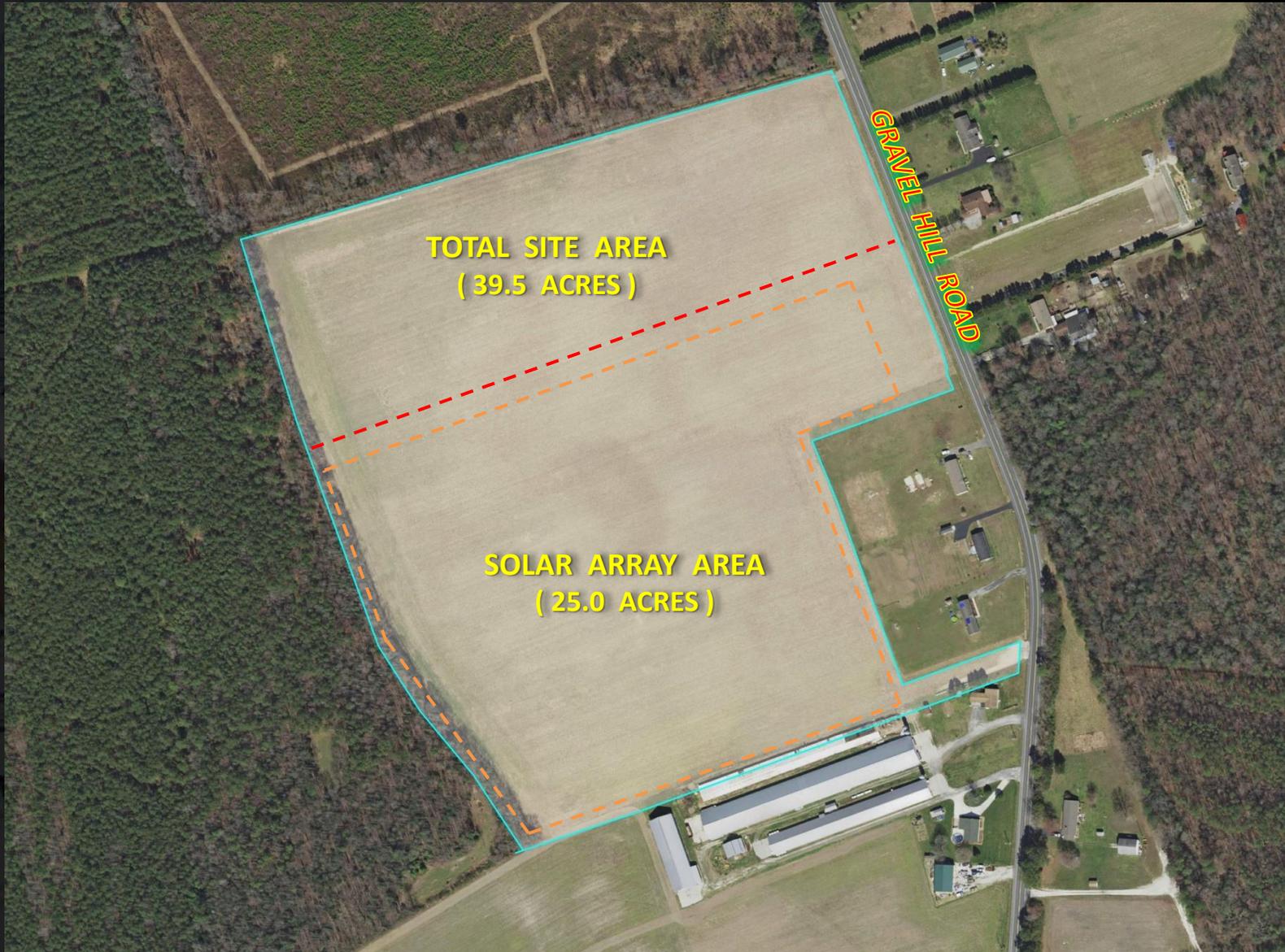
ARCHITECTURE
ENGINEERING

SUSSEX COUNTY - SOLAR ENERGY SYSTEM

PLANNING & ZONING COMMISSION

