CITY OF ROME PLANNING BOARD

CARE OF: DEPARTMENT OF COMMUNITY AND ECONOMIC DEVELOPMENT
ROME CITY HALL, 198 N. WASHINGTON STREET
ROME, NEW YORK 13440-5815
Telephone: (315) 339-7643 Fax: (315) 838-1167
www.RomeNewYork.com

Application for Planning Board Review

Property Address: 5792 Old Oneida Rd, Rome NY 13440 **County Tax ID #:** 272.000-2-36

Type of Action Requested

☒ Site Plan Review ☐ Site Plan Revision ☐ Minor Subdivision (less than 5 lots)

☐ Major Subdivision (5 lots or more)
☐ Preliminary Plat ☐ Final Plat

Please fill out all the application forms completely and ensure that you are submitting all required supporting documentation. Review and complete the application checklist form prior to submission to confirm that your application is complete.

A complete application must include, at minimum:

- *Completed Application Form*
- *Application Fee*
- *All Required Submittals*
- *Digital Copy of All Documents*
- *10 Paper Copies of All Documents Printed to Full Original Scale*

*A **complete** application package must be submitted to the City's Department of Community and Economic Development at least sixteen (16) calendar days in advance of the upcoming meeting to be placed on an agenda. **Please note that for review items which require a State Environmental Quality Review (SEQR), by law, each agency that is part of the project review has up to thirty (30) days for comment.** With this in mind, if an item subject to SEQR is submitted at the deadline (16 days prior to the meeting), it is unlikely that the review item will be able to be acted on at the following regular meeting of the planning board.*

The Planning Board generally meets on the first Tuesday of each month, but consult the publicly posted schedule as this can vary as a result of public holidays.

Office Use	Date Received:	Fee Recieved: ☐ Yes ☐ No ☐ N/A

City of Rome, New York
Application for Planning Board Review

Applicant Information

Name: Emeren US, LLC - Mac Moore
Address: 149 Water St.; Suite 302
Phone: 916-712-7303
City: Norwalk State: CT Zip: 06854
E-Mail: mac.moore@emeren.com

Property Owner Information ☐ (Check if same as applicant)

Name: Estate of James Elliott
Address: 6536 Henderberg Road
Phone: 315-829-3076
City: Rome State: NY Zip: 13440
E-Mail: elliottfarms1066@gmail.com

Agent Information

Name: Same as Applicant
Address: _____
Phone: _____
City: _____ State: _____ Zip: _____
E-Mail: _____

Brief Project Summary/Description:

Emeren US, LLC is proposing to develop a 4.2MW AC/5.53MW DC solar PV project. The project has an Interconnection Agreement with National Grid and has made 100% of the upgrade costs.

Property Zoning: _____ **Property Size:** 140 acres

Current Land Use: Crops

Are there any easements or rights-of-way on the property? ☐ Yes ■ No

☐ Utility ☐ Right-of-Way ☐ Access ☐ Other

Are there any known archaeological or historically significant features on the property? ☐ Yes ■ No

If yes, please explain: _____

Are there any federal or state wetlands located on the property? ■ Yes ☐ No

■ Federal Wetlands ■ New York State Wetlands

Is the property located within a floodplain? ☐ Yes ☐ No

☐ 100-Year ☐ 500-Year

City of Rome, New York
Application for Planning Board Review

Site Plan Review Supplement

Please complete this section if you are applying for site plan review

Proposed Building Square Footage: n/a

Proposed Building Height: n/a

Proposed Lot Coverage: 19.3 acres

Proposed Impervious Surface Coverage: 5.45 acres

Proposed Building Setbacks: 300 ft, 200 ft, 200 ft, 200 ft (Front, Side, Side, Rear)

Breakdown of Proposed Uses by Square Footage: 840,708 sqft for solar & 5,893,668 sqft for agriculture

Proposed Number of Residential Units: n/a (If Applicable)

Does the proposed project involve the construction of wireless telecommunication facilities or infrastructure?

☐ Yes ■ No

Does the proposed project involve the construction of a Tier 2 or Tier 3 Solar Energy Project as defined in the City of Rome Zoning Code?

☐ No ☐ Yes, Tier 2 ■ Yes, Tier 3

Additional information is required for projects involving wireless telecommunication facilities and infrastructure, as well as Tier 2 and 3 solar arrays. For these types of project, please contact the Department of Community and Economic Development for assistance.

Application Submittals Checklist (Site Plan Review)

*This checklist **must** be completed if you are applying for Site Plan Review in order for your application to be considered complete.*

- ■ Completed Application for Planning Board Review
- ■ Application Fee ($50 Minor Site Plan, $250 Major Site Plan) (Make Checks Payable to City of Rome)
- ■ Completed Short or Long Form Environmental Assessment Form, Part 1, As Applicable
- ■ Project Drawings including the following and scaled to no more than 1"=100':
  - ■ Project Title (cover page)
  - ■ Name and address of applicant (all drawings)
  - ■ Name and address of person/firm who prepared the drawings (all drawings)
  - ■ North Arrow and scale (all drawings)
  - ■ Date of drafting and most recent revision (all drawings)
  - ■ Boundaries of property (all drawings)
  - ■ Grading and drainage plan, including both existing and proposed contours
  - ■ Location, type of construction, and exterior dimensions of all buildings
  - ■ Elevations and design of all proposed buildings
  - ■ Location, design, and type of construction of all parking and loading areas
  - ■ Access and egress for all buildings and parking and loading areas
  - ■ Location, design, and construction details for all existing and proposed site improvements
  - ■ Pedestrian access and circulation
  - ■ Emergency vehicle access and circulation
  - ■ Location, design, and construction details for all utilities provisioning and connection
  - ■ Location, design, and construction details for all proposed signs
  - ■ Landscaping plan and planting schedule, including proposed buffer areas and vegetative cover
  - ☐ Outdoor lighting plan, including photometrics
  - ☐ Estimated project construction schedule
  - ■ List of all state and county permits required for the project and their status

Please note that the Planning Board or City departments may, at their discretion, require the submission of additional information beyond what is listed above.

Subdivision Supplement

Please complete this section if you are applying for property subdivision.

Existing parcel size(s):_____

New parcel sizes:_____

Proposed number of parcels to result from subdivision:_____

Will all parcels have frontage on a public right-of-way and take access from it?

☐ Yes ☐ No

Does the proposed subdivision anticipate the creation of new roads, power lines, or water and sewer infrastructure that will be maintained by the City of Rome?

_____

For major subdivision - have copies of the proposed plat been sent to the Oneida County Department of Health for approval?

☐ Yes ☐ No

Application Submittals Checklist (Preliminary Plat, Minor Subdivision)

*This checklist **must** be completed if you are applying for property subdivision in order for your application to be considered complete.*

- ☐ Completed Application for Planning Board Review
- ☐ Application Fee ($50 base fee plus $35 per lot)(Make checks payable to City of Rome)
- ☐ Completed Short or Long Form Environmental Assessment Form, Part 1, as applicable
- ☐ Legal description of the parcels resulting from the proposed subdivision
- ☐ A preliminary plat map prepared by a Professional Engineer or Licensed Land Surveyor at a scale not exceeding 1"=100' and showing the following:
  - ☐ North arrow and scale bar
  - ☐ Name and address of applicant
  - ☐ Name, address, and stamp of the Engineer or Land Surveyor who prepared the drawing
  - ☐ Layout, number, dimensions, and area of each lot within the proposed subdivision
  - ☐ Boundary lines of the proposed parcels, including angles and distances, and a statement of the total areas of those parcels
  - ☐ The location, dimensions, and layout of rights-of-way, blocks, easements, improvements, and utilities within and contiguous to the proposed subdivision, as well as the location and dimensions of such major features as railroad lines, waterways, and exceptional topography
  - ☐ The location of all existing and proposed connections with existing and proposed water, sewer, and other utility lines, and an indication of provisions for and location of stormwater management facilities
  - ☐ If applicable - location, dimensions, and layout of all parcels of land intended to be dedicated for public use or reserved as common space for subdivision property owners (such as parks or walking trails)
  - ☐ If applicable - outline and description of all public improvements (such as roads), together with preliminary drawings

Please note that the Planning Board or City departments may, at their discretion, require the submission of additional information beyond what is listed above. Commonly requested information includes, but is not limited to, the following:

- ☐ Topography map with contours at specified intervals
- ☐ Cross-section of proposed rights-of-way, showing roadway widths and grades, bicycle and pedestrian facilities, green infrastructure, and street trees
- ☐ The proposed location of water, gas, electric, cable, data delivery, and telephone outlets or lines
- ☐ Elevation drawing(s)

Application Submittals Checklist (Pre-Application Conference, Major Subdivision)

- ☐ Sketch plan showing a general layout of proposed streets, lots, and other improvements
- ☐ Location map indicating the proposed subdivision in relation to the surrounding area
- ☐ Depiction of land to be reserved for streets, stormwater management, sewers, water, fire protection, public buildings, utilities, and other facilities
- ☐ Map of general locations of obvious conservation features
- ☐ Conservation Features Inventory (required only if the proposed subdivision contains previously undeveloped or agricultural land)

Application Submittals Checklist (Preliminary Plat, Major Subdivision)

*This checklist **must** be completed if you are applying for property subdivision in order for your application to be considered complete.*

- ☐ Completed Application for Planning Board Review
- ☐ Application Fee ($150 base fee plus $35 per lot)(Make checks payable to City of Rome)
- ☐ Completed Short or Long Form Environmental Assessment Form, Part 1, as applicable
- ☐ Legal description of the parcels resulting from the proposed subdivision
- ☐ A preliminary plat map prepared by a Professional Engineer or Licensed Land Surveyor at a scale not exceeding 1”=100’ and showing the following:
  - ☐ North arrow and scale bar
  - ☐ Name and address of applicant
  - ☐ Name, address, and stamp of the Engineer or Land Surveyor who prepared the drawing
  - ☐ Layout, number, dimensions, and area of each lot within the proposed subdivision
  - ☐ Boundary lines of the proposed parcels, including angles and distances, and a statement of the total areas of those parcels
  - ☐ The location, dimensions, and layout of rights-of-way, blocks, easements, improvements, and utilities within and contiguous to the proposed subdivision, as well as the location and dimensions of such major features as railroad lines, waterways, and exceptional topography
  - ☐ The location of all existing and proposed connections with existing and proposed water, sewer, and other utility lines, and an indication of provisions for and location of stormwater management facilities
  - ☐ If applicable - location, dimensions, and layout of all parcels of land intended to be dedicated for public use or reserved as common space for subdivision property owners (such as parks or walking trails)
  - ☐ If applicable - outline and description of all public improvements (such as roads), together with preliminary drawings

Application Submittals Checklist (Final Plat, Major Subdivision)

*This checklist **must** be completed if you are applying for property subdivision in order for your application to be considered complete.*

- ☐ Completed Application for Planning Board Review
- ☐ Formal offers of dedication, when not set forth on the final plat, of any public rights-of-way or parks, accompanied by the appropriate deeds bearing a certification of approval by the City Corporation Counsel.
- ☐ An endorsement from abstract or title company certifying that there are no liens against the land to be subdivided arising from nonpayment of City taxes, water or sewer charges, or fines
- ☐ A preliminary plat map prepared by a Professional Engineer or Licensed Land Surveyor at a scale not exceeding 1"=100' and showing the following:
    - ☐ All information from the approved preliminary plat
    - ☐ Date of preperation of the final plat and by whom it was prepared
    - ☐ The boundary of the plat, based on accurate traverse, with angles and linear dimensions
    - ☐ The exact location, width, and name of all rights-of-way within and adjoining the plat
    - ☐ True angles and distances to the nearest established right-of-way line or official monuments (no less than three)
    - ☐ Municipal, township, county, and section lines accurately tied to the lines of the subdivision by distances and angles
    - ☐ Radii, internal angles, points, curvatures, tangent bearings, and lengths of all arcs
    - ☐ All easements established for public use and utilities
    - ☐ All lot numbers and lot lines, with accurate dimensions given in hundredths of a foot
    - ☐ Accurate outlines of all areas dedicated or reserved for public use, with the proposed uses indicated, and all areas to be reserved for the common use of the property owners, with the proposed uses indicated
- ☐ A certification by all who have an interest in the property to be subdivided, authorizing and acknowledging the preparation of the subdivision plat and the dedication of any thoroughfares and other public areas
- ☐ Documentation of the approval of the City Engineer that the subdivision agrees with the City survey and is mathematically correct
- ☐ Certification from the Oneida County Health Department and any other applicable authorities that the final plat meets required specifications.

City of Rome, New York
Application for Planning Board Review

General Information and Certification

The City of Rome's Planning Board regularly meets the first Tuesday of every month. To be placed on an agenda, a complete application must be submitted to the City's Department of Community and Economic Development at least sixteen (16) calendar days in advance of the upcoming meeting.

Please note that you *must* have a representative in attendance at the meeting in order for your application to be considered.

All required supporting documentation including the required number of copies of plans, documents, drawings and/or other illustrative materials must be submitted in an application packet in order for it to be considered complete. Please refer to the relevant application checklist to confirm that you are submitting all necessary information.

Failure to provide complete information may result in unnecessary delays or revocation of approvals.

I do hereby state that the information submitted is an accurate representation of my request and complete to the best of my knowledge:

Applicant Signature: _____

Date: 11/15/2024

Owner Signature: _____

Date: 11/14/2024

Stamford HQ
100 First Stamford Place, Suite 301
Stamford, CT 06902

NY Old Oneida Road Solar LLC

About Us

Emeren US LLC (Emeren) is a leading global solar project developer and operator, with local professional teams in more than 10 countries around the world. The company operates in the fastest-growing solar markets thanks to its improved clarity of government policies. Emeren's strategy is to pursue high-margin project development opportunities in these profitable and flourishing markets, specifically, in the U.S. and Europe, where the Company has an industry-leading position.

Project Overview

Emeren is proposing to build a new solar farm on a property located at 5792 Old Oneida Road, Rome, NY 13440, owned by James Elliott. The total parcel is 140 acres and the Limit of Disturbance of the project site occupies 20 acres, leased by Emeren.

Proposed Location

This location was chosen due to its proximity to 3-phase electrical distribution lines, association with a utility substation that has appears to have significant capacity to handle the electrical generation of a solar farm, the fact that the land is mostly cleared and flat so as to require minimal-to-no grading for constructing the facility, and the interest of the landowner in having a solar farm on his property.

Proposed Design

The project is 4.2 MW AC of Solar PV.

Solar panels will be installed in parallel rows as shown on the project map. Each panel will be approximately 2 meters high and 1 meter wide. In order to maximize power production a single axis tracker racking system has been chosen. Each row is composed of trackers with a minimum of 1x26 panels long or multiples of this. The rows will span the width of the project area, face East/West supported by a single-axis tracking system that is secured to the ground using embedded piles.

The solar panels will be wired together and connected to electrical boxes. Underground cabling will be installed to connect the boxes to inverter stations and switchgear. Connection to grid will be done over-head to the utility feeder located on Roosevelt Road.

All the proposed work and equipment will comply with US standards and certifications, and it will take place within the identified property.

The proposed Commercial Operation Date is late 2024 to early 2025.

Interconnection Details

Interconnection (POI) to the utility grid (National Grid) will be done at the 34.5kV feeder. This project will meet the latest New York State Standardized Interconnection Requirements (SIR).

Wetlands

Wetland areas were assessed as waters of the U.S. subject to USACE jurisdiction, and as freshwater wetlands subject to NYSDEC regulation. A full Wetland Delineation Report was completed by C&S Environmental LLC.

Cultural Resource Assessment

Emeren has reviewed the New York Cultural Resource Information System. Please note that there are no known historic structures near the site and that the project is not identified as an area of archaeological sensitivity.

Fencing

The new solar farm will be entirely surrounded by a 8 foot chain linked fence for public safety and site security.

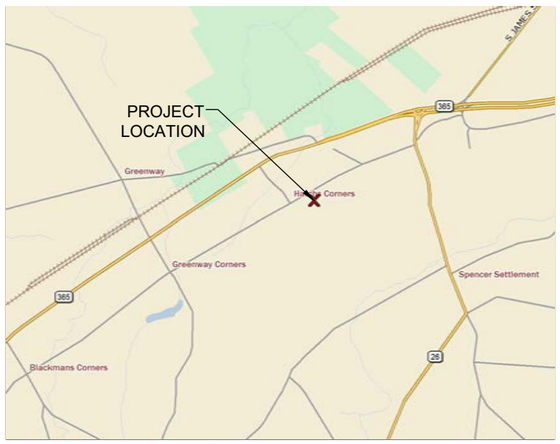
SITE PLAN DRAWINGS

SITE NAME: OLD ONEIDA SOLAR FARM, LLC

OLD ONEIDA ROAD
ROME, NY

LOCATION MAP

DIRECTIONS TO SITE: (FROM SYRACUSE INTERNATIONAL AIRPORT) TAKE I-90 EAST TO EXIT 3 AND HEAD TOWARDS SR365 NORTH. FOLLOW SR365 TO A RIGHT ONTO HENDERBURG ROAD THEN A LEFT ONTO OLD ONEIDA ROAD. SITE IS ON THE RIGHT.



VICINITY MAP

PROJECT INFORMATION

PROPERTY OWNER:	JAMES ELLIOT 6536 HENDERBURG ROAD ROME, NY 13440
SITE NAME:	NY OLD ONEIDA SOLAR FARM, LLC
SITE ADDRESS:	OLD ONEIDA ROAD ROME, NY 13440
TAX MAP #:	272.-02-36
ZONING JURISDICTION:	TOWN OF ROME
ZONING DISTRICT:	TBD
COUNTY:	ONEIDA COUNTY

PROJECT DIRECTORY

APPLICANT:	MIDDLE GROVE ROAD, LLC 850 CANAL ST, SUITE 3D STAMFORD, CT 06902
CONTACT:	BRADLEY DAVIS
PHONE:	(645) 624-4566
EMAIL:	bradley.davis@renesolapower.com
CIVIL ENGINEERING FIRM:	C&S ENGINEERS INC. 499 COL. EILEEN COLLINS BLVD. SYRACUSE, NY 13212
CONTACT:	ERIC N. KENNA P.E.
PHONE:	(315) 455-2000
POWER COMPANY:	NATIONAL GRID
PHONE:	1 (800) 892-2345

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

DIG | SAFELY

PHONE #: 1-800-962-7962 OR 811

WEBSITE: HTTP://WWW.DIGSAFELYNEWYORK.COM

DRAWING LIST

SHEET NO.	SHEET NAME	REV	DATE
GENERAL			
G-001	TITLE SHEET	0	01-04-24
CIVIL			
C-101	AERIAL PLAN	0	01-04-24
C-102	SITE PLAN	0	01-04-24
C-103	GRADING PLAN	0	01-04-24
C-104	EROSION AND SEDIMENT CONTROL PLAN	0	01-04-24
C-105	LANDSCAPING PLAN	0	01-04-24
C-106	LANDSCAPING DETAILS	0	01-04-24
C-501	EROSION AND SEDIMENT CONTROL DETAILS	0	01-04-24
C-502	EROSION AND SEDIMENT CONTROL DETAILS	0	01-04-24
C-503	FENCE DETAILS	0	01-04-24
C-504	SIGNAGE DETAILS	0	01-04-24

C&S PROJECT: V32.007.002

JANUARY 2024

STATE OF NEW YORK
ERIC N. KENNA
088339
LICENSED PROFESSIONAL ENGINEER

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF THE PLANS AND SPECIFICATIONS FOR THIS PROJECT ARE IN COMPLIANCE WITH THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE AND THE BUILDING CODE OF NEW YORK STATE

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

G-001

Jan 05, 2024 - 11:33am
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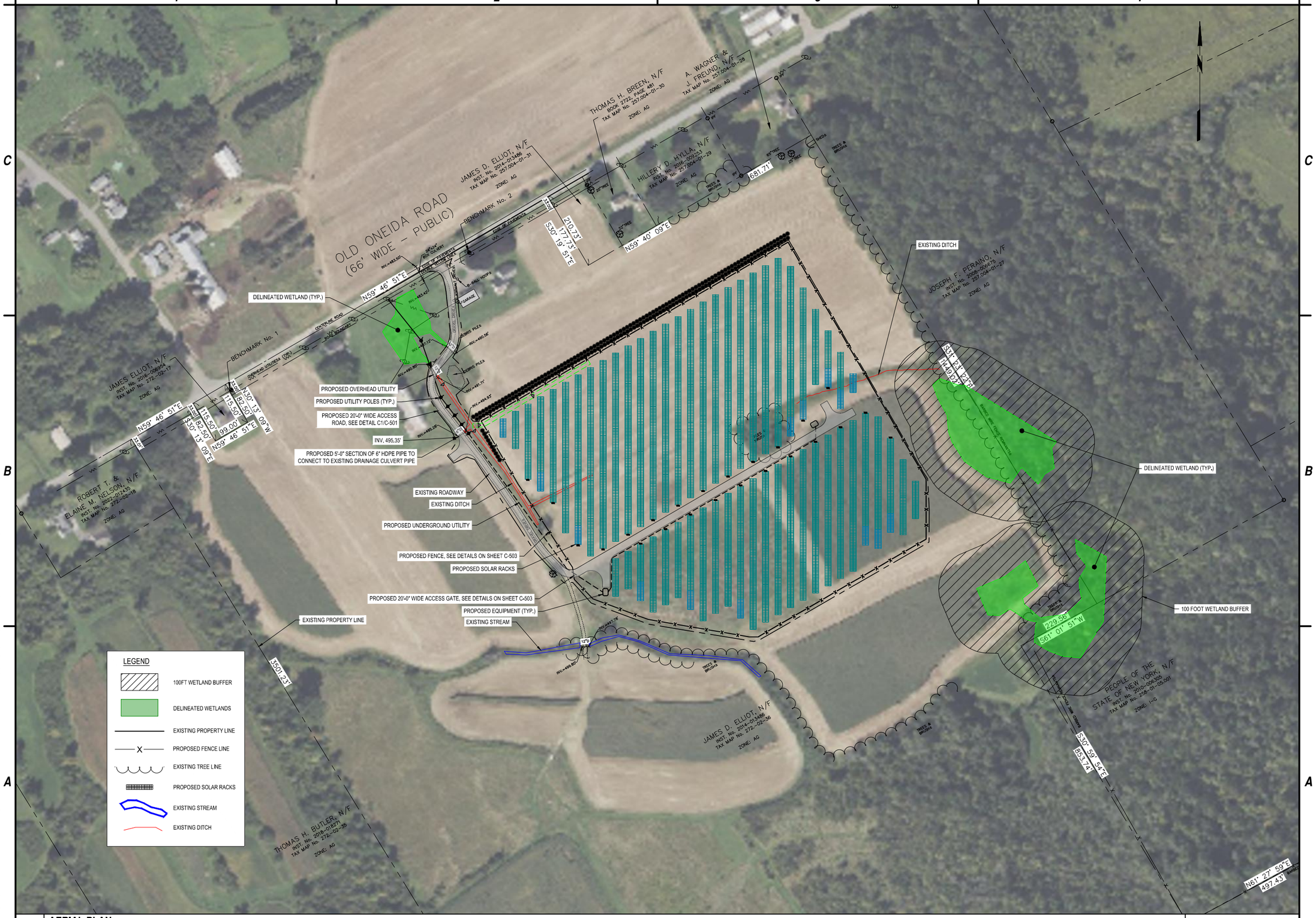

C&S COMPANIES
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

STATE OF NEW YORK
ERIC TENNEY
058339
LICENSED PROFESSIONAL ENGINEER

emeren
Empowering Renewables

NY OLD ONEIDA SOLAR FARM, LLC
5792 OLD ONEIDA ROAD
ROME, NY 13440
ONEIDA COUNTY

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	B. BUCKINGHAM
DESIGNED BY:	
CHECKED BY:	

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

AERIAL PLAN

C-101

Jan 05, 2024 - 11:33am
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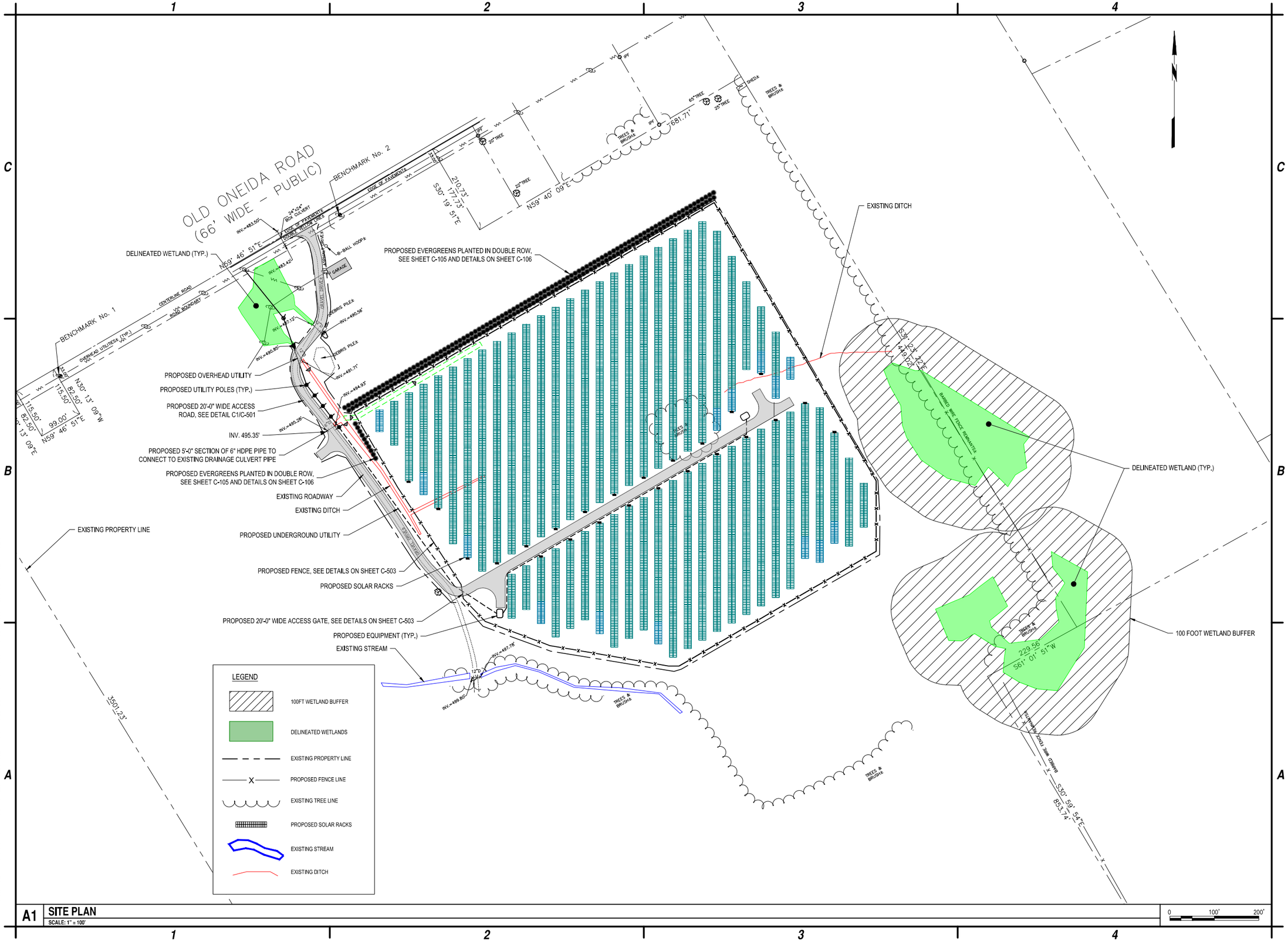

A1 **SITE PLAN**
SCALE: 1" = 100'

0 100' 200'

Jan 05, 2024 — 11:33am
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C&S COMPANIES
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

STATE OF NEW YORK
KEVIN M. LEE
LICENSED PROFESSIONAL ENGINEER
058339

emeren
Empowering Renewables

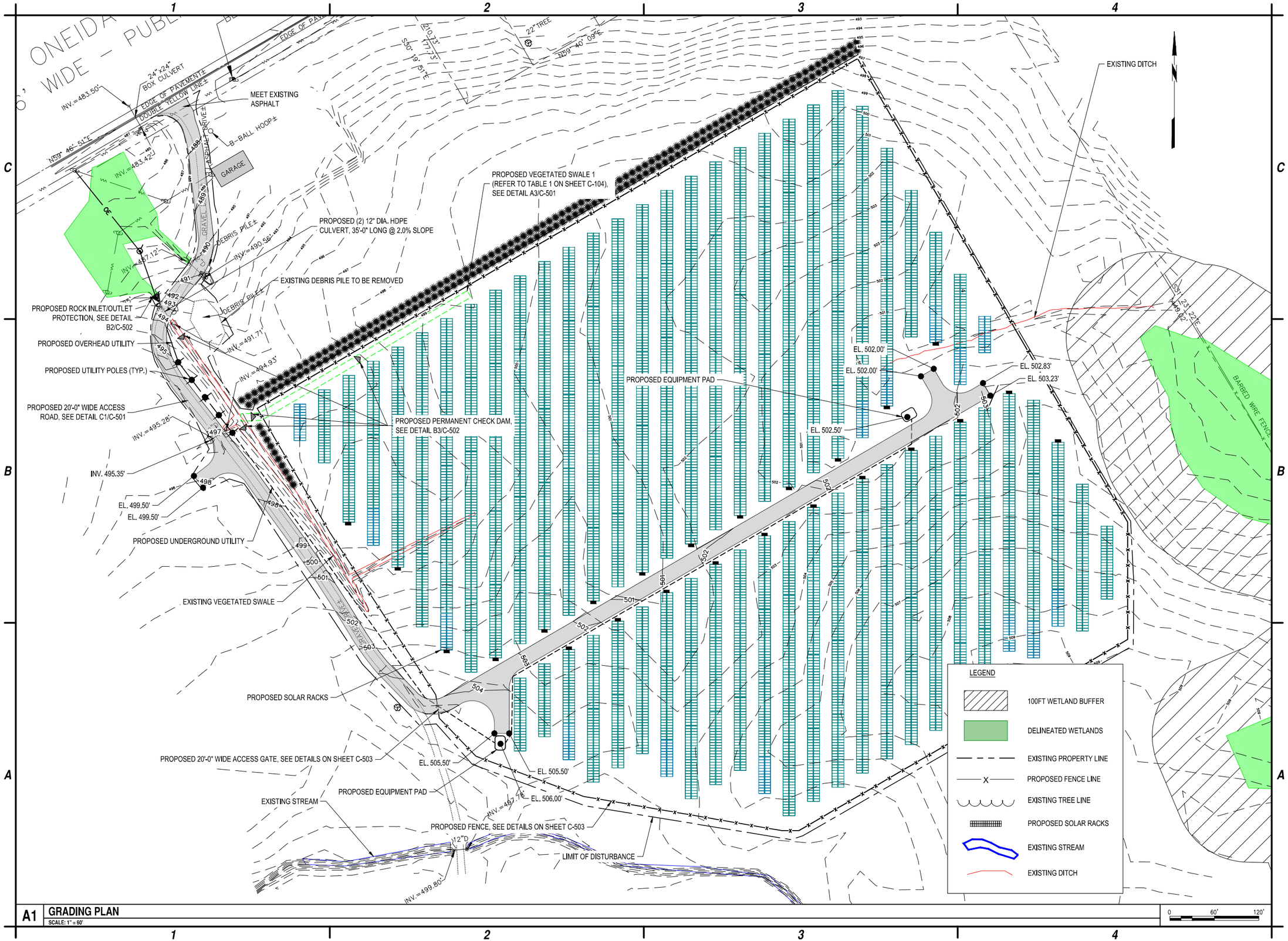
NY OLD ONEIDA SOLAR FARM, LLC
5792 OLD ONEIDA ROAD
ROME, NY 13440
ONEIDA COUNTY

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	B. BUCKINGHAM
DESIGNED BY:	
CHECKED BY:	

SITE PLAN

C-102



C&S COMPANIES
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

STATE OF NEW YORK
KENNETH E. LEE
LICENSED PROFESSIONAL ENGINEER
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emeren
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NY OLD ONEIDA SOLAR FARM, LLC
5792 OLD ONEIDA ROAD
ROME, NY 13440
ONEIDA COUNTY

MARK	DATE	DESCRIPTION
		REVISIONS

PROJECT NO:	V32.007.002
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DRAWN BY:	B. BUCKINGHAM
DESIGNED BY:	
CHECKED BY:	

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

GRADING PLAN

C-103

Jan 05, 2024 – 11:33am
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TABLE 1: VEGETATED SWALE SEED MIX		
PERCENT	BOTANICAL NAME	COMMON NAME
26.00%	PANICUM VIRGATUM, NJ ECOTYPE	SWITCHGRASS
25.00%	PANICUM VIRGATUM, 'CARTHAGE', NC ECOTYPE	SWITCHGRASS, 'CARTHAGE'
22.00%	CAREX VULPINOIDEA, PA ECOTYPE	FOX SEDGE
22.00%	ELYMUS VIRGINICUS, PA ECOTYPE	VIRGINIA WILDRYE
3.00%	JUNCUS EFFUSUS	SOFT RUSH
1.00%	JUNCUS TENUIS, PA ECOTYPE	PATH RUSH
1.00%	PANICUM RIGIDULUM, PA ECOTYPE	REDTOP PANICGRASS

NOTE:
THIS SEED MIX SHALL BE USED FOR PROPOSED VEGETATED SWALES. ALL OTHER DISTURBED AREAS SHALL RECEIVE THE NORTHEAST SOLAR POLLINATOR 3' MIX PER DETAIL B4/C-504.

NOTE:
ALL WETLANDS ARE TO BE STAKED OUT AND PROTECTED DURING CONSTRUCTION.
GRADING SHALL NOT OCCUR IN WETLANDS

LEGEND
- 100FT WETLAND BUFFER
- DELINEATED WETLANDS
- EXISTING PROPERTY LINE
- PROPOSED FENCE LINE
- EXISTING TREE LINE
- PROPOSED SOLAR RACKS
- EXISTING STREAM
- EXISTING DITCH
- SILT FENCE

PROPOSED CONCRETE WASHOUT AREA, SEE DETAIL C3/C-502
PROVIDE TEMPORARY STONE YARD IN STAGING AREA, SEE DETAIL B4/C-502
PROPOSED CONTRACTOR STAGING AREA
PROPOSED STABILIZED CONSTRUCTION ENTRANCE, SEE DETAIL A1/C-501
OLD ONEIDA ROAD (66' WIDE - PUBLIC)
BENCHMARK No. 2
PROPOSED VEGETATED SWALE 1 (REFER TO TABLE 1, THIS SHEET), SEE DETAIL A3/C-501
PROPOSED 7'-0" HIGH CHAIN LINK FENCE
PROPOSED SOLAR RACKS
PROPOSED SILT FENCE (TYP.) (SEE DETAIL A2/C-501)
PROPOSED DISCONNECTED FLOW LENGTH (TYP.) (SEE NOTE #1, THIS SHEET)
PROPOSED FILTER STRIP AREA FOR IMPERVIOUS SURFACE (TYP.) (SEE NOTE #3, THIS SHEET)
PROPOSED PERMANENT CHECK DAM, SEE DETAIL B3/C-502
PROPOSED ELECTRICAL EQUIPMENT PAD
PROPOSED ROCK INLET/OUTLET PROTECTION, SEE DETAIL B2/C-502
BENCHMARK No. 1
PROPOSED (2) 12" DIA. HDPE CULVERTS, 35'-0" LONG @ 2.0% SLOPE
EXISTING DEBRIS PILE TO BE REMOVED
100 FOOT WETLAND BUFFER
PROPOSED TEMPORARY STOCK PILE LOCATION, SEE DETAIL A4/C-502
PROPOSED SILT FENCE (TYP.) (SEE DETAIL A2/C-501)
INV. 495.35'
DELINEATED WETLAND (TYP.)
EXISTING VEGETATED SWALE (REFER TO TABLE 1, THIS SHEET),
PROPOSED FILTER STRIP AREA FOR IMPERVIOUS SURFACE (TYP.) (SEE NOTE #3, THIS SHEET)
PROPOSED FENCE, SEE DETAILS ON SHEET C-503
LIMITS OF DISTURBANCE
PROPOSED 20'-0" WIDE ACCESS ROAD, SEE DETAIL C1/C-501
PROPOSED 7'-0" HIGH CHAIN LINK FENCE

TABLE 1: VEGETATED SWALE						
SWALE	LENGTH	START INV.	END INV.	SLOPE	BOTTOM WIDTH	DEPTH
1	350 FT	497.4'	493.8'	1.0%	1'-6"	1'-6"
EX. SWALE	470 FT	499.3'	491.7'	1.6%	2'-0"	2'-0"

NOTE:
1. MAXIMUM SIDE SLOPE OF 1:3

NOTES:
1. DISCONNECTED FLOW LENGTH AREAS COMPRISE OF DENSE GRASS AND ARE LOCATED BETWEEN EACH SOLAR PANEL AT A WIDTH OF 17'-0". DISCONNECTED FLOW LENGTHS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAIL C1/ C-504 AND NYSDEC STORMWATER PERMITTING MEMO.

2. IN AREAS WHERE SOIL DISTURBANCE ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, SOIL STABILIZATION MEASURES SHALL BE INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN FOURTEEN DAYS (SEVEN DAYS IF OPEN DISTRIBUTED AREA EXCEEDS 5 ACRES, OR THREE DAYS IF BETWEEN NOVEMBER 15TH AND APRIL 1ST).

3. FILTER STRIP AREAS DOWNGRADE OF IMPERVIOUS AREAS SHALL BE PROTECTED FROM CONSTRUCTION IMPACTS THROUGH THE USE OF CONSTRUCTION FENCING.

4. ALL FILTER STRIPS WITHIN PHYSICALLY DISTURBED AREAS FROM GRADING ACTIVITIES ONLY ARE TO RECEIVE SOIL RESTORATION AT THE END OF CONSTRUCTION IN ACCORDANCE TO NYS DEC'S DEEP-RIPPING AND DE-COMPACTION. ALL OTHER FILTER STRIP AREAS TO BE MAINTAINED IN THEIR NATURAL STATE AND PROTECTED FROM DISTURBANCE.

A1 EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1" = 100'

0 100' 200'

C&S COMPANIES
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

STATE OF NEW YORK KENNETH LEE LICENSED 058339 PROFESSIONAL ENGINEER

emeren Empowering Renewables

NY OLD ONEIDA SOLAR FARM, LLC
5792 OLD ONEIDA ROAD
ROME, NY 13440
ONEIDA COUNTY

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	B. BUCKINGHAM
DESIGNED BY:	
CHECKED BY:	

EROSION AND SEDIMENT CONTROL PLAN

C-104

Jan 05, 2024 – 11:33am
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PLANT LIST					
KEY	QTY.	BOTANICAL NAME	COMMON NAME	MINIMUM SIZE	
		Evergreens			
JVH		Juniperus virginiana 'Hillspire'	Hillspire Juniper	5-6' ht	B&B
JVC		Juniperus virginiana 'Canaertii'	Canaertii Juniper	5-6' ht	B&B

A1 PLAN
SCALE: 1" = 100'

0 100' 200'

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Syracuse, New York 13212
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Fax: 315-455-9667
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STATE OF NEW YORK
KENNETH E. LEE
LICENSED PROFESSIONAL ENGINEER
058339

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DESIGNED BY:	
CHECKED BY:	

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

LANDSCAPING PLAN

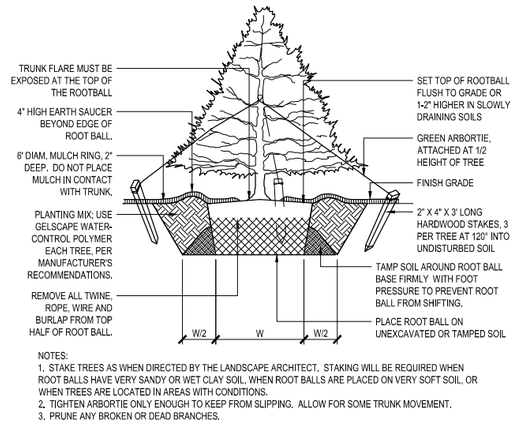
C-105

B1 HILLSPIRE JUNIPER
NTS

C2 NOT USED
NTS

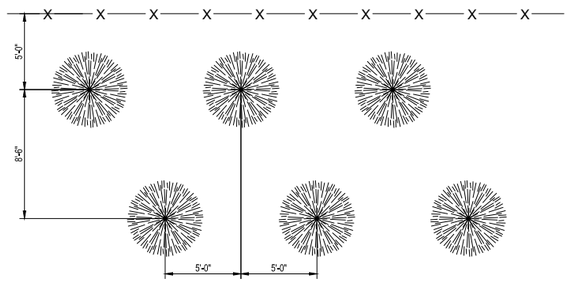
B2 NOT USED
NTS

C3 NOT USED
NTS



NOTES:
1. STAKE TREES AS WHEN DIRECTED BY THE LANDSCAPE ARCHITECT. STAKING WILL BE REQUIRED WHEN ROOT BALLS HAVE VERY SANDY OR WET CLAY SOIL, WHEN ROOT BALLS ARE PLACED ON VERY SOFT SOIL, OR WHEN TREES ARE LOCATED IN AREAS WITH CONDITIONS.
2. TIGHTEN ARBORTIE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT.
3. PRUNE ANY BROKEN OR DEAD BRANCHES.

B3 TREE PLANTING DETAIL
NTS



A1 PLANTING LAYOUT
NTS

A3 CANAERTII JUNIPER
NTS

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C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

STATE OF NEW YORK ERIC K. KENNA LICENSED PROFESSIONAL ENGINEER 058339

emeren Empowering Renewables

NY OLD ONEIDA SOLAR FARM, LLC
5792 OLD ONEIDA ROAD
ROME, NY 13440
ONEIDA COUNTY

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	M. BUCKINGHAM
DESIGNED BY:	E.N. KENNA P.E.
CHECKED BY:	

LANDSCAPING DETAILS

C-106

Jan 05, 2024 – 11:34am
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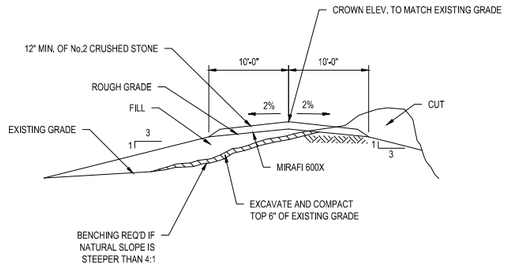
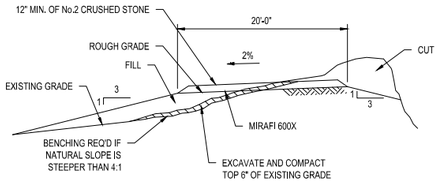




NOTE:
REMOVE ANY SOFT SOILS EXCAVATED DURING INSTALLATION OF ACCESS ROAD.

C1 ACCESS DRIVE DETAIL

SCALE: NOT TO SCALE

1. SCHEDULE A PRE-CONSTRUCTION MEETING THAT SHALL BE ATTENDED BY THE QUALIFIED INSPECTOR, AND INVOLVED SUBCONTRACTORS TO DISCUSS RESPONSIBILITIES AS THEY RELATE TO THE IMPLEMENTATION OF THE SWPPP MEASURES TO AVOID AND MINIMIZE IMPACTS TO PROTECTED SPECIES DURING REMEDIATION, DEMOLITION AND CONSTRUCTION.
2. INSTALL THE STABILIZED CONSTRUCTION ENTRANCE FOR THE PROJECT AS SHOWN ON THE PLANS.
3. DELINEATE THE LIMITS OF DISTURBANCE FOR THE PROJECT, TO INCLUDE THE STAKEOUT AND INSTALLATION OF WETLAND PROTECTIONS OF WETLANDS ON SITE OR THAT COULD BE IMPACTED BY CONSTRUCTION. CONTRACTOR TO ENSURE DELINEATION OF WETLAND BOUNDARIES AND INSTALLATION OF PROTECTIONS REMAINS THROUGHOUT DURATION OF CONSTRUCTION EFFORTS TO PROTECT WETLANDS FROM DISRUPTION AS A RESULT OF CONSTRUCTION ACTIVITIES.
4. ESTABLISH LOCATION FOR STAGING AREA AND SOIL STOCKPILE AS SHOWN ON THE PLANS. IF THESE AREAS ARE NOT CONDUCIVE DUE TO ANY UNFORESEEN CONDITIONS, THE CONTRACTOR SHALL IDENTIFY A NEW LOCATION FOR REVIEW AND APPROVAL BY THE ENGINEER.
5. INSTALL ALL SILT / CONSTRUCTION FENCE FOR THE PROJECT AS SHOWN ON THE PLANS INCLUDING THE INSTALLATION OF SILT FENCE SURROUNDING THE PERIMETER OF THE SOIL STOCKPILE, STAGING AREA, AND AT THE DOWN GRADIENT SIDE OF ALL SOLAR PANEL ARRAYS LOCATIONS.
6. SELECTIVELY CLEAR ONLY THE AREAS REQUIRED FOR THE FOLLOWING: INSTALLATION OF THE STABILIZED FACILITY ENTRANCE, PLACEMENT OF THE CONSTRUCTION OFFICE TRAILER AND PARKING AREAS, PLACEMENT OF TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES, CONSTRUCTION STAGING AREA, THE SOIL STOCKPILE, AND THE MINIMAL AREAS IDENTIFIED TO BE GRADED.
7. INSTALL ALL SWALES /BASINS AND BERMS AS SHOWN ON THE PLANS. TOPSOIL, SEED, AND MULCH THE SWALES. ROLLED EROSION CONTROL FABRICS, TURF REINFORCEMENT MATS, MULCH ANCHORING TO BE INSTALLED AS NEEDED AND IN AREAS OF CONCENTRATED FLOW.
8. CONTRACTOR TO INSTALL LEVEL SPREADERS AS SHOWN ON THE GRADING AND EROSION AND SEDIMENT CONTROL PLAN, COVERING THE LEVEL SPREADER WITH PLYWOOD OR MUD MATS IN LOCATIONS WHERE THEY MUST BE CROSSED DURING CONSTRUCTION IS REQUIRED.
9. CONTRACTOR TO INSTALL THE ACCESS ROADWAYS AS SHOWN ON THE PLANS.
10. PROVIDE TEMPORARY SEEDING AND STABILIZATION MEASURES OF ANY DISTURBED AREAS IN ACTIVE AREAS ON THE NEXT BUSINESS DAY AND COMPLETED IN FOURTEEN DAYS.
11. INSTALL POSTS, BRACKETS, MOUNTING STRUCTURES, AND MODULES. CONTRACTOR SHALL LIMIT SOLAR ARRAY SUPPORTS AND MODULE INSTALLATION TO AREAS AND SECTIONS WHERE TEMPORARY STABILIZATION CAN BE MANAGED AND CONTROLLED AT ALL TIMES. A 5-ACRE WAIVER REQUEST WILL BE SUBMITTED TO THE TOWN OF AFTON AS AN MS4 COMMUNITY TO ALLOW THE SITE CONTRACTOR TO TRAVERSE THE SITE WITH THE SOLAR SUPPORT INSTALLATION EQUIPMENT ONLY. CONVENTIONAL EARTH MOVING AND MASS GRADING ACTIVITIES ARE NOT PROPOSED. PLEASE REFER TO THE 5-ACRE WAIVER LETTER IN APPENDIX A-7. SEEDING AND STABILIZATION MEASURES OUTLINED IN STEP 10 SHALL BE IMPLEMENTED BEFORE MOVING ONTO THE NEXT SECTION OF SOLAR PANEL INSTALLATIONS.
12. COMPLETE OVERALL ON-SITE STABILIZATION.
13. CONTRACTOR TO RAKE OUT ANY AREAS OF LEVEL SPREADERS THAT ARE PACKED WITH MUD AND REMOVE AND REPLACE STONE AS NECESSARY.
14. UPON ESTABLISHMENT OF SUBSTANTIAL VEGETATIVE COVER (85% MIN.) REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS. SEED AND MULCH THE REMAINING DISTURBED AREAS (RESULTING FROM TEMPORARY EROSION CONTROL MEASURE REMOVAL).
15. REMOVE SILT FENCING ONLY AFTER DISTURBED SURFACES ARE STABILIZED.
16. UPON FINAL STABILIZATION, AND CERTIFICATION BY THE NYSDEC AND THE QUALIFIED PROFESSIONAL RETAINED TO PERFORM THE REQUIRED SITE INSPECTIONS, THE OWNER SHALL FILE THE NOTICE OF TERMINATION (NOT) WITH THE NYSDEC.

C3 CONSTRUCTION SEQUENCE

SCALE: NOT TO SCALE

STABILIZED CONSTRUCTION ENTRANCE NOTES:

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.

2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).

3. THICKNESS - NOT LESS THAN SIX (6) INCHES.

4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.

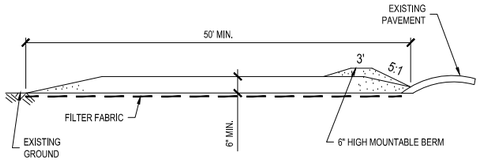
5. FILTER FABRIC - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.

6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.

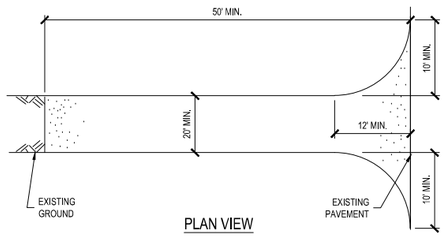
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF- WAY MUST BE REMOVED IMMEDIATELY.

8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.



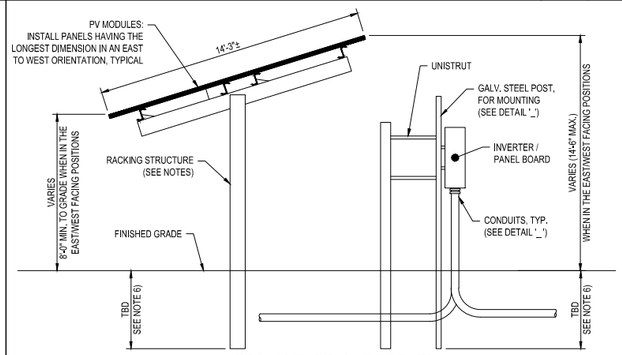
PROFILE



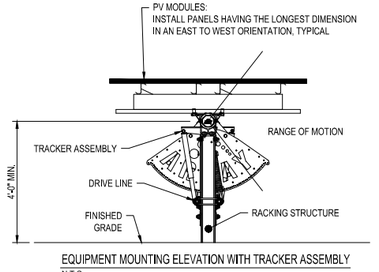
PLAN VIEW

A1 STABILIZED CONSTRUCTION ENTRANCE DETAIL

SCALE: NOT TO SCALE



TYPICAL EQUIPMENT MOUNTING ELEVATION
N.T.S.



EQUIPMENT MOUNTING ELEVATION WITH TRACKER ASSEMBLY
N.T.S.

NOTES:
1) ACTUAL HEIGHT OF THE RACKING SYSTEM AND OR DEPTH OF FOUNDATIONS ARE NOT PROVIDED. REFERENCE THE RACKING SYSTEM MANUFACTURER'S PRODUCT DATA AND INSTRUCTIONS FOR INFORMATION. RACKING STRUCTURE IS SHOWN AS REPRESENTATIVE ONLY.
2) EQUIPMENT SHALL BE PROVIDED / MOUNTED SUCH THAT IT DOES NOT CAUSE ANY SHADING OF THE PHOTOVOLTAIC (PV) MODULES.
3) CONDUITS SHALL BE ROUTED SUCH THAT CONFLICT WITH ARRAY FOUNDATIONS IS AVOIDED.
4) ENCLOSURE SHALL BE MOUNTED SUCH THAT ALL CODE REQUIRED CLEARANCES ARE MET AND COMPLIED TO. (REFERENCE NEC ARTICLE 110.32)
5) REFER TO RACKING MANUFACTURER'S MANUAL FOR ADDITIONAL INFORMATION.
6) EMBEDMENT DEPTH VARIES, PER GEOTECHNICAL AND STRUCTURAL CALCULATION DETERMINATION.

B2 EQUIPMENT MOUNTING SECTION - ELEVATION

SCALE: NOT TO SCALE

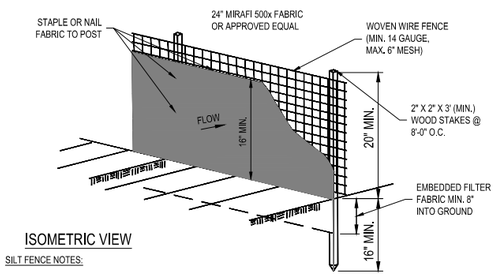
NOTES:
1. SEED INSIDE THE SOLAR ARRAY WITH NORTHEAST SOLAR POLLINATOR 3' MIX - ERNMX-612.
2. REFER TO APPENDIX C-3 OF SWPPP REPORT, STANDARD AND SPECIFICATIONS FOR PERMANENT CONSTRUCTION AREA PLANTING

NORTHEAST SOLAR POLLINATOR 3' MIX

PERCENT	BOTANICAL NAME	COMMON NAME
94.90%	FESTUCA OVINA	SHEEP FESCUE
2.50%	ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED
2.00%	CHAMAECRISTA FASCICULATA, PA ECOTYPE	PARTRIDGE PEA, PA ECOTYPE
0.30%	OENOTHERA FRUTICOSA VAR. FRUTICOSA	SUNDROPS
0.30%	TRADESCANTIA VIRGINIANA, SOUTHERN PA/ NORTHERN VA	VIRGINIA SPIDERWORT, SOUTHEASTERN PA/ NORTHERN VA BLEND

B4 GRASS RESTORATION DETAIL

SCALE: NOT TO SCALE



ISOMETRIC VIEW

SILT FENCE NOTES:

1. WOVEN WIRE FENCE SHALL BE SECURELY FASTENED TO FENCE POSTS WITH WIRE TIES OR STAPLES.

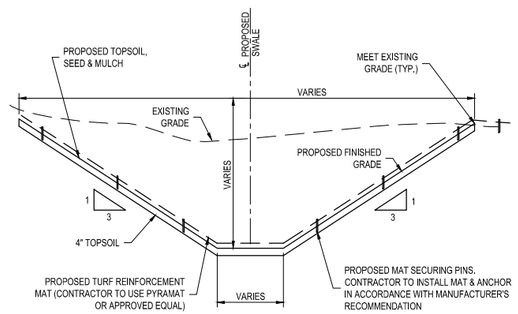
2. SILT FENCE FABRIC SHALL BE SECURELY FASTENED TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION, WHEN TWO SECTIONS OF SILT FENCE FABRIC ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.

3. MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR AS DIRECTED BY ENGINEER AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

4. CONTRACTOR SHALL REMOVE THE SILT FENCE AT THE APPROPRIATE TIME, DRESS THE DISTURBED AREAS, AND DISPOSE OF THE SILT FENCE.

A2 SILT FENCE DETAIL

SCALE: NOT TO SCALE



A3 VEGETATED SWALE

SCALE: NOT TO SCALE

A4 NOT USED

SCALE: NOT TO SCALE

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DESIGNED BY:
CHECKED BY: E.N. KENNA P.E.

EROSION AND SEDIMENT CONTROL DETAILS

C-501

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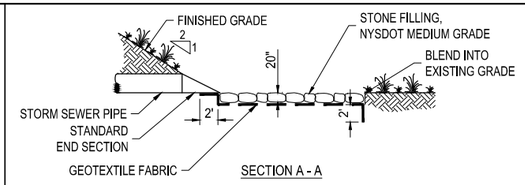
C1 NOT USED
SCALE: NOT TO SCALE

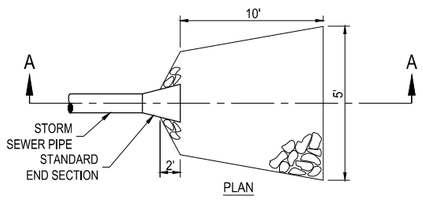
B1 NOT USED
SCALE: NOT TO SCALE

A1 NOT USED
SCALE: NOT TO SCALE

B2 ROCK INLET/OUTLET PROTECTION DETAIL
SCALE: NOT TO SCALE



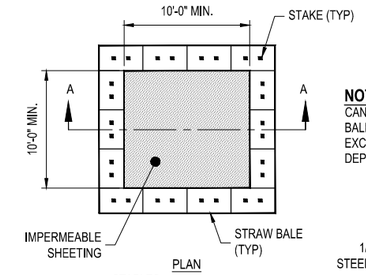
SECTION A - A



PLAN

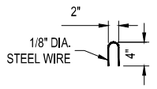
A2 NOT USED
SCALE: NOT TO SCALE

C3 TEMPORARY CONCRETE WASH-OUT AREA (STRAW BALE) DETAIL
SCALE: NOT TO SCALE

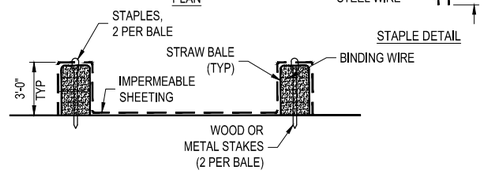


PLAN

NOTE:
CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH



STAPLE DETAIL

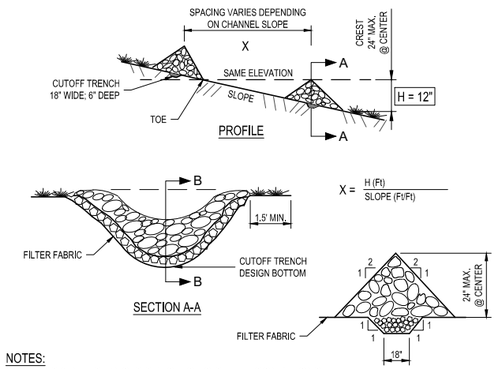


SECTION A-A

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER.
6. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

B3 CHECK DAM DETAIL
NOT TO SCALE



PROFILE

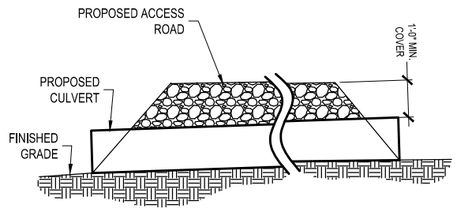
SECTION A-A

$X = \frac{H\ (Ft)}{SLOPE\ (Ft/Ft)}$

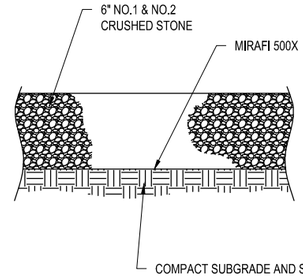
SECTION B-B

NOTES:
1. ROCK DAM SIZING IS SPECIFIC TO SWALE CONDITIONS.
2. SPECIFICALLY, THE HEIGHT OF THE CHECK DAM (H) IS 12".
3. REFER TO THE PLAN SHEETS FOR CHECK DAM SPACING.

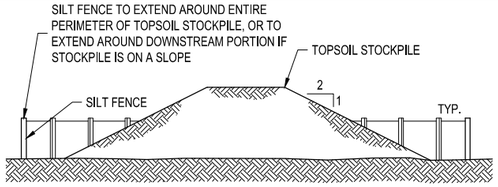
A3 TYPICAL CULVERT DETAIL
SCALE: NOT TO SCALE



B4 TYPICAL STONE YARD DETAIL (FOR STAGING AREA)
SCALE: NOT TO SCALE



A4 TYPICAL TOPSOIL STOCKPILE DETAIL
SCALE: NOT TO SCALE



TEMPORARY TOPSOIL STOCKPILE NOTES:
1. REFER TO SILT FENCE DETAIL FOR MATERIALS AND INSTALLATION METHODS.
2. IF THE STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, IT SHALL BE STABILIZED WITH BURLAP MATTING OR SEEDED WITHIN 7 DAYS OF COMPLETION TO MINIMIZE EROSION.
3. INSPECTION OF SILT FENCE SHALL BE AT LEAST ONCE PER WEEK AND AFTER RAIN EVENTS IN EXCESS OF 1/2". REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
4. SEDIMENT TRAPPED BY THE SILT FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHENEVER SIGNIFICANT ACCUMULATION OCCURS.
5. SILT FENCE SHALL BE MAINTAINED IN PLACE UNTIL TOPSOIL STOCKPILE HAS BEEN ELIMINATED AND SHALL BE REMOVED ONLY WHEN DIRECTED BY THE ENGINEER.
6. TOPSOIL STOCKPILE LOCATION SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE OWNER OR AN AUTHORIZED REPRESENTATIVE

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emeren Empowering Renewables

NY OLD ONEIDA SOLAR FARM, LLC
5792 OLD ONEIDA ROAD
ROME, NY 13440
ONEIDA COUNTY

MARK	DATE	DESCRIPTION
		REVISIONS

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	M. BUCKINGHAM
DESIGNED BY:	E.N.KENNA P.E.
CHECKED BY:	

EROSION AND SEDIMENT CONTROL DETAILS

C-502

Jan 05, 2024 – 11:34am
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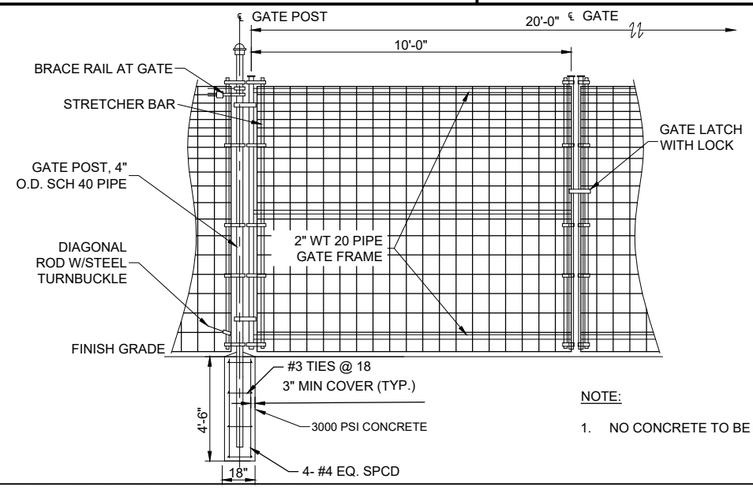
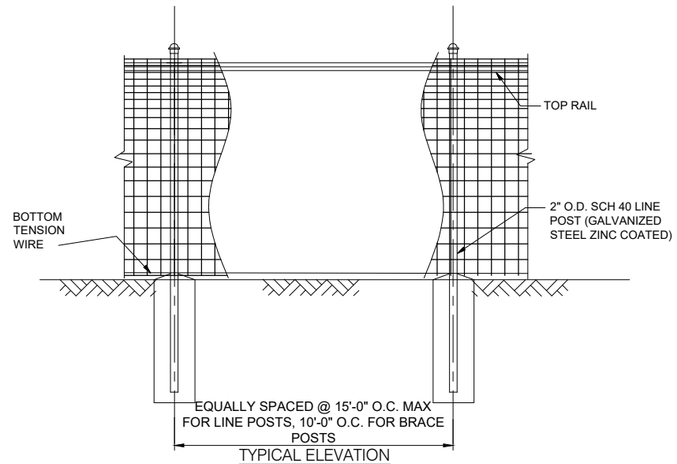


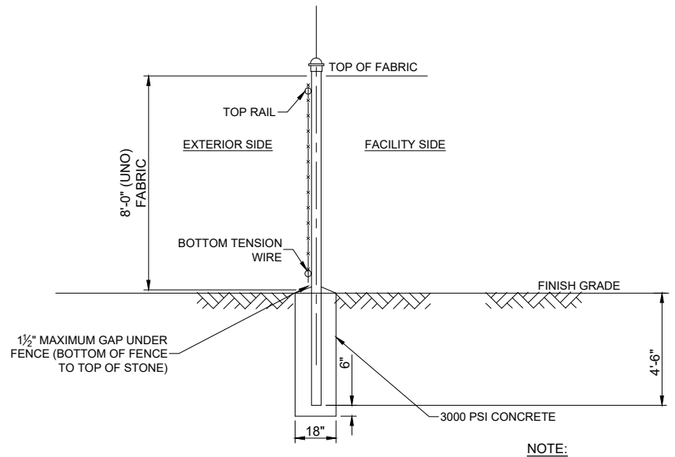
NOTE:

1. NO CONCRETE TO BE PLACED IN WETLAND AREAS.

C1 WOVEN WIRE DOUBLE SWING GATE DETAIL
NTS



TYPICAL ELEVATION



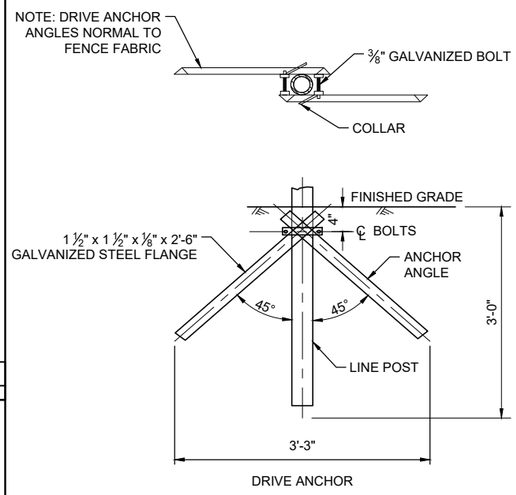
TYPICAL SECTION

NOTE:

1. NO CONCRETE TO BE PLACED IN WETLAND AREAS.

A1 WOVEN WIRE FENCE DETAIL
NTS

COLLAR: WELDABLE STEEL OR CAST STEEL GALVANIZED IN ACCORDANCE WITH SECTION 719-01 TYPE I OR CAST IRON OR MALLEABLE IRON.

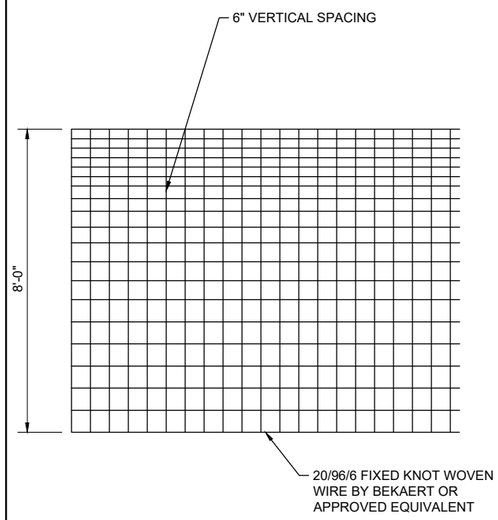


DRIVE ANCHOR

NOTE:

1. NO EXCAVATION, BACKFILL OR PLACEMENT OF CONCRETE IN WETLAND AREAS.

B3 DRIVE ANCHOR DETAIL
SCALE: X" = 1'-0"

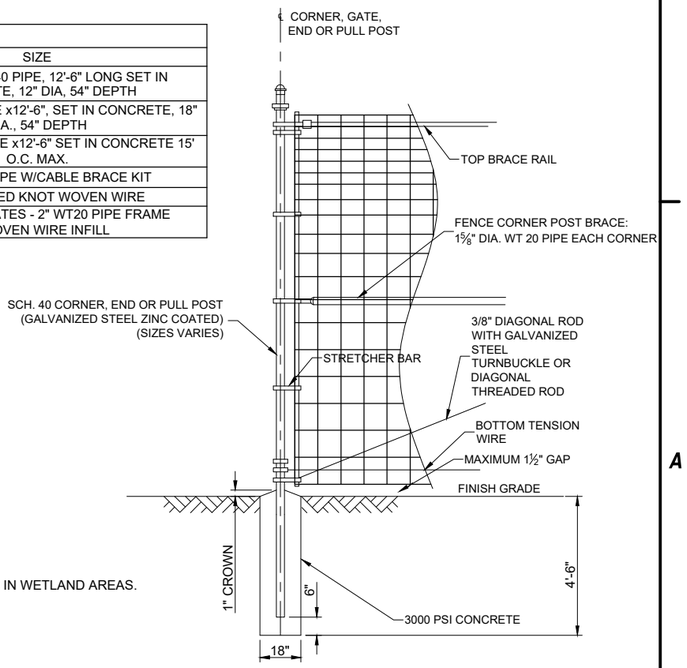


NOTE:

1. FENCE SHALL BE FIXED KNOT AND NON BARBED.

B4 FENCE FABRIC DETAIL
SCALE: X" = 1'-0"

FENCE SPECS	
FENCE PART	SIZE
TERMINAL & BRACE POSTS	2½" O.D. SCH 40 PIPE, 12'-6" LONG SET IN CONCRETE, 12" DIA, 54" DEPTH
GATE POSTS	4" O.D. SCH 40 PIPE x12'-6", SET IN CONCRETE, 18" DIA., 54" DEPTH
LINE POSTS	2" O.D. SCH. 40 PIPE x12'-6" SET IN CONCRETE 15' O.C. MAX.
BRACING	1⅝" WT20 PIPE W/CABLE BRACE KIT
COVERAGE	20/96/6 FIXED KNOT WOVEN WIRE
GATES	20' DOUBLE GATES - 2" WT20 PIPE FRAME W/WOVEN WIRE INFILL



NOTE:

1. NO CONCRETE TO BE PLACED IN WETLAND AREAS.

A3 WOVEN WIRE CORNER, END OR PULL POST DETAIL
SCALE: X" = 1'-0"

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ROME, NY 13440

ONEIDA COUNTY

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	M. BUCKINGHAM
DESIGNED BY:	
CHECKED BY:	E.N. KENNA, P.E.

FENCE DETAILS

C-503

NY OLD ONEIDA
SOLAR FARM, LLC

SITE NAME: NY OLD ONEIDA SOLAR FARM, LLC

FACILITY OWNER: TBD

EMERGENCY CONTACT: TBD

PRIVATE PROPERTY - NO TRESPASSING

(x1)
.063" ALUMINUM
DIRECT PRINT, GLOSS LAM
(x4) CORNER HOLES, 1/4"
1 SIDED- SF

A1 EMERGENCY CONTACT SIGN
NOT TO SCALE

14"x10" OUTDOOR
DURABLE ALUMINUM

A3 HIGH VOLTAGE SIGN
NOT TO SCALE

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ROME, NY 13440
ONEIDA COUNTY

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REVISIONS

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	M. BUCKINGHAM
DESIGNED BY:	-
CHECKED BY:	E.N. KENNA, P.E.

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SIGNAGE DETAILS

C-504

Jan 05, 2024 — 11:34am
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OLD ONEIDA ROAD
(66' WIDE – PUBLIC)

JAMES ELLIOT, N/F
INST. No. 2016–006954
TAX MAP No. 272.–02–17
ZONE: AG

ROBERT T. & ELAINE M. NELSON, N/F
INST. No. 2022–012435
TAX MAP No. 272.–02–18
ZONE: AG

JAMES D. ELLIOT, N/F
INST. No. 2014–013486
TAX MAP No. 257.004–01–31
ZONE: AG

THOMAS H. BREEN, N/F
BOOK 2722, PAGE 481
TAX MAP No. 257.004–01–30
ZONE: AG

A. WAGNER & J. FREUND, N/F
TAX MAP No. 257.004–01–28
ZONE: AG

HILLERY D. HYLLA, N/F
INST. No. 2016–009253
TAX MAP No. 257.004–01–29
ZONE: AG

JOSEPH F. PERAINO, N/F
INST. No. 2008–006675
TAX MAP No. 257.004–01–27
ZONE: AG

JAMES D. ELLIOT, N/F
INST. No. 2014–013486
TAX MAP No. 272.–02–36
ZONE: AG

THOMAS H. BUTLER, N/F
INST. No. 2018–018271
TAX MAP No. 272.–02–35
ZONE: AG

PEOPLE OF THE STATE OF NEW YORK, N/F
INST. No. 2010–006305
TAX MAP No. 258–01–05.001
ZONE: I–G

BENCHMARK No. 1
BENCHMARK No. 2
N59° 46' 51"E 189'± 188'±
N59° 46' 51"E 985'± 985'±
CENTERLINE ROAD
ROAD BOUNDARY
OVERHEAD UTILITIES± (TYP.)
33.00'
S30° 13' 09"E 82.50' 115.50'
99.00'
N59° 46' 51"E
N30° 13' 09"W 82.50' 115.50'
24"x24" BOX CULVERT
EDGE OF PAVEMENT±
DOUBLE YELLOW LINE±
INV.=483.50
INV.=483.42
INV.=487.12
INV.=490.85
INV.=490.56
INV.=491.71
INV.=495.28
INV.=494.93
INV.=497.78
INV.=499.80
GRAVEL DRIVE
GARAGE
B-BALL HOOP±
DEBRIS PILE±
S30° 19' 51"E 177.73' 210.73'
N59° 40' 09"E 681.71'
20"TREE
22"TREE
25"TREE
65"TREE
SHED±
TREES & BRUSH±
S31° 23' 22"E 1449.92'
BARBED WIRE FENCE REMNANTS±
229.56' S61° 01' 51"W
853.74' S30° 59' 54"E
3501.23'
3534.24' OVERALL
N31° 35' 41"W
N.Y. CENTRAL

GRAPHIC SCALE

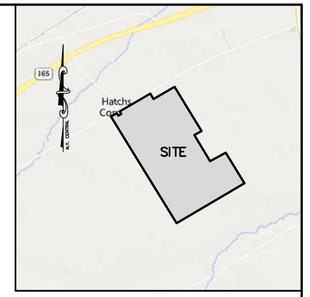
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

BULK REGULATIONS	
PRESENT ZONE:	AG Agricultural
Minimum Lot Area	1 acre
Minimum Building Height	35 feet
Minimum Front Yard Setback	30 feet
Minimum Side Yard Setback	30 feet
Minimum Rear Yard Setback	30 feet

BENCHMARKS:

BENCHMARK No. 1 – MAG NAIL 1' UP IN THE NORTH SIDE OF POLE No. NG 150. ELEVATION=489.37'

BENCHMARK No. 2 – MAG NAIL 1' UP IN THE NORTH SIDE OF POLE No. NG 147. ELEVATION=488.03'



LOCATION PLAN
Scale: 1" = 2000'

NOTES:

Total area: 154.59± acres
Present Zone: Agricultural (AG).
Elevations referred to NAVD 88.
Location of underground utilities taken by field measurement where practicable, otherwise taken from various other sources and are approximate only.
The premises shown hereon is within Zone "X" (Areas determined to be outside the 0.2% annual chance floodplain.) according to Federal Emergency Management Agency National Flood Insurance Program Flood Insurance Rate Map Community Panel Nos. 36065C545F & 36065C0565F, effective date: September 27, 2013.
Tax Map No. 572.–02–31 & Part of 572.–02–36

LEGEND:

- indicates original grade
- indicates light stand
- indicates utility pole, anchor & overhead lines
- indicates iron pipe and/or monument found
- indicates bollard
- indicates sign
- indicates storm culvert
- indicates gas main, gas valve & gas line marker
- indicates water main, water valve & hydrant
- indicates storm sewer, catch basin & manhole
- indicates sanitary sewer, sewer vent & manhole
- indicates underground telephone line, manhole & box
- indicates underground electric line & manhole
- indicates underground television cable & box
- indicates boundary line
- indicates adjacent parcel line
- indicates old/original parcel line
- indicates easement line
- indicates centerline road

\\RSERVER\Civil 3D Projects\ONEIDA COUNTY\ROME\OLD ONEIDA RD_5792\DWG\OLD ONEIDA RD_5792.dwg

REVISIONS	
ADD TOPO	11–16–2023

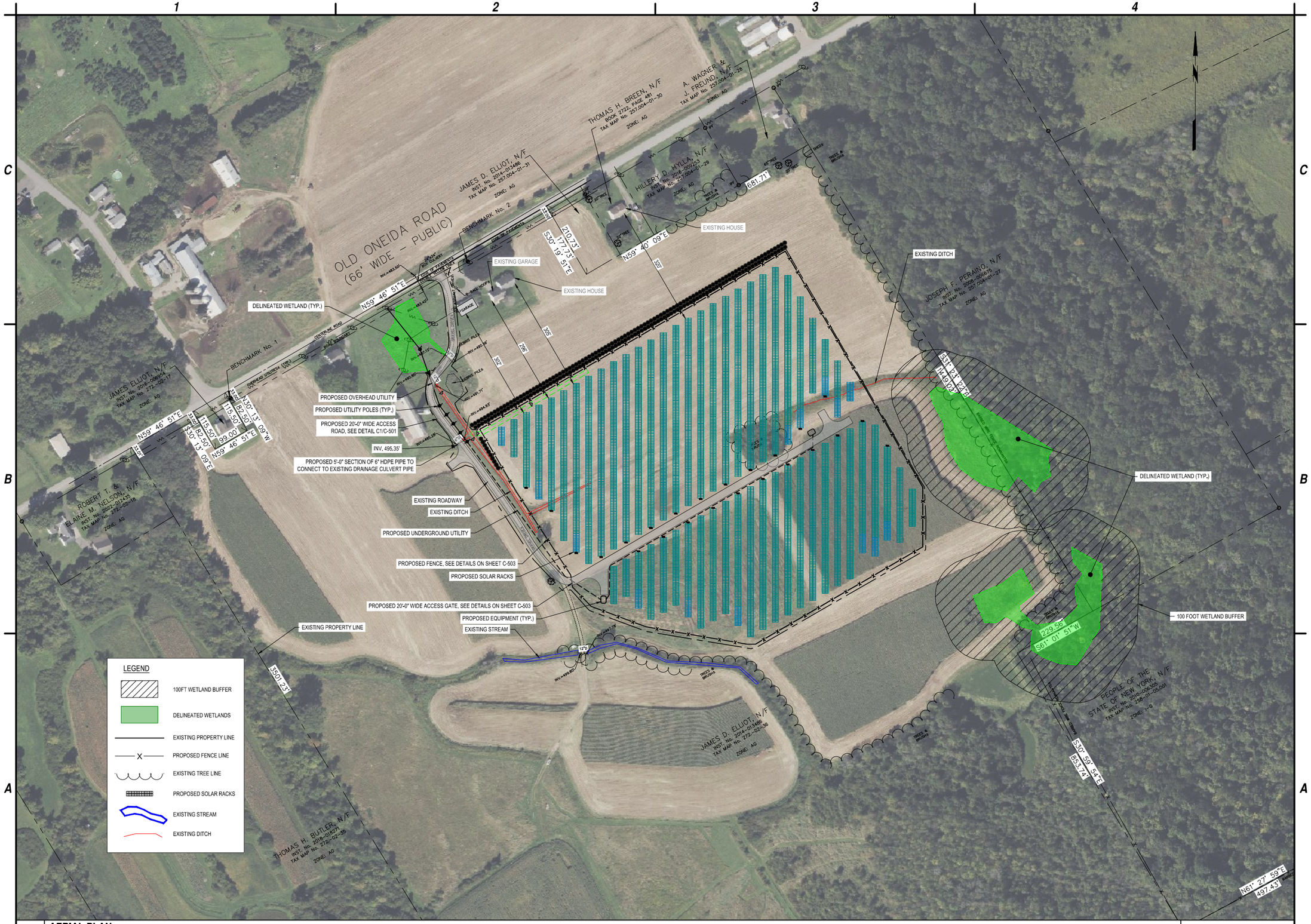
PARTIAL TOPOGRAPHIC SURVEY
5792 OLD ONEIDA ROAD

CITY OF ROME
ONEIDA COUNTY, NEW YORK

STATE OF NEW YORK · TIMOTHY J. FOTER · LICENSED LAND SURVEYOR · NO. 050806

IANUZI & ROMANS LAND SURVEYING, P.C.
5251 WITZ DRIVE
NORTH SYRACUSE, NY 13212
PHONE: (315) 457–7200
FAX: (315) 457–9251
EMAIL: mail@romanspc.com

DATE: AUGUST 29, 2023
SCALE: 1" = 100'
FILE No.: 301.143
SHEET No.
F.B. No. 1713



Apr 12, 2024 - 9:43am
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LICENSED PROFESSIONAL ENGINEER
058339

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ONEIDA COUNTY

MARK	DATE	DESCRIPTION

REVISIONS

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DESIGNED BY:	
CHECKED BY:	

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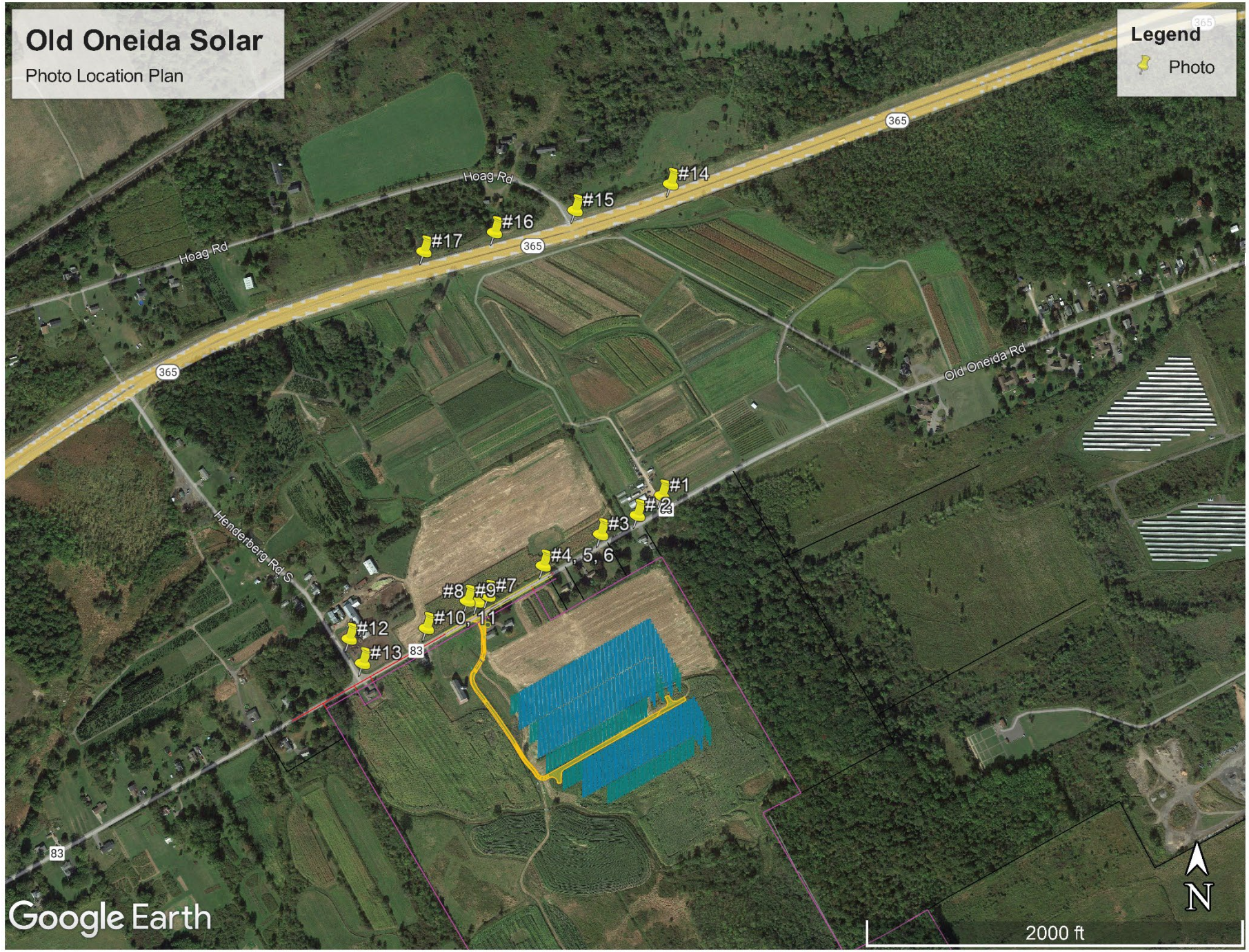
AERIAL PLAN

C-101



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Old Oneida Road Solar
Old Oneida Road
Rome, NY

Photo Location Map

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Photo Simulation – Existing Conditions

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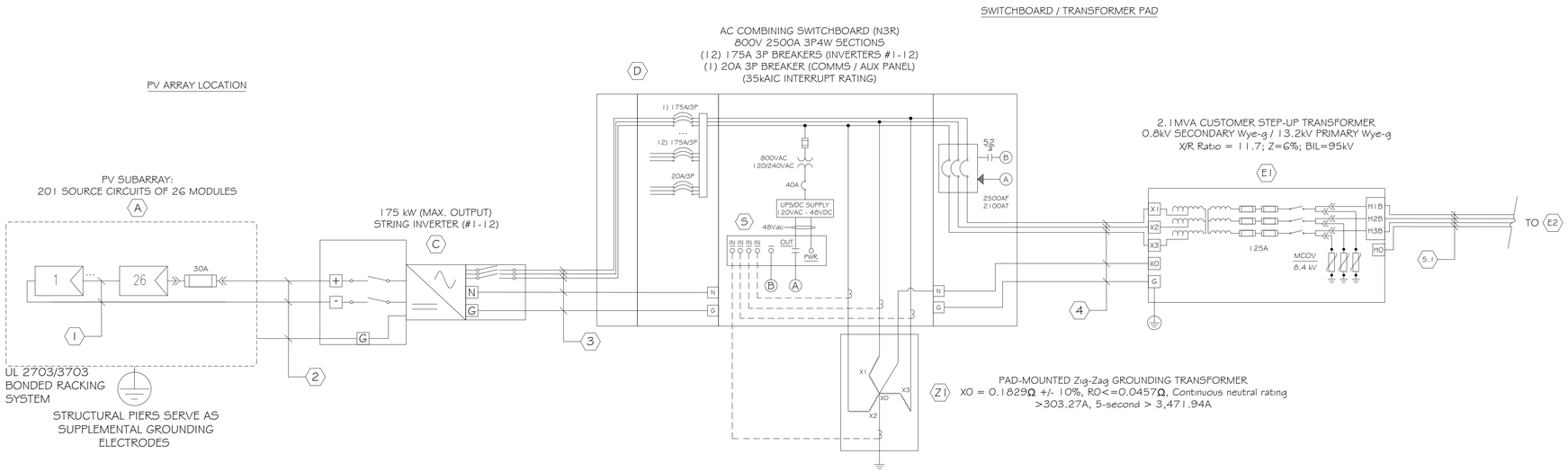
Photo #16a – Route 365 West Bound
Emeren Empowering Renewables
NY Old Oneida Solar Farm, LLC

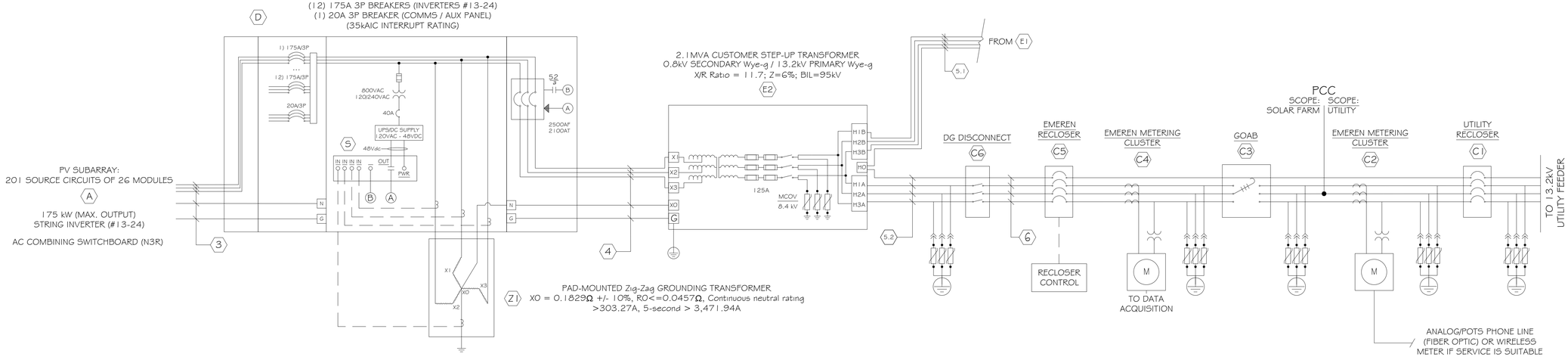
Photo Simulation – Existing Conditions

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

emeren® Empowering Renewables

Photo #17a – Route 365 West Bound
Emeren Empowering Renewables
NY Old Oneida Solar Farm, LLC





NOTES

- Inverters complaint with UL1741SB/IEEE1547-2020;
- Inverters settings must match the following tables:

81U/180 Settings

Protection Element	Pickup(Hz)	Clearing Time(s)
81U-2	57	0.16
81U-1	59	300
81O-1	61	180
81O-2	61.8	0.16

27/59 Settings

Protection Element	Pickup(per unit)	Clearing Time(s)
27-2	V<=0.45	0.16
27-1	0.45<=V<=0.88	2
59-1	1.1<=V<=1.2	1
59-2	V>=1.2	0.16

PV SYSTEM	
DC CAPACITY (MWp)	5.96
AC Capacity (MW)	4.2
DC/AC ratio	1.42
PITCH (ft)	29.9
GCR	53.3%
PCS RATING* (MVA)	4.2
INTERCONNECTION (kV)	13.2
PV MODULE	JINKO SOLAR
PV MODEL	JKM570N-72HL4-BDV
# IN PV STRING	26
STRING TOTAL #	402
INVERTER PCS	FIMER
PCS MODEL	PVS-175-TL
PCS TOTAL #	24

emeren
Empowering Renewables

EMEREN GROUP LTD.