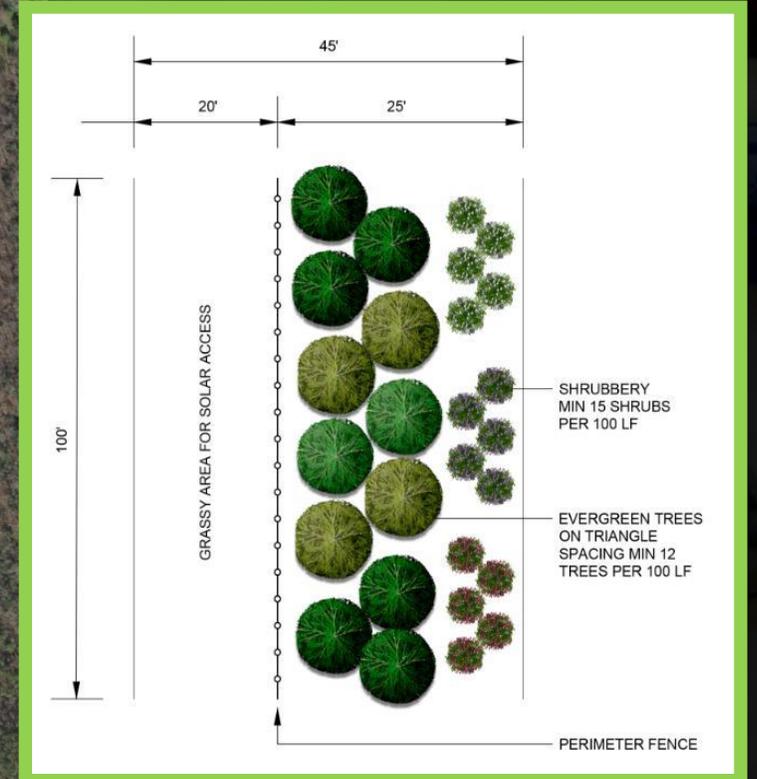
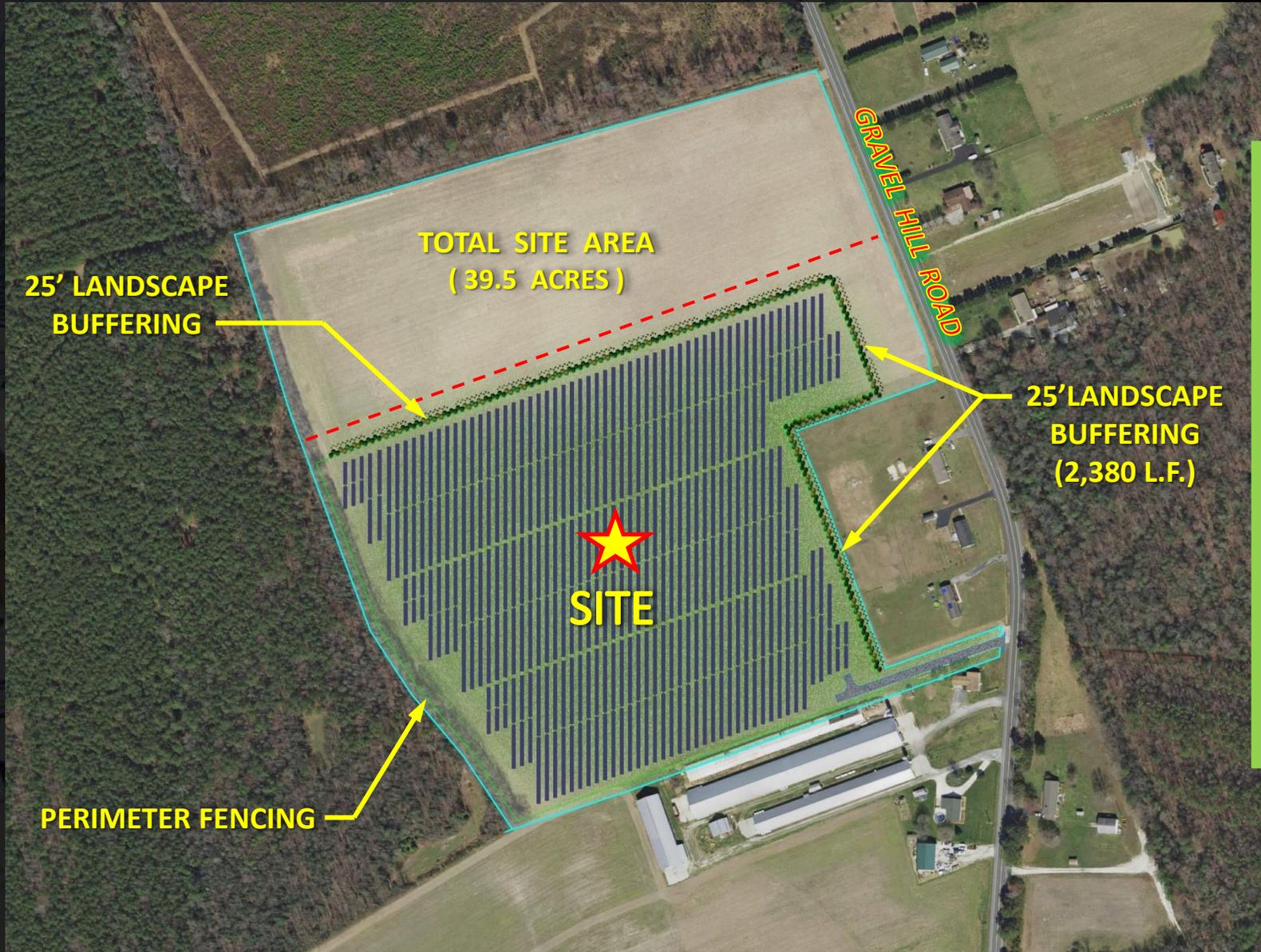
PUBLIC HEARING / TPE DE SU163 / 12.15.2022