100 First Stamford Place, Suite 302, Stamford CT, 06902 USA

Applicant: Old Oneida Solar LLC

NY ROME OLD ONEIDA ROAD SOLAR FARM

5792 Old Oneida Road
Rome, NY 13440

43°10'44.67"N, 75°30'14.23"W
43.179074, -75.503953

Owner: Elliot, James D
Tax Parcel ID:
301389-272-000-0002-036

OVERALL SYSTEM SIZE
5.88MWdc / 4.2MWac

REV	DESCRIPTION	BY	DATE
7	LAYOUT UPDATES	PS	11/09/23
6	LAYOUT UPDATES	PS	10/30/23
5	STAGING AREAS UPDATES	PS	05/10/23
4	TURNAROUNDS UPDATES	PS	05/05/23
3	LAYOUT UPDATES	PS	08/10/23

SHEET TITLE

IFP 3 LINE DIAGRAM

PAPER SIZE	PLOT 24" x 36" FOR FULL SCALE
SCALE	NTS
DATE	11/18/2023
DRAWING NO.	E-100

FORM "K"
APPENDIX A
NIAGARA MOHAWK POWER CORPORATION d/b/a NATIONAL GRID
NEW YORK STATE STANDARDIZED CONTRACT
FOR INTERCONNECTION OF NEW DISTRIBUTED GENERATION UNITS WITH CAPACITY OF 5 MW OR LESS CONNECTED IN PARALLEL WITH UTILITY DISTRIBUTION SYSTEMS

Customer Information:

Name: John Ewen (ReneSolar Power Holdings LLC)

Address: 5984 Old Oneida Road
Rome New York
13440

Telephone: (203) 550-7157

Fax:

Email: john.ewen@renesolapower.com

UtilityAccountNumber: 8955549012

Unit Application/File No.: CLA 25.1-13.
00302519

Utility Information:

Name: Niagara Mohawk Power Corporation d/b/a National Grid

Address: 1125 Broadway
Albany, NY 12204

Telephone: (518) 433-3392

Fax: (518) 433-3995

Email: DistributedGenerationServices-NY@nationalgrid.com

DEFINITIONS

Dedicated Facilities means the equipment and facilities on the Utility's system necessary to permit operation of the Unit in parallel with the Utility's system.

Delivery Service means the services the Utility may provide to deliver capacity or energy generated by Customer to a buyer to a delivery point(s), including related ancillary services.

"Net energy metering" means the use of a net energy meter to measure, during the billing period applicable to a customer-generator, the net amount of electricity supplied by an electric corporation and provided to the corporation by a customer-generator.

"SIR" means the New York State Standardized Interconnection Requirements for new distributed generation units with a nameplate capacity of 5 MW or less connected in parallel with the Utility's distribution system

"Unit" means the distributed generation Unit with a nameplate capacity of 5 MW or less located on the Customer's premises at the time the Utility approves such Unit for operation in parallel with the Utility's system. This Agreement relates only to such Unit, but a new agreement shall not be required if the Customer makes physical alterations to the Unit that do not result in an increase in its nameplate generating capacity. The nameplate generating

capacity of the Unit shall not exceed 5 MW, except for fuel cell electric generating units which shall not exceed 1.5 MW and farm waste generating units shall not exceed 1.0 MW.

I. TERM AND TERMINATION

1.1 Term: This Agreement shall become effective when executed by both Parties and shall continue in effect until terminated.

1.2 Termination: This Agreement may be terminated as follows:

a. The Customer may terminate this Agreement at any time, by giving the Utility sixty (60) days' written notice.

b. Failure by the Customer to seek final acceptance by the Utility within twelve (12) months after completion of the utility construction process described in the SIR shall automatically terminate this Agreement.

c. Either Party may, by giving the other Party at least sixty (60) days' prior written notice, terminate this Agreement in the event that the other Party is in default of any of the material terms and conditions of this Agreement. The terminating Party shall specify in the notice the basis for the termination and shall provide a reasonable opportunity to cure the default.

d. The Utility may, by giving the customer at least sixty (60) days' prior written notice, terminate this Agreement for cause. The Customer's non-compliance with an upgrade to the SIR, unless the Customer's installation is "grandfathered," shall constitute good cause.

1.3 Disconnection and Survival of Obligations: Upon termination of this Agreement the Unit will be disconnected from the Utility's electric system. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

1.4 Suspension: This Agreement will be suspended during any period in which the Customer is not eligible for delivery service from the Utility

II. SCOPE OF AGREEMENT

2.1 Scope of Agreement: This Agreement relates solely to the conditions under which the Utility and the Customer agree that the Unit may be interconnected to and operated in parallel with the Utility’s system.

2.2 Electricity Not Covered: The Utility shall have no duty under this Agreement to account for, pay for, deliver, or return in kind any electricity produced by the Facility and delivered into the Utility’s System unless the system is net metered as described in Public Service Law Sections 66-j or 66-l.

III. INSTALLATION, OPERATION AND MAINTENANCE OF UNIT

3.1 Compliance with SIR: Subject to the provisions of this Agreement, the Utility shall be required to interconnect the Unit to the Utility's system, for purposes of parallel operation, if the Utility accepts the Unit as in compliance with the SIR. The Customer shall have a continuing obligation to maintain and operate the Unit in compliance with the SIR.

3.2 Observation of the Unit - Construction Phase: The Utility may, in its discretion and upon reasonable notice, conduct reasonable on-site verifications during the construction of the Unit. Whenever the Utility chooses to exercise its right to conduct observations herein it shall specify to the Customer its reasons for its decision to conduct the observation. For purposes of this paragraph and paragraphs 3.3 through 3.5, the term "on-site verification" shall not include testing of the Unit, and verification tests shall not be required except as provided in paragraphs 3.3 and 3.4.

3.3 Observation of the Unit - Ten-day Period: The Utility may conduct on-site verifications of the Unit and observe the execution of verification testing within a reasonable period of time, not exceeding ten (10) business days after system installation. The applicant's facility will be allowed to commence parallel operation upon satisfactory completion of the verification test. The applicant must have complied with and must continue to comply with all contractual and technical requirements.

3.4 Observation of the Unit - Post-Ten-day Period: If the Utility does not perform an on-site verification of the Unit and observe the execution of verification testing within the ten-day period, the Customer will send the Utility within five (5) days of the verification testing a written notification certifying that the Unit has been installed and tested in compliance with the SIR, the utility-accepted design and the equipment manufacturer's instructions. The Customer may begin to produce energy upon satisfactory completion of the verification test. After receiving the verification test notification, the Utility will either issue to the Customer a formal letter of acceptance for interconnection, or may request that the applicant and utility set a date and time to conduct an on-site verification of the Unit and make reasonable inquiries of the Customer, but only for purposes of determining whether the verification tests were properly performed. The Customer shall not be required to perform the verification tests a second time, unless irregularities appear in the verification test report or there are other objective indications that the tests were not properly performed in the first instance.

3.5 Observation of the Unit - Operations: The Utility may conduct on-site verification of the operations of the Unit after it commences operations if the Utility has a reasonable basis for doing so based on its responsibility to provide continuous and reliable utility service or as authorized by the provisions of the Utility's Retail Electric Tariff relating to the verification of customer installations generally.

3.6 Costs of Dedicated Facilities: During the term of this Agreement, the Utility shall design, construct and install the Dedicated Facilities. The Customer shall be responsible for paying the incremental capital cost of such Dedicated Facilities attributable to the Customer's Unit. All costs associated with the operation and maintenance of the Dedicated Facilities after the Unit first produces energy shall be the responsibility of the Utility.

IV. DISCONNECTION OF THE UNIT

4.1 Emergency Disconnection: The Utility may disconnect the Unit, without prior notice to the Customer (a) to eliminate conditions that constitute a potential hazard to Utility personnel or the general public; (b) if pre-emergency or emergency conditions exist on the Utility system; (c) if a hazardous condition relating to the Unit is observed by a Utility inspection; or (d) if the Customer has tampered with any protective device. The Utility shall notify the Customer of the emergency if circumstances permit.

4.2 Non-Emergency Disconnection: The Utility may disconnect the Unit, after notice to the responsible party has been provided and a reasonable time to correct, consistent with the conditions, has elapsed, if (a) the Customer has failed to make available records of verification tests and maintenance of his protective devices; (b) the Unit system interferes with Utility equipment or equipment belonging to other customers of the Utility; (c) the Unit adversely affects the quality of service of adjoining customers.

4.3 Disconnection by Customer: The Customer may disconnect the Unit at any time.

4.4 Utility Obligation to Cure Adverse Effect: If, after the Customer meets all interconnection requirements, the operations of the Utility are adversely affecting the performance of the Unit or the Customer's premises, the Utility shall immediately take appropriate action to eliminate the adverse effect. If the Utility determines that it needs to upgrade or reconfigure its system the Customer will not be responsible for the cost of new or additional equipment beyond the point of common coupling between the Customer and the Utility.

V. ACCESS

5.1 Access to Premises: The Utility shall have access to the disconnect switch of the Unit at all times. At reasonable hours and upon reasonable notice consistent with Section III of this Agreement, or at any time without notice in the event of an emergency (as defined in paragraph 4.1), the Utility shall have access to the Premises.

5.2 Utility and Customer Representatives: The Utility shall designate, and shall provide to the Customer, the name and telephone number of a representative or representatives who can be reached at all times to allow the Customer to report an emergency and obtain the assistance of the Utility. For the purpose of allowing access to the premises, the Customer shall provide the Utility with the name and telephone number of a person who is responsible for providing access to the Premises.

5.3 Utility Right to Access Utility-Owned Facilities and Equipment: If necessary for the purposes of this Agreement, the Customer shall allow the Utility access to the Utility's equipment and facilities located on the Premises. To the extent that the Customer does not own all or any part of the property on which the Utility is required to locate its equipment or facilities to serve the Customer under this Agreement, the Customer shall secure and provide in favor of the Utility the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

VI. DISPUTE RESOLUTION

6.1 Good Faith Resolution of Disputes: Each Party agrees to attempt to resolve all disputes arising hereunder promptly, equitably and in a good faith manner.

6.2 Mediation: If a dispute arises under this Agreement, and if it cannot be resolved by the Parties within ten (10) business days after written notice of the dispute, the parties agree to submit the dispute to mediation by a mutually acceptable mediator, in a mutually convenient location in New York State, in accordance with the then current CPR Institute for Dispute Resolution Mediation Procedure, or to mediation by a mediator provided by the New York Public Service Commission. The Parties agree to participate in good faith in the mediation for a period of up to 90 days. If the Parties are not successful in resolving their disputes through mediation, then the parties may refer the dispute for resolution to the New York Public Service Commission, which shall maintain continuing jurisdiction over this Agreement.

6.3 Escrow: If there are amounts in dispute of more than two thousand dollars ($2,000), the Customer shall either place such disputed amounts into an independent escrow account pending final resolution of the dispute in question, or provide to the Utility an appropriate irrevocable standby letter of credit in lieu thereof.

VII. INSURANCE

7.1 The Customer is not required to provide general liability insurance coverage as part of this Agreement, the SIR, or any other Utility requirement. Due to the risk of incurring damages however, the Public Service Commission recommends that every distributed generation customer protect itself with insurance.

7.2 Effect: The inability of the Utility to require the Customer to provide general liability insurance coverage for operation of the Unit is not a waiver of any rights the Utility may have to pursue remedies at law against the Customer to recover damages.

VIII. MISCELLANEOUS PROVISIONS

8.1 Beneficiaries: This Agreement is intended solely for the benefit of the Parties hereto, and if a Party is an agent, it's principal. Nothing in this Agreement shall be construed to create any duty to, or standard of care with reference to, or any liability to, any other person.

8.2 Severability: If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction, such portion or provision shall be deemed separate and independent, and the remainder of this Agreement shall remain in full force and effect.

8.3 Entire Agreement: This Agreement constitutes the entire Agreement between the Parties and supersedes all prior agreements or understandings, whether verbal or written.

8.4 Waiver: No delay or omission in the exercise of any right under this Agreement shall impair any such right or shall be taken, construed or considered as a waiver or relinquishment thereof, but any such right may be exercised from time to time and as often as may be deemed expedient. In the event that any agreement or covenant herein shall be breached and thereafter waived, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive any other breach hereunder.

8.5 Applicable Law: This Agreement shall be governed by and construed in accordance with the law of the State of New York.

8.6 Amendments: This Agreement shall not be amended unless the amendment is in writing and signed by the Utility and the Customer.

8.7 Force Majeure: For purposes of this Agreement, "Force Majeure Event" means any event: (a) that is beyond the reasonable control of the affected Party; and (b) that the affected Party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lightning, storms, and other natural calamities; explosions or fires; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible.

8.8 Assignment to Corporate Party: At any time during the term, the Customer may assign this Agreement to a corporation or other entity with limited liability, provided that the Customer obtains the consent of the Utility. Such consent will not be withheld unless the Utility can demonstrate that the corporate entity is not reasonably capable of performing the obligations of the assigning Customer under this Agreement.

8.9 Assignment to Individuals: At any time during the term, the Customer may assign this Agreement to another person, other than a corporation or other entity with limited liability, provided that the assignee is the owner, lessee, or is otherwise responsible for the Unit.

8.10 Permits and Approvals: Customer shall obtain all environmental and other permits lawfully required by governmental authorities prior to the construction and for the operation of the Unit during the term of this Agreement.

8.11 Limitation of Liability: Neither by inspection, if any, or non-rejection, nor in any other way, does the Utility give any warranty, express or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, installed or maintained by the Customer or leased by the Customer from third parties, including without limitation the Unit and any structures, equipment, wires, appliances or devices appurtenant thereto.

ACCEPTED AND AGREED:

Customer Signature: John Ewen
John Ewen (Jul 29, 2020 10:19 EDT)

Printed Name: John Ewen (ReneSolar Power Holdings LLC)

Title: President

Date: 07/29/2020 10:19:40

Utility Signature: Michael F. Pilawa

Printed Name: Digitally signed by Michael F. Pilawa
DN: cn=Michael F. Pilawa, o=National Grid, ou=Technical Sales and Engineering Support, email=Michael.Pilawa@us.ngrid.com, c=US
Date: 2015.08.19 13:05:02 -04'00'

Title: Michael F. Pilawa, Manager

Date: 08/09/21

To whom it may concern;

John Ewen (ReneSolar Power Holdings LLC)

herby authorizes Bradley Davis RENESOLA

To act as our agent in dealings with National Grid in regard to the output of proposed solar electric generation with anticipated construction to start :

In this regard Bradley Davis RENESOLA may act on our behalf in matters pertaining to the interconnection of distribution generation with National Grid, including signing of all documents relating to this matter.

John Ewen
John Ewen (Jul 29, 2020 10:19 EDT)

07/29/2020 10:19:40

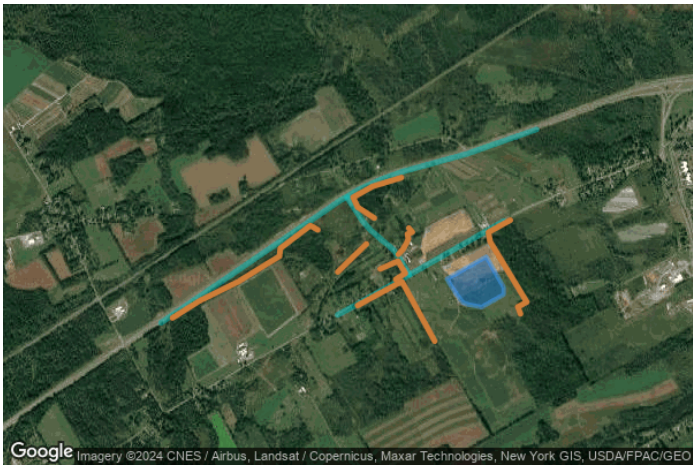
Customer Signature & Date

Renesola - Old Oneida

OldOneida

Created Dec 21, 2023
Updated Apr 03, 2024
Time-step 1 minute
Timezone offset UTC-5
Minimum sun altitude 0.0 deg
Site ID 108532.18816

Project type Advanced
Project status: active
Category 1 MW to 5 MW



Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

PV Analysis Methodology: **Version 2**
Enhanced subtended angle calculation: **On**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
Old Oneida	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 15.5 acres

Name: Old Oneida
Description: Tracking at 9.5 height
Footprint area: 15.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 0.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	43.177632	-75.504392	496.32	9.50	505.82
2	43.177227	-75.504068	498.31	9.50	507.81
3	43.176836	-75.503704	502.14	9.50	511.64
4	43.176372	-75.503217	504.38	9.50	513.88
5	43.176253	-75.502848	502.99	9.50	512.49
6	43.176113	-75.501815	508.35	9.50	517.85
7	43.176788	-75.500181	509.60	9.50	519.10
8	43.177175	-75.500174	505.23	9.50	514.73
9	43.178844	-75.501463	498.33	9.50	507.83

Route Receptor(s)

Name: Henderburg Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	43.182066	-75.511847	470.48	4.00	474.48
2	43.180830	-75.510731	469.08	4.00	473.08
3	43.180580	-75.510452	469.40	4.00	473.40
4	43.180283	-75.510076	467.19	4.00	471.19
5	43.179798	-75.509336	468.93	4.00	472.93
6	43.179453	-75.508746	473.79	4.00	477.79
7	43.179172	-75.508328	480.77	4.00	484.77
8	43.178679	-75.507877	481.42	4.00	485.42
9	43.177873	-75.507201	487.81	4.00	491.81

Name: Old Oneida Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	43.175687	-75.512543	488.31	4.00	492.31
2	43.176192	-75.511260	498.17	4.00	502.17
3	43.177690	-75.507607	488.67	4.00	492.67
4	43.178246	-75.506266	490.12	4.00	494.12
5	43.178778	-75.504979	487.00	4.00	491.00
6	43.179551	-75.503108	484.01	4.00	488.01
7	43.180778	-75.500153	483.29	4.00	487.29

Name: Route 365 EB
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	43.175257	-75.525707	469.95	4.00	473.95
2	43.181250	-75.513648	466.10	4.00	470.10
3	43.181849	-75.512448	468.23	4.00	472.23
4	43.182491	-75.510968	470.16	4.00	474.16
5	43.183038	-75.509315	468.44	4.00	472.44
6	43.183484	-75.507610	465.45	4.00	469.45
7	43.183860	-75.505732	464.54	4.00	468.54
8	43.184433	-75.502892	463.20	4.00	467.20
9	43.185753	-75.497719	461.30	4.00	465.30

Obstruction Components

Name: Obstruction 1
Upper edge height: 10.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	43.175523	-75.524851	469.02
2	43.176446	-75.522834	481.71
3	43.177494	-75.519937	484.23
4	43.178871	-75.516879	482.19
5	43.179301	-75.516811	477.83
6	43.180537	-75.514579	466.80
7	43.180302	-75.514022	467.42

Name: Obstruction 2
Upper edge height: 10.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	43.178018	-75.512531	468.86
2	43.179536	-75.510407	467.60

Name: Obstruction 3
Upper edge height: 10.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	43.183142	-75.507789	462.98
2	43.182665	-75.509924	464.69
3	43.182071	-75.511394	469.90
4	43.181531	-75.511051	468.97
5	43.180944	-75.509817	466.00

Name: Obstruction 4
Upper edge height: 10.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	43.174261	-75.505314	513.24
2	43.177500	-75.507760	488.94
3	43.176193	-75.511064	501.72

Name: Obstruction 5
Upper edge height: 10.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	43.178181	-75.509369	492.68
2	43.178603	-75.508050	480.45
3	43.177946	-75.507502	484.82
4	43.177609	-75.508221	489.96

Name: Obstruction 6
Upper edge height: 10.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	43.180829	-75.499674	488.55
2	43.180172	-75.501305	484.44
3	43.179656	-75.501176	487.97
4	43.176385	-75.498451	523.55
5	43.176119	-75.499116	516.02
6	43.175744	-75.498923	521.67

Name: Obstruction 7
Upper edge height: 10.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	43.178976	-75.508023	482.64
2	43.179234	-75.507691	480.15
3	43.179594	-75.507401	478.32
4	43.179836	-75.507272	475.27
5	43.180079	-75.507337	473.40
6	43.180181	-75.506982	470.63
7	43.180400	-75.507240	468.54

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt deg	Orientation deg	"Green" Glare min	"Yellow" Glare min	Energy Produced kWh	Data File
Old Oneida	SA tracking	SA tracking	0	0	-	-

PV & Receptor Analysis Results

Results for each PV array and receptor

Old Oneida no glare found

Component	Green glare (min)	Yellow glare (min)
Route: Henderburg Road	0	0
Route: Old Oneida Road	0	0
Route: Route 365 EB	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not automatically account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographi obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- 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.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, nc discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

January 5, 2024

Mark Domenico, RA.
Chief Code Enforcement Officer & Building Inspector
198 N Washington Street
Rome, NY 13440

Re: **NY Old Oneida Solar Farm, LLC - Noise Assessment**
5792 Old Oneida Road, Rome, New York 13440

Dear Mr. Domenico and City of Rome ZBA Members**:**

NY Old Oneida Solar Farm, LLC proposes the construction of a ground-mounted solar farm and associated electrical appurtenances at a property at 5792 Old Oneida Road, in the City of Rome, New York (hereafter "subject property"). The approximate 144-acre subject property is on the south side of Old Oneida Road. C&S Engineers, Inc. (C&S) has prepared a noise assessment to identify anticipated noise levels from the proposed project at the subject property boundary.

In general, the proposed solar photovoltaic (PV) system is proposed for installation within an approximate 17.6-acre site on the subject parcel. The proposed facilities will be located within a secured, fenced area. Underground electric facilities will be installed throughout the site. Noise will be generated by the inverter equipment, located throughout the array and transformer equipment located on two equipment pads located within the array. The proposed site plan (Attachment 1) shows the location of the two equipment pads and the locations of the inverters closest to each of the property lines. The site plan also indicates the proximity of the inverters to the parcel's closest property lines and to the closest residential property line adjacent to the site.

The information on the equipment provided by the equipment manufacturer (Attachment 2) lists the maximum noise level output as follows;

- 175 kW inverter < 65 dB at a distance of 1.0 meter
- Typical transformer - 61 dB at a distance of 1.0 meter

The equipment is proposed to be located on two equipment pads located within the array, as shown on Attachment 1. In addition, inverters will be located throughout the array. Inverters are often installed in pairs and therefore, to be conservative, two (2) inverters were considered at each inverter location. The combined noise level output of two (2) inverters was calculated at 68 dB (at a distance of 1.0 meter) and this was the value used as the source value when determining the predicted noise levels at the property lines for this assessment.

Using the Inverse Square Law, calculations were done to predict the sound level at the point on each of the subject parcel property lines closest to an inverter location, as well as, the sound level at the closest adjacent residential property line. The noise level contributed by the inverters is calculated based on the distance from the inverters to the property line. The distance between the source and corresponding property line is shown on Attachment 1. The table provided as Attachment 3 presents

the predicted noise level for the contributing source, and a predicted noise level at the property line or lines closest to the source.

The closest property line to an inverter location is the eastern line. The property line is approximately 233 ft from the closest inverters. The predicted noise level at this point on the property boundary due to the noise generated by the inverters is 31 dB. Additionally, the closest residential property is located north of the subject parcel and the distance from the property boundary to the closest inverters is approximately 596 ft. The predicted noise level at this point on the property boundary due to the noise generated by the inverters is 22.8 dB.

In comparison, a typical computer operating has a noise level of 37-45 dBA, the noise level of a refrigerator is typically 40-43 dBA and a typical microwave oven has a noise level of approximately 55-59 dBA. A list of common noise sources and their associated decibel level, as published by the Noise Pollution Clearinghouse (NPC Resources) is attached for reference (Attachment 4).

The calculations performed during this noise analysis indicate that the maximum noise levels produced by the proposed project will be 31 dB at the closest property boundary and 22.8 dB at the closest adjacent residential property boundary. The calculations cannot take into consideration any existing buffers between the facility and neighboring parcels. The existing facility is located in an existing field, however the area to the east and south of the site are wooded and there are existing intermittent tree lines on portions of the property's perimeter which will help to further reduce noise levels on adjacent properties. In addition, the proposed project includes landscaping plantings on the northern side of the project.

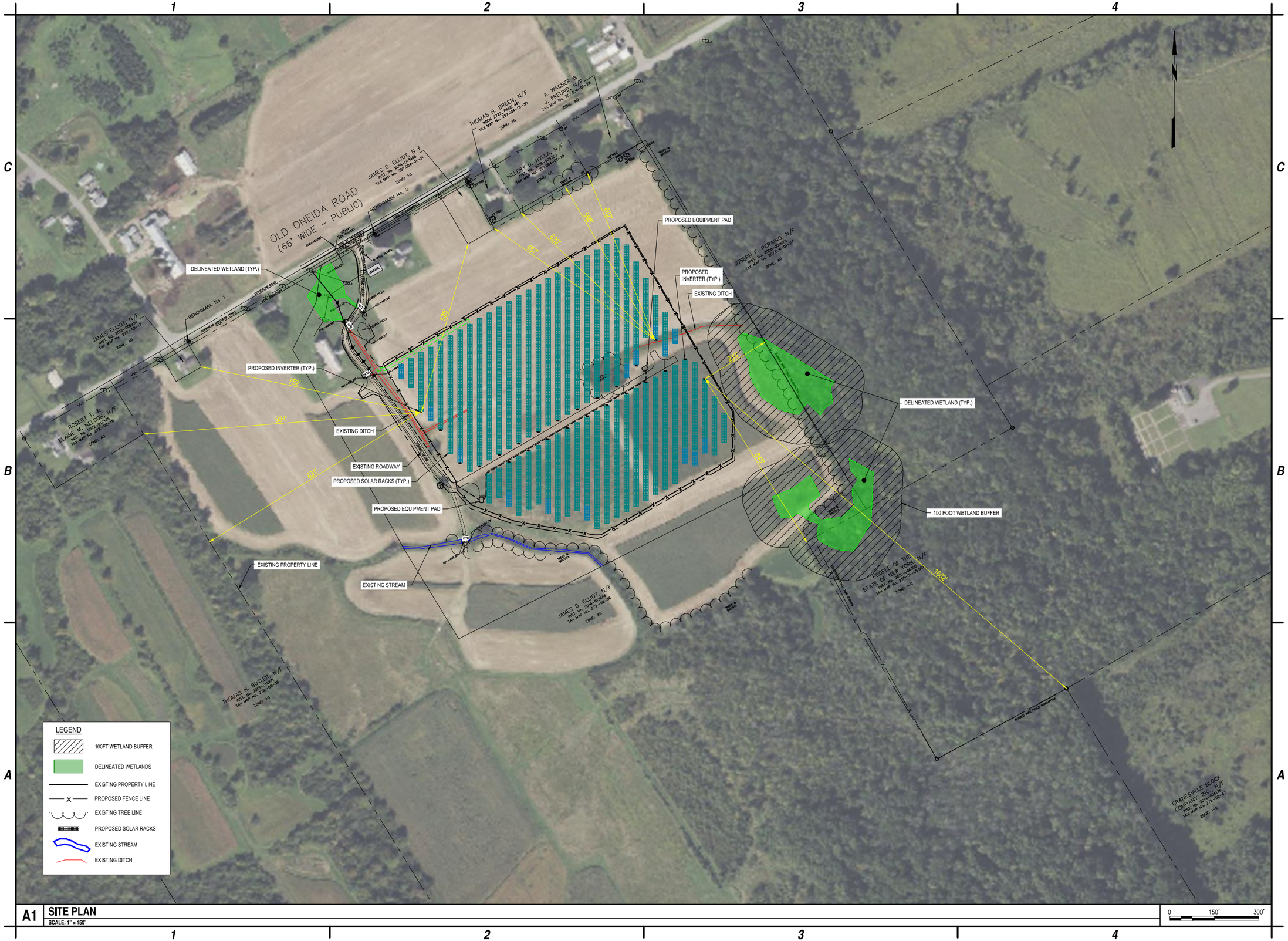
The City of Rome zoning code provides requirements for maximum noise levels generated by a facility as measured at the property line and based on the adjacent uses on neighboring properties. The neighboring properties to the subject parcel are residential, vacant or agricultural. The Code provides a maximum noise level requirement of 65 dB during the day and 55 dB at night at a property line for which the neighboring use is residential. The predicted levels for this facility will be well below these levels at all property lines.

Based on the information provided above, it is our opinion that the noise levels generated by the operation of the electrical equipment associated with the proposed project will not result in a significant impact on the neighboring properties and meet the requirements of the zoning code.

Sincerely,

Eric N. Kenna, P.E.
Service Group Manager

Attachment 1
Site Plan



A1 **SITE PLAN**
SCALE: 1" = 150'

0 150' 300'

Jan 04, 2024 - 9:10am
F:\Project\V32 - Renesola Power Holdings, LLC\V32007002 - Old Oneida Site Permitting\Design\CADD\Old Oneida Noise Study.dwg

C&S COMPANIES
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

emeren
Empowering Renewables

NY OLD ONEIDA SOLAR FARM, LLC
5792 OLD ONEIDA ROAD
ROME, NY 13440

ONEIDA COUNTY

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	B. BUCKINGHAM
DESIGNED BY:	
CHECKED BY:	

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

SITE PLAN

C-101

Attachment 2
Equipment Information

FIMER

Solar inverter PVS-175-TL

The PVS-175-TL is FIMER's innovative three-phase string inverter, delivering a six-in-one solution to enhance and optimize solar power generation for ground mounted utility scale applications.

175 kW

High power density
This new high-power string inverter with the highest power density within the 1500 Vdc segment, delivers up to 185 kVA at 800 Vac. This not only maximizes the ROI for ground-mounted utility-scale applications but also reduces Balance of System costs (i.e. AC side cabling) for small to large scale, free field ground mounted PV installations.

Design flexibility
The inverter comes equipped with 12 MPPT, the highest available in the market, assuring maximum PV plant design flexibility and increasing yields also in case of complex installations.

Installer friendly design
Quick and easy installation, thanks to plug and play connectors, as the existing PV module's mounting systems can be used to install the inverters, thus saving time and cost on site preparation and hire of plant.
The fuse and combiner free design eliminates the need for external components, such as separate DC combiner boxes and AC first level combiners, thanks to the integrated DC disconnect and AC wiring compartment with optional AC disconnect.
The Advanced Cooling Concept preserves the lifetime of the system and minimizes O&M costs thanks to internal heavy-duty inverter cooling fans. These can be easily removed during scheduled maintenance cycles whilst the power module can be easily replaced without removing the wiring box.

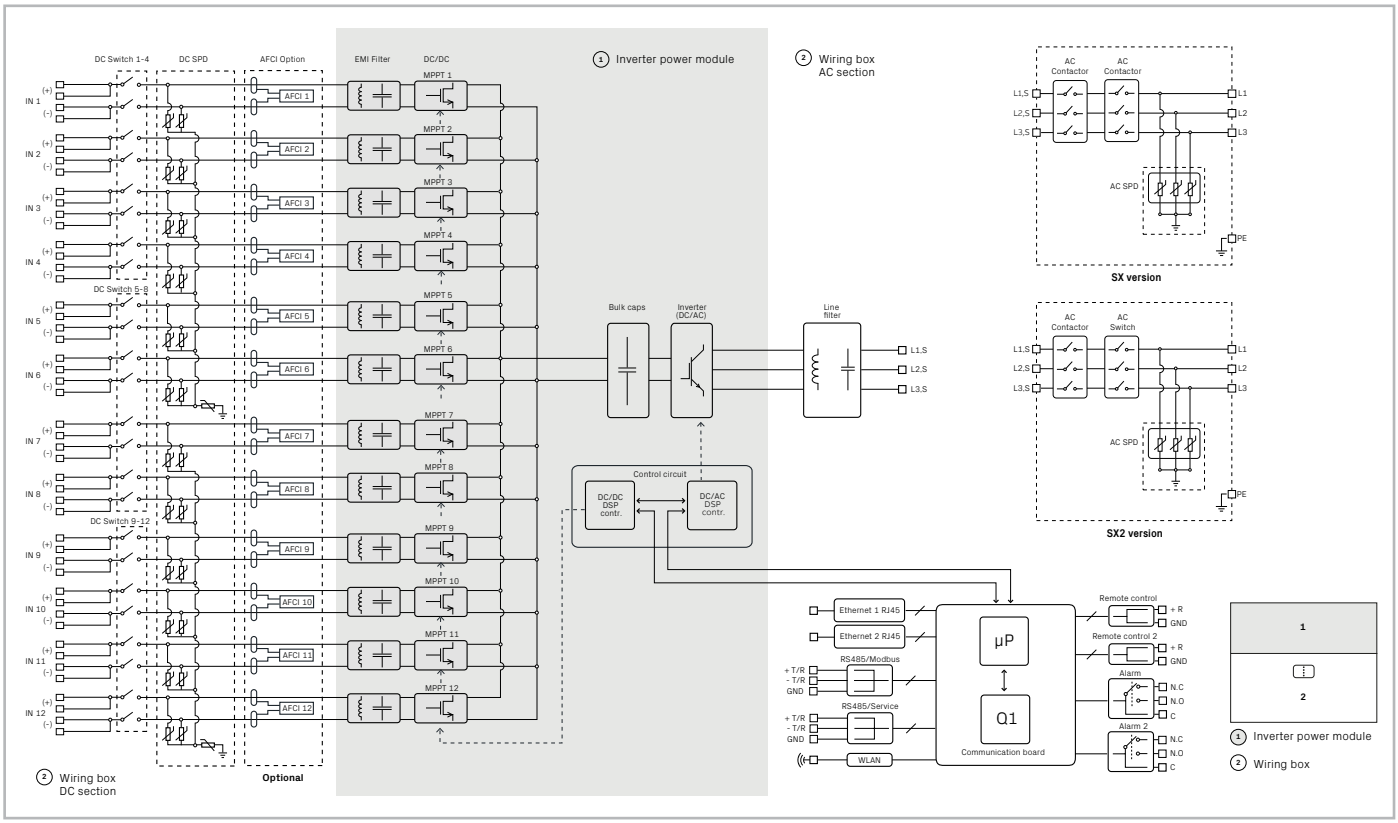
Advanced communication for O&M
Standard wireless access from any mobile device makes the configuration of inverter and plant easier and faster. Improved user experience thanks to a built-in User Interface (UI) enables access to advanced inverter configuration settings.
The Installer for Solar Inverters mobile APP and configuration wizard enable a quick multi-inverter installation and commissioning thus reducing the time spent on site.

Fast system integration
Industry standard Modbus (RTU/TCP)/SUNSPEC protocol enables fast system integration.
Two Ethernet ports enable fast and future-proof communication for PV plants.

Protect your assets
Monitoring your assets is made easy, as every inverter is capable to connect to Aurora Vision cloud platform and thanks to the state-of-the-art cybersecurity and Arc Fault Detection option, your assets and profitability are secure in the long term.

Highlights
- Up to 185 kW power rating, highest in class
- All-in-one combiner and fuse free design
- Separate power module and wiring compartment for fast swap and replacement
- Easy access to consumables for fast inspection and replacement
- 12 MPPT and wide input voltage range for maximum energy yield
- WLAN interface for commissioning and configuration
- Remote monitoring and firmware upgrade via the Aurora Vision cloud platform (logger free)
- Free of charge standard access to Aurora Vision cloud

PVS-175-TL string inverter block diagram



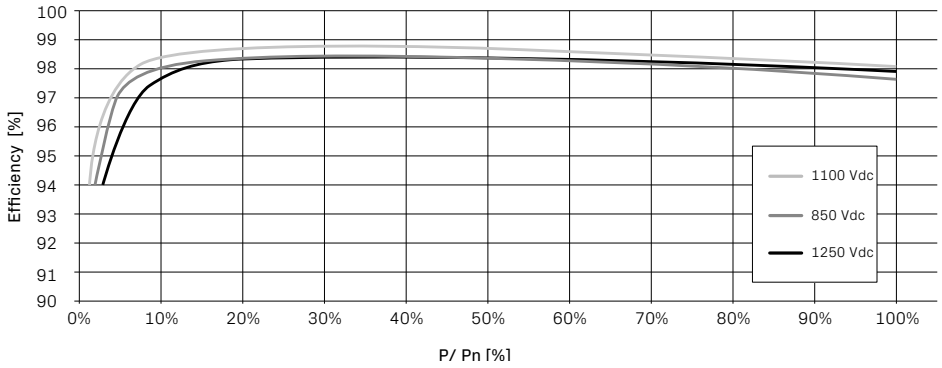
Technical data and types

Type code	PVS-175-TL
Input side	
Absolute maximum DC input voltage ($V_{max,abs}$)	1500 V
Start-up DC input voltage (V_{start})	750 V (650...1000 V)
Operating DC input voltage range (V_{dcmin}...V_{dcmax})	0.7 x Vstart...1500 V (min 600 V)
Rated DC input voltage (V_{dcr})	1100 Vdc
Rated DC input power (P_{dcr})	188000 W @ 30°C - 177000 W @ 40°C
Number of independent MPPT	12
MPPT input DC voltage range ($V_{MPPTmin}$...$V_{MPPTmax}$) at P_{acr}	850..1350 V
Maximum DC input current for each MPPT ($I_{MPPTmax}$)	22 A
Maximum input short circuit current for each MPPT (I_{SCmax})	30 A
Number of DC input pairs for each MPPT	2 DC inputs per MPPT
DC connection type	PV quick fit connector [1]
Input protection	
DC Series Arc Fault Circuit Interrupter [2]	Type I acc. to UL 1699B with single-MPPT sensing capability
Reverse polarity protection	Yes, from limited current source
Input over voltage protection for each MPPT	Type 2 with monitoring
Photovoltaic array isolation control (insulation resistance)	Yes, acc. to IEC 62109-2
Residual Current Monitoring Unit (leakage current protection)	Yes, acc. to IEC 62109-2
DC Load Breaking Disconnect Switch (rating for each MPPT)	20 A/1500 V - 50 A/1000 V
Fuse rating	N/A, No fuses
String current monitoring	MPPT-level current sense
Output side	
AC Grid connection type	Three phase 3W+PE (TN system)
Rated AC power (P_{acr} @cosφ=1)	175 000 W @ 40°C
Maximum AC output power (P_{acmax} @cosφ=1)	185 000 W @≤ 30°C
Maximum apparent power (S_{max})	185 000 VA
Rated AC grid voltage ($V_{ac,r}$)	800 V
AC voltage range	(552...960) [3]
Maximum AC output current ($I_{ac,max}$)	135 A
Rated output frequency (f_r)	50 Hz/60 Hz
Output frequency range (f_{min}...f_{max})	45...55 Hz/55...65 Hz [3]
Nominal power factor and adjustable range	> 0.995, 0...1 inductive/capacitive with maximum S_{max}
Total current harmonic distortion	< 3%
Max DC current injection (% of In)	< 0.5%*In
Maximum AC Cable outer diameter / multi core	1 x 53 mm (1 x M63 cable gland)
Maximum AC Cable outer diameter / single core	3 x 32 mm (3 x M40 cable gland)
AC connection type [4]	Copper Busbar for lug connections with M10 bolts (included)
Output protection	
Anti-islanding protection	According to local standard
Maximum external AC overcurrent protection	200 A
Output overvoltage protection - replaceable surge protection device	Type 2 with monitoring
Operating performance	
Maximum efficiency (η_{max})	98.7%
Weighted efficiency (EURO/CEC)	98.4%
Communication	
Communication interfaces	1xRS485, 2x Ethernet (RJ45) [5]
Local user interface	4 LEDs, Web User Interface, Mobile APP
Communication protocol	Modbus RTU/TCP (Sunspec compliant)
Commissioning tool	FIMER Installer for solar inverters mobile app/Embedded Web User Interface
Remote monitoring services	Aurora Vision, Plant Portfolio Platform
Advanced features	Built-in Export Limitation control algorith/Integrated data logging for iverters and accessories / Remote FW update

Technical data and types

Type code	PVS-175-TL
Environmental	
Operating ambient temperature range	-25...+60°C/-13...140°F with derating above 40°C/133 °F
Relative humidity	4%...100% condensing
Sound pressure level, typical	65dB(A) @ 1m
Maximum operating altitude without derating	2000 m / 6560 ft
Physical	
Environmental protection rating	IP 65 (IP54 for cooling section)
Cooling	Forced air
Dimension (H x W x D)	867x1086x419 mm / 34.2"x42.7"x16.5" for, -SX model 867x1086x458 mm / 34.2"x42.7"x18.0" for, -SX2 model
Weight	~76 kg / 167,5 lbs for power module; ~77 kg / 169,7 lbs for Wiring box Overall max ~153 kg / 337,2 lbs
Mounting system	Mounting bracket (vertical support only)
Safety	
Isolation level	Transformerless
Marking	CE
Safety and EMC standard	IEC/EN 62109-1, IEC/EN 62109-2, EN 61000-6-2, EN 61000-6-4, EN 61000-3-11, EN 61000-3-12, EN 301 489-1, EN 301 489-17, EN 300 328, EN 62311,
Grid standard [6]	CEI 0-16, UTE C 15 712-1, JORDAN IRR-DCC-MV and IRR-TIC, BDEW, VDE-AR-N 4110, VDE-AR-N 4120, P.O. 12.3, DRRG D.4, AS/ NZS4777.2
Available product variants	
Inverter power module	PVS-175-TL-POWER MODULE
24 quick fit connector pairs (2 each MPPT) + DC switches + SPD Type 2 (DC & AC)	WB-SX-PVS-175-TL
24 quick fit connector pairs (2 each MPPT) + DC switches + AC disconnection switch + SPD Type 2 (DC & AC)	WB-SX2-PVS-175-TL
Optional available	
DC Series Arc Fault Circuit Interrupter	Type I acc. to UL 1699B [2] with single-MPPT sensing capability
AC Plate, Single Core Cables	Plate with 4 individual AC cable glands: 3 x M40: Ø 22...32mm, 1 x M32: Ø 18...25mm
AC Plate, Multi Core Cables	Plate with 2 individual AC cable glands: 1 x M63: Ø 37...53mm, 1 x M32: Ø 18...25mm
Pre-Charge [7]	Night time operation with restart capability
Anti-PID [8]	Based on night time polarization of the array

Efficiency curves of PVS-175-TL



1) Multicontact MC4-Evo2. Cable couplers may accept up to 10mm^2 (AWG8)
2) Available as an option. Performance in line with the relevant requirements of the Draft IEC 63027 standard
3) The AC voltage and frequency range may vary depending on specific country grid standard
4) Use of aluminum cables is possible via bi-metallic cable lugs
5) As per IEEE 802.11 b/g/n standard, 2.4 GHz
6) Check your sales channel for availability of the applicable grid standard for your country
7) The Inverter cannot verify the photovoltaic array isolation resistance before connection during Night time. When this accessory is present, the inverter must be installed and operate in "restricted areas (access limited to qualified personnel)" according to IEC 62109-2
8) Cannot operate simultaneously with the night mode

Remark. Features not specifically listed in the present data sheet are not included in the product

FIMER

For more information please contact your local FIMER representative or visit:

fimer.com

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. FIMER does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

PVS-175-TL_EN REV. C 09-06-2021

Attachment 3
Noise Level Table

NY Old Oneida Solar Farm, LLC

Predicted Sound Levels	Source	Receptor	Distance to Source (ft)	Level at receptor (dB)	
	Inverters	Closest Point on Northern Property Line	585	23	
	Inverters	Closest Point on Eastern Property Line	233	31	Closest Property Line
	Inverters	Closest Point on Southern Property Line	645	22.1	
	Inverters	Closest Point on Western Property Line	831	19.9	
	Inverters	Closest adjacent residential property	596	22.8	Closest Residential Property

Proposed Sound Sources (based on manufacturer's information)

175 kW Inverter	65 dB at 1.0 meter	
2 - 175 kW inverters	68 dB at 1.0 meter	(Value used at each inverter location considered)
Typical transformer	61 dB at 1.0 meters	

Attachment 4
Noise Pollution Clearinghouse – Common Noise Sources

Typical Noise Levels

Take a look at the noise levels of many common appliances and events around the house. You might be surprised. All sounds are measured at the distance that a person would typically be from the source.

Device	dBA
Grand Canyon at Night (no roads, birds, wind)	10
Quiet basement w/o mechanical equipment	20
Quiet Room	28-33
Computer	37-45
Refrigerator	40-43
Typical Living Room	40
Forced Hot Air Heating System	42-52
Radio Playing in Background	45-50
Background Music	50
Bathroom Exhaust Fan	54-55
Microwave	55-59
Normal Conversation	55-65
Clothes Dryer	56-58
Printer	58-65
Window Fan on High	60-66
Alarm Clock	60-80
Dishwasher	63-66
Clothes Washer	65-70
Phone	66-75
Push Reel Mower	68-72
Inside Car, Windows Closed, 30 MPH	68-73
Handheld Electronic Games	68-76
Kitchen Exhaust Fan, High	69-71
Inside Car, Windows Open, 30 MPH	72-76
Garbage Disposal	76-83
Air Popcorn Popper	78-85
Hairdryer	80-95
Electric Can Opener	81-83
Vacuum Cleaner	84-89
Coffee Grinder	84-95
Handheld Electric Mixer	86-91
Lawn Mower	88-94
Air Compressor	90-93
1/4" Drill	92-95
Food Processor	93-100
Weed Whacker	94-96

Leaf Blower	95-105
Circular Saw	100-104
Maximum Output of Stereo	100-110

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212

TECHNICAL MEMORANDUM

To: Emeren

From: Bryan A. Bayer, PWS, CE

Date: July 20, 2023

File: V32.007.002

Re: NY Rome Old Oneida Road 1 Solar Farm Site, City of Rome, Oneida County, New York

A rare, threatened, and endangered (RTE) species habitat assessment was performed by qualified environmental scientists from C&S Engineers, Inc. (C&S) on April 18, 2023 within the NY Rome Old Oneida Road Solar Farm Site located southeast of Old Oneida Road and west of State Route 26 in the City of Rome, Oneida County, New York. The Area of Investigation (AOI) is comprised of a 40.64-acre area within the property (See Attachment A, Figure 1). This technical memorandum was prepared to discuss the findings of the field investigation.

Existing Vegetative Communities

In March 2014, the New York State Department of Environmental Conservation (NYSDEC) published a report entitled *Ecological Communities of New York State*[1], Second Edition (*Ecological Communities*) as part of the New York Natural Heritage Program inventory. The report is a revised and expanded version of the original 1990 version that lists and describes ecological systems, subsystems, and communities within New York State. The classification was developed to help assess and protect biological diversity of the state. An assessment of the vegetative cover types within the proposed project area was conducted consistent with the representative characteristics presented in *Ecological Communities*.

Based on review of aerial photography and information collected during C&S's site visits, the AOI is primarily comprised (1) cropland/row crops, (2) successional old field, (3) shallow emergent marsh, (4) intermittent stream, (5) ditch/artificial intermittent stream, (7) mowed lawn, (8) unpaved road/path, (9) paved road/path, and (10) rural structure exterior.

[1] Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2014. *Ecological Communities of New York State.* Second Edition. Accessed on October 9, 2017. Available at: http://www.dec.ny.gov/docs/wildlife_pdf/ecocomm2014.pdf

Cropland/row crops are described by *Ecological Communities* as land used for agricultural row crops, *e.g.* corn, potatoes, and soybeans, as well as residential vegetable gardens. The majority of the AOI contains agricultural fields used primarily for growing corn.

Successional old fields are characterized by *Ecological Communities* as meadow habitats that have been previously disturbed by farming or development, then abandoned, as well as areas subject to periodic mowing at intervals which allow for growth of successional old field species. Typical species include goldenrods (*Solidago altissima*, *S. nemoralis*, *S. rugosa*, *S. juncea*, *S. canadensis*, and *Euthamia graminifolia*), bluegrasses (*Poa pratensis* and *P. compressa*), timothy (*Phleum pratense*), orchard grass (*Dactylis glomerata*), New England aster (*Sympyotrichum novae-angiliae*), Queen-Anne's-lace (*Daucus carota*), and dandelion (*Taraxacum officinale*). Shrub cover within successional old field habitats is generally less than 50%, with species including silky dogwood (*Cornus amomum*), arrowwood (*Viburnum dentatum* var. *lucidum*), and sumac (*Rhus typhina* and *R. glabra*). This community supports butterfly populations, such as black swallowtail (*Papilio polyxenes*), orange sulphur (*Colias eurytheme*), and eastern tailed blue (*Everes comyntas*). Birds found in this community include field sparrow (*Spizella pusilla*), savannah sparrow (*Passerculus sandwichensis*), and American goldfinch (*Carduelis tristis*). Successional old fields occur in the northwestern corner of the AOI.

Ecological Communities defines a ***shallow emergent marsh*** as a marsh meadow habitat located on mineral soil or deep muck. These palustrine wetland communities are maintained by permanent saturation and seasonal flooding. This habitat type is variable, some areas containing a high species biodiversity, with others supporting a single dominant species. Characteristic plants include cattails (*Typha latifolia*, *T. angustifolia*, *T. x glauca*), sedges (*Carex* spp.), marsh St. John's-wort (*Triadenum virginicum*), arrowhead (*Sagittaria latifolia*), goldenrods (*Solidago rugosa*, *S. gigantea*), spotted Joe-pye-weed (*Eutrochium maculatum*), boneset (*Eupatorium perfoliatum*), jewelweed (*Impatiens capensis*), *etc*. Shallow emergent marshes may contain scattered shrubs, although shrub cover will remain below 50%; characteristic shrubs include speckled alder (*Alnus incana* ssp. *rugosa*), shrubby dogwoods (*Cornus amomum*, *C. sericea*), willows (*Salix* spp.), and buttonbush (*Cephalanthus occidentalis*). These communities support a variety of amphibian species including northern spring peeper (*Pseudacris crucifer*), green frog (*Rana clamitans melanota*), American toad (*Bufo americanus*), and wood frog (*Rana sylvatica*). Various bird species also use these habitats, including red-winged

blackbird (*Agelaius phoeniceus*), marsh wren (*Cistothorus palustris*), swamp sparrow (*Melospiza georgiana*), and common yellowthroat (*Geothlypis trichas*). Shallow emergent marsh habitats occur in the northwestern and southeastern corners of the AOI.

Ecological Communities defines the riverine cultural group as communities that are either created and maintained by human activities or are modified by human influence to such a degree that stream flow, morphometry, water chemistry, and/or biological composition are significantly different than the waterway that existed prior to human influence. The ***ditch/artificial intermittent stream***, classified under the riverine cultural group, is a man-made waterway usually constructed for the purposes of drainage or irrigation. Surface flow in this system changes based on precipitation and groundwater levels; surface flow can also be artificially controlled. The AOI contains two ditches – the first is located in the northwestern portion of the site and connects to a shallow emergent marsh via culvert; the second is located in the eastern portion of the AOI.

An ***intermittent stream***, according to *Ecological Communities*, typically contains flow only during the spring months or after a heavy rain event. These systems are usually considered 1st order streams located in the uppermost segments of a stream network; as such, they are often characterized by a moderate to steep gradient and hydric soils. Intermittent streams may contain populations of bryophytes, including mosses (*bryhnia novae-angliae*, *Bryum pseudotriquetrum*, *Hygrohypnum ochraeceum*, *etc*.) and leafy liverworts (*Chiloscyphus polyanthus*, *Scapania nemorea*, and *S. undulata*). Additional hydrophytic vascular plants include water-carpet (*Chrysosplemium americanum*) and pennywort (*Hydrocotyle americana*). Intermittent stream fauna are those that can survive and thrive in habitats with seasonal/weather dependent stream flow. Common amphibians include immature or hibernating green frog and northern two-lined salamander (*Eurycea bislineata*); macroinvertebrates include water striders (*Gerris* spp.), water boatman (Corixidae), caddisflies (Trichoptera), mayflies (Ephemeroptera), stoneflies (Plecoptera), and blackflies (Simuliidae). An intermittent stream occurs in the southern corner of the AOI.

The ***mowed lawn*** ecological community includes maintained land with clipped grasses and forbs. Common fauna include gray squirrel (*Sciurus carolinensis*), American robin (*Turdus migratorius*), mourning dove (*Zedaida macroura*), and northern mockingbird (*Mimus polyglottos*). Mowed lawn is located in the northern portion of the AOI.

An ***unpaved road/path***, according to *Ecological Communities*, contains gravel, bare soil, or bedrock outcrop with sparse vegetation. These communities are maintained by regular use or scraping of the land surface. A common plant in these habitats is path rush (*Juncus tenuis*) and a common bird is a killdeer (*Charadrius vociferus*). There is a pathway running through the western half of the AOI composed of compacted soil.

Ecological Communities defines a ***paved road/path*** as a pathway or road that has been paved with brick, concrete, stone, asphalt, or other suitable materials, that may contain sparse vegetation in cracks and crevices. A paved residential driveway is located in the northern portion of the AOI.

Ecological Communities defines the ***rural structure exterior*** as a structure made of metal, wood, or concrete, *e.g.* barns, houses, bridges, *etc.* located in a rural or sparsely inhabited suburban area. This community may contain sparse vegetation growing in cracks and crevices, including lichens, mosses, terrestrial algae, and vascular plants. Birds, insects, or bats may use these sites for nesting or roosting provided the proper characteristics are present. Common birds in these habitats include American robin (*Turdus migratorius*), eastern phoebe (*Sayornis phoebe*), barn swallow (*Hirundo rustica*), and house sparrow (*Passer domesticus*). A residential structure with a garage, as well as a barn, is located in the northwestern corner of the AOI.

The Ecological Communities Cover Type Map (Figure 2) is included in Attachment A. Photographs depicting the site have been included as Attachment B.

RTE Habitat Assessment

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) online service was consulted for this project. The IPaC is used to obtain a USFWS Official Species List (See Attachment C) that identifies the potential presence of federally listed rare, threatened, and endangered species near a proposed action that may be affected by project activities. The USFWS Official Species List dated April 28, 2023 lists one mammal, northern long-eared bat (*Myotis septentrionalis*), and one insect, monarch butterfly (*Danaus plexippus*). Lastly and according to the IPaC system, there are no critical habitats located within the property and no other Federally threatened or endangered species, or environmentally-sensitive habitat areas were identified.

The USFWS developed a determination key (Dkey) for the northern long-eared bat in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S. C 1531 et seq.). Upon issuance of the Official Species List indicating potential presence of northern long-eared bat, the northern long-eared bat Dkey was completed, resulting in a determination of "No Effect" of the proposed project on the northern long-eared bat. The USFWS official species list, as well as the northern long-eared bat Dkey dated May 2, 2023 indicating a "No Effect" determination, can be found in Attachment C.

The New York State Department of Environmental Conservation (NYSDEC) Environmental Resource Mapper (ERM) website provides generalized locations of animal and plant species listed as endangered or threatened known to occur within the vicinity of an action. The ERM uses the New York Natural Heritage Program (NYNHP) Database with respect to rare species. It is an interactive mapping application that depicts NYNHP data with added buffering; the buffering is species dependent and is intended to depict precise locations of protected species and establish a range where each individual species may occur. Projects that overlap ERM buffer areas require further coordination with NYNHP. In the event ERM rare species buffers do not encompass part or all of a project location, NYNHP indicates that no further coordination is necessary, and it can be assumed there are no known records of endangered species within the vicinity of a project. The ERM (See Attachment C) indicates that the project is not located in the vicinity of rare plants or animals. Accordingly, no further coordination is necessary with NYNHP.

Below is a description of the project's potential to impact species identified in the USFWS IPaC Resource List:

Northern long-eared bat

The northern long-eared bat (*Myotis septentrionalis*) is listed as endangered at the state and federal level. The northern long-eared bat winters in caves and mines and migrates seasonally to summer roosts in dead and decadent trees. Northern long-eared bats are typically associated with mature interior forest[2] and tend to avoid woodlands with significant edge habitat[3]. They may prefer cluttered or densely forested areas including in uplands and at streams or

[2] Carroll, S. K., T. C. Carter and G. A. Feldhamer. 2002. Placement of nets for bats: effects on perceived fauna. Southeastern Naturalist 1:193-198.
[3] Yates, M. and R. Muzika. 2006. Effect of forest structure and fragmentation on site occupancy of bat species in Missouri Ozark forests. Journal of Wildlife Management 70:1238-1248.

vernal pools[4]. They may use small openings or canopy gaps as well. Some research suggests that northern long-eared bats forage on forested ridges and hillsides rather than in riparian or floodplain forests. Captures from New York suggest that northern long-eared bats may also be found using younger forest types[5]. This species selects day roosts in dead or live trees under loose bark, or in cavities and crevices, and may sometimes use caves as night roosts[6]. They may also roost in buildings or behind shutters. A variety of tree species are used for roosting. The structural complexity of surrounding habitat and availability of roost trees may be important factors in roost selection[7]. Roosts of female bats tend to be large diameter, tall trees, and in at least some areas, located within a less dense canopy[8]. Northern long-eared bats hibernate in caves and mines where the air temperature is constant, preferring cooler areas with high humidity[9].

In New York, a permit is required for the "take" of protected species under the Uniform Procedures Act that includes direct impact to the species as well as adverse modification to habitat. The New York State Department of Environmental Conservation (NYSDEC) considers impacts to "occupied" habitat as well as direct impacts to the species. NYSDEC requirements for northern long-eared bat protection are consistent with USFWS in areas that are not considered "occupied habitat". NYSDEC defines occupied habitat as those areas within five (5) miles of a known hibernacula, or 1.5 miles from a documented summer occurrence. The closest hibernacula on record is approximately 29 miles southeast of the AOI, at Jamesville Quarry. The AOI is not considered "occupied habitat" and therefore additional NYSDEC requirements are not necessary.

A site visit was conducted on April 18, 2023 to visually assess the suitability of the project habitat for northern long-eared bats. As categorized in *Ecological*

[4] Brooks, R. T. and W. M. Ford. 2005. Bat Activity in a Forest Landscape of Central Massachusetts. Northeastern Naturalist 12:447-462.
[5] New York Natural Heritage Program. 2016. Online Conservation Guide for Myotis septentrionalis. Available from: http://www.acris.nynhp.org/guide.php?id=7407. Accessed October 9, 2017.
[6] U.S. Fish and Wildlife Service. 2013. 12-Month finding on a petition to list the eastern small-footed bat and the northern long-eared bat as threatened or endangered; Listing the northern long-eared bat as an endangered species; Proposed rule. Vol. 78 No.
[7] Carter, T. C. and G. A. Feldhamer. 2005. Roost tree use by maternity colonies of Indiana bats and northern long-eared bats in southern Illinois. Forest Ecology and Management 219:259-268.
[8] Sasse, D. B. and P. J. Pekins. 1996. Summer roosting ecology of northern long-eared bats (Myotis septentrionalis) in the White Mountain National Forest. Pp. 91-101 in Proceedings of the Bats and Forests Symposium of the British Columbia Ministry of Forest.
[9] U.S. Fish and Wildlife Service. 2013. 12-Month finding on a petition to list the eastern small-footed bat and the northern long-eared bat as threatened or endangered; Listing the northern long-eared bat as an endangered species; Proposed rule. Vol. 78 No.

Communities, the AOI contains cropland/row crops, rural structures, paved and unpaved roads and paths, successional old field, shallow emergent marsh, a ditch/artificial intermittent stream, a natural intermittent stream, and mowed lawn habitats. Observed tree cover on site is located primarily outside of the proposed project footprint and will not be impacted by the proposed project.

The proposed project involves development of a ground-mounted solar array; therefore, the area will be cleared prior to construction. The majority of land clearing will be within agricultural fields. Minimal tree clearing is proposed for the project. Although the USFWS official species list indicated potential presence of northern long-eared bats, the completion of the USFWS D-key yielded a "No Effect" determination.

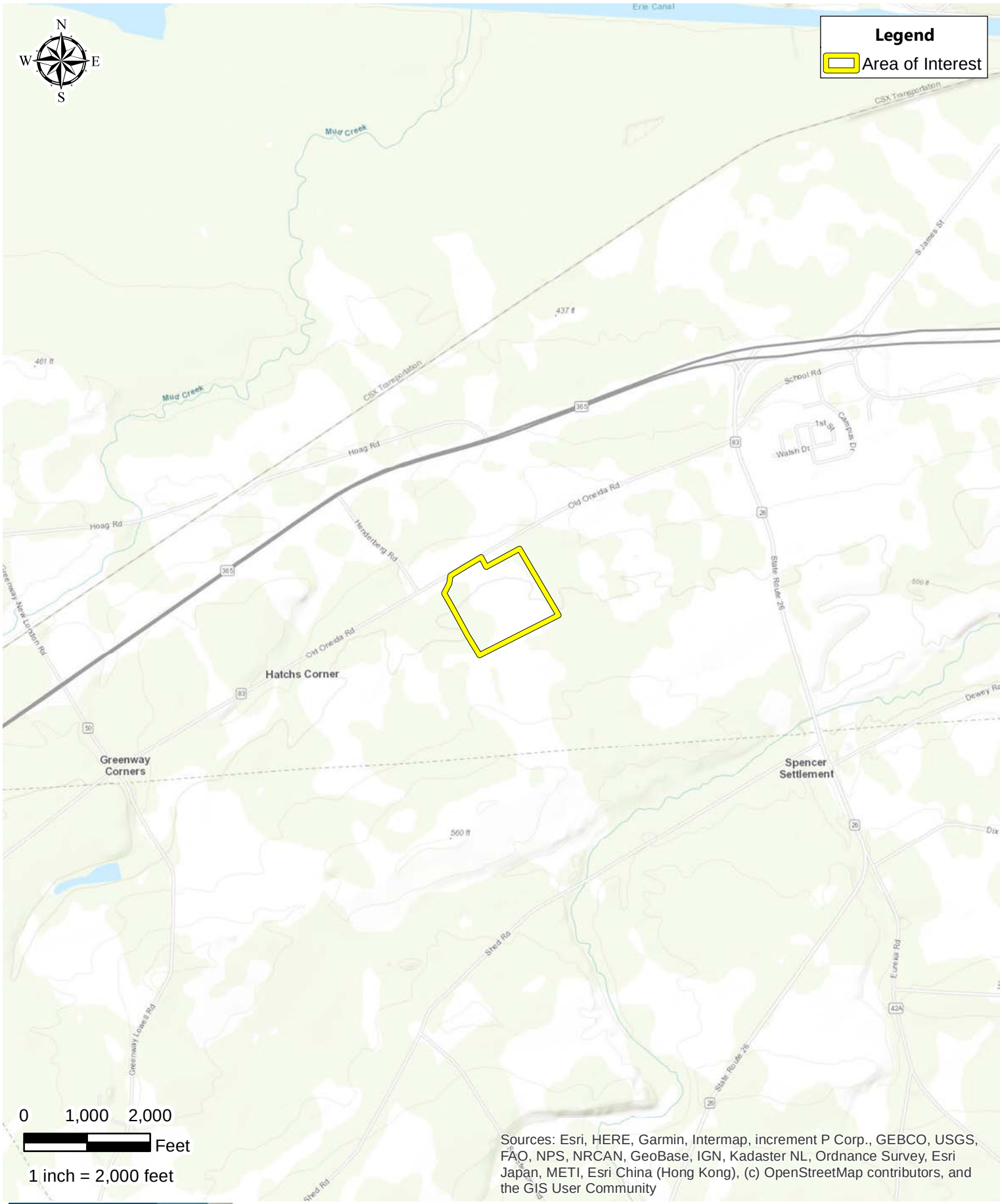
Monarch Butterfly

The monarch butterfly can be found in varying habitats, so long as milkweed (for breeding) and flowering plants (for nectar) are present. No milkweed plants were observed by C&S staff during the April 18, 2023 site visit. Further, the monarch butterfly is considered a candidate species and is not listed as threatened or endangered; therefore, requirements associated with potential presence of endangered or threatened species do not apply to this species[10].

Agency correspondence and the field investigation indicate that no potential adverse impacts to the northern long-eared bat are anticipated due to the proposed project. The majority of land clearing will be within agricultural fields. Minimal tree clearing is proposed for the project. Although the USFWS official species list indicated potential presence of northern long-eared bats, the completion of the USFWS D-key yielded a "No Effect" determination. No seasonal restriction is proposed relative to tree clearing. Additionally, no impacts to the monarch butterfly are anticipated as a result of this project as the project area does not provide suitable habitat. Further, the monarch butterfly is considered a candidate species and is not listed as threatened or endangered; therefore, requirements associated with potential presence of endangered or threatened species do not apply to this species.

[10] U.S. Fish & Wildlife Service. N.D. *Danaus plexippus* Overview. Available from https://www.fws.gov/species/monarch-butterfly-danaus-plexippus. Accessed June 29, 2022.

ATTACHMENT A
FIGURES



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Sources: Created by C&S Companies, Inc.
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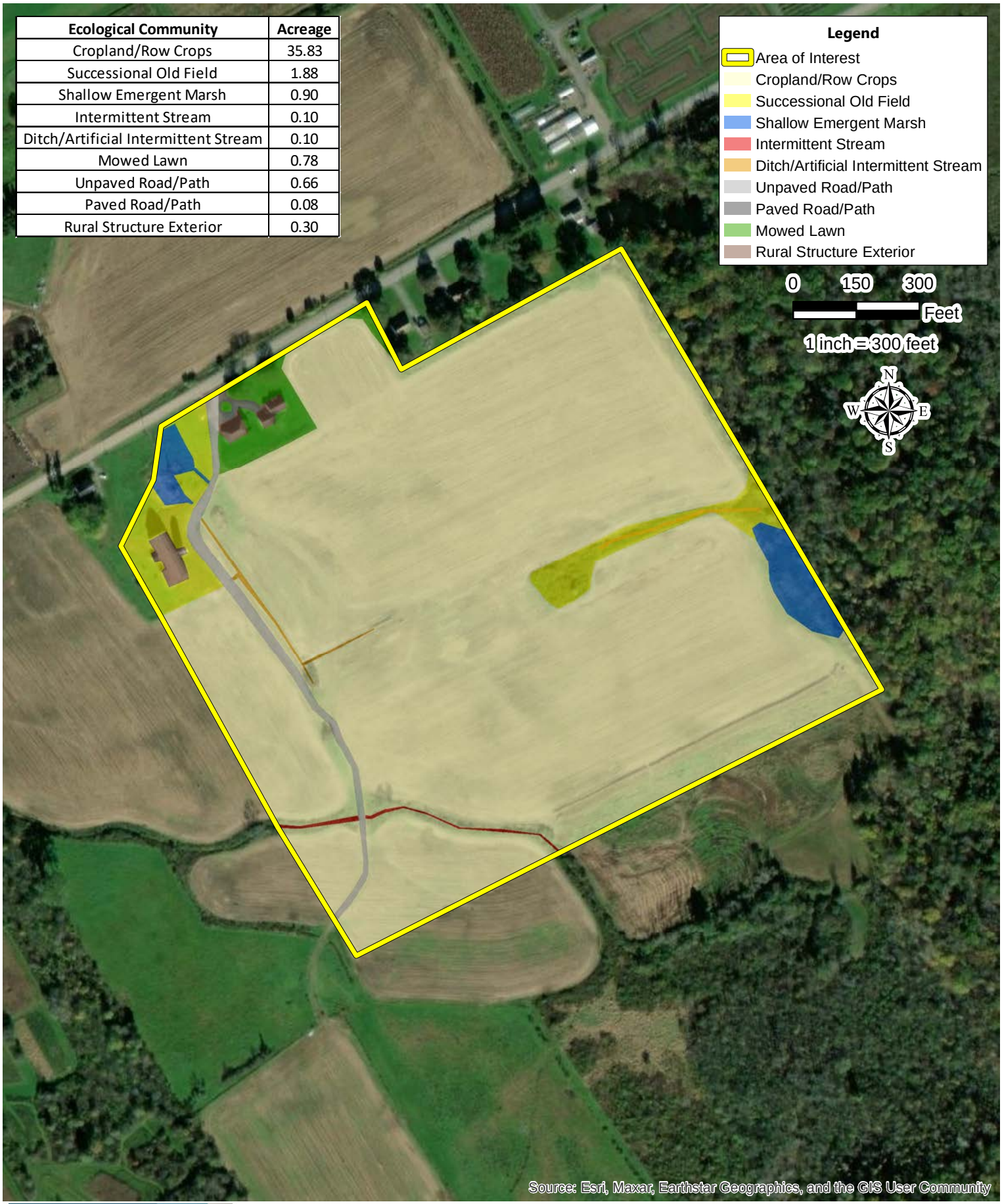
Figure 1 | Project Location Map

Renesola Power Hodings
NY Rome Old Oneida Road 1 Solar Farm
City of Rome, Oneida County, New York

Ecological Community	Acreage
Cropland/Row Crops	35.83
Successional Old Field	1.88
Shallow Emergent Marsh	0.90
Intermittent Stream	0.10
Ditch/Artificial Intermittent Stream	0.10
Mowed Lawn	0.78
Unpaved Road/Path	0.66
Paved Road/Path	0.08
Rural Structure Exterior	0.30



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Sources: Created by C&S Engineers, Inc.
Modified: 7/17/2023 @ 10:43:53 AM

Figure 2 | Ecological Communities

Renesola Power Hodings
NY Rome Old Oneida Road 1 Solar Farm
City of Rome, Oneida County, New York

ATTACHMENT B
SITE PHOTOGRAPHS

Photo Documentation

Project: NY Rome Old Oneida Rd 1 Solar Farm
NY Rome Old Oneida Rd 1 Solar Farm, LLC

Photo 1 – Representative photo of cropland/row crops ecological community with rural structures in the background.

Photo 2 – Representative photo of unpaved road/path ecological community.

Photo Documentation

Project: NY Rome Old Oneida Rd 1 Solar Farm
NY Rome Old Oneida Rd 1 Solar Farm, LLC

Photo 3 – Representative photo of successional old field ecological community.

Photo 4 – Representative photo shallow emergent marsh ecological community.

Photo Documentation

Project: NY Rome Old Oneida Rd 1 Solar Farm
NY Rome Old Oneida Rd 1 Solar Farm, LLC

Photo 5 – Representative photo of ditch/artificial intermittent stream ecological community.

Photo 6 – Representative photo intermittent stream ecological community.

Photo Documentation

Project: NY Rome Old Oneida Rd 1 Solar Farm
NY Rome Old Oneida Rd 1 Solar Farm, LLC

Photo 7 – Representative photo of rural structure ecological community.

Photo 8 – Representative photo of rural structures and mowed lawn ecological communities.

ATTACHMENT C
RTE INFORMATION

Environmental Resource Mapper

The coordinates of the point you clicked on are:

UTM 18	**Easting:**	459069.33231165516	**Northing:**	4780621.3979379935
Longitude/Latitude	**Longitude:**	-75.50361703363247	**Latitude:**	43.17725772735463

The approximate address of the point you clicked on is:
Rome, New York

County: Oneida
City: Rome

USGS Quad: VERONA

If your project or action is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the action may be harmful to the species or its habitat.

If your project or action is within or near an area with rare plants and/or significant natural communities, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdiction.

Please refer to the "Need a Permit?" tab for permit information or other authorizations regarding these natural resources.

Disclaimer: If you are considering a project or action in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreational Rivers, are currently not included on the maps.

Print Preview

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To:
Project Code: 2023-0075440
Project Name: Old Oneida

April 28, 2023

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

To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

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

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

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

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

PROJECT SUMMARY

Project Code: 2023-0075440
Project Name: Old Oneida
Project Type: Commercial Development
Project Description: Commercial Solar Development
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.1775819,-75.50247961766335,14z

Counties: Oneida County, New York

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: C&S Engineers, Inc.
Name: Shannon Booth
Address: 499 Col Eileen Collins Boulevard
City: Syracuse
State: NY
Zip: 13212
Email sbooth@cscos.com
Phone: 3159855938

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To:
Project code: 2023-0075440
Project Name: Old Oneida

May 02, 2023

Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Old Oneida'

Dear Shannon Booth:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on May 02, 2023, for 'Old Oneida' (here forward, Project). This project has been assigned Project Code 2023-0075440 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into the IPaC must accurately represent the full scope and details of the Project. Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter.

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may

include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the New York Ecological Services Field Office and reference Project Code 2023-0075440 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Old Oneida

2. Description

The following description was provided for the project 'Old Oneida':

> Commercial Solar Development

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.1775819,-75.50247961766335,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats are likely to be present in the action area, answer "NO" and continue through the key.

   Do you want to make a no effect determination?

   Yes

PROJECT QUESTIONNAIRE

IPAC USER CONTACT INFORMATION

Agency: C&S Engineers, Inc.
Name: Shannon Booth
Address: 499 Col Eileen Collins Boulevard
City: Syracuse
State: NY
Zip: 13212
Email sbooth@cscos.com
Phone: 3159855938

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212

Wildlife Management Plan

NY Rome Old Oneida Road 1 Solar Farm Site

City of Rome

Oneida County, New York

Prepared for:
Emeren Inc.
100 First Stamford Place, Suite 302
Stamford, CT 06902

January 2024

Table of Contents

List of Figures

Appendices

Appendix A: Web Soil Survey
Appendix B: Photographs
Appendix C: Site Plans
Appendix D: Agency Correspondence
Appendix E: Monitoring Data Sheets
Appendix F: Resumes

1.0 Introduction

Emeren Inc. proposes development on an approximately 40.64-acre area located directly southeast of Old Oneida Road and west of State Route 26 in the City of Rome, Oneida County, New York. C&S Engineers, Inc. (C&S) is retained by Emeren to prepare a Wildlife Management Plan (WMP) consistent with City of Rome regulations. The Area of Interest (AOI) is comprised of the proposed project footprint within the larger parcel totaling 40.64 acres. The AOI is depicted in the attached Figure 1 – Project Location Map. This report provides a description of the property and describes wildlife and land use management objectives.

The City of Rome incorporates requirements for solar projects within its Code of Ordinances, Chapter 80 – Zoning Code, Article XIX – Zoning Applications, Section 80-19.11 Solar Energy Systems (the Code). Per the Code, the proposed Project is considered a Tier 3 solar system. Per Section 80-19.11-8.(A)(ii)(c.), of the Code, a WMP must be prepared which provides a description of the property, the wildlife, and land use management objectives for the site.

1.1 Project Description

Emeren Inc. is proposing to construct a ground-mounted solar farm and associated electrical appurtenances within a 40.64-acre site.

1.2 Project Location

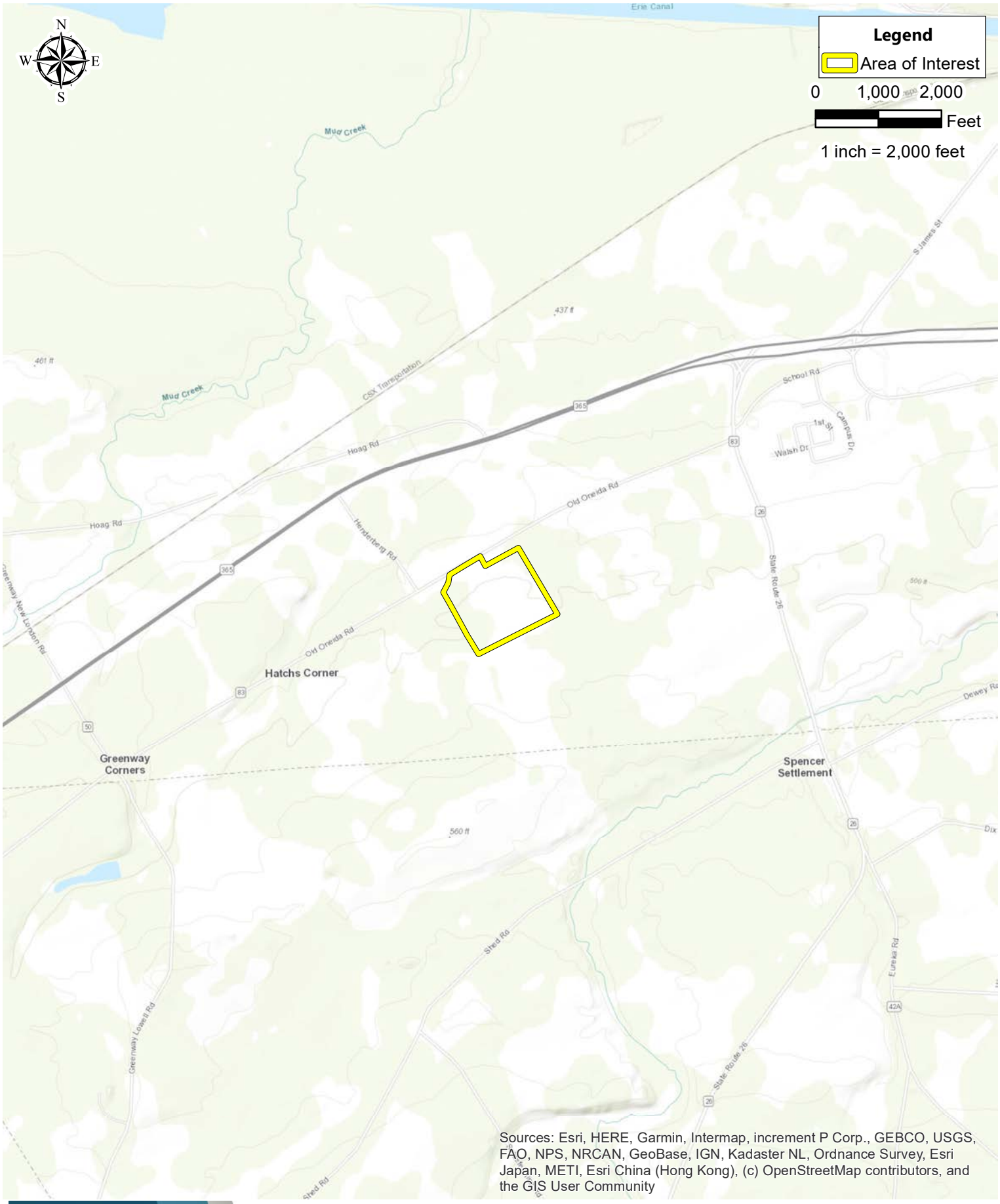
The AOI is located directly southeast of Old Oneida Road and west of State Route 26 in the City of Rome, Oneida County (See Figure 1). The site occurs within the Oneida Lake watershed (USGS Cataloging Unit: 04140202).

2.0 Wildlife Management Objective

The goal of the wildlife management plan is to provide methods for implementing wildlife habitat improvement practices. Components include preparation of goals and objectives, inventory of resources, site specific habitat recommendations and development of wildlife compartments, and record keeping. The overall objective of this project is to utilize the safe, abundant, renewable, and nonpolluting energy solar resource in a manner which avoids and minimizes potential impacts to the environment and wildlife on the project site and within the vicinity.

3.0 Resource Inventory

The preparation of the WMP includes a desktop evaluation and field survey as described in the following sections.



Document Path: F:\Project\V32 - Renesola Power Holdings, LLC\V32007002 - Old Oneida Site Permitting\Planning Study\GIS\Projects\Wildlife_Management_Plan\Figure_1_Topo.mxd

Figure 1 | Project Location Map

Sources: Created by C&S Engineers, Inc.
Modified: 1/4/2024 @ 3:49:56 PM

Emeren
NY Rome Old Oneida Road 1 Solar Farm
City of Rome, Oneida County, New York

3.1 Desktop Evaluation

Prior to field survey, C&S reviewed various maps and other sources of information to obtain pertinent information relative to on-site habitat and land use. These include:

- United States Geological Survey (USGS) topographic maps
- National Wetlands Inventory (NWI) Maps prepared by the U.S. Fish and Wildlife Service (USFWS)
- Freshwater Wetland Maps prepared by the NYSDEC
- Stream Classification Maps prepared by the NYSDEC
- Soil Survey Geographic Database (SSURGO) Soils Map prepared using U.S. Department of Agriculture Natural Resources Conservation Service Soil Survey Geographic Database
- Federal Emergency Management Agency (FEMA) Floodplain Maps
- Google Earth™ historical aerial imagery

3.2 Field Surveys

In March 2014, the New York State Department of Environmental Conservation (NYSDEC) published a report entitled Ecological Communities of New York State, Second Edition[1] (Ecological Communities) as part of the New York Natural Heritage Program inventory. The report is a revised and expanded version of the original 1990 version that lists and describes ecological systems, subsystems, and communities within New York State. The classification was developed to help assess and protect biological diversity of the state. An assessment of the vegetative cover types within the proposed project area was conducted consistent with the representative characteristics presented in Ecological Communities.

3.3 Resource Inventory Results

3.3.1 Desktop Evaluation

Resource mapping used during the desktop review are provided in Figures 1 through 6. Figure 1 depicts the AOI on USGS topographic mapping. Figure 2 provides NYSDEC mapped resources within the AOI. Figure 3 provides NWI mapping, and Figure 4 provides soil survey information. Figure 5 depicts FEMA mapped floodplains within the vicinity of the AOI. A summary of information gathered during the desktop analysis is provided herein.