PROJECT AREA - EXISTING CONDITIONS



- LOCATION: GEORGETOWN
- ZONING: AR-1
- EXISTING USE: AGRICULTURE
- PROPOSED USE: SOLAR
- C/U AREA: 25.0 AC.
- TOTAL AREA: 39.5 AC.

PROJECT AREA - EXISTING CONDITIONS



PROJECT OVERVIEW & DESIGN STANDARDS

- COMMUNITY SOLAR FACILITY - GROUND MOUNT TRACKING SYSTEM / 4 MEGAWATT AC
- BENEFITS LOCAL RESIDENTIAL, BUSINESS AND MUNICIPAL SUBSCRIBERS WITH LOWER POWER COSTS
- NO INCREASE IN TRAFFIC (1-2 MAINTENANCE VISITS PER MONTH)
- RENEWABLE ENERGY SOURCE WHICH PRODUCES NO ODORS, DUST, GAS, SMOKE OR FUMES
- LOW TO NO NOISE FROM POWER INVERTERS (65 Dba at 1 Meter)
- GLARE STUDY COMPLETED (NO IMPACTS)
- REDUCED STORMWATER RUNOFF BY PROVIDING POLLINATOR FRIENDLY GROUND COVER AND PLANTINGS
- 25' LANDSCAPE SCREENING
- PERIMETER FENCING WITH EMERGENCY ACCESS PROVISIONS
- COMMUNITY OUTREACH MEETING HELD DECEMBER 5, 2022
- DECOMMISSIONING AT THE END OF OPERATION LIFE OF THE PROJECT

PROJECT SUMMARY

- THE FACILITY IS A PUBLIC UTILITY USE UNDER SUSSEX COUNTY ZONING CODE AND MEETS THE PURPOSES OF A CONDITIONAL USE IN THAT IT IS OF PUBLIC OR SEMI-PUBLIC CHARACTER THAT IS ESSENTIAL AND DESIREABLE FOR THE GENERAL CONVENIENCE AND WELFARE OF SUSSEX COUNTY RESIDENTS.
- 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
- THE PROPOSED USE WILL NOT HAVE ANY ADVERSE IMPACT ON THE NEIGHBORING AND ADJACENT PROPERTIES AND PROVIDES ADEQUATE LANDSCAPE BUFFERING AND PERIMETER FENCING
- THE 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
- NO SIGNIFICANT NOISE, DUST OR ODOR WILL BE GENERATED BY THE FACILITY