3.3.2 Topography and Drainage

The Project site appears on the Verona and Rome U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps (See Figure 1). The AOI is located directly southeast of Old Oneida Road and west of State Route 26 in the City of Rome, Oneida County within the USGS topographic map. Elevation ranges from approximately 540 feet above mean sea level (amsl) in the northern portion of the AOI to 550 feet amsl in the southern portion of the AOI (North American Vertical Datum of 1988 [NAVD 88]). The site slopes gently to the northwest.

3.3.3 New York State Mapped Resources

Article 24 of the Environmental Conservation Law requires the NYSDEC to map freshwater wetlands subject to jurisdiction of the law. Article 24 Freshwater Wetland Maps show the approximate location of the wetland boundary and the unique alpha numeric wetland identification number assigned to each resource. Due to the scale of the mapping and aerial photography used to produce the wetland boundaries, they are suitable for general planning purposes only. Based on the Freshwater Wetland Maps

1 Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2014. Ecological Communities of New York State. Second Edition. Accessed on October 9, 2017. Available at: http://www.dec.ny.gov/docs/wildlife_pdf/ecocomm 2014.pdf

and the field review, wetland RO-15 is a Class 2 wetland that intersects the southeastern corner of the AOI. There are no NYSDEC streams within or adjacent to the AOI (See Figure 2).

3.3.4 National Wetlands Inventory Map

Based on the NWI map, there are no mapped NWI wetlands within the AOI. Three NWI wetlands are mapped southeast of the project site, outside of project boundaries – PFO1F is a semi permanently flooded palustrine forested, broad-leaved deciduous wetland; PFO4/1B is a palustrine forested, needle-leaved evergreen/broad-leaved deciduous, saturated wetland; and PFO1B is a saturated palustrine forested, broad-leaved deciduous wetland. One NWI wetland, PSS1F, is located northeast of the AOI – PSS1F is a semi permanently flooded palustrine scrub-shrub wetland (See Figure 3).

3.3.5 Soil Survey

Two unique soil series are mapped within the AOI as depicted in Figure 4, both of which contain hydric components. Table 1 provides the hydric rating, and acreage of the soils mapped on site. The hydric rating by map unit provided by the USDA NRCS Web Soil Survey is provided as Appendix A.

Table 1. Web Soil Summary in the AOI

Soil map unit	Hydric rating	Acres of soil within AOI	Percent of soil within AOI
136A – Kendaia silt loam, 0 to 3 percent slopes	5	28.6	70.4%
790B – Conesus silt loam, 3 to 8 percent slopes	1	12.0	29.6%

3.3.6 FEMA Floodplain Map

The FEMA floodplain map (See Figure 5) depicts that the AOI is not within a regulatory floodway (zone A).

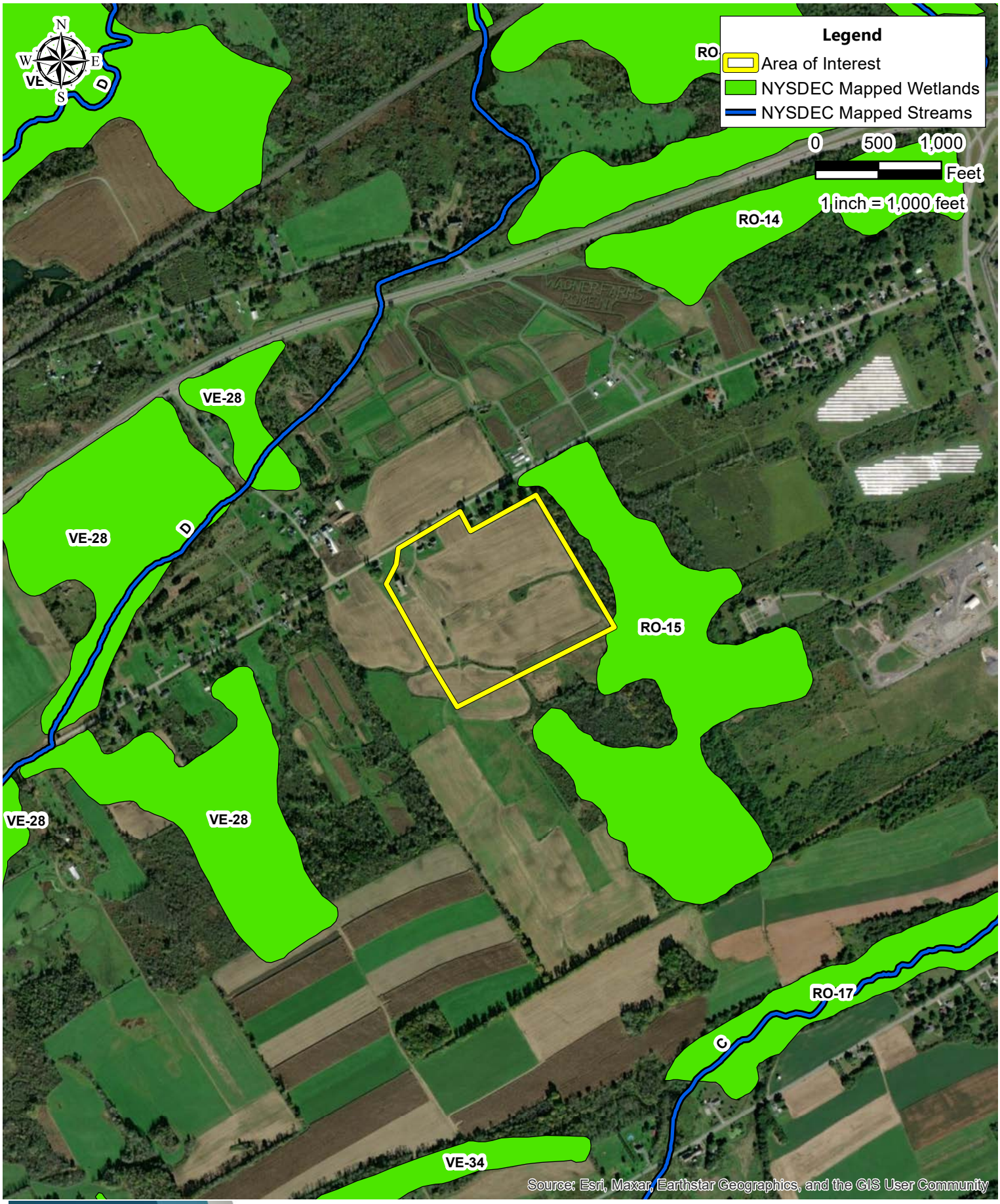
3.3.7 Historical Aerial Photography

The AOI is predominantly comprised of agricultural lands. The earliest photograph dates to 1985 and the most recent is from 2020. In each photograph the site is an agricultural field with evidence of plowing and row crop plantings.

3.4 Vegetative Cover Type Mapping

Based on review of aerial photography and information collected during C&S's site visits, the AOI is primarily comprised of the following habitats in accordance with *Ecological Communities*: (1) cropland/row crops, (2) successional old field, (3) shallow emergent marsh, (4) intermittent stream, (5) ditch/artificial intermittent stream, (7) mowed lawn, (8) unpaved road/path, (9) paved road/path, and (10) rural structure exterior. Photographs of the site are provided as Appendix B.

Cropland/row crops are described by *Ecological Communities* as land used for agricultural row crops, *e.g.* corn, potatoes, and soybeans, as well as residential vegetable gardens. The majority of the AOI contains agricultural fields used primarily for growing corn.



Sources: Created by C&S Engineers, Inc.
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NYSDEC Freshwater Wetlands & Streams Classification Map

Figure 2

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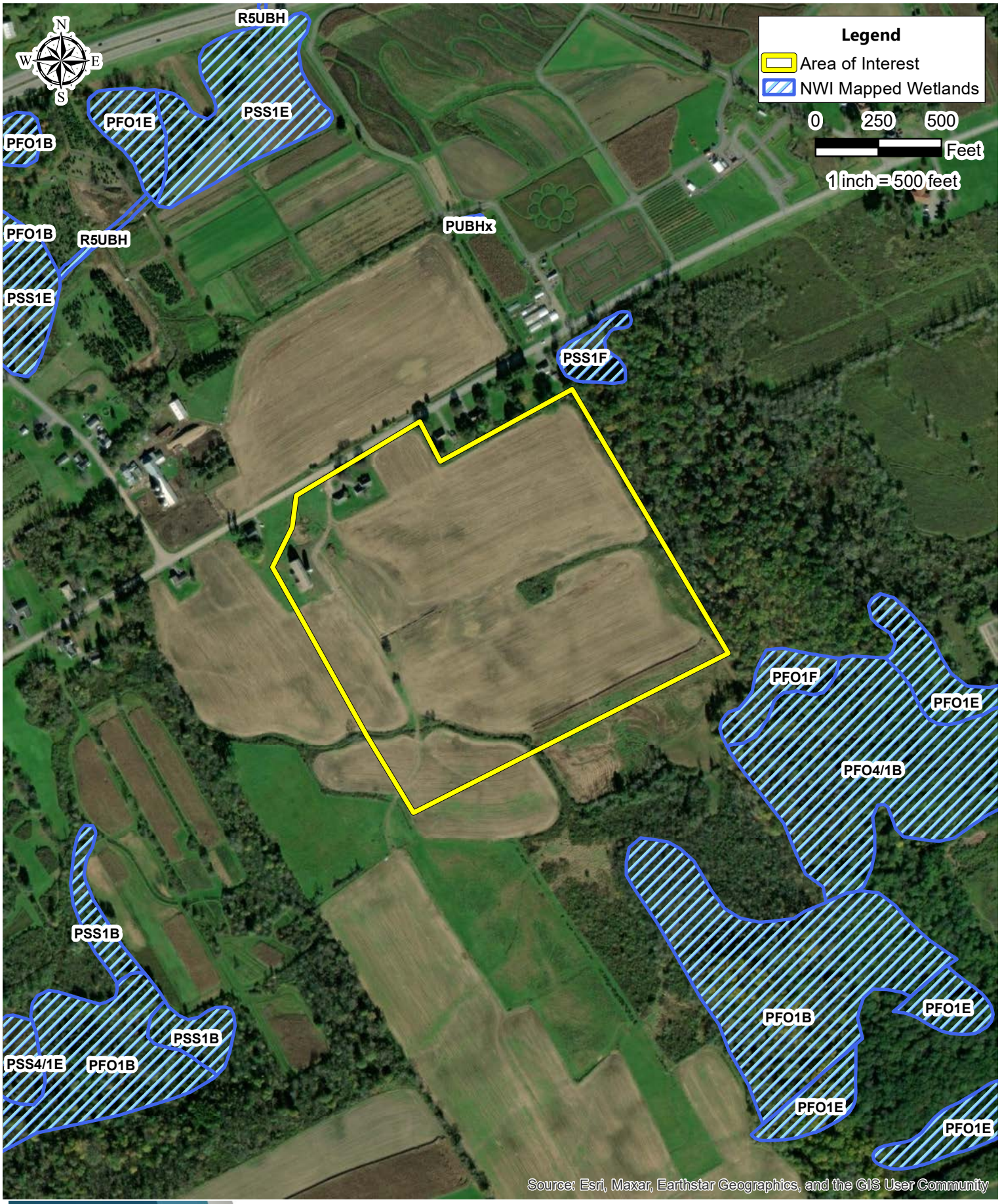

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Figure 3 | National Wetlands Inventory (NWI) Map

Sources: Created by C&S Engineers, Inc.
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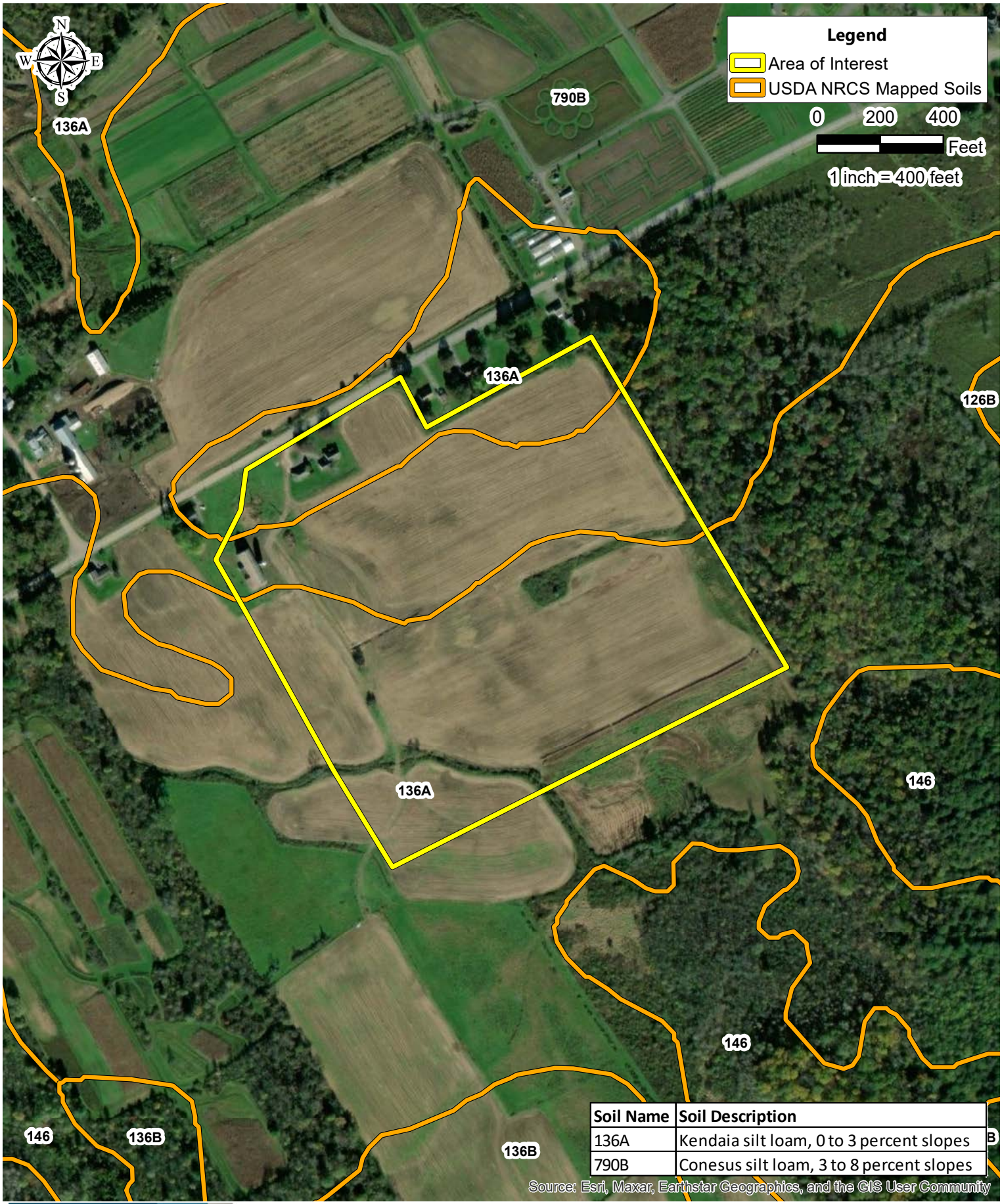

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Figure 4 | USDA NRCS Soils Map

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City of Rome, Oneida County, New York

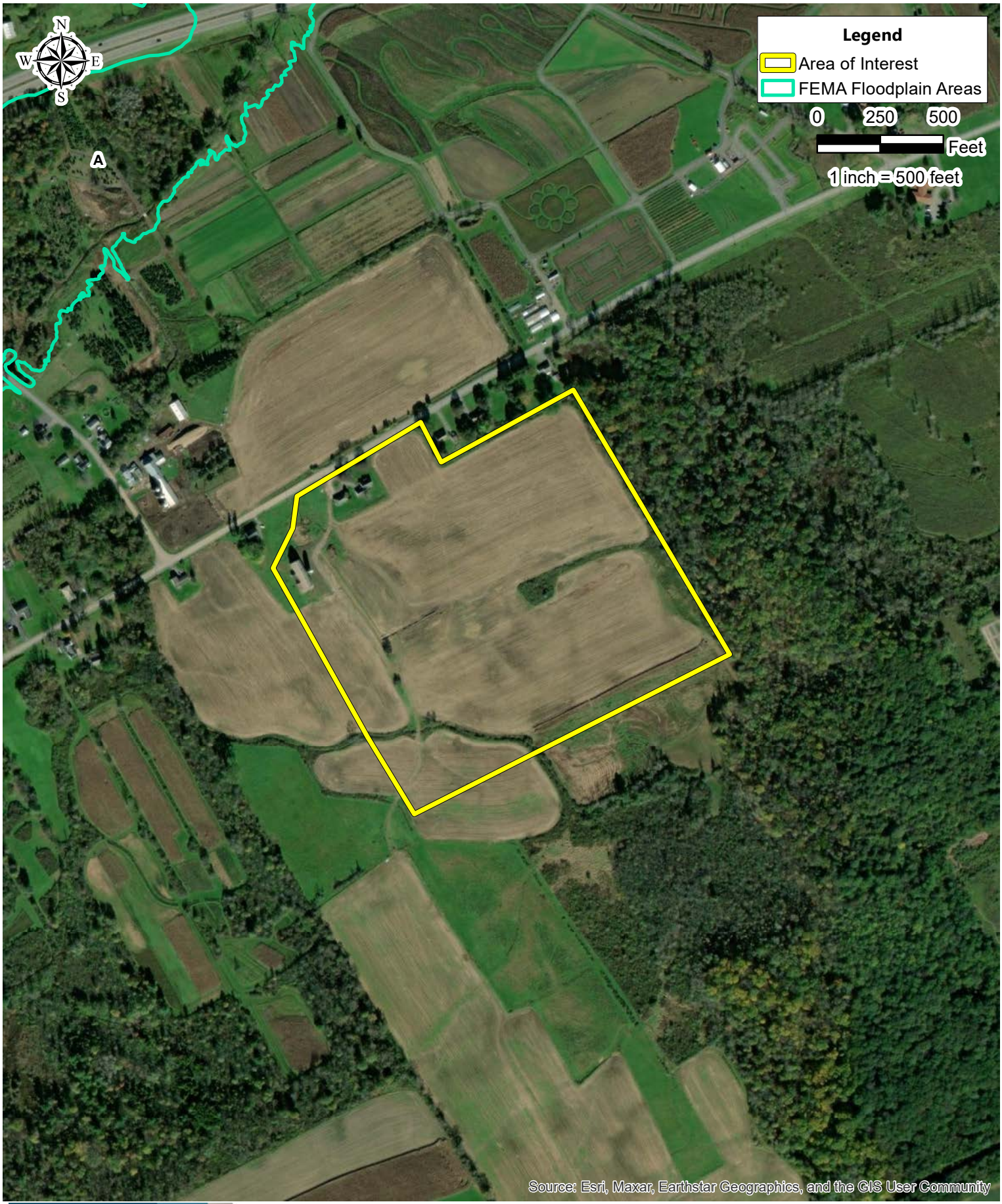

Figure 5 | FEMA Floodzone Areas Map

Sources: Created by C&S Engineers, Inc.
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City of Rome, Oneida County, New York

Successional old fields are characterized by *Ecological Communities* as meadow habitats that have been previously disturbed by farming or development, then abandoned, as well as areas subject to periodic mowing at intervals which allow for growth of successional old field species. Typical species include goldenrods (*Solidago altissima*, *S. nemoralis*, *S. rugosa*, *S. juncea*, *S. canadensis*, and *Euthamia graminifolia*), bluegrasses (*Poa pratensis* and *P. compressa*), timothy (*Phleum pratense*), orchard grass (*Dactylis glomerata*), New England aster (*Sympyotrichum novae-angiliae*), Queen-Anne's-lace (*Daucus carota*), and dandelion (*Taraxacum officinale*). Shrub cover within successional old field habitats is generally less than 50%, with species including silky dogwood (*Cornus amomum*), arrowwood (*Viburnum dentatum* var. *lucidum*), and sumac (*Rhus typhina* and *R. glabra*). This community supports butterfly populations, such as black swallowtail (*Papilio polyxenes*), orange sulphur (*Colias eurytheme*), and eastern tailed blue (*Everes comyntas*). Birds found in this community include field sparrow (*Spizella pusilla*), savannah sparrow (*Passerculus sandwichensis*), and American goldfinch (*Carduelis tristis*). Successional old fields occur in the northwestern corner of the AOI.

Ecological Communities defines a ***shallow emergent marsh*** as a marsh meadow habitat located on mineral soil or deep muck. These palustrine wetland communities are maintained by permanent saturation and seasonal flooding. This habitat type is variable, some areas containing a high species biodiversity, with others supporting a single dominant species. Characteristic plants include cattails (*Typha latifolia*, *T. angustifolia*, *T. x glauca*), sedges (*Carex* spp.), marsh St. John's-wort (*Triadenum virginicum*), arrowhead (*Sagittaria latifolia*), goldenrods (*Solidago rugosa*, *S. gigantea*), spotted Joe-pye-weed (*Eutrochium maculatum*), boneset (*Eupatorium perfoliatum*), jewelweed (*Impatiens capensis*), *etc*. Shallow emergent marshes may contain scattered shrubs, although shrub cover will remain below 50%; characteristic shrubs include speckled alder (*Alnus incana* ssp. *rugosa*), shrubby dogwoods (*Cornus amomum*, *C. sericea*), willows (*Salix* spp.), and buttonbush (*Cephalanthus occidentalis*). These communities support a variety of amphibian species including northern spring peeper (*Pseudacris crucifer*), green frog (*Rana clamitans melanota*), American toad (*Bufo americanus*), and wood frog (*Rana sylvatica*). Various bird species also use these habitats, including red-winged blackbird (*Agelaius phoeniceus*), marsh wren (*Cistothorus palustris*), swamp sparrow (*Melospiza georgiana*), and common yellowthroat (*Geothlypis trichas*). Shallow emergent marsh habitats occur in the northwestern and southeastern corners of the AOI.

Ecological Communities defines the riverine cultural group as communities that are either created and maintained by human activities or are modified by human influence to such a degree that stream flow, morphometry, water chemistry, and/or biological composition are significantly different than the waterway that existed prior to human influence. The ***ditch/artificial intermittent stream***, classified under the riverine cultural group, is a man-made waterway usually constructed for the purposes of drainage or irrigation. Surface flow in this system changes based on precipitation and groundwater levels; surface flow can also be artificially controlled. The AOI contains two ditches – the first is located in the northwestern portion of the site and connects to a shallow emergent marsh via culvert; the second is located in the eastern portion of the AOI.

An ***intermittent stream***, according to *Ecological Communities*, typically contains flow only during the spring months or after a heavy rain event. These systems are usually considered 1st order streams located in the uppermost segments of a stream network; as such, they are often characterized by a moderate to steep gradient and hydric soils. Intermittent streams may contain populations of bryophytes, including mosses (*bryhnia novae-angliae*, *Bryum pseudotriquetrum*, *Hygrohypnum ochraeceum*, *etc*.) and leafy liverworts (*Chiloscyphus polyanthus*, *Scapania nemorea*, and *S. undulata*). Additional hydrophytic vascular plants include water-carpet (*Chrysosplemium americanum*) and pennywort (*Hydrocotyle americana*). Intermittent stream fauna are those that can survive and thrive in habitats with seasonal/weather dependent stream flow. Common amphibians include immature or hibernating green frog and northern two-lined salamander (*Eurycea bislineata*); macroinvertebrates include water striders (*Gerris* spp.), water boatman (Corixidae), caddisflies (Trichoptera), mayflies (Ephemeroptera), stoneflies (Plecoptera), and blackflies (Simuliidae). An intermittent stream occurs in the southern corner of the AOI.

The ***mowed lawn*** ecological community includes maintained land with clipped grasses and forbs. Common fauna include gray squirrel (*Sciurus carolinensis*), American robin (*Turdus migratorius*), mourning dove (*Zedaida macroura*), and northern mockingbird (*Mimus polyglottos*). Mowed lawn is located in the northern portion of the AOI.

An ***unpaved road/path***, according to *Ecological Communities*, contains gravel, bare soil, or bedrock outcrop with sparse vegetation. These communities are maintained by regular use or scraping of the land surface. A common plant in these habitats is path rush (*Juncus tenuis*) and a common bird is a killdeer (*Charadrius vociferus*). There is a pathway running through the western half of the AOI composed of compacted soil.

Ecological Communities defines a ***paved road/path*** as a pathway or road that has been paved with brick, concrete, stone, asphalt, or other suitable materials, that may contain sparse vegetation in cracks and crevices. A paved residential driveway is located in the northern portion of the AOI.

Ecological Communities defines the ***rural structure exterior*** as a structure made of metal, wood, or concrete, *e.g.* barns, houses, bridges, *etc.* located in a rural or sparsely inhabited suburban area. This community may contain sparse vegetation growing in cracks and crevices, including lichens, mosses, terrestrial algae, and vascular plants. Birds, insects, or bats may use these sites for nesting or roosting provided the proper characteristics are present. Common birds in these habitats include American robin (*Turdus migratorius*), eastern phoebe (*Sayornis phoebe*), barn swallow (*Hirundo rustica*), and house sparrow (*Passer domesticus*). A residential structure with a garage, as well as a barn, is located in the northwestern corner of the AOI.

The Ecological Communities Cover Type Map is provided as Figure 6. Photographs depicting the site have been included as Appendix B.

Ecological Community	Acreage
Cropland/Row Crops	35.83
Successional Old Field	1.88
Shallow Emergent Marsh	0.90
Intermittent Stream	0.10
Ditch/Artificial Intermittent Stream	0.10
Mowed Lawn	0.78
Unpaved Road/Path	0.66
Paved Road/Path	0.08
Rural Structure Exterior	0.30

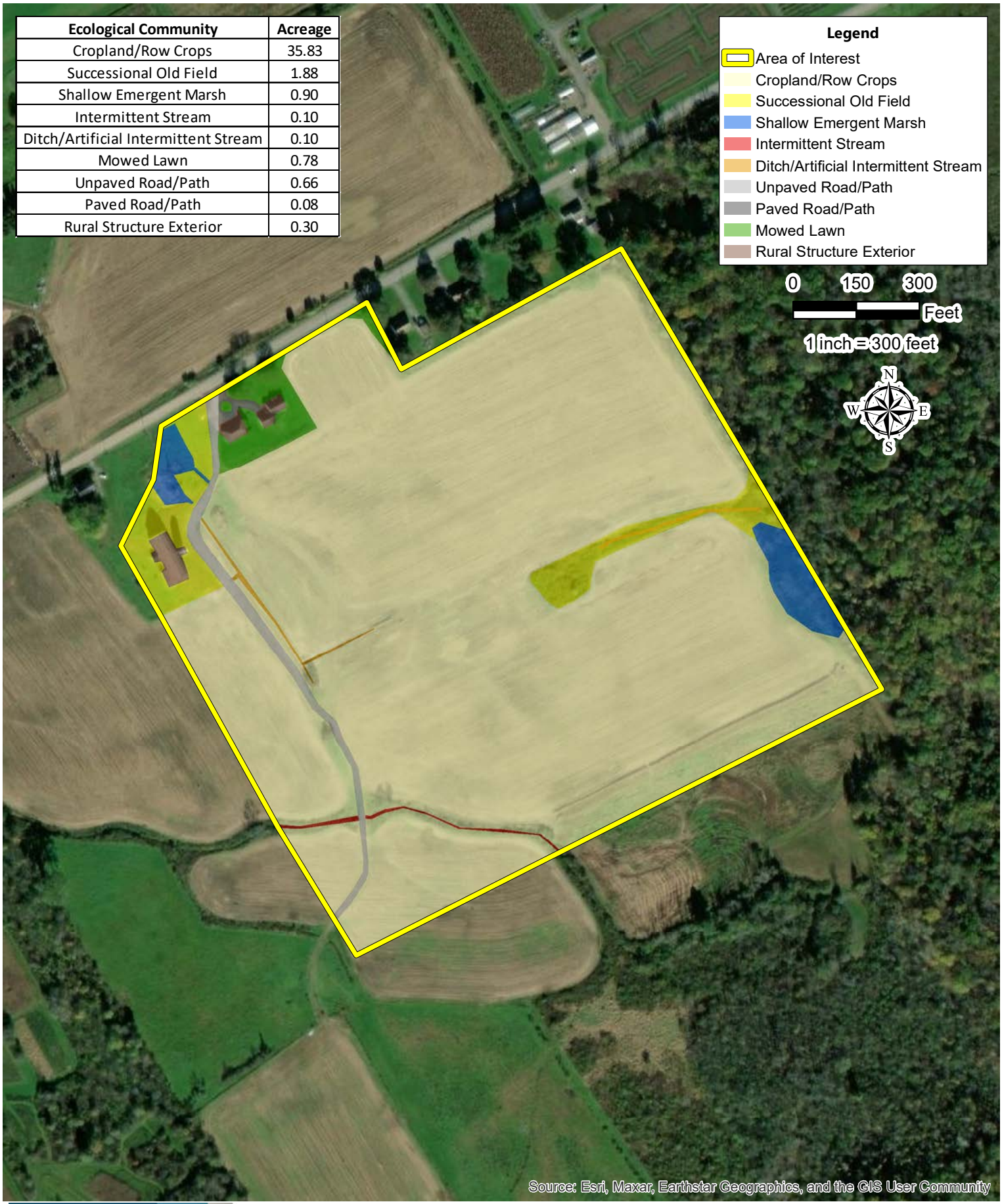

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Figure 6 | Ecological Communities

Sources: Created by C&S Engineers, Inc.
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Emeren
NY Rome Old Oneida Road 1 Solar Farm
City of Rome, Oneida County, New York

4.0 Land Use Objectives

The overall objective of this project is to utilize the safe nonpolluting energy solar resource in a manner which avoids and minimizes potential impacts to the environment and wildlife. Perimeter fencing is used to prevent access of large animals within the solar array facility. However, smaller animals can pass throughout and inhabit the facility. Vegetation within the array provides habitat to a variety of species. Fencing details are provided in the site plans included as Appendix C. Emeren and any subsequent owners of the project that will operate and maintain the array will adhere to long term maintenance requirements.

4.1 Priority Wildlife Species

Resource mapping used during the desktop review are provided in Figures 1 through 5. Figure 1 depicts the AOI on USGS topographic mapping. Figure 2 provides NYSDEC mapped resources within the AOI. Figure 3 provides NWI mapping, and Figure 4 provides soil survey information. Figure 5 depicts FEMA mapped floodplains within the vicinity of the AOI. A summary of information gathered during the desktop analysis is provided above in Section 3.3 – Resource Inventory Results.

It is anticipated that the proposed development will diversify the on-site wildlife presence. Wildlife anticipated to occupy the project area after development include grassland/meadow bird species, small mammals and pollinators. Areas outside the fenced/development area are likely to observe agricultural activities and therefore no improvement relative to wildlife habitat are expected within the remainder of the AOI.

4.1.1 Birds

NYSDEC indicates that grasslands need to be at least twenty-five acres in size to offer appropriate habitat for at-risk grassland birds in New York. While this project does not meet that requirement in the fenced in area that will be comprised of a meadow area with solar panels, the establishment of this meadow may result in occupation by grassland bird species such as sparrows and meadowlarks and other species which do not currently occupy the site based on lack of habitat. Regardless, management of these areas as grassland/meadows will provide suitable habitat for a host of songbirds.

The proposed array fenced in area occupies approximately 17.17 acres. Solar array panels will cover approximately 6.68 acres within the total fenced area, while the remaining 10.49 acres will be managed grassland/meadow community. The 10.49 acre area will not likely be considered highly suitable grassland bird habitat due to its size and the placement of solar arrays within this area. However, we are hopeful that grassland species will use the site.

Prominent grassland bird species in this area that could possibly occupy the habitat include eastern meadowlark, henslow sparrow, bobolink, and savannah sparrow. These species rely on open grasslands for foraging, breeding, and nesting. It will provide habitat for a host of songbirds including sparrows, blackbirds, and finches.

4.1.2 Small mammals

Small mammals that may occupy the grassland/meadow habitat include rabbits, voles, white-footed mice, groundhogs, and fox. While insects are likely the most common food source for grassland species, a wide variety of plant and animal matter is consumed. Insects and other invertebrates for grassland species include: grasshoppers, crickets, beetles, dragonflies, caterpillars, ants, katydids, alfalfa weevils, cutworms,

wasps, spiders, snails, earthworms, sow bugs, others. Raptor prey items include voles, mice, gophers, voles, shrews, moles, rabbits, snakes, lizards, songbirds, and others.

As the soil is restored, and the meadows develop over time, it is likely these species will occupy the site and provide an important food source for raptor species.

4.1.3 Pollinators

NYSDEC released a New York State Pollinator Protection Plan (NYSPPP) in 2016, highlighting the importance and need for responsible pollinator management. The NYSPPP indicates that habitat loss and fragmentation are some of the biggest challenges to pollinators. Habitats with a variety of native flowering plants that have overlapping blooming times and that are adapted to local soils and climates are usually the best sources of nectar and pollen for pollinators[2]. Through conversion of the project to grassland/meadow areas and through widespread seeding/planting, pollinator use will likely increase. Common pollinators in New York include bees, butterflies, beetles, moths, flies, and hummingbirds.

Mowing practices must accommodate the selected plantings as to not interrupt the wildflower life cycle.

4.2 Rare, threatened, and endangered species

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) online service was consulted for this project. The IPaC is used to obtain a USFWS Official Species List (See Appendix D) that identifies the potential presence of federally listed rare, threatened, and endangered species near a proposed action that may be affected by project activities. The USFWS Official Species List dated April 28, 2023 lists one mammal, northern long-eared bat (*Myotis septentrionalis*), and one insect, monarch butterfly (*Danaus plexippus*). Lastly and according to the IPaC system, there are no critical habitats located within the property and no other Federally threatened or endangered species, or environmentally-sensitive habitat areas were identified.

The USFWS developed a determination key (Dkey) for the northern long-eared bat in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S. C 1531 et seq.). Upon issuance of the Official Species List indicating potential presence of northern long-eared bat, the northern long-eared bat Dkey was completed, resulting in a determination of "No Effect" of the proposed project on the northern long-eared bat. The USFWS official species list, as well as the northern long-eared bat Dkey dated May 2, 2023 indicating a "No Effect" determination, can be found in Appendix D.

The New York State Department of Environmental Conservation (NYSDEC) Environmental Resource Mapper (ERM) website provides generalized locations of animal and plant species listed as endangered or threatened known to occur within the vicinity of an action. The ERM uses the New York Natural Heritage Program (NYNHP) Database with respect to rare species. It is an interactive mapping application that depicts NYNHP data with added buffering; the buffering is species dependent and is intended to depict precise locations of protected species and establish a range where each individual species may occur.

2 US Department of Agriculture (USDA). 2009. New England Pollinator Handbook; Pollinator Biology and Habitat. pp 1-19.

Projects that overlap ERM buffer areas require further coordination with NYNHP. In the event ERM rare species buffers do not encompass part or all of a project location, NYNHP indicates that no further coordination is necessary, and it can be assumed there are no known records of endangered species within the vicinity of a project. The ERM (See Appendix D) indicates that the project is not located in the vicinity of rare plants or animals. Accordingly, no further coordination is necessary with NYNHP.

Below is a description of the project's potential to impact species identified in the USFWS IPaC Resource List:

Northern long-eared bat

The northern long-eared bat (*Myotis septentrionalis*) is listed as endangered at the state and federal level. The northern long-eared bat winters in caves and mines and migrates seasonally to summer roosts in dead and decadent trees. Northern long-eared bats are typically associated with mature interior forest[3] and tend to avoid woodlands with significant edge habitat[4]. They may prefer cluttered or densely forested areas including in uplands and at streams or vernal pools[5]. They may use small openings or canopy gaps as well. Some research suggests that northern long-eared bats forage on forested ridges and hillsides rather than in riparian or floodplain forests. Captures from New York suggest that northern long-eared bats may also be found using younger forest types[6]. This species selects day roosts in dead or live trees under loose bark, or in cavities and crevices, and may sometimes use caves as night roosts[7]. They may also roost in buildings or behind shutters. A variety of tree species are used for roosting. The structural complexity of surrounding habitat and availability of roost trees may be important factors in roost selection[8]. Roosts of female bats tend to be large diameter, tall trees, and in at least some areas, located within a less dense canopy[9]. Northern long-eared bats hibernate in caves and mines where the air temperature is constant, preferring cooler areas with high humidity[10].

In New York, a permit is required for the "take" of protected species under the Uniform Procedures Act that includes direct impact to the species as well as adverse modification to habitat. The New York State Department of Environmental Conservation (NYSDEC) considers impacts to "occupied" habitat as well as direct impacts to the species. NYSDEC requirements for northern long-eared bat protection

3 Carroll, S. K., T. C. Carter and G. A. Feldhamer. 2002. Placement of nets for bats: effects on perceived fauna. Southeastern Naturalist 1:193-198.

4 Yates, M. and R. Muzika. 2006. Effect of forest structure and fragmentation on site occupancy of bat species in Missouri Ozark forests. Journal of Wildlife Management 70:1238-1248.

5 Brooks, R. T. and W. M. Ford. 2005. Bat Activity in a Forest Landscape of Central Massachusetts. Northeastern Naturalist 12:447-462.

6 New York Natural Heritage Program. 2016. Online Conservation Guide for Myotis septentrionalis. Available from: http://www.acris.nynhp.org/guide.php?id=7407. Accessed October 9, 2017.

7 U.S. Fish and Wildlife Service. 2013. 12-Month finding on a petition to list the eastern small-footed bat and the northern long-eared bat as threatened or endangered; Listing the northern long-eared bat as an endangered species; Proposed rule. Vol. 78 No.

8 Carter, T. C. and G. A. Feldhamer. 2005. Roost tree use by maternity colonies of Indiana bats and northern long-eared bats in southern Illinois. Forest Ecology and Management 219:259-268.

9 Sasse, D. B. and P. J. Pekins. 1996. Summer roosting ecology of northern long-eared bats (Myotis septentrionalis) in the White Mountain National Forest. Pp. 91-101 in Proceedings of the Bats and Forests Symposium of the British Columbia Ministry of Forest.

10 U.S. Fish and Wildlife Service. 2013. 12-Month finding on a petition to list the eastern small-footed bat and the northern long-eared bat as threatened or endangered; Listing the northern long-eared bat as an endangered species; Proposed rule. Vol. 78 No.

are consistent with USFWS in areas that are not considered "occupied habitat". NYSDEC defines occupied habitat as those areas within five (5) miles of a known hibernacula, or 1.5 miles from a documented summer occurrence. The closest hibernacula on record is approximately 29 miles southeast of the AOI, at Jamesville Quarry. The AOI is not considered "occupied habitat" and therefore additional NYSDEC requirements are not necessary.

A site visit was conducted on April 18, 2023 to visually assess the suitability of the project habitat for northern long-eared bats. As categorized in *Ecological Communities*, the AOI contains cropland/row crops, rural structures, paved and unpaved roads and paths, successional old field, shallow emergent marsh, a ditch/artificial intermittent stream, a natural intermittent stream, and mowed lawn habitats. Observed tree cover on site is located primarily outside of the proposed project footprint and will not be impacted by the proposed project.

The proposed project involves development of a ground-mounted solar array; therefore, the area will be cleared prior to construction. The majority of land clearing will be within agricultural fields. Minimal tree clearing is proposed for the project. Although the USFWS official species list indicated potential presence of northern long-eared bats, the completion of the USFWS D-key yielded a "No Effect" determination.

Monarch Butterfly

The monarch butterfly can be found in varying habitats, so long as milkweed (for breeding) and flowering plants (for nectar) are present. No milkweed plants were observed by C&S staff during the April 18, 2023 site visit. Further, the monarch butterfly is considered a candidate species and is not listed as threatened or endangered; therefore, requirements associated with potential presence of endangered or threatened species do not apply to this species[11].

Agency correspondence and the field investigation indicate that no potential adverse impacts to the northern long-eared bat are anticipated due to the proposed project. The majority of land clearing will be within agricultural fields. Minimal tree clearing is proposed for the project. Although the USFWS official species list indicated potential presence of northern long-eared bats, the completion of the USFWS D-key yielded a "No Effect" determination. No seasonal restriction is proposed relative to tree clearing. Additionally, no impacts to the monarch butterfly are anticipated as a result of this project as the project area does not provide suitable habitat. Further, the monarch butterfly is considered a candidate species and is not listed as threatened or endangered; therefore, requirements associated with potential presence of endangered or threatened species do not apply to this species.

5.0 Designating Management Compartments

Farms and woodlands are seldom uniform in the distribution of plant species, soils, and management potential. Because of these differences, a variety of management strategies are necessary for enhancing wildlife habitats across a property. Land tracts are divided into management units called "compartments" to make the process of recommending and conducting habitat improvement practices over a large and

11 U.S. Fish & Wildlife Service. N.D. Danaus plexippus Overview. Available from https://www.fws.gov/species/monarch-butterfly-danaus-plexippus. Accessed June 29, 2022.

diverse area easier and more efficient. Compartments are areas that have similar characteristics such as vegetation, soils, topography, or other features. In this particular situation, the solar developer will have a lease for the project that includes the access road and fenced in solar array (including adjacent landscaping areas). The lease area encompasses approximately 17 acres within the larger AOI. The 17-acre lease area will be comprised of similar vegetation throughout, and therefore this WMP has one compartment only. Compartment C-1 defined in this WMP is shown on Figure 7. This compartment is selected based on shared future habitat features and shared future land use management objectives related to the development of the project:

- Compartment 1: Solar array, grassland/meadow, and wildflower habitat

5.1 Compartment Management Objectives

5.1.1 Compartment 1: Solar array, grassland/meadow, and wildflower habitat

Compartment 1 (C-1): C-1 comprises the future array and meadow complex, as shown on Figure 7. The overarching management goal in this Compartment is to plan, construct, and maintain the project to improve the existing agricultural field to create a diverse, occupied meadow and wildflower habitat intermixed with the solar array.

5.1.1.1 Objective C-1: Erosion and sediment control during construction

Construction activities and processes may result in the potential to add silt laden runoff to adjacent properties. This can include all areas of land disturbed either through grading, excavating, or construction or material storage areas. Water that comes in contact with the surface of the site as a result of precipitation (snow, hail, rain, etc.) is considered stormwater associated with construction activity and is subject to the requirements of the Project's SWPPP.

Construction projects typically require the following general operations that have the potential for sediment transport:

- Tree Clearing - Removal of vegetation can expose soils to erosion. Ruts caused by equipment can create paths for concentrated water flows.
- Construction Site Entrance - Vehicles leaving the site can track soil onto public roadways.
- Grading Operations - Exposed soils have the potential for erosion and discharge of sediment.
- Fugitive Dust - Dust generated by vehicles can be deposited in wetlands and waterways.
- Access Road Preparation and Similar Grading Activities - Maintenance and heavy use of access roads can expose soils, creating erosion potential.
- Construction Vehicles- Sediment tracking onto public roadways and within water resources is a safety and regulatory concern. The spread of invasive species are also a concern with improperly maintained construction vehicles.

Soil erosion and sediment control plans created for this project are included in the project site plans provided as Appendix C. A SWPPP will be prepared for this project which will detail the steps taken to avoid impacts to water quality resources beyond construction methods. This will include a description of wetland and waterbody resource crossings, and how vegetation and construction buffers will be demarcated on the site prior to ground disturbance, ensuring these resources are protected.

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C&S COMPANIES
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

emeren
Empowering Renewables

NY OLD ONEIDA SOLAR FARM, LLC
5792 OLD ONEIDA ROAD
ROME, NY 13440
ONEIDA COUNTY

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	B. BUCKINGHAM
DESIGNED BY:	
CHECKED BY:	

Wildlife Compartment Map

Figure 7

5.1.1.2 Objective C-1-2: Soil restoration

Soils located within disturbed areas tend to over-compact as a result of heavy construction traffic limiting their infiltrative properties, leading to an increase in runoff. Under the SPDES GP 0-15-002, soil restoration is required in disturbed areas that will be vegetated to recover the original soil properties.

Soil restoration increases the chances for proper revegetation and stabilization, reducing the quantity and movement associated with potential stormwater runoff. Many runoff reduction practices require application of soil restoration measures over disturbed areas to achieve performance standards for runoff reduction. Key benefits of soil restoration include less stormwater runoff, better water quality, direct groundwater recharge, and most importantly, long-term success of revegetation by restoring soil organic matter.

5.1.1.3 Objective C-1-3: Rapid permanent stabilization

By adhering to the stabilization requirements of GP-15-002, this Compartment will have a lower potential of weed and invasive plant establishment, allowing the selected seed mixtures and plantings to establish and flourish.

Per the requirements of GP-15-002, any upland areas that are disturbed shall be stabilized using permanent seed mix, unless directed otherwise in associated permitting. The final seed mix determination will occur at the time of the final site plan and through the development of the related permitting documents. It is anticipated that a mix of conservation seed and wildflower mix will be used. Invasive species control is supported by rapid stabilization of planned and native seed mixes.

5.1.1.4 Objective C-1-4: Grassland bird/songbird use

NYSDEC recommends land management for a minimum of 5 years to successfully provide grassland bird habitat. As vegetation establishes over time, the meadows of this Compartment will become habitat for a variety of species. The natural vegetation within the solar facility are anticipated to be conducive to wildlife habitat. This is due to the fact that the array field remains relatively undisturbed throughout the year. In addition, areas below the panels are shaded which increases the type of species that may use the project area. Per NYSDEC guidance, grassland birds thrive on large, open, grasslands as these habitats provide the wide open treeless spaces they need to nest and reproduce.

Management by Mowing

A solution to satisfying multiple species needs is to create a unique mowing schedule. NYSDEC recommends mowing one half of the site at a height no shorter than 6 - 8 inches, and to rotate the mowed portion every year per the Grassland Habitat Best Management Practices. It is typical that a 5-year minimum duration is needed to establish a grassland habitat. We proposed monitoring the site during that time. Lastly, additional timing and mowing considerations are provided below, as provided by NYSDEC:

1. Between 16 August and 1 November of the first year of management, reduce fragmentation of the grassland by eliminating hedgerows, shrubs, and trees within the AOI, as applicable.
2. Mowing window: All mowing must be done between 16 August and 1 October.
3. Mowing as early within the mowing window as circumstances and conditions allow to prevent the maturation and release of seeds from forbs. At least 1/3 of mowed vegetation should be chopped

up and left on site after each mowing. Thatch will provide nesting habitat for birds as well as attracting moles and voles which are prey for raptors and owls.

4. The following species, if present, may require spot-mowing after 15 August of any year to control their encroachment into the field: spotted or brown knapweed, pale swallow-wort, burdock, or goldenrods.
5. Nesting Restrictions: Grasslands/meadows should not be disturbed by mowing, planting, harvesting, driving, or by any other mechanized means from 23 April to 15 August, inclusive (the nesting season) of every contract year.
6. Wintering Restrictions: Excessive disturbance such as frequent high speed snowmobile, ATV, motorized vehicle operation, or loud noises such as fireworks should be avoided from 1 November to 1 March, inclusive for the protection of wintering raptor areas.

Pending the final site design, the mowing schedule and mowing area selections will be determined as part of this WMP.

5.1.1.5 Objective C-1-5: Responsible pesticides and fertilizer use

Pesticide use is not anticipated but at times may be required, typically around fence posts. Where permanent seeding, sodding, and plant establishment is required, application of fertilizer shall be in accordance with Nutrient Runoff Law - ECL Article 17, Title 21.

Additional information related to responsible fertilizer use is provided below.

- In no case shall fertilizer be applied between 1 December and 1 April annually.
- Fertilizer shall not be spread within 20 feet of surface water.
- Any fertilizer falling or spilled into impervious surface areas such as parking lots, roadways, and sidewalks should be immediately contained and legally applied or placed in an appropriate container.
- Incorporate the fertilizer, and lime if specified, into the top 2-4 inches of the topsoil or soil profile.

When applying fertilizer by hydroseeding care should be taken to apply mix only to seed bed areas at an appropriate flow rate to prevent erosion.

6.0 Record Keeping

Emeren has developed record sheets to be used post-construction. These data sheets are provided as Appendix E.

7.0 Wildlife Management Plan Summary

The overall objective of this project is to utilize the safe nonpolluting energy solar resource in a manner which avoids and minimizes potential impacts to the environment and wildlife. The site will be managed based on habitat type. This plan is developed specifically to address management of habitat for grassland bird and songbird species, small mammals and pollinators.

Compartment C-1 consists of the solar array, grassland/meadow, and wildflower habitat. The following measures will be employed during and post construction activities from a wildlife management perspective:

- Improve existing maintained successional old fields and cleared lands to create a diverse, occupied meadow and wildflower habitat intermixed with the solar array. This is accomplished by a combination of soil restoration and introduction of conservation seed and wildflower mix post construction. This activity will enhance pollinator habitat, as well as improve habitat for grassland birds.
- The post-construction vegetation is anticipated to be conducive to grassland bird and songbird species. In order to avoid conflicts with nesting birds, a mowing maintenance schedule is developed to avoid mowing during the nesting season. The mowing plan calls for chopping and keeping 1/3 of mowed vegetation to provide nesting habitat. This will also attract moles and voles which are prey for raptors and owls.
- There is also a plan to monitor for knapweed, swallow-wort, burdock, and goldenrods. These species are not desirable for grassland birds. If present, the maintenance plan provides measures to control these species.
- Project fencing is designed to allow small mammals entry to the array area, while keeping larger animals outside of the array (See Appendix C).
- Lastly, the plan calls for responsible pesticide and fertilizer use to avoid direct wildlife impacts.

8.0 List of Preparers

Below is a list of the primary authors and field biologists that prepared this wildlife management plan. Copies of their respective resumes are included as Appendix F.

Bryan A. Bayer – Principal Author

- Mr. Bayer is an environmental scientist with twenty-five years of experience managing large and complex environmental projects. Mr. Bayer is a Certified Ecologist by the Ecological Society of America, and is primarily responsible for field surveys, wildlife impact analysis, permit preparation, and State Environmental Quality Review Act material preparation. In addition, Mr. Bayer provides field surveys, botanical surveys, wildlife inventories, ecological cover type mapping, habitat assessments, biological assessments, and permit documents relative to projects' potential to impact rare, threatened, and endangered species.

Justin Strong – Field Biologist

- Mr. Strong has 17 years of experience responsible for environmental and ecological assessments. He provides wetlands delineation services consistent with state and federal criteria in a number of states. He also authors or co-authors environmental documents consistent with the National Environmental Policy Act and state environmental quality regulations. He also manages regulatory compliance for both federal and state listed threatened and endangered species. Routine tasks include preparation of study plans for agency approval, botanical surveys, wildlife inventories, habitat assessments and ecological cover type mapping, field surveys, and agency consultation.

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APPENDIX A
USDA WEB SOIL SURVEY

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Oneida County, New York

Old Oneida

January 4, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (Old Oneida)

Map Scale: 1:4,310 if printed on A landscape (11" x 8.5") sheet.

N

0 50 100 200 300 Meters

0 200 400 800 1200 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

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
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

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: Oneida County, New York
Survey Area Data: Version 26, Sep 5, 2023

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

Date(s) aerial images were photographed: Sep 15, 2022—Oct 28, 2022

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 (Old Oneida)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
136A	Kendaia silt loam, 0 to 3 percent slopes	28.6	70.4%
790B	Conesus silt loam, 3 to 8 percent slopes	12.0	29.6%
Totals for Area of Interest		**40.6**	**100.0%**

Map Unit Descriptions (Old Oneida)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Oneida County, New York

136A—Kendaia silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2w5j0
Elevation: 460 to 1,640 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Kendaia and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kendaia

Setting

Landform: Drumlins, ridges, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: silt loam
Bw - 8 to 15 inches: silt loam
Bg - 15 to 20 inches: gravelly silt loam
BCg - 20 to 24 inches: gravelly loam
C - 24 to 79 inches: gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Lima

Percent of map unit: 6 percent
Landform: Drumlins, till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Lyons

Percent of map unit: 5 percent
Landform: Depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Churchville

Percent of map unit: 2 percent
Landform: Lake plains, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope, rise, talf
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ovid

Percent of map unit: 2 percent
Landform: Reworked lake plains, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

790B—Conesus silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w3jl
Elevation: 390 to 1,970 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Conesus and similar soils: 85 percent

Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Conesus

Setting

Landform: Drumlins, hills, till plains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 9 inches: silt loam
E/B - 9 to 14 inches: gravelly silt loam
Bt/E - 14 to 19 inches: gravelly silt loam
Bt1 - 19 to 25 inches: gravelly silt loam
Bt2 - 25 to 36 inches: gravelly silt loam
C - 36 to 79 inches: gravelly loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B/D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Lansing

Percent of map unit: 7 percent
Landform: Drumlins, hills, till plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Kendaia

Percent of map unit: 3 percent
Landform: Drumlins, till plains
Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Nunda

Percent of map unit: 2 percent
Landform: Drumlinoid ridges, hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Appleton

Percent of map unit: 2 percent
Landform: Drumlins, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Lyons

Percent of map unit: 1 percent
Landform: Depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

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APPENDIX B
SITE PHOTOGRAPHS

Photo Documentation

Project: NY Rome Old Oneida Rd 1 Solar Farm
NY Rome Old Oneida Rd 1 Solar Farm, LLC

Photo 1 – Representative photo of cropland/row crops ecological community with rural structures in the background.

Photo 2 – Representative photo of unpaved road/path ecological community.

Photo Documentation

Project: NY Rome Old Oneida Rd 1 Solar Farm
NY Rome Old Oneida Rd 1 Solar Farm, LLC

Photo 3 – Representative photo of successional old field ecological community.

Photo 4 – Representative photo shallow emergent marsh ecological community.

Photo Documentation

Project: NY Rome Old Oneida Rd 1 Solar Farm
NY Rome Old Oneida Rd 1 Solar Farm, LLC

Photo 5 – Representative photo of ditch/artificial intermittent stream ecological community.

Photo 6 – Representative photo intermittent stream ecological community.

Photo Documentation

Project: NY Rome Old Oneida Rd 1 Solar Farm
NY Rome Old Oneida Rd 1 Solar Farm, LLC

Photo 7 – Representative photo of rural structure ecological community.

Photo 8 – Representative photo of rural structures and mowed lawn ecological communities.

APPENDIX C
PROJECT PLANS

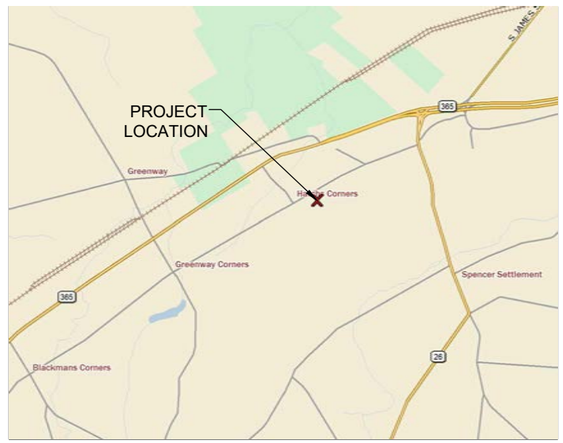
SITE PLAN DRAWINGS

SITE NAME: OLD ONEIDA SOLAR FARM, LLC

OLD ONEIDA ROAD
ROME, NY

LOCATION MAP

DIRECTIONS TO SITE: (FROM SYRACUSE INTERNATIONAL AIRPORT) TAKE I-90 EAST TO EXIT 3 AND HEAD TOWARDS SR365 NORTH. FOLLOW SR365 TO A RIGHT ONTO HENDERBURG ROAD THEN A LEFT ONTO OLD ONEIDA ROAD. SITE IS ON THE RIGHT.



VICINITY MAP

PROJECT INFORMATION	
PROPERTY OWNER:	JAMES ELLIOT 6536 HENDERBURG ROAD ROME, NY 13440
SITE NAME:	NY OLD ONEIDA SOLAR FARM, LLC
SITE ADDRESS:	OLD ONEIDA ROAD ROME, NY 13440
TAX MAP #:	272.-02-36
ZONING JURISDICTION:	TOWN OF ROME
ZONING DISTRICT:	TBD
COUNTY:	ONEIDA COUNTY

PROJECT DIRECTORY

APPLICANT:	MIDDLE GROVE ROAD, LLC 850 CANAL ST, SUITE 3D STAMFORD, CT 06902
CONTACT:	BRADLEY DAVIS
PHONE:	(645) 624-4566
EMAIL:	bradley.davis@renesolapower.com
CIVIL ENGINEERING FIRM:	C&S ENGINEERS INC. 499 COL. EILEEN COLLINS BLVD. SYRACUSE, NY 13212
CONTACT:	ERIC N. KENNA P.E.
PHONE:	(315) 455-2000
POWER COMPANY:	NATIONAL GRID
PHONE:	1 (800) 892-2345

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

DIG | SAFELY

PHONE #: 1-800-962-7962 OR 811

WEBSITE: HTTP://WWW.DIGSAFELYNEWYORK.COM

DRAWING LIST

SHEET NO.	SHEET NAME	REV	DATE
GENERAL			
G-001	TITLE SHEET	0	10-12-23
CIVIL			
C-101	AERIAL PLAN	0	10-12-23
C-102	SITE PLAN	0	10-12-23
C-103	GRADING PLAN	0	10-12-23
C-104	EROSION AND SEDIMENT CONTROL PLAN	0	10-12-23
C-501	EROSION AND SEDIMENT CONTROL DETAILS	0	10-12-23
C-502	EROSION AND SEDIMENT CONTROL DETAILS	0	10-12-23
C-503	FENCE DETAILS	0	10-12-23
C-504	SIGNAGE DETAILS	0	10-12-23

C&S PROJECT: V32.007.002

OCTOBER 2023

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF THE PLANS AND SPECIFICATIONS FOR THIS PROJECT ARE IN COMPLIANCE WITH THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE AND THE BUILDING CODE OF NEW YORK STATE

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

G-001

Jan 04, 2024 - 11:49am
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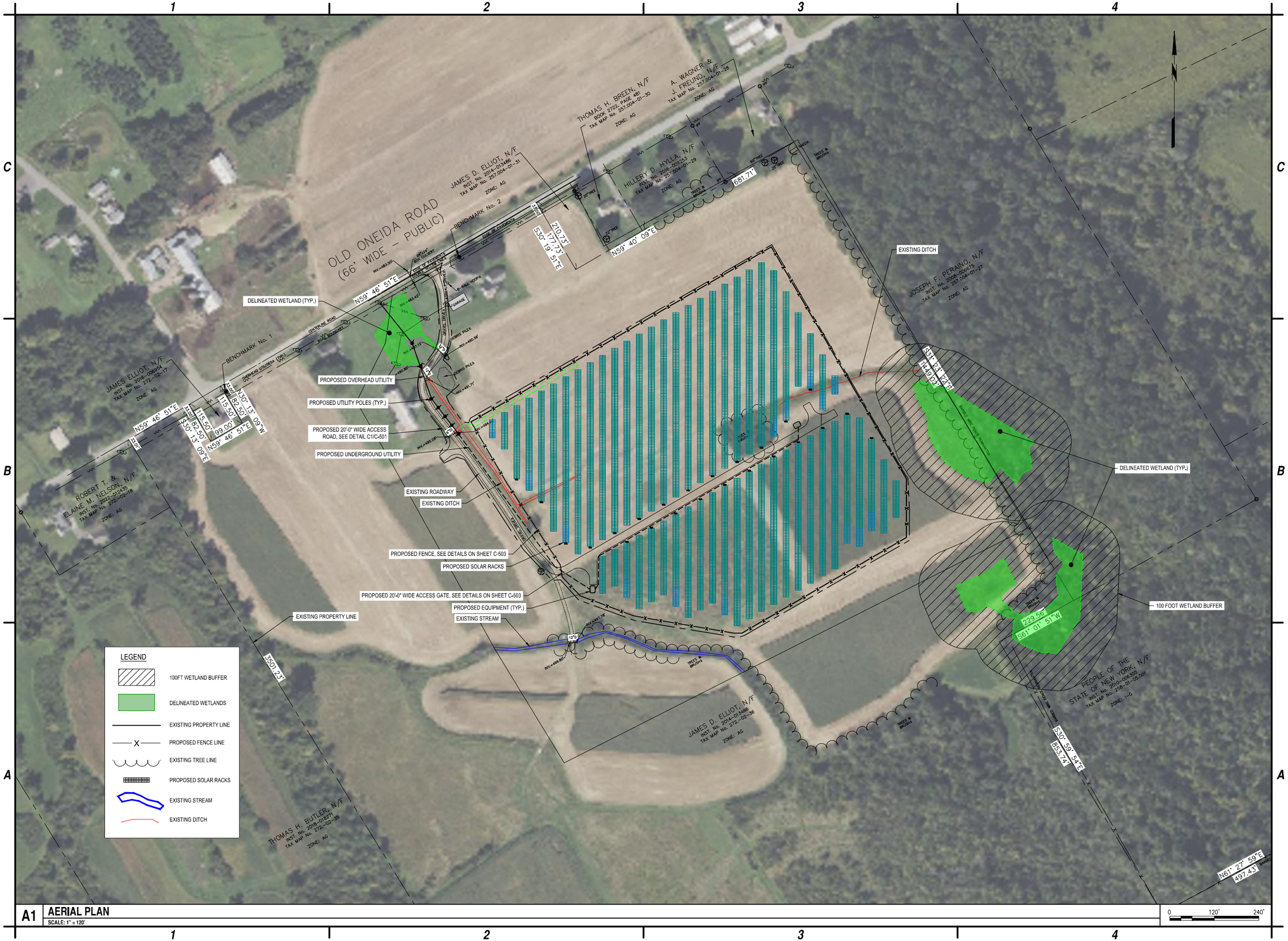

A1 **AERIAL PLAN**
SCALE: 1" = 120'

0 120' 240'

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Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

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Empowering Renewables

NY OLD ONEIDA SOLAR FARM, LLC
5792 OLD ONEIDA ROAD
ROME, NY 13440
ONEIDA COUNTY

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	B. BUCKINGHAM
DESIGNED BY:	
CHECKED BY:	

AERIAL PLAN

C-101

Jan 04, 2024 - 11:49am
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A1 **SITE PLAN**
SCALE: 1" = 100'

0 100' 200'

Jan 04, 2024 — 11:50am
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Syracuse, New York 13212
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		REVISIONS

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	B. BUCKINGHAM
DESIGNED BY:	
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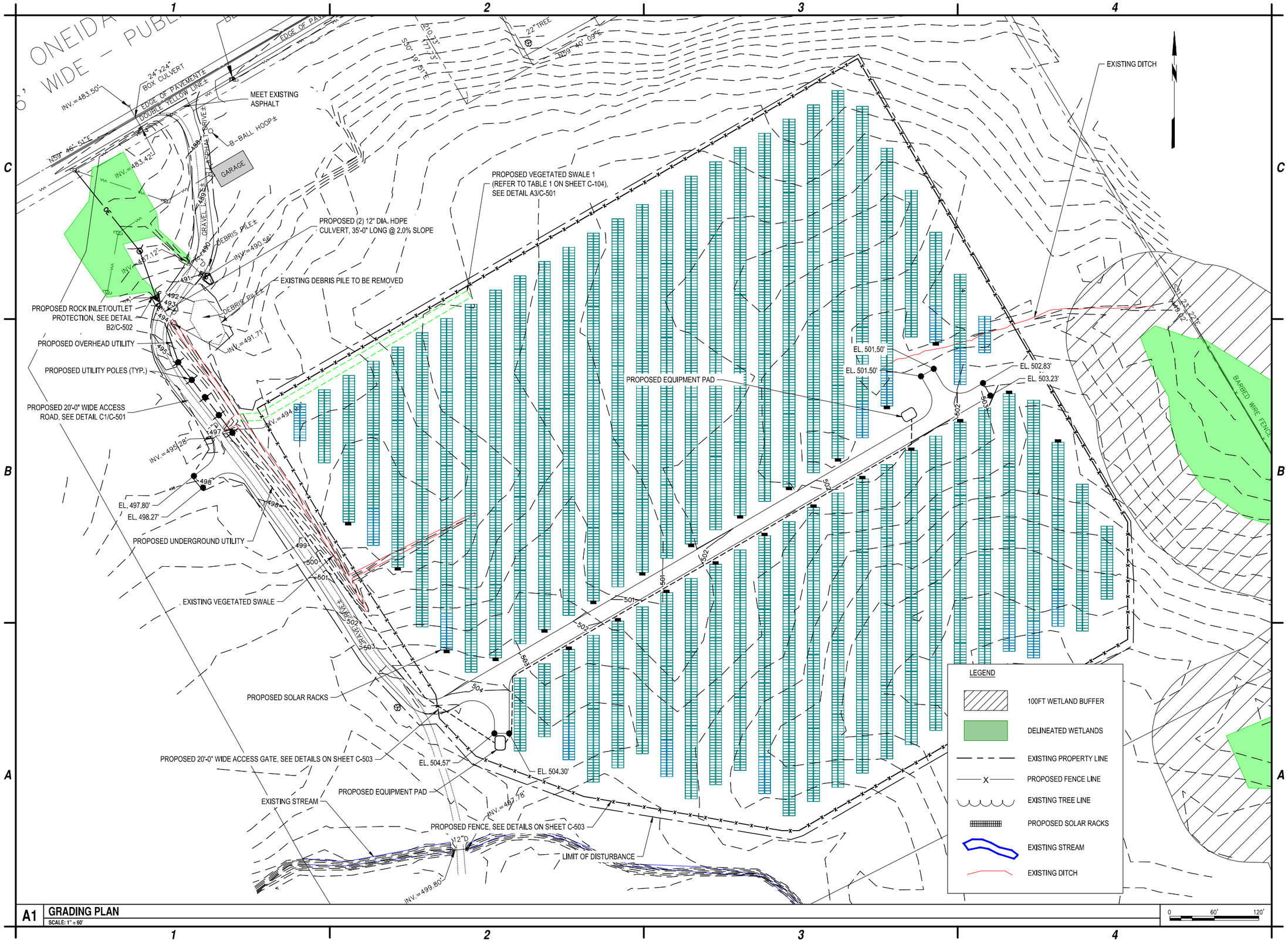
SITE PLAN

C-102



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Syracuse, New York 13212
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Fax: 315-455-9667
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DRAWN BY:	B. BUCKINGHAM
DESIGNED BY:	
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GRADING PLAN

C-103

TABLE 1: VEGETATED SWALE SEED MIX		
PERCENT	BOTANICAL NAME	COMMON NAME
26.00%	PANICUM VIRGATUM, NJ ECOTYPE	SWITCHGRASS
25.00%	PANICUM VIRGATUM, 'CARTHAGE', NC ECOTYPE	SWITCHGRASS, 'CARTHAGE'
22.00%	CAREX VULPINOIDEA, PA ECOTYPE	FOX SEDGE
22.00%	ELYMUS VIRGINICUS, PA ECOTYPE	VIRGINIA WILDRYE
3.00%	JUNCUS EFFUSUS	SOFT RUSH
1.00%	JUNCUS TENUIS, PA ECOTYPE	PATH RUSH
1.00%	PANICUM RIGIDULUM, PA ECOTYPE	REDTOP PANICGRASS

NOTE:
THIS SEED MIX SHALL BE USED FOR PROPOSED VEGETATED SWALES. ALL OTHER DISTURBED AREAS SHALL RECEIVE THE NORTHEAST SOLAR POLLINATOR 3' MIX PER DETAIL B4/C-504.

NOTE:
ALL WETLANDS ARE TO BE STAKED OUT AND PROTECTED DURING CONSTRUCTION.
GRADING SHALL NOT OCCUR IN WETLANDS

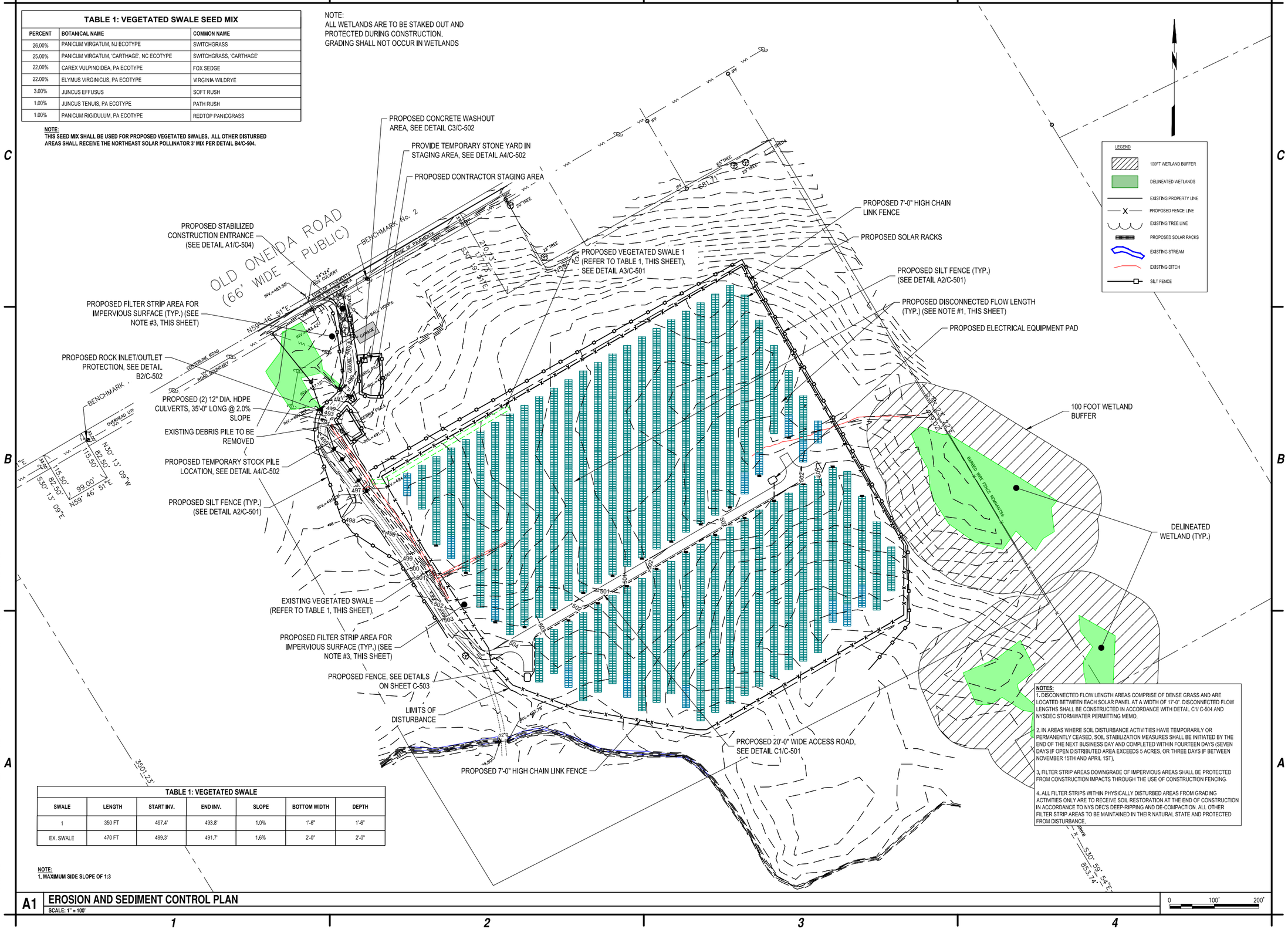

TABLE 1: VEGETATED SWALE						
SWALE	LENGTH	START INV.	END INV.	SLOPE	BOTTOM WIDTH	DEPTH
1	350 FT	497.4'	493.8'	1.0%	1'-6"	1'-6"
EX. SWALE	470 FT	499.3'	491.7'	1.6%	2'-0"	2'-0"

NOTE:
1. MAXIMUM SIDE SLOPE OF 1:3

NOTES:
1. DISCONNECTED FLOW LENGTH AREAS COMPRISE OF DENSE GRASS AND ARE LOCATED BETWEEN EACH SOLAR PANEL AT A WIDTH OF 17'-0". DISCONNECTED FLOW LENGTHS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAIL C1/ C-504 AND NYSDEC STORMWATER PERMITTING MEMO.

2. IN AREAS WHERE SOIL DISTURBANCE ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, SOIL STABILIZATION MEASURES SHALL BE INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN FOURTEEN DAYS (SEVEN DAYS IF OPEN DISTRIBUTED AREA EXCEEDS 5 ACRES, OR THREE DAYS IF BETWEEN NOVEMBER 15TH AND APRIL 1ST).

3. FILTER STRIP AREAS DOWNGRADE OF IMPERVIOUS AREAS SHALL BE PROTECTED FROM CONSTRUCTION IMPACTS THROUGH THE USE OF CONSTRUCTION FENCING.

4. ALL FILTER STRIPS WITHIN PHYSICALLY DISTURBED AREAS FROM GRADING ACTIVITIES ONLY ARE TO RECEIVE SOIL RESTORATION AT THE END OF CONSTRUCTION IN ACCORDANCE TO NYS DEC'S DEEP-RIPPING AND DE-COMPACTION. ALL OTHER FILTER STRIP AREAS TO BE MAINTAINED IN THEIR NATURAL STATE AND PROTECTED FROM DISTURBANCE.

A1 **EROSION AND SEDIMENT CONTROL PLAN**
SCALE: 1" = 100'

0 100' 200'

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MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	V32.007.002
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DRAWN BY:	B. BUCKINGHAM
DESIGNED BY:	
CHECKED BY:	

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EROSION AND SEDIMENT CONTROL PLAN

C-104

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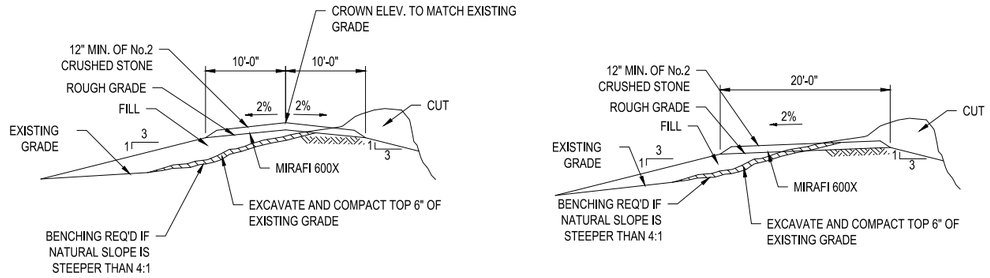


NOTE:
REMOVE ANY SOFT SOILS EXCAVATED DURING INSTALLATION OF ACCESS ROAD.

C1 ACCESS DRIVE DETAIL

NTS

1. SCHEDULE A PRE-CONSTRUCTION MEETING THAT SHALL BE ATTENDED BY THE QUALIFIED INSPECTOR, AND INVOLVED SUBCONTRACTORS TO DISCUSS RESPONSIBILITIES AS THEY RELATE TO THE IMPLEMENTATION OF THE SWPPP MEASURES TO AVOID AND MINIMIZE IMPACTS TO PROTECTED SPECIES DURING REMEDIATION, DEMOLITION AND CONSTRUCTION.
2. INSTALL THE STABILIZED CONSTRUCTION ENTRANCE FOR THE PROJECT AS SHOWN ON THE PLANS.
3. DELINEATE THE LIMITS OF DISTURBANCE FOR THE PROJECT, TO INCLUDE THE STAKEOUT AND INSTALLATION OF WETLAND PROTECTIONS OF WETLANDS ON SITE OR THAT COULD BE IMPACTED BY CONSTRUCTION. CONTRACTOR TO ENSURE DELINEATION OF WETLAND BOUNDARIES AND INSTALLATION OF PROTECTIONS REMAINS THROUGHOUT DURATION OF CONSTRUCTION EFFORTS TO PROTECT WETLANDS FROM DISRUPTION AS A RESULT OF CONSTRUCTION ACTIVITIES.
4. ESTABLISH LOCATION FOR STAGING AREA AND SOIL STOCKPILE AS SHOWN ON THE PLANS. IF THESE AREAS ARE NOT CONDUCIVE DUE TO ANY UNFORESEEN CONDITIONS, THE CONTRACTOR SHALL IDENTIFY A NEW LOCATION FOR REVIEW AND APPROVAL BY THE ENGINEER.
5. INSTALL ALL SILT / CONSTRUCTION FENCE FOR THE PROJECT AS SHOWN ON THE PLANS INCLUDING THE INSTALLATION OF SILT FENCE SURROUNDING THE PERIMETER OF THE SOIL STOCKPILE, STAGING AREA, AND AT THE DOWN GRADIENT SIDE OF ALL SOLAR PANEL ARRAYS LOCATIONS.
6. SELECTIVELY CLEAR ONLY THE AREAS REQUIRED FOR THE FOLLOWING: INSTALLATION OF THE STABILIZED FACILITY ENTRANCE, PLACEMENT OF THE CONSTRUCTION OFFICE TRAILER AND PARKING AREAS, PLACEMENT OF TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES, CONSTRUCTION STAGING AREA, THE SOIL STOCKPILE, AND THE MINIMAL AREAS IDENTIFIED TO BE GRADED.
7. INSTALL ALL SWALES /BASINS AND BERMS AS SHOWN ON THE PLANS. TOPSOIL, SEED, AND MULCH THE SWALES. ROLLED EROSION CONTROL FABRICS, TURF REINFORCEMENT MATS, MULCH ANCHORING TO BE INSTALLED AS NEEDED AND IN AREAS OF CONCENTRATED FLOW.
8. CONTRACTOR TO INSTALL LEVEL SPREADERS AS SHOWN ON THE GRADING AND EROSION AND SEDIMENT CONTROL PLAN. COVERING THE LEVEL SPREADER WITH PLYWOOD OR MUD MATS IN LOCATIONS WHERE THEY MUST BE CROSSED DURING CONSTRUCTION IS REQUIRED.
9. CONTRACTOR TO INSTALL THE ACCESS ROADWAYS AS SHOWN ON THE PLANS.
10. PROVIDE TEMPORARY SEEDING AND STABILIZATION MEASURES OF ANY DISTURBED AREAS IN ACTIVE AREAS ON THE NEXT BUSINESS DAY AND COMPLETED IN FOURTEEN DAYS.
11. INSTALL POSTS, BRACKETS, MOUNTING STRUCTURES, AND MODULES. CONTRACTOR SHALL LIMIT SOLAR ARRAY SUPPORTS AND MODULE INSTALLATION TO AREAS AND SECTIONS WHERE TEMPORARY STABILIZATION CAN BE MANAGED AND CONTROLLED AT ALL TIMES. A 5-ACRE WAIVER REQUEST WILL BE SUBMITTED TO THE TOWN OF AFTON AS AN MS4 COMMUNITY TO ALLOW THE SITE CONTRACTOR TO TRAVERSE THE SITE WITH THE SOLAR SUPPORT INSTALLATION EQUIPMENT ONLY. CONVENTIONAL EARTH MOVING AND MASS GRADING ACTIVITIES ARE NOT PROPOSED. PLEASE REFER TO THE 5-ACRE WAIVER LETTER IN APPENDIX A-7. SEEDING AND STABILIZATION MEASURES OUTLINED IN STEP 10 SHALL BE IMPLEMENTED BEFORE MOVING ONTO THE NEXT SECTION OF SOLAR PANEL INSTALLATIONS.
12. COMPLETE OVERALL ON-SITE STABILIZATION.
13. CONTRACTOR TO RAKE OUT ANY AREAS OF LEVEL SPREADERS THAT ARE PACKED WITH MUD AND REMOVE AND REPLACE STONE AS NECESSARY.
14. UPON ESTABLISHMENT OF SUBSTANTIAL VEGETATIVE COVER (85% MIN.) REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS. SEED AND MULCH THE REMAINING DISTURBED AREAS (RESULTING FROM TEMPORARY EROSION CONTROL MEASURE REMOVAL).
15. REMOVE SILT FENCING ONLY AFTER DISTURBED SURFACES ARE STABILIZED.
16. UPON FINAL STABILIZATION, AND CERTIFICATION BY THE NYSDEC AND THE QUALIFIED PROFESSIONAL RETAINED TO PERFORM THE REQUIRED SITE INSPECTIONS, THE OWNER SHALL FILE THE NOTICE OF TERMINATION (NOT) WITH THE NYSDEC.

C3 CONSTRUCTION SEQUENCE

SCALE: NOT TO SCALE

STABILIZED CONSTRUCTION ENTRANCE NOTES:

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.

2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).

3. THICKNESS - NOT LESS THAN SIX (6) INCHES.

4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.

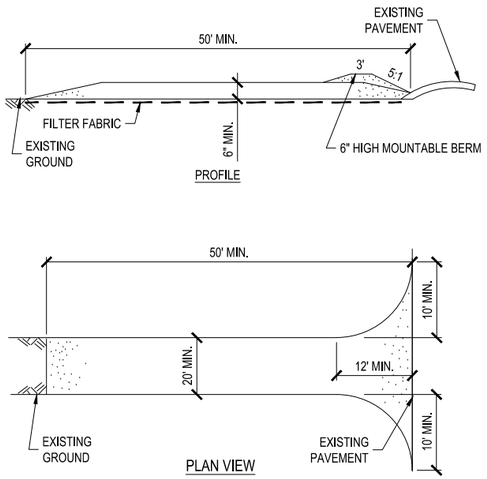
5. FILTER FABRIC - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.

6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.

7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF- WAY MUST BE REMOVED IMMEDIATELY.

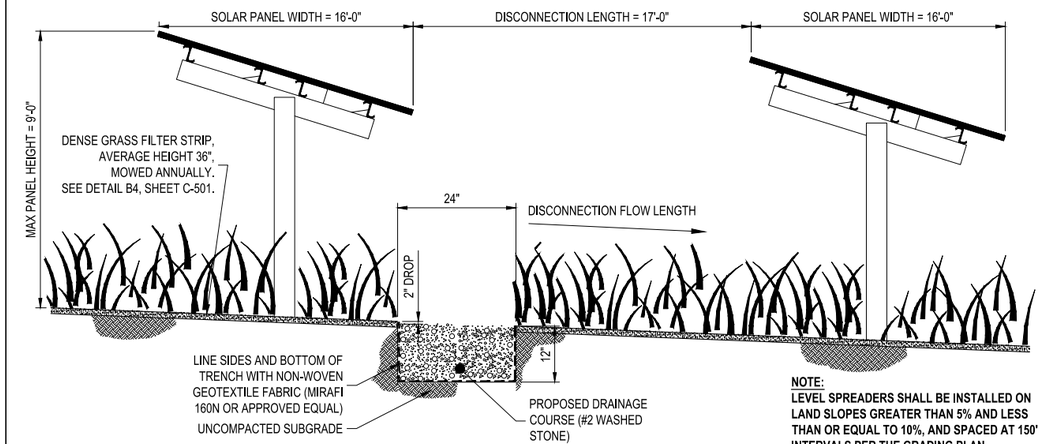
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.



A1 STABILIZED CONSTRUCTION ENTRANCE DETAIL

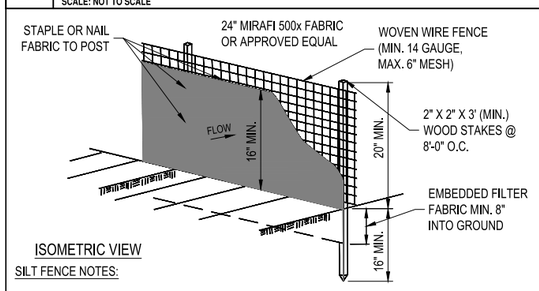
SCALE: NOT TO SCALE



NOTE:
LEVEL SPREADERS SHALL BE INSTALLED ON LAND SLOPES GREATER THAN 5% AND LESS THAN OR EQUAL TO 10%, AND SPACED AT 150' INTERVALS PER THE GRADING PLAN.

B2 LEVEL SPREADER TYPICAL DETAIL

SCALE: NOT TO SCALE



SILT FENCE NOTES:

1. WOVEN WIRE FENCE SHALL BE SECURELY FASTENED TO FENCE POSTS WITH WIRE TIES OR STAPLES.

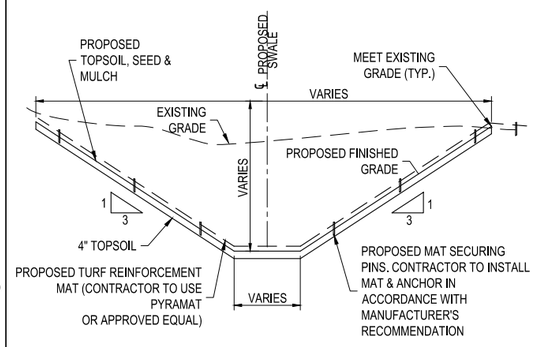
2. SILT FENCE FABRIC SHALL BE SECURELY FASTENED TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION, WHEN TWO SECTIONS OF SILT FENCE FABRIC ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.

3. MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR AS DIRECTED BY ENGINEER AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

4. CONTRACTOR SHALL REMOVE THE SILT FENCE AT THE APPROPRIATE TIME, DRESS THE DISTURBED AREAS, AND DISPOSE OF THE SILT FENCE.

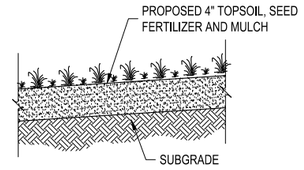
A2 SILT FENCE DETAIL

SCALE: NOT TO SCALE



A3 VEGETATED SWALE

SCALE: NOT TO SCALE



NOTES:
1. SEED INSIDE THE SOLAR ARRAY WITH NORTHEAST SOLAR POLLINATOR 3' MIX - ERNMX-612.
2. REFER TO APPENDIX C-3 OF SWPPP REPORT, STANDARD AND SPECIFICATIONS FOR PERMANENT CONSTRUCTION AREA PLANTING

NORTHEAST SOLAR POLLINATOR 3' MIX

PERCENT	BOTANICAL NAME	COMMON NAME
94.90%	FESTUCA OVINA	SHEEP FESCUE
2.50%	ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED
2.00%	CHAMAECRISTA FASCICULATA, PA ECOTYPE	PARTRIDGE PEA, PA ECOTYPE
0.30%	OENOTHERA FRUTICOSA VAR. FRUTICOSA	SUNDROPS
0.30%	TRADESCANTIA VIRGINIANA, SOUTHERN PA/ NORTHERN VA	VIRGINIA SPIDERWORT, SOUTHEASTERN PA/ NORTHERN VA BLEND

B4 GRASS RESTORATION DETAIL

SCALE: NOT TO SCALE

A4 NOT USED

SCALE: NOT TO SCALE

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Syracuse, New York 13212
Phone: 315-455-2000
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ONEIDA COUNTY

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	M. BUCKINGHAM
DESIGNED BY:	
CHECKED BY:	E.N. KENNA P.E.

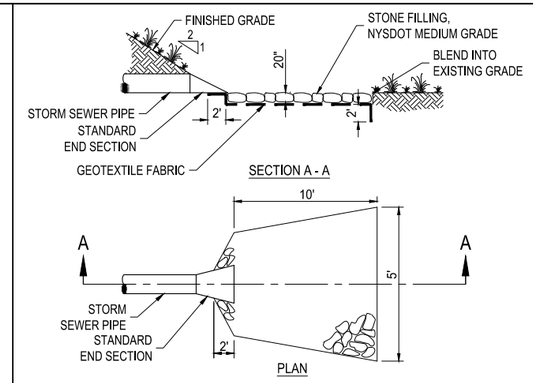
EROSION AND SEDIMENT CONTROL DETAILS

C-501

C1 NOT USED
SCALE: NOT TO SCALE

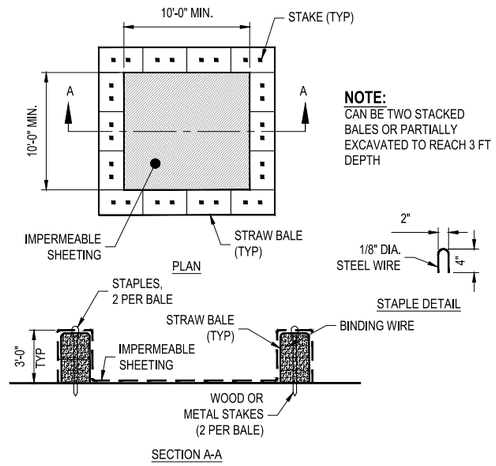
B1 NOT USED
SCALE: NOT TO SCALE

A1 NOT USED
SCALE: NOT TO SCALE



B2 ROCK INLET/OUTLET PROTECTION DETAIL
SCALE: NOT TO SCALE

A2 NOT USED
SCALE: NOT TO SCALE



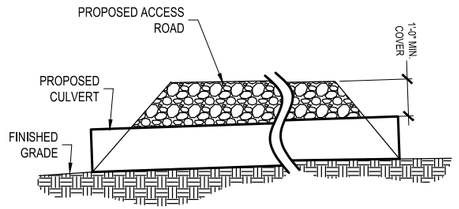
NOTE:
CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

CONSTRUCTION SPECIFICATIONS

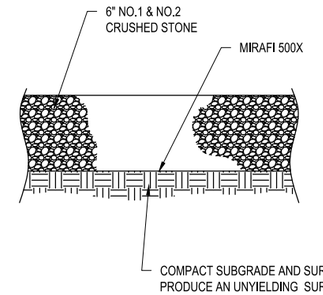
1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED), EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER.
6. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

C3 TEMPORARY CONCRETE WASH-OUT AREA (STRAW BALE) DETAIL
SCALE: NOT TO SCALE

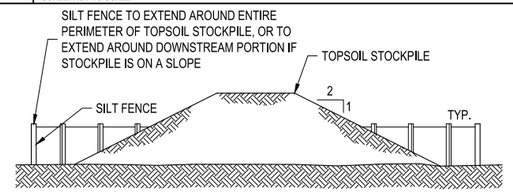
B3 NOT USED
NOT TO SCALE



A3 TYPICAL CULVERT DETAIL
SCALE: NOT TO SCALE



B4 TYPICAL STONE YARD DETAIL (FOR STAGING AREA)
SCALE: NOT TO SCALE



TEMPORARY TOPSOIL STOCKPILE NOTES:

1. REFER TO SILT FENCE DETAIL FOR MATERIALS AND INSTALLATION METHODS.
2. IF THE STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, IT SHALL BE STABILIZED WITH BURLAP MATTING OR SEEDED WITHIN 7 DAYS OF COMPLETION TO MINIMIZE EROSION.
3. INSPECTION OF SILT FENCE SHALL BE AT LEAST ONCE PER WEEK AND AFTER RAIN EVENTS IN EXCESS OF 1/2". REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
4. SEDIMENT TRAPPED BY THE SILT FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHENEVER SIGNIFICANT ACCUMULATION OCCURS.
5. SILT FENCE SHALL BE MAINTAINED IN PLACE UNTIL TOPSOIL STOCKPILE HAS BEEN ELIMINATED AND SHALL BE REMOVED ONLY WHEN DIRECTED BY THE ENGINEER.
6. TOPSOIL STOCKPILE LOCATION SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE OWNER OR AN AUTHORIZED REPRESENTATIVE

A4 TYPICAL TOPSOIL STOCKPILE DETAIL
SCALE: NOT TO SCALE

C&S COMPANIES
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

emeren
Empowering Renewables

NY OLD ONEIDA SOLAR FARM, LLC
5792 OLD ONEIDA ROAD
ROME, NY 13440
ONEIDA COUNTY

MARK	DATE	DESCRIPTION

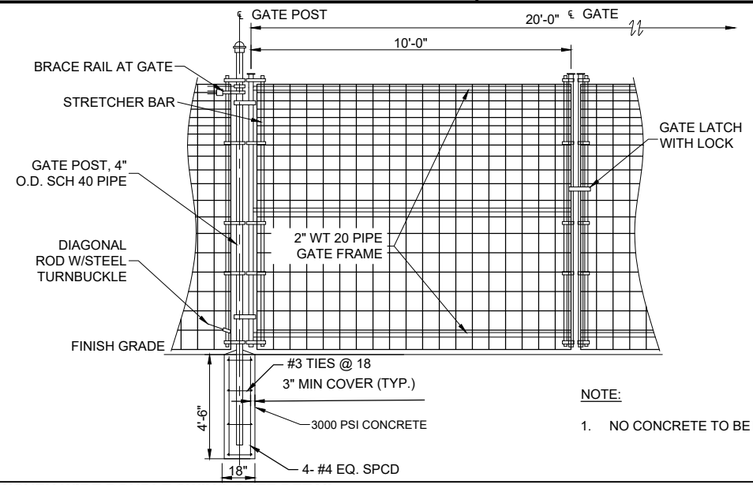
REVISIONS

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	M. BUCKINGHAM
DESIGNED BY:	E.N.KENNA P.E.
CHECKED BY:	

EROSION AND SEDIMENT CONTROL DETAILS

C-502

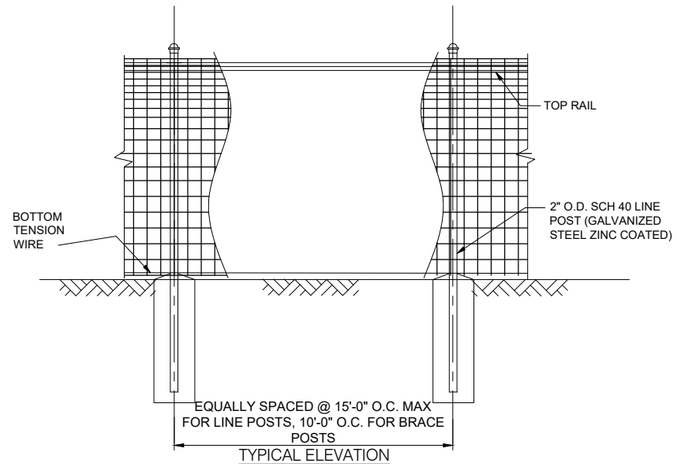
Jan 04, 2024 - 11:50am
F:\Project\V32 - Renesola Power Holdings, LLC\V32007002 - Old Oneida Site Permitting\Design\CADD\Sheet Files\V32007002_C-502 E&SC Details.dwg



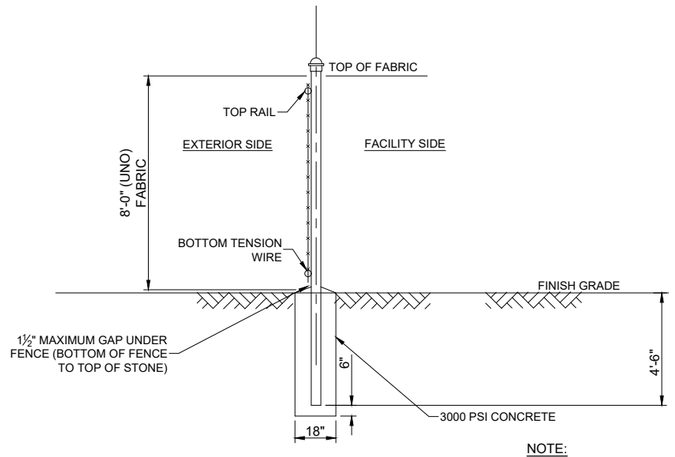
NOTE:

1. NO CONCRETE TO BE PLACED IN WETLAND AREAS.

C1 WOVEN WIRE DOUBLE SWING GATE DETAIL
NTS



TYPICAL ELEVATION



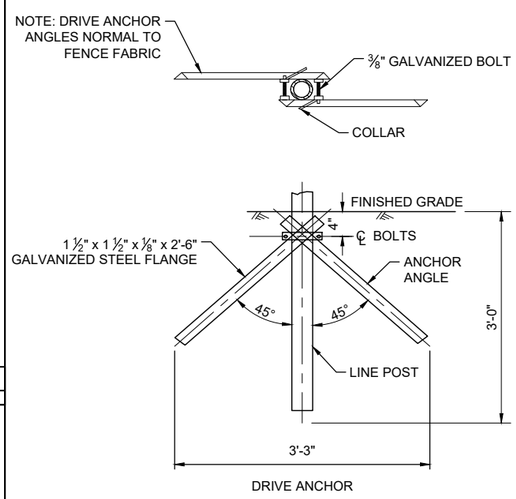
TYPICAL SECTION

NOTE:

1. NO CONCRETE TO BE PLACED IN WETLAND AREAS.

A1 WOVEN WIRE FENCE DETAIL
NTS

COLLAR: WELDABLE STEEL OR CAST STEEL GALVANIZED IN ACCORDANCE WITH SECTION 719-01 TYPE I OR CAST IRON OR MALLEABLE IRON.

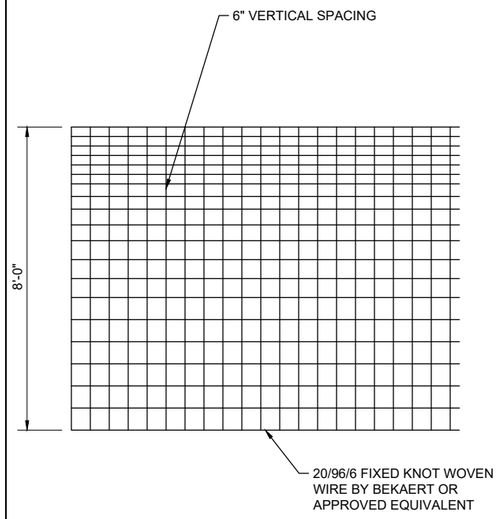


DRIVE ANCHOR

NOTE:

1. NO EXCAVATION, BACKFILL OR PLACEMENT OF CONCRETE IN WETLAND AREAS.

B3 DRIVE ANCHOR DETAIL
SCALE: X" = 1'-0"

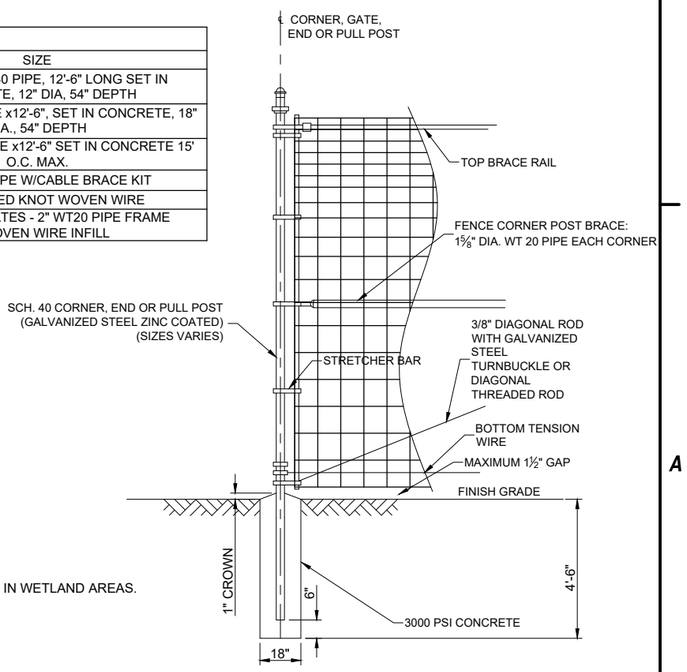


NOTE:

1. FENCE SHALL BE FIXED KNOT AND NON BARBED.

B4 FENCE FABRIC DETAIL
SCALE: X" = 1'-0"

FENCE SPECS	
FENCE PART	SIZE
TERMINAL & BRACE POSTS	2½" O.D. SCH 40 PIPE, 12'-6" LONG SET IN CONCRETE, 12" DIA, 54" DEPTH
GATE POSTS	4" O.D. SCH 40 PIPE x12'-6", SET IN CONCRETE, 18" DIA., 54" DEPTH
LINE POSTS	2" O.D. SCH. 40 PIPE x12'-6" SET IN CONCRETE 15' O.C. MAX.
BRACING	1⅝" WT20 PIPE W/CABLE BRACE KIT
COVERAGE	20/96/6 FIXED KNOT WOVEN WIRE
GATES	20' DOUBLE GATES - 2" WT20 PIPE FRAME W/WOVEN WIRE INFILL



NOTE:

1. NO CONCRETE TO BE PLACED IN WETLAND AREAS.

A3 WOVEN WIRE CORNER, END OR PULL POST DETAIL
SCALE: X" = 1'-0"

C&S COMPANIES
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

emeren
Empowering Renewables

NY OLD ONEIDA SOLAR FARM, LLC
5792 OLD ONEIDA ROAD
ROME, NY 13440
ONEIDA COUNTY

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	M. BUCKINGHAM
DESIGNED BY:	
CHECKED BY:	E.N. KENNA, P.E.

FENCE DETAILS

C-503

NY OLD ONEIDA
SOLAR FARM, LLC

SITE NAME: NY OLD ONEIDA SOLAR FARM, LLC

FACILITY OWNER: TBD

EMERGENCY CONTACT: TBD

PRIVATE PROPERTY - NO TRESPASSING

(x1)
.063" ALUMINUM
DIRECT PRINT, GLOSS LAM
(x4) CORNER HOLES, 1/4"
1 SIDED- SF

A1 EMERGENCY CONTACT SIGN
NOT TO SCALE

14"x10" OUTDOOR
DURABLE ALUMINUM

A3 HIGH VOLTAGE SIGN
NOT TO SCALE

C&S COMPANIES
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
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Fax: 315-455-9667
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ROME, NY 13440
ONEIDA COUNTY

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	V32.007.002
DATE:	JANUARY 2024
DRAWN BY:	M. BUCKINGHAM
DESIGNED BY:	-
CHECKED BY:	E.N. KENNA, P.E.

SIGNAGE DETAILS

C-504

APPENDIX D
AGENCY CORRESPONDENCE

Environmental Resource Mapper

The coordinates of the point you clicked on are:

UTM 18	**Easting:**	459069.33231165516	**Northing:**	4780621.3979379935
Longitude/Latitude	**Longitude:**	-75.50361703363247	**Latitude:**	43.17725772735463

The approximate address of the point you clicked on is:
Rome, New York

County: Oneida
City: Rome

USGS Quad: VERONA

If your project or action is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the action may be harmful to the species or its habitat.

If your project or action is within or near an area with rare plants and/or significant natural communities, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdiction.

Please refer to the "Need a Permit?" tab for permit information or other authorizations regarding these natural resources.

Disclaimer: If you are considering a project or action in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreational Rivers, are currently not included on the maps.

Print Preview

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To:
Project code: 2023-0075440
Project Name: Old Oneida

May 02, 2023

Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Old Oneida'

Dear Shannon Booth:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on May 02, 2023, for 'Old Oneida' (here forward, Project). This project has been assigned Project Code 2023-0075440 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into the IPaC must accurately represent the full scope and details of the Project. Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter.

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may

include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the New York Ecological Services Field Office and reference Project Code 2023-0075440 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Old Oneida

2. Description

The following description was provided for the project 'Old Oneida':

> Commercial Solar Development

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.1775819,-75.50247961766335,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats are likely to be present in the action area, answer "NO" and continue through the key.

   Do you want to make a no effect determination?

   Yes

PROJECT QUESTIONNAIRE

IPAC USER CONTACT INFORMATION

Agency: C&S Engineers, Inc.
Name: Shannon Booth
Address: 499 Col Eileen Collins Boulevard
City: Syracuse
State: NY
Zip: 13212
Email sbooth@cscos.com
Phone: 3159855938

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To:
Project Code: 2023-0075440
Project Name: Old Oneida

April 28, 2023

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

To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

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

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

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

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

PROJECT SUMMARY

Project Code: 2023-0075440
Project Name: Old Oneida
Project Type: Commercial Development
Project Description: Commercial Solar Development
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.1775819,-75.50247961766335,14z

Counties: Oneida County, New York

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

---

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

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: C&S Engineers, Inc.
Name: Shannon Booth
Address: 499 Col Eileen Collins Boulevard
City: Syracuse
State: NY
Zip: 13212
Email sbooth@cscos.com
Phone: 3159855938

APPENDIX E
MONITORING DATA SHEETS

EMEREN
NY ROME OLD ONEIDA ROAD 1 SOLAR FARM SITE
CITY OF ROME, ONEIDA COUNTY, NEW YORK

Compartment Number C-1: Solar Array, Grassland, and Wildflower Habitat
Management Objectives

1.) Site restoration *(Provide a description of post-construction site restoration success)*

_____
_____
_____
_____
_____
_____
_____
_____

2.) Increase use of site by grassland birds *(Provide evidence of use by grassland birds, description of grassland habitat, etc.)*

_____
_____
_____
_____
_____
_____
_____
_____

3.) Responsible pesticides and fertilizer use *(Note any areas of stressed vegetation)*

_____
_____
_____
_____
_____
_____
_____
_____

Description of Compartment:

1.) Size of Compartment (number of acres)
_____

2.) Dominant Vegetation
_____

_____
_____
_____

APPENDIX F
RESUMES

Bryan Bayer, PWS, CE

Managing Environmental Scientist

Bryan Bayer is a Professional Wetland Scientist and a Certified Ecologist with 25 years of experience responsible for environmental and ecological assessments. He provides wetlands delineation services consistent with state and federal criteria in a number of states. He also authors or co-authors environmental documents consistent with the National Environmental Policy Act and state environmental quality regulations. He also manages regulatory compliance for both federal and state listed threatened and endangered species. Routine tasks include preparation of study plans for agency approval, habitat assessments, field surveys, and agency consultation.

Total Experience
25 years

With C&S Since
2004

Education
B.A., Environmental Science, Hobart College, 1998

Registrations
Professional Wetland Scientist, Society of Wetland Scientist, Certification #7467

Certified Ecologist, Ecological Society of America

Organizations
Member: New York State Wetlands Forum; Ecological Society of America; Society of Wetland Scientists

Training
Environmental Regulatory Management, SUNY ESF

Wildlife Hazard Management at Airports and Bird Identification, USDA

38-Hour Army Corps of Engineers Wetland Delineation Training Program

24-Hour NYSWF USACE Regional Supplement Training

ODOT, Wetlands and Waterways, Ecological, and Categorical Exclusion Training

Experience

Renewable Energy

Ground Mount Solar Array Project, Dimension Energy, Multiple Locations, NY, Ongoing—Responsible for regulatory compliance including SEQR, Section 404 Clean Water Act, and NYSDEC Article 24 and Article 15 requirements for more than 50 proposed utility scale solar array projects. Tasks included coordinated review, managing archeological surveys, conducting wetland delineation, ecological surveys, and endangered species habitat assessments.

Ground Mount Solar Array Project, TESLA, Ithaca Tompkins Regional Airport, NY, 2018—Responsible for regulatory compliance including SEQR, Section 404 Clean Water Act, and Federal Aviation Administration NEPA requirements for a proposed utility scale solar array farm at the airport. Tasks included coordinated review and managing archeological surveys, and conducting wetland delineation and ecological survey. The project received a jurisdictional determination by the USACE as well.

Ground Mount Solar Array Projects, TJA Clean Energy, Multiple Locations, NY, Ongoing—Bryan completed environmental screening and compliance services for 70 proposed solar farm array projects across New York State. During preliminary site selection, conducted wetland, endangered species, and cultural resource "red flag" analysis to determine whether parcels may be hindered from the ability to site a solar array. Upon selection of preferred sites, provided support for municipal approvals including SEQR, and impact analysis regarding wetlands, endangered species, and cultural resources.

New York State Environmental Quality Review

Project Glass, Green Empire Farms, NY, 2019—Managed the New York State Environmental Quality Review Act, Section 404 of the Clean Water Act, and State Historic Preservation Act compliance for the proposed greenhouse project. The proposed facilities include a total of four (4) greenhouse buildings with support facilities, agricultural labor housing, an electrical substation, rain water storage/irrigation basins, and appurtenant features. Three of the four greenhouse buildings will each encompass approximately 32.45 acres each. The fourth greenhouse structure is approximately 15.37 acres. The total site encompasses 291-acres. Bryan prepared the SEQR documentation including the Full EAF, and supporting documentation including

wetland studies, cultural resource surveys, endangered species assessments, and lighting analysis. Cultural resource surveys revealed the presence of significant pre-historic sites. Bryan managed cultural resource surveys, and coordination/regulatory approval with the State Historic Preservation Act, NYSDEC, and Native American Tribe.

Endangered Species

Island Hollow Apartments, Two Plus Four Construction, Cicero, NY, 2016—Completed Phase I eastern massasauga rattlesnake survey for the proposed residential development in the Town of Cicero, NY. The site is located within the vicinity of habitat managed by NYSDEC for the species. Habitat suitability was assessed during a field survey, and field findings were forwarded to the NYSDEC for review and approval. It was determined that no primary habitat for gestating females or hibernating snakes occurred on site. Construction monitoring was proposed to avoid conflicts with foraging species.

Inficon Expansion, Inficon, NY, 2014—Conducted presence/absence acoustic surveys for the federally endangered Indiana bat associated with project expansion. The acoustic survey revealed the presence of the endangered species on site. Tree removal was necessary in order to keep construction schedule on track. Specifically, four trees needed to be removed during summer months in order to allow for construction of a needed access road. Bryan coordinated with the United States Fish and Wildlife Service in order to obtain approval to continue construction by proposing emergence counts on each tree for two consecutive nights. No bats were observed during emergence counts, and the trees were allowed to be removed so that the construction schedule could be maintained.

Rover Pipeline, Energy Transfer, WV, OH, PA, 2015—Conducted habitat assessments for federally listed Indiana and northern long-eared bats in Ohio. The Rover Pipeline is an interstate natural gas pipeline being designed to transport 3.25 billion cubic feet of natural gas per day through approximately 820 miles of 24-inch, 30-inch, 36-inch and 42-inch pipeline, and is located in Pennsylvania, West Virginia, and Ohio.

Atlantic Coast Pipeline, Dominion Transmission, WV, VA, NC, 2016—Managed endangered species studies along portions of 564-mile interstate natural gas pipeline system in West Virginia, Virginia, and North Carolina. Tasks included acoustic surveys, including visual vetting of calls, for endangered bats at 300 sites; habitat assessment and mist-net surveys at four sites for state-listed southeastern myotis and eastern subspecies of Rafinesque's big-eared bat in Virginia and North Carolina; and habitat assessment for West Virginia Northern Flying Squirrel on United States Forest Service lands in West Virginia. Project highlights include locating 30 – 40 big-eared bats roosting under a highway bridge within survey corridor.

Tuscarora Pipeline, National Fuel Gas, Steuben County, NY, 2015—Conducted wetland delineations along the 17.2-mile long project. Managed completion of endangered bat mist-net surveys along the entire project corridor. Staff located and conducted radio-telemetry on 4 captured northern long-eared bats (*Myotis septentrionalis*). Managed and co-authored Biological Assessment consistent with Section 7 of the Endangered Species Act to address impacts to the federally listed northern long-eared bat to support Federal Energy Regulatory Commission permitting. Construction cost: $58.5 million.

Hawks Nest & Glen Ferris Hydroelectric Project (FERC), Brookfield Energy, West Virginia, 2013—Conducted field reconnaissance surveys including wetlands and waterways delineation, wetland functions and values assessment, Indiana bat habitat assessment, acoustic surveys for endangered bats, and surveys for rare plants and animals along a 10-mile stretch of the New River Gorge. Field studies are in support of preparation of the FERC relicensing report for the two hydroelectric projects.

NYCO Minerals, Seventy Road Mine Expansion, NY, 2015—Project manager for acoustic surveys and analysis for federally and state listed bats at proposed expansion of mining facility in Essex County, NY. Concluded some calls were consistent with both federally endangered Indiana bat and federally threatened northern long-eared bat, as well as New York Species of Concern small footed bat.

Justin Strong

Project Environmental Scientist

Justin Strong has nearly 20 years of experience responsible for environmental and ecological assessments. He provides wetlands delineation services consistent with state and federal criteria in a number of states. In addition, Justin provides services related to environmental permits including wetlands mitigation planning and design. He also authors or co-authors environmental documents consistent with the National Environmental Policy Act and state environmental quality regulations. He also manages regulatory compliance for both federal and state listed threatened and endangered species. Routine tasks include preparation of study plans for agency approval, habitat assessments, field surveys, and agency consultation.

Total Experience
19 years

With C&S Since
2011

Education
A.A.S. Environmental Technology, SUNY Morrisville, 2003

B.S. in Environmental Science, Cazenovia, 2005

Certifications
Drone Remote Pilot Certification #4224708, 2019

Professional Organizations
Member, New York State Wetlands Forum

Specialized Training

NYSDOT-NYSDEC, 40-hour USACE Wetland Delineation Training

8-hour Wildlife Society Blanding's Turtle Workshop

16-hour Wildlife Society Bog Turtle Workshop

Experience

Renewable Energy

Ground Mount Solar Array Project, Renesola, Stockbridge Solar Array, NY, 2018-Ongoing—Responsible for regulatory compliance including SEQR, Section 404 Clean Water Act, and municipal approvals for the proposed project. Tasks include wetland delineation, stormwater pollution prevention plan/erosion and sediment control plan, and preparation of a Full EAF for SEQR.

Ground Mount Solar Array Projects, TJA Clean Energy, Multiple Locations, NY, 2018–Ongoing—Justin completed environmental screening and compliance services for 30 proposed solar farm array projects across New York State. During preliminary site selection, conducted wetland, endangered species, and cultural resource "red flag" analysis to determine whether parcels may be hindered from the ability to site a solar array. Upon selection of preferred sites, provided support for municipal approvals including SEQR, and impact analysis regarding wetlands, endangered species, and cultural resources. Tasks include habitat analysis, ecological cover type mapping, and flora and fauna inventories for wildlife and endangered species.

Ground Mount Solar Array Projects, Dimension Energy, Multiple Locations, NY, 2019–Ongoing—Justin completed environmental screening and compliance services for multiple proposed solar farm array projects across New York State. During preliminary site selection, conducted wetland, endangered species, and cultural resource "red flag" analysis to determine whether parcels may be hindered from the ability to site a solar array. Upon selection of preferred sites, provided support for municipal approvals including SEQR, and impact analysis regarding wetlands, endangered species, and cultural resources. Tasks include habitat analysis, ecological cover type mapping, and flora and fauna inventories for wildlife and endangered species.

Ground Mount Solar Array Projects, Omni Navitas, Multiple Locations, NY, 2019–Ongoing—Completed wetland delineations for multiple solar array locations. Tasks included coordinated review and managing archeological surveys, and conducting wetland delineation and ecological survey. The projects include applying for a jurisdictional determination by the USACE and NYSDEC.

Wetland Permitting & Mitigation

Riverwalk Wetland Mitigation, Bragman Associates, NY, 2015–2020—Prepared and designed a wetland mitigation plan to offset permanent impacts to forested wetland associated with the Riverwalk Development. The plan involved designing and creating 1 acre of forested wetlands. The mitigation plan was approved by the USACE allowing construction at the airport to proceed on schedule. Conducted post-construction monitoring for a period of 5 years; in 2020, the project met the final USACE criteria.

Niagara Falls International Airport Runway 6-24 Safety Area Improvements, Niagara Falls, NY, 2010–2017— Prepared a stream mitigation plan to offset permanent impacts to Cayuga Creek associated with NFTA's Runway 6-24 safety area improvements project. The plan involved improving the West Branch of Bergholtz Creek and enhancing 900 feet of degraded stream at Niagara County Community College by establishing a defined low flow channel, creating meanders, glides, and pools, establishing a 6.2-acre adjacent riparian fringe, and constructing a pedestrian bridge to improve public access. NCCC intends to utilize the area for educational purposes. The mitigation plan was approved by the USACE allowing construction at the airport to proceed on schedule. Conducted post-construction monitoring for a period of 5 years; in 2017, the project met the final USACE criteria.

Runway Safety Area Improvement Project, Chautauqua County Airport, Jamestown, NY, 2008-2011—The project involved permanent impacts to 2.5 acres of federally regulated wetlands, and therefore required obtaining an Individual Corps of Engineers Permit for construction. Upon completion of the EA, a joint application for permit included a wetland mitigation plan and design for creation of a 7-acre wetland at the NYSDEC Conewango Swamp Wildlife Management Area. The design included installing an osprey nest pole, which is actively being used by breeding osprey. Conducted post-construction monitoring for a period of 5 years; in 2017, the project met the final USACE criteria.

Wetland Delineation

Project Glass, Green Empire Farms, Wampsville, NY, 2017–2018—Completed wetland delineations for the 291-acre project site, electrical transmission and gas transmission line corridors. The electric and gas line corridors encompass approximately 0.75-miles in length. Tasks include preparation of materials to support a jurisdictional determination. The USACE JD for the project site was approved based upon our recommendations.

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212

Wetland & Waterway Delineation Report

NY Rome Old Oneida Road 1 Solar Farm Site

City of Rome

Oneida County, New York

Prepared for:
Emeren Inc.
100 First Stamford Place, Suite 302
Stamford, CT 06902

May 3, 2023

Table of Contents

List of Figures

Appendices

1.0 Introduction

Emeren Inc. proposes development on an approximately 40.64-acre area located directly southeast of Old Oneida Road and west of State Route 26 in the City of Rome, Oneida County, New York. C&S Engineers, Inc. (C&S) performed a wetland and waterway delineation for the 40.64-acre site (hereinafter referred to as "Project Area of Interest" or "AOI") on April 18, 2023. The delineation is prepared consistent with the New York State Department of Environmental Conservation (NYSDEC) and United States Army Corps of Engineers (USACE) guidelines. This report outlines review of published resource materials, existing site conditions, and the results of field investigations.

1.1 Project Description

Emeren Inc. is proposing to construct a ground-mounted solar farm and associated electrical appurtenances within a 40.64-acre site.

1.2 Project Location

The AOI is located directly southeast of Old Oneida Road and west of State Route 26 in the City of Rome, Oneida County (See Figure 1). The site occurs within the Oneida Lake watershed (USGS Cataloging Unit: 04140202).

2.0 Methods

2.1 Desktop Evaluation

Prior to field survey, C&S reviewed various maps and other sources of information to determine onsite areas that contain aquatic resources. These include:

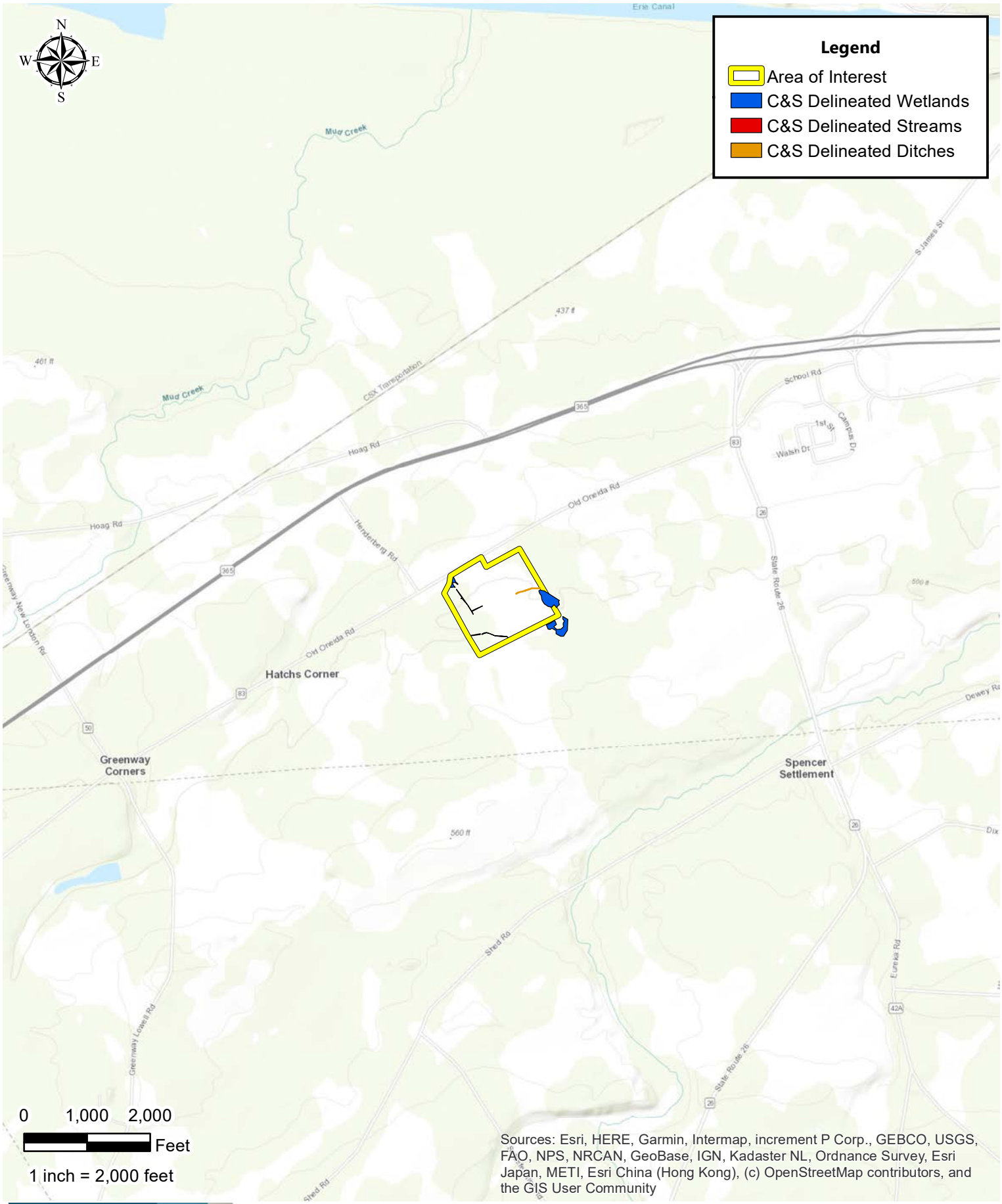
- United States Geological Survey (USGS) topographic maps
- National Wetlands Inventory (NWI) Maps prepared by the U.S. Fish and Wildlife Service (USFWS)
- Freshwater Wetland Maps prepared by the NYSDEC
- Stream Classification Maps prepared by the NYSDEC
- Soil Survey Geographic Database (SSURGO) Soils Map prepared using U.S. Department of Agriculture Natural Resources Conservation Service Soil Survey Geographic Database
- Federal Emergency Management Agency (FEMA) Floodplain Maps

The above references are used initially to identify areas with potential to contain wetlands and streams.

3.0 Field Surveys

3.1 Wetlands

C&S completed wetland delineations within the AOI on April 18, 2022. During field surveys, dominant flora species, hydrologic features, and soil conditions are recorded. Wetlands boundaries are delineated using criteria for vegetation, soils, and hydrology as specified in the *1987 Corps of Engineers Wetland Delineation Manual* (USACE 1987) (hereinafter referred to as the USACE Manual) and the *2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0* (Regional Supplement) (USACE 2012). The wetland delineation was also performed consistent with the *1995 NYSDEC Freshwater Wetlands Delineation Manual* (NYSDEC 1995).



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Sources: Created by C&S Engineers, Inc.
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Figure 1 | Project Location Map

Renesola Power Hodings
NY Rome Old Oneida Road 1 Solar Farm
City of Rome, Oneida County, New York

Locations of wetland delineation flags are mapped in the field using a Trimble Global Positioning System (GPS). Wetland flags/points are placed and coordinates are recorded via GPS along the wetland boundaries based on observations of hydrophytic vegetation, hydric soils, and hydrology conditions. These observations are made throughout the hydrologic condition continuum to verify the wetland boundary is sufficiently identified. Each wetland is assigned a letter designation, and each wetland flag is labeled with the letter assigned to the wetland and numbered consecutively. All GPS code phase data captured in the field are post-processed (differential correction) using Trimble's Pathfinder Office software. Wetland polygons are created in Geographic Information System (GIS) shapefiles and incorporated on Project base maps for the preparation of report figures. Wetland areas are calculated using Environmental Systems Research Institute ARCGIS ARCView.

Formal wetland determination data forms are completed in the field to document justification for the wetland boundary as delineated (Appendix A). These forms are prepared consistent with the Regional Supplement, and include information pertaining to hydrology, vegetation, and soils for each wetland within the Project AOI.

Vegetation is characterized consistent with the Regional Supplement, and recorded in plots as required by the USACE. Scientific nomenclature for plant species and the indicator status for each plant species occurring within the wetland sampling plot is determined using National Wetland Plant List: 2016 Update of Wetland Ratings (Lichvar et al. 2016). Soil characteristics and hydrology data are observed and collected at test pits within the vegetative plots. The pits are excavated by hand to a depth of 20 inches below grade consistent with the USACE Manual. The presence of hydric soil indicators is determined by describing pertinent characteristics of the soil sample. Soil colors are determined using the Munsell® soil color charts (2000 Edition, Gretag Macbeth, Division of Kollmorgen Instruments Corporation, New Windsor, New York). Hydric soil characteristics such as organic soil layers, reducing conditions, gleying, low-chroma mottles, and concretions are noted. Primary and secondary indicators of hydrology are also noted at each sample plot.

A wetland determination is made at each sample plot after characterizing vegetation, hydrology, and soil. If the vegetation, hydrology, and hydric soil criteria are met, the area is deemed a wetland. If one or more of the criteria are not met, the area is determined to be non-wetland. Completed wetland determination sheets for each representative soil pit are included in Appendix A.

Wetlands identified are further classified consistent with the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). Wetlands identified are further classified consistent with the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). The jurisdictional status of delineated features is identified consistent with the *2008 Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell V. United States* memorandum prepared by the United States Environmental Protection Agency and USACE, and the associated guidance document entitled the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* dated May 30, 2007.

3.2 Wetland Manual Differences

The NYSDEC manual and the USACE Manual/Regional Supplement are similar with regard to identifying wetland boundaries; however there are a few significant differences. The first difference is that the NYSDEC Manual states that if an area meets certain requirements regarding prevalence of wetland vegetation, the area can be considered a wetland without detailed investigation of hydrology and soils. If the wetland vegetation requirements are not met, but more than 50 percent of the dominant species prefer wetland habitats; then an investigation and verification of hydrology and/or hydric soils is required to locate a wetland boundary. The second difference is that the Regional Supplement has established additional methods for determining the dominance of hydrophytic vegetation, additional indicators of wetland hydrology, and additional hydric soils criteria that exceed those identified in the USACE and NYSDEC Manuals. These additional indicators could result in differences of wetland boundaries. In the instance the two wetland boundaries are not consistent as a result of the differences in manuals; the discrepancy between the two will be described within the results section of this report. This summary will include a discussion of the reason for the different boundaries.

3.3 Streams

Stream delineations were completed within and immediately adjacent the AOI. The federally regulated Ordinary High Water (OHW) mark of streams within the Project AOI are delineated using the definitional criteria as presented in Title 33, Code of Federal Regulations, Part 328, and the USACE Regulatory Guidance Letter 05-05 – Guidance on Ordinary High Water Mark Identification. Each stream is categorized in regard to its flow regime as perennial, intermittent, or ephemeral, as defined by the USACE. The OHW mark for each stream is mapped using the Trimble GPS.

Streams in the State of New York are protected by Article 15 Use and Protection of Waters. Streams are given classifications that designate the level of protection afforded to each waterbody. Each waterbody identified within the AOI is classified according to Article 15. The waterbody classification categories are AA, A, B, C or D depending on their designated level of protection. Waters with classifications A, B, and C may also have a standard of (T), indicating that it may support a trout population, or (TS), indicating that it may support trout spawning (TS). Streams with a designation of C(T) or higher are considered "protected" waters of New York State.

Stream boundaries are mapped using Trimble GPS units with sub-meter accuracy. Stream lengths are calculated in linear feet using Environmental Systems Research Institute ARCGIS ARCView. The jurisdictional status of delineated features is identified consistent with the *2008 Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell V. United States* memorandum prepared by the United States Environmental Protection Agency and USACE, and the associated guidance document entitled the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* dated May 30, 2007.

3.4 Ditches – Federal Jurisdiction

The jurisdictional status of ditches identified is consistent with the *2008 Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell V. United States* memorandum prepared by the United States Environmental Protection Agency and USACE, and the

associated guidance document entitled the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* dated May 30, 2007.

4.0 Results

4.1 Desktop Evaluation

Resource mapping used during the desktop review are provided in Figures 1 through 5. Figure 1 depicts the AOI on USGS topographic mapping. Figure 2 provides NYSDEC mapped resources within the AOI. Figure 3 provides NWI mapping, and Figure 4 provides soil survey information. Figure 5 depicts FEMA mapped floodplains within the vicinity of the AOI. A summary of information gathered during the desktop analysis is provided herein.

4.1.1 Topography and Drainage

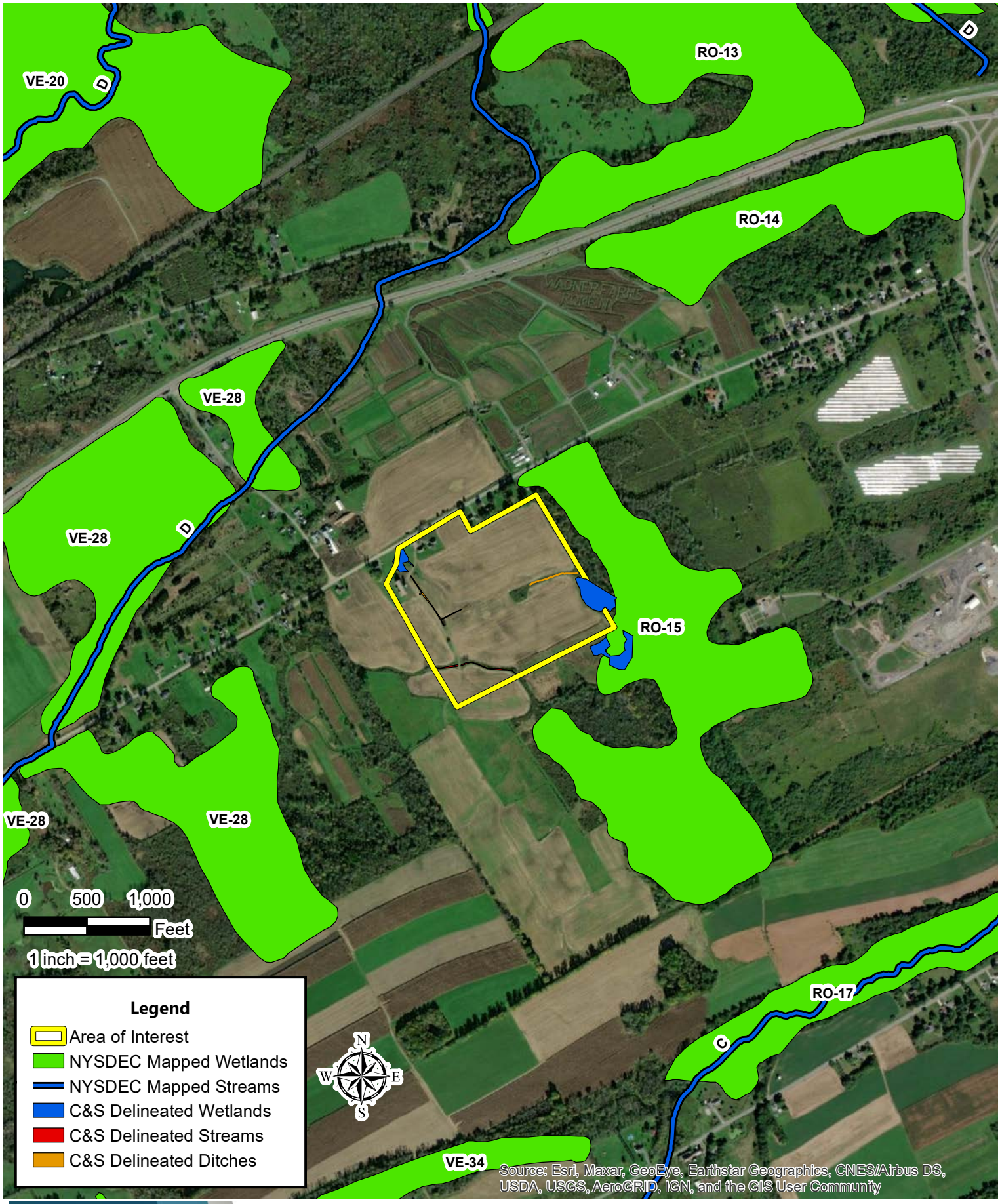
The Project site appears on the Verona and Rome U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps (See Figure 1). The AOI is located directly southeast of Old Oneida Road and west of State Route 26 in the City of Rome, Oneida County within the USGS topographic map. Elevation ranges from approximately 540 feet above mean sea level (amsl) in the northern portion of the AOI to 550 feet amsl in the southern portion of the AOI (North American Vertical Datum of 1988 [NAVD 88]). The site slope gently to the northwest.

4.1.2 New York State Mapped Resources

Article 24 of the Environmental Conservation Law requires the NYSDEC to map freshwater wetlands subject to jurisdiction of the law. Article 24 Freshwater Wetland Maps show the approximate location of the wetland boundary and the unique alpha numeric wetland identification number assigned to each resource. Due to the scale of the mapping and aerial photography used to produce the wetland boundaries, they are suitable for general planning purposes only. Based on the Freshwater Wetland Maps and the field review, wetland RO-15 is a Class 2 wetland that intersects the southeastern corner of the AOI. There are no NYSDEC streams within or adjacent to the AOI (See Figure 2).

4.1.3 National Wetlands Inventory Map

Based on the NWI map, there are no mapped NWI wetlands within the AOI. Three NWI wetlands are mapped southeast of the project site, outside of project boundaries – PFO1F is a semi permanently flooded palustrine forested, broad-leaved deciduous wetland; PFO4/1B is a palustrine forested, needle-leaved evergreen/broad-leaved deciduous, saturated wetland; and PFO1B is a saturated palustrine forested, broad-leaved deciduous wetland. One NWI wetland, PSS1F, is located northeast of the AOI – PSS1F is a semipermanently flooded palustrine scrub-shrub wetland (See Figure 3).



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Sources: Created by C&S Engineers, Inc.
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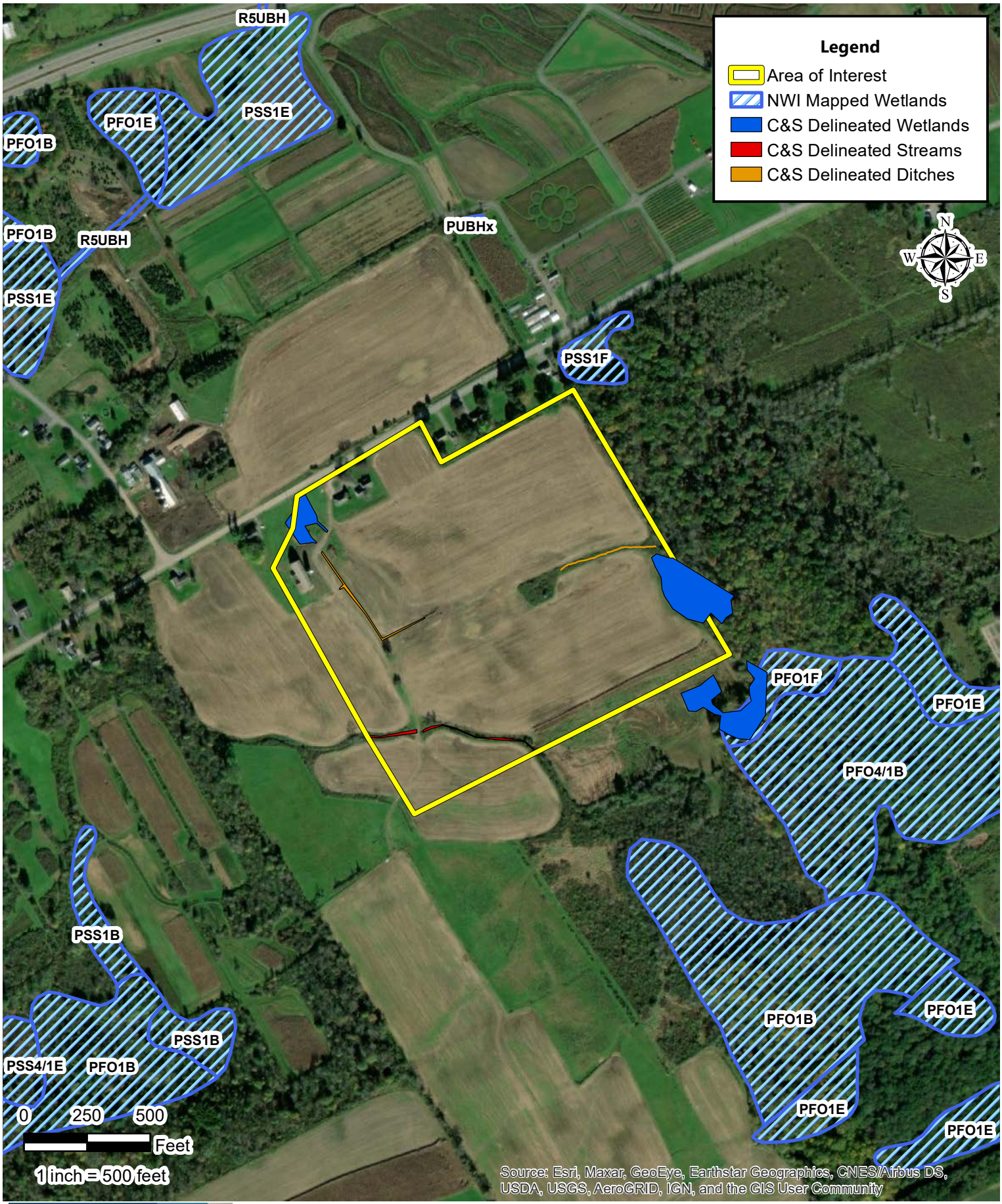
NYSDEC Freshwater Wetlands & Streams Classification Map

Figure 2

Renesola Power Hodings
NY Rome Old Oneida Road 1 Solar Farm
City of Rome, Oneida County, New York



Sources: Created by C&S Engineers, Inc.
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Figure 3 | National Wetlands Inventory (NWI) Map

Renesola Power Hodings
NY Rome Old Oneida Road 1 Solar Farm
City of Rome, Oneida County, New York

4.1.4 Soil Survey

Two unique soil series are mapped within the AOI as depicted in Figure 4, both of which contain hydric components. Table 1 provides the hydric rating, and acreage of the soils mapped on site. The hydric rating by map unit provided by the USDA NRCS Web Soil Survey is provided as Appendix B.

Table 1. Web Soil Summary in the AOI

Soil map unit	Hydric rating	Acres of soil within AOI	Percent of soil within AOI
136A – Kendaia silt loam, 0 to 3 percent slopes	5	28.6	70.4%
790B – Conesus silt loam, 3 to 8 percent slopes	1	12.0	29.6%

4.1.5 FEMA Floodplain Map

The FEMA floodplain map (See Figure 5) depicts that the AOI is not within a regulatory floodway (zone A).

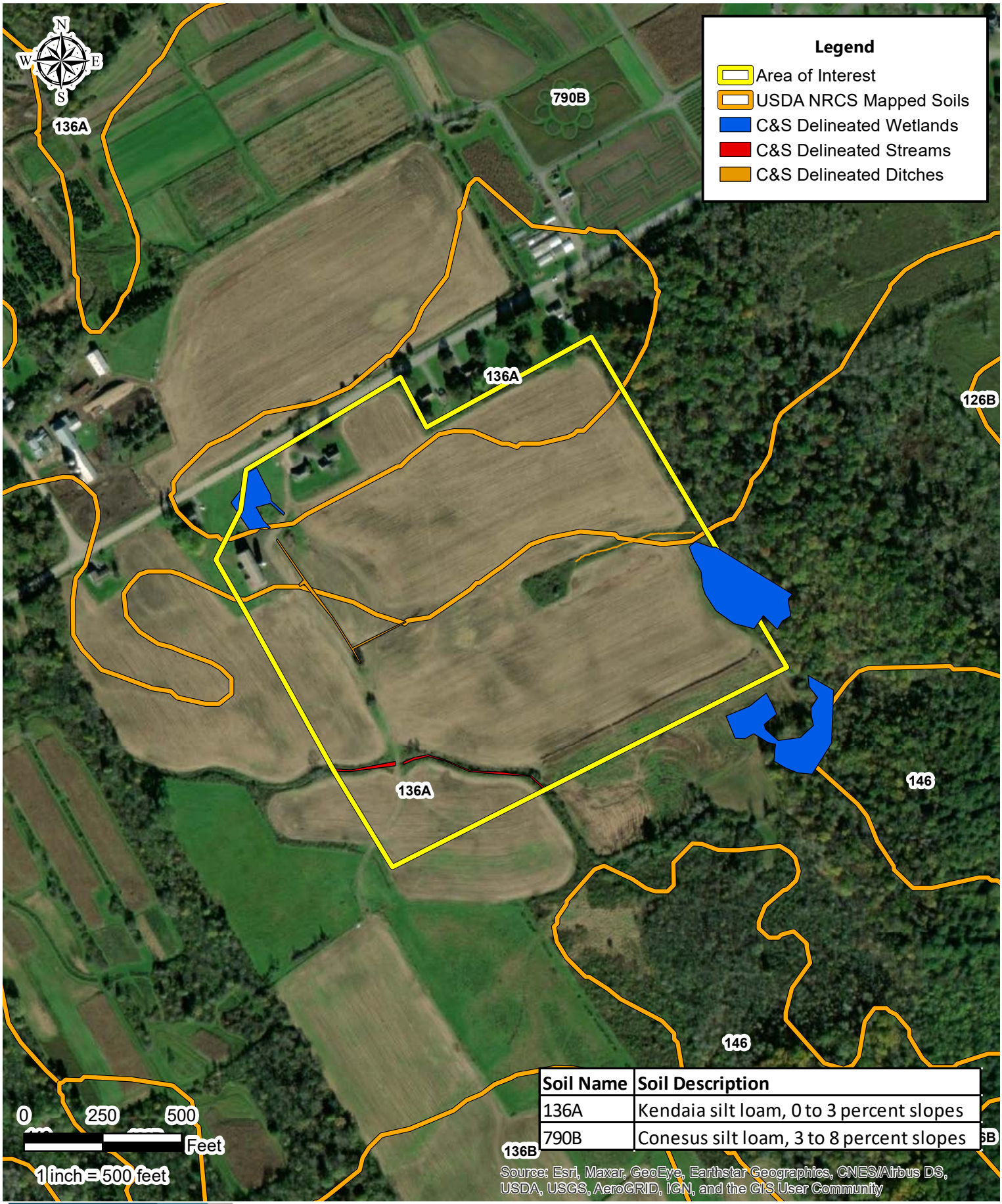
4.2 Field Surveys

4.2.1 Wetlands

C&S delineated two wetlands within the AOI, referred to as Wetlands A and Z and one wetland adjacent to the AOI, referred to as wetland Y. The boundaries of the delineated wetlands are included in Figure 6. Wetland A, Y, and Z are categorized as palustrine emergent (PEM) wetlands consistent with the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979) (hereinafter referred to as Cowardin). The boundaries of on-site wetlands within the AOI are delineated consistent with the USACE manual. Table 2 provides a summary of the wetland identified during the field investigation. Photographs of the wetland identified are provided in Appendix C.

Table 2. Wetland Delineation Summary in the AOI

Wetland Id	Cowardin Community Type Within AOI	Potential Agency Jurisdiction	Latitude/ Longitude Coordinates	Acreage
A	PEM	USACE	43°10'42.08"N, 75°30'18.70"W	0.34 total; 0.29 within AOI
Y	PEM	NYSDEC/USACE	43°10'33.95"N, 75°29'55.29"W	0.96 total; 0.00 within AOI
Z	PEM	NYSDEC/USACE	43°10'38.99"N, 75°29'58.04"W	1.11 total; 0.61 within AOI
TOTAL				2.41 total; 0.90 within AOI



Soil Name	Soil Description
136A	Kendaia silt loam, 0 to 3 percent slopes
790B	Conesus silt loam, 3 to 8 percent slopes

Sources: Created by C&S Companies, Inc.
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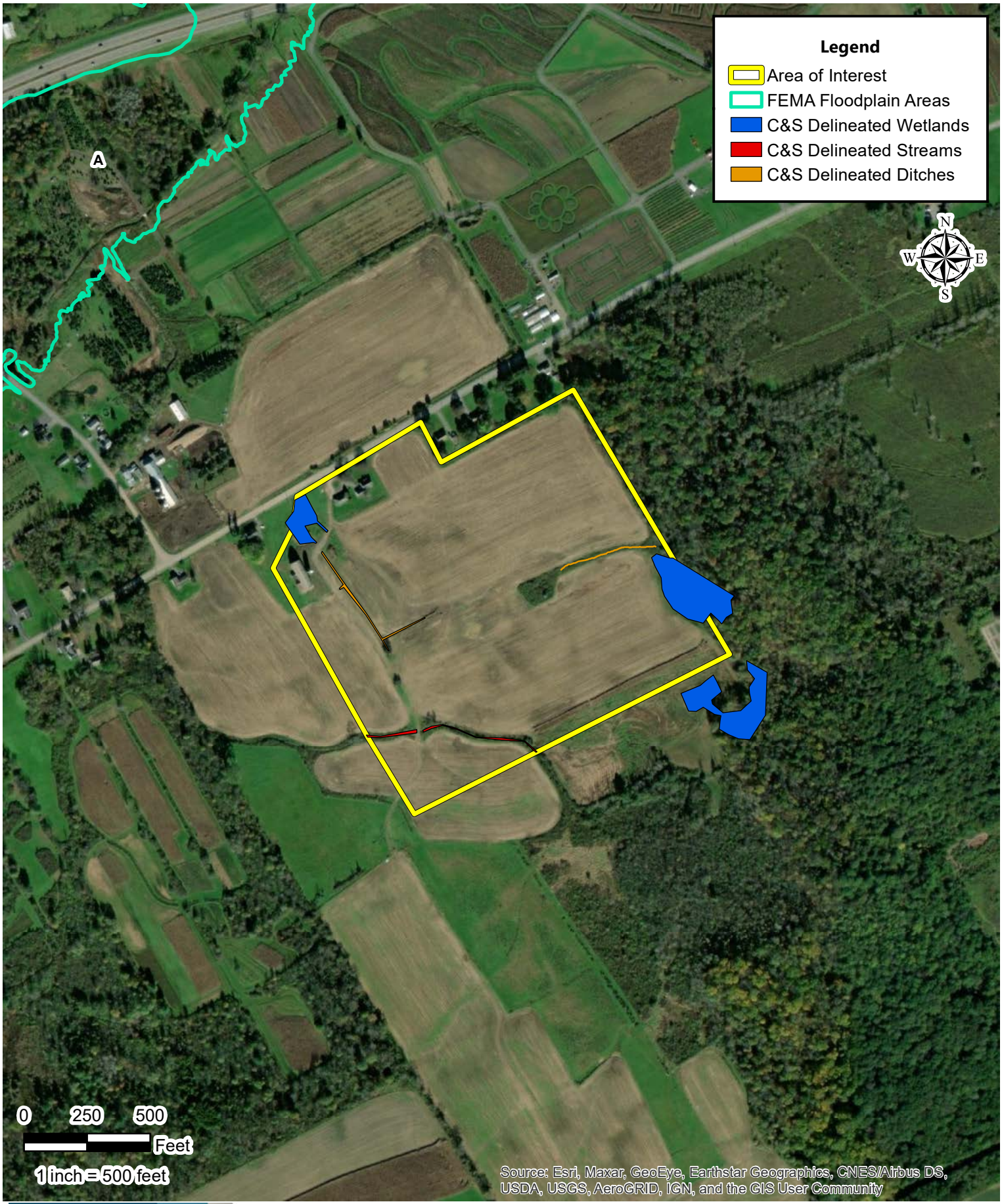
Figure 4 | USDA NRCS Soils Map

Renesola Power Hodings
NY Rome Old Oneida Road 1 Solar Farm
City of Rome, Oneida County, New York



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Sources: Created by C&S Engineers, Inc.
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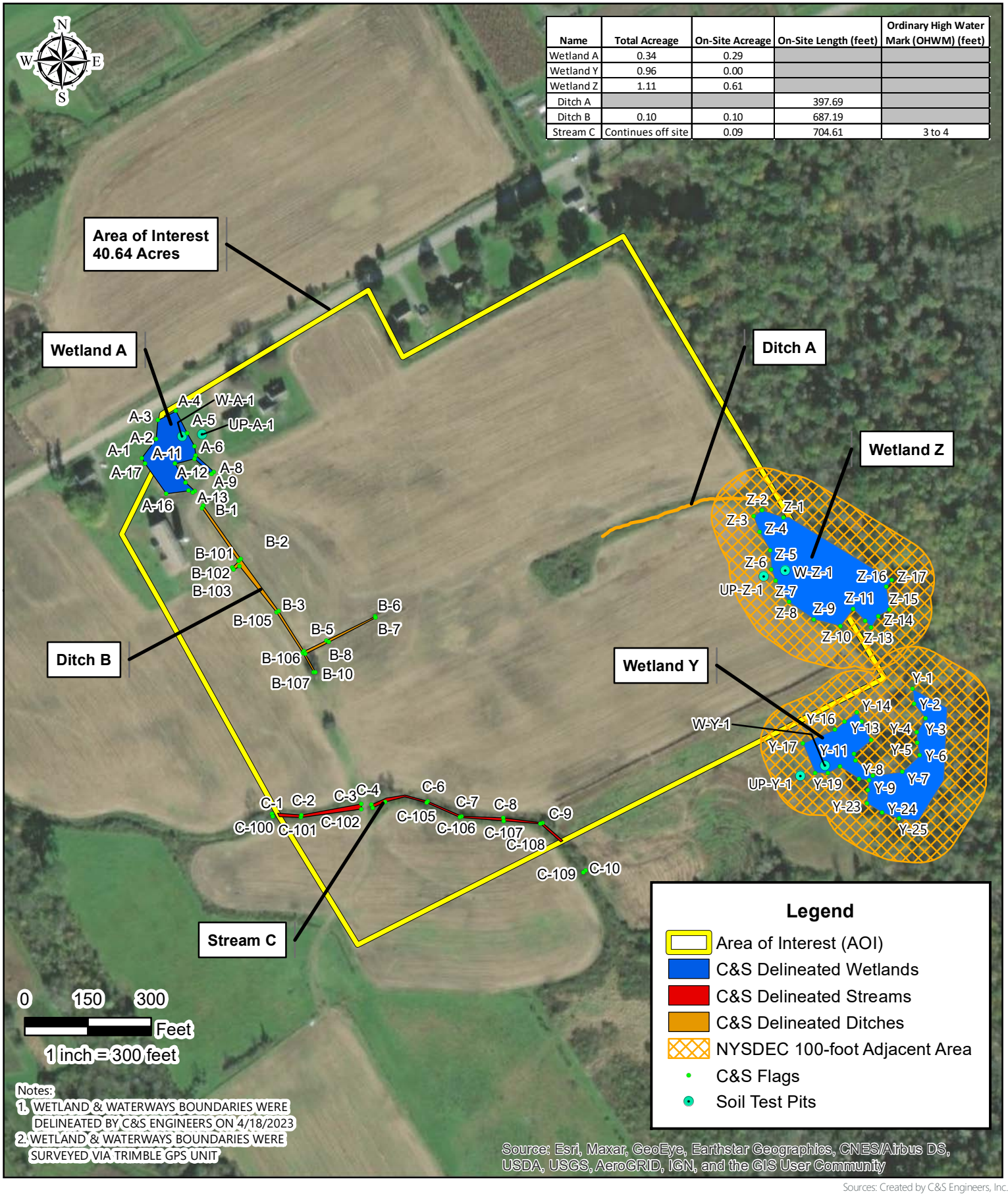
Figure 5 | FEMA Floodzone Areas Map

Renesola Power Hodings
NY Rome Old Oneida Road 1 Solar Farm
City of Rome, Oneida County, New York



Name	Total Acreage	On-Site Acreage	On-Site Length (feet)	Ordinary High Water Mark (OHWM) (feet)
Wetland A	0.34	0.29		
Wetland Y	0.96	0.00		
Wetland Z	1.11	0.61		
Ditch A			397.69	
Ditch B	0.10	0.10	687.19	
Stream C	Continues off site	0.09	704.61	3 to 4

Notes:
1. WETLAND & WATERWAYS BOUNDARIES WERE DELINEATED BY C&S ENGINEERS ON 4/18/2023
2. WETLAND & WATERWAYS BOUNDARIES WERE SURVEYED VIA TRIMBLE GPS UNIT

Sources: Created by C&S Engineers, Inc.

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Figure 6 | C&S Wetlands & Surface Water Delineation Map

Renesola Power Holdings
NY Rome Old Oneida Road 1 Solar Farm
City of Rome, Oneida County, New York

The PEM Cowardin classes are defined below:

PEM - This aquatic resource is a palustrine emergent wetland. Vegetation is comprised of erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.

Below are descriptions of the wetlands that are directly adjacent to the AOI:

Wetland A (PEM): The tree, shrub and woody vine stratum are absent from this wetland. Wetland A is dominated reed canary grass (*Phalaris arundinacea*) and Indian-hemp (*Apocynum cannabinum*), and also contains a goldenrod species (*Solidago* sp.) in the herbaceous stratum. The primary hydrologic indicators observed are surface water (A1), a high-water table (A2), and saturation (A3). The secondary hydrologic indicators observed are drainage patterns (B10), geomorphic position (D2), and a positive FAC-neutral test (D5). The soil hydric indicator F6 for redox dark surface was observed and met.

Wetland Y (PEM): The tree, shrub and woody vine stratum are absent from this wetland. The herbaceous stratum is dominated by reed canary grass (*Phalaris arundinacea*) and cattail (*Typha angustifolia*). The primary hydrologic indicators observed are a standing water (A1) and oxidized rhizospheres on living roots (C3). The secondary hydrologic indicators observed were saturation visible on aerial imagery (C9) and a positive FAC-neutral test (D5). The soil hydric indicator F3 for depleted matrix was observed and met.

Wetland Z (PEM): The forested and woody vine stratum are absent from this wetland. The shrub layer covered less than 5% of the wetland and was dominated by pussy willow (*Salix discolor*) and honeysuckle (*Lonicera morrowii*). The herbaceous stratum is dominated by soft rush (*Juncus effusus*) and reed canary grass. The primary hydrologic indicators observed are standing water (A1) and oxidized rhizospheres on living roots (C3). The secondary hydrologic indicators observed were saturation visible on aerial imagery (C9) and a positive FAC-neutral test (D5). The soil hydric indicator F6 for redox dark surface was observed and met.

4.2.2 Streams and Open Waters

The field survey resulted in one intermittent stream (Stream C) identified within the AOI, summarized in Table 3. Photographs of the stream identified are provided in Appendix C. The boundary of the stream is included in Figure 5.

Table 3. Stream Delineation Summary in the AOI

Stream ID	Stream Classification	Agency Jurisdiction	Length in AOI (linear ft)	Ordinary High Water Mark (OHWM) (feet)
C	Intermittent	USACE	405	3 to 4

No open waters were delineated during the field survey.

4.2.3 Ditches

The field survey resulted in two ditches located throughout the AOI (Ditches A and B). Table 3 provides a summary of the ditches identified during the field investigation. Photographs of the ditches identified are provided in Appendix C. The boundaries of the delineated ditches are included in Figure 6.

Table 4. Ditch Delineation Summary in the AOI

Ditch ID	Agency Jurisdiction	Length in AOI (linear ft)
A	NYSDEC	110.71
A	No Jurisdiction	286.98
B	No Jurisdiction	687.19
		Total: 1,084.88

Ditch A is dug in an upland area and only drains upland surface water into Wetland Z. Areas of Ditch A that are located in the NYSDEC 100ft. adjacent area would be regulated by NYSDEC. Areas located outside of the adjacent area are not regulated by NYSDEC or USACE because these areas only drain upland surface water and were dug in upland areas.

The field investigation indicated that Ditch B drains directly into Wetland A via culvert. Based on the field investigation, Ditch B is dug in and drains only upland waters and therefore should be considered a non-jurisdictional feature.

5.0 Conclusion

C&S was retained by Emeren Inc. to complete a wetland and waterway survey for the proposed project. Wetland areas were assessed as waters of the U.S. subject to USACE and NYSDEC jurisdiction. These features are also classified consistent with the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979).

Three wetlands (Wetlands A, Y, and Z) within the Oneida Lake watershed (USGS Cataloging Unit: 04140202) were delineated by C&S within the AOI, all of which are considered PEM features consistent with *Cowardin*. Wetland A totals 0.29 acre on-site; Wetland A drains off-site via sub-surface culvert drainage northwest of the AOI and may be considered regulated under Section 404 of the Clean Water Act. A significant nexus determination may be required to determine wetland jurisdiction under Section 404 of the Clean Water Act. Wetland Y totals 0.96 acre and is located southeast of the AOI, outside of project boundaries. Wetland Z totals 0.61 acre on-site. Wetlands Y and Z are subject to regulation under Article 24 of the Freshwater Wetlands Act, as well as Section 404 of the Clean Water Act. Additionally, any work done within the 100-foot adjacent areas of NYSDEC regulated wetlands will also require an Article

24 permit. A Water Quality Certification will be required by the NYSDEC for any Section 404 permit issued by the USACE. The wetlands described herein satisfy the criteria to be a wetland pursuant to the 1995 NYSDEC Freshwater Wetland Delineation Manual and the Army Corps of Engineers' 1987 Manual (and Regional Supplement) with subsequent clarification memoranda and pursuant to confirmation by the USACE.

One stream (Stream C) was identified within the AOI; Stream C is considered an intermittent stream and, based on the field review and aerial photography, may connect wetlands outside of the AOI. Therefore, Stream C may be subject to jurisdiction by the USACE.

Two ditches were identified within the AOI boundary, totaling 1,084.88 linear feet. Portions of Ditch A would be considered jurisdictional by the NYSDEC as they fall within the NYSDEC 100-foot regulated adjacent area, while other portions of Ditch fall outside of this regulated area and will therefore not be considered jurisdictional. Ditch B is dug in and drains only upland waters and therefore should be considered a non-jurisdictional feature.

No open waters were identified during the field survey.

The final boundary and jurisdictional status of on-site features is subject to approval by both the USACE and NYSDEC.

6.0 Literature Cited

Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U. S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. (available at: Northern Prairie Wildlife Research Center, Jamestown, North Dakota website http://www.npwrc.usgs.gov/resource/1998/classwet/classwet.htm).

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USACE. 1987. Corps of Engineers Wetlands Delineation Manual. Final Report. Wetlands Research Program Technical Report Y-87-1 (on-line edition), Waterways Experiment Station, Environmental Laboratory, Vicksburg, Mississippi. 143 pp.

USACE. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, ERDC/EL TR-12-1 (Version 2.0). U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi.

APPENDIX A
USACE WETLAND DATA FORMS

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: NY Rome Old Oneida Road 1 Solar Farm City/County: Rome/Oneida County Sampling Date: 4/18/2023

Applicant/Owner: NY Rome Old Oneida Road 1, LLC State: NY Sampling Point: W-A-1

Investigator(s): S. Booth Section, Township, Range: 272.000-0002-036

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope %: 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43°10'42.39"N Long: 75°30'18.35"W Datum: NAD83

Soil Map Unit Name: 136A - Kendaia silt loam, 0 to 3 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 1
Water Table Present?	Yes X	No ____	Depth (inches): 1
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: W-A-1

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. *Phalaris arundinacea*	15	Yes	FACW
2. *Apocynum cannabinum*	25	Yes	FAC
3. *Solidago sp.*	5	No	
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	45 =Total Cover		
Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	40 (A)		105 (B)

Prevalence Index = B/A = 2.63

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W-A-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/2	100					Loamy/Clayey	
2-18	10YR 3/2	95	10YR 3/6	5	C	M	Loamy/Clayey	Prominent redox concentrations
18-20	10YR 3/2	95	10YR 5/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ? Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ? Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: NY Rome Old Oneida Road 1 Solar Farm City/County: Rome/Oneida County Sampling Date: 4/18/2023

Applicant/Owner: NY Rome Old Oneida Road 1, LLC State: NY Sampling Point: UP-A-1

Investigator(s): S. Booth Section, Township, Range: 272.000-0002-036

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope %: 3

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43°10'42.44"N Long: 75°30'17.72"W Datum: NAD83

Soil Map Unit Name: 136A - Kendaia silt loam, 0 to 3 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: UP-A-1

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 feet)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. *Poa sp.*	35	Yes	
2. *Galium mollugo*	15	Yes	FACU
3. *Urtica dioica*	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	55 =Total Cover		
Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	20 (A)		75 (B)

Prevalence Index = B/A = 3.75

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UP-A-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: NY Rome Old Oneida Road 1 Solar Farm City/County: Rome/Oneida County Sampling Date: 4/18/23

Applicant/Owner: NY Rome Old Oneida Road 1, LLC State: NY Sampling Point: W-Y-1

Investigator(s): J. Strong Section, Township, Range: 272.000-0002-036

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): concave Slope %: 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43°10'34.505"N Long: 75°29'57.754"W Datum: NAD 1983

Soil Map Unit Name: Kendaia silt loam, 0 to 3 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland Y
Wetland Hydrology Present?	Yes X	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 1
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W-Y-1

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15x15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5x5)			
1. *Phalaris arundinacea*	65	Yes	FACW
2. *Typha angustifolia*	35	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 5x5)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	35	x 1 =	35
FACW species	65	x 2 =	130
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		165 (B)

Prevalence Index = B/A = 1.65

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W-Y-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	93	5YR 4/4	7	C	PL/M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: NY Rome Old Oneida Road 1 Solar Farm City/County: Rome/Oneida County Sampling Date: 4/18/23

Applicant/Owner: NY Rome Old Oneida Road 1, LLC State: NY Sampling Point: UP-Y-1

Investigator(s): J. Strong Section, Township, Range: 272.000-0002-036

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): convex Slope %: 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43°10'34.27"N Long: 75°29'58.763"W Datum: NAD 1983

Soil Map Unit Name: Kendaia silt loam, 0 to 3 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation X, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
The data point is within an active agricutural area that has recenlty been plowed to prepare the soil for corn to be planted.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UP-Y-1

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15x15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5x5)			
1. *Phalaris arundinacea*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5 =Total Cover		
Woody Vine Stratum (Plot size: 5x5)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	5 (A)		20 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UP-Y-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: NY Rome Old Oneida Road 1 Solar Farm City/County: Rome/Oneida County Sampling Date: 4/18/23

Applicant/Owner: NY Rome Old Oneida Road 1, LLC State: NY Sampling Point: W-Z-1

Investigator(s): J. Strong Section, Township, Range: 272.000-0002-036

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): concave Slope %: 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43°10'38.971"N Long: 75°29'59.126"W Datum: NAD 1983

Soil Map Unit Name: 136A- Kendaia silt loam, 0 to 3 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland Z
Wetland Hydrology Present?	Yes X	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 1
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W-Z-1

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15x15)			
1. *Salix discolor*	5	Yes	FACW
2. *Lonicera morrowii*	1	No	FACU
3.			
4.			
5.			
6.			
7.			
	6	=Total Cover	
Herb Stratum (Plot size: 5x5)			
1. *Phalaris arundinacea*	40	Yes	FACW
2. *Juncus effusus*	60	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: 5x5)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	45	x 2 =	90
FAC species	0	x 3 =	0
FACU species	1	x 4 =	4
UPL species	0	x 5 =	0
Column Totals:	106 (A)		154 (B)

Prevalence Index = B/A = 1.45

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W-Z-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5YR 3/1	95	5YR 3/4	5	C	PL/M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: NY Rome Old Oneida Road 1 Solar Farm City/County: Rome/Oneida County Sampling Date: 4/18/23

Applicant/Owner: NY Rome Old Oneida Road 1, LLC State: NY Sampling Point: UP-Z-1

Investigator(s): J. Strong Section, Township, Range: 272.000-0002-036

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): convex Slope %: 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43°10'38.978"N Long: 75°29'59.852"W Datum: NAD 1983

Soil Map Unit Name: 136A- Kendaia silt loam, 0 to 3 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation X, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
The data point is within an active agricutural area that has recenlty been plowed to prepare the soil for corn to be planted.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UP-Z-1

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15x15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5x5)			
1. *Phalaris arundinacea*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5 =Total Cover		
Woody Vine Stratum (Plot size: 5x5)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	5 (A)		20 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UP-Z-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10YR 3/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

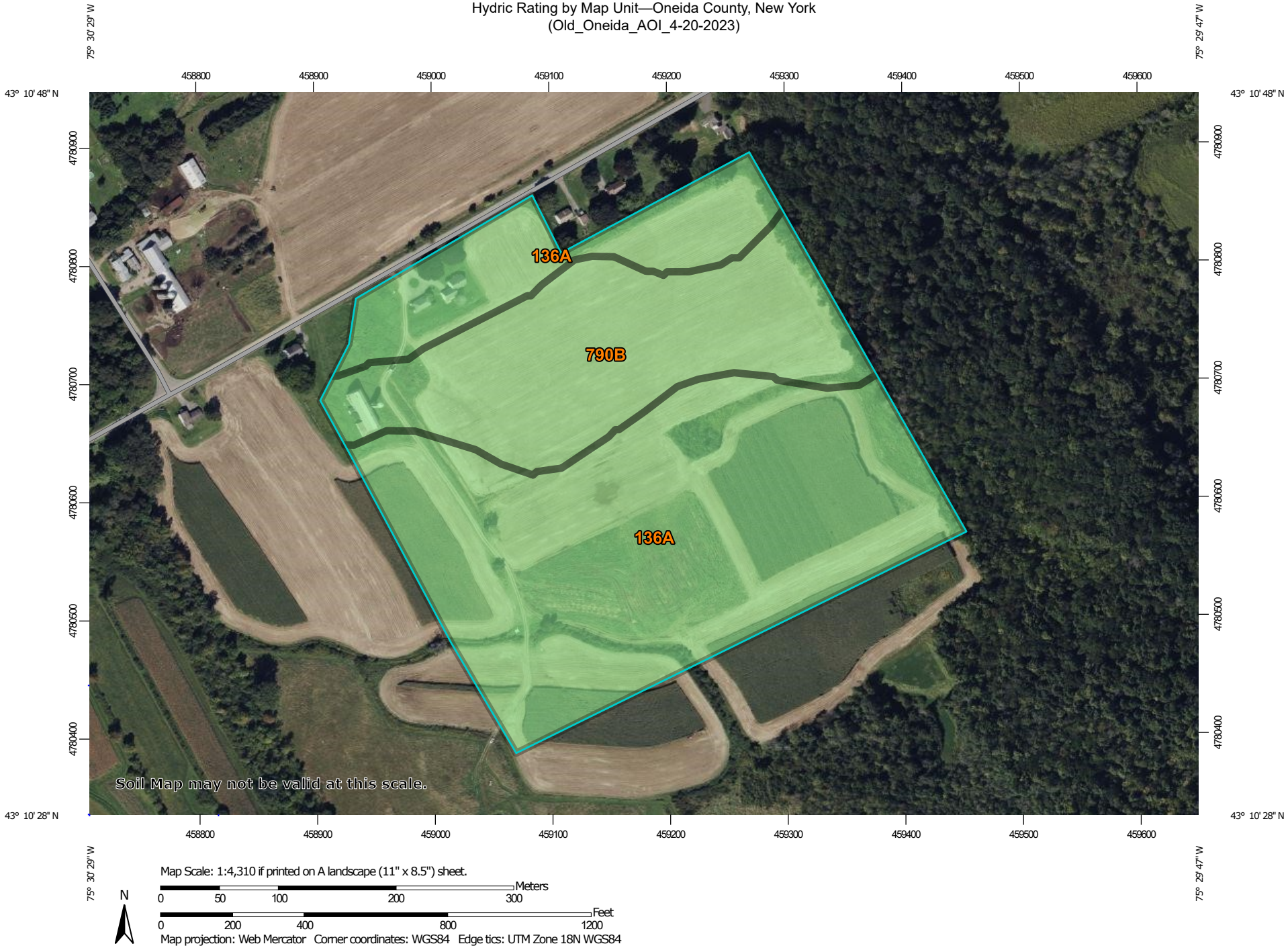
Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

APPENDIX B
WEB SOIL SURVEY

Hydric Rating by Map Unit—Oneida County, New York
(Old_Oneida_AOI_4-20-2023)



Map Scale: 1:4,310 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

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: Oneida County, New York
Survey Area Data: Version 25, Sep 10, 2022

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

Date(s) aerial images were photographed: Sep 15, 2022—Oct 28, 2022

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.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
136A	Kendaia silt loam, 0 to 3 percent slopes	5	28.6	70.4%
790B	Conesus silt loam, 3 to 8 percent slopes	1	12.0	29.6%
Totals for Area of Interest			**40.6**	**100.0%**

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

APPENDIX C
PHOTOGRAPHS

Photo Documentation

Project: NY Rome Old Oneida Rd 1 Solar Farm
NY Rome Old Oneida Rd 1 Solar Farm, LLC

Photo 1 – Photo at W-A-1 Data Point, taken facing northwest, view of Old Oneida Road in the background.

Photo 2 – Photo of soil at W-A-1 Data Point.

Photo Documentation

Project: NY Rome Old Oneida Rd 1 Solar Farm
NY Rome Old Oneida Rd 1 Solar Farm, LLC

Photo 3 – Photo at UP-A-1 Data Point, taken facing south.

Photo 4 – Photo of soil at UP-A-1 Data Point.

Photo 5 – Photo of Ditch B, taken facing southeast.

Photo 6 – Photo of Ditch B, taken facing northeast.

Photo Documentation

Project: NY Rome Old Oneida Rd 1 Solar Farm
NY Rome Old Oneida Rd 1 Solar Farm, LLC

Photo 7 – Photo of Stream C, taken facing southwest.

Photo 8 – Representative photo of the northwestern corner of the site.

Photo Documentation

Project: NY Rome Old Oneida Rd 1 Solar Farm
NY Rome Old Oneida Rd 1 Solar Farm, LLC

Photo 9 – Representative photo of the northern portion of the site.

Photo 10 – Representative photo of the central portion of the site.

Photo Documentation

Project: NY Rome Old Oneida Rd 1 Solar Farm
NY Rome Old Oneida Rd 1 Solar Farm, LLC

Photo 11 – Photo at W-Z-1 Data Point

Photo 12 – Photo of soil at W-Z-1 Data Point.

Photo Documentation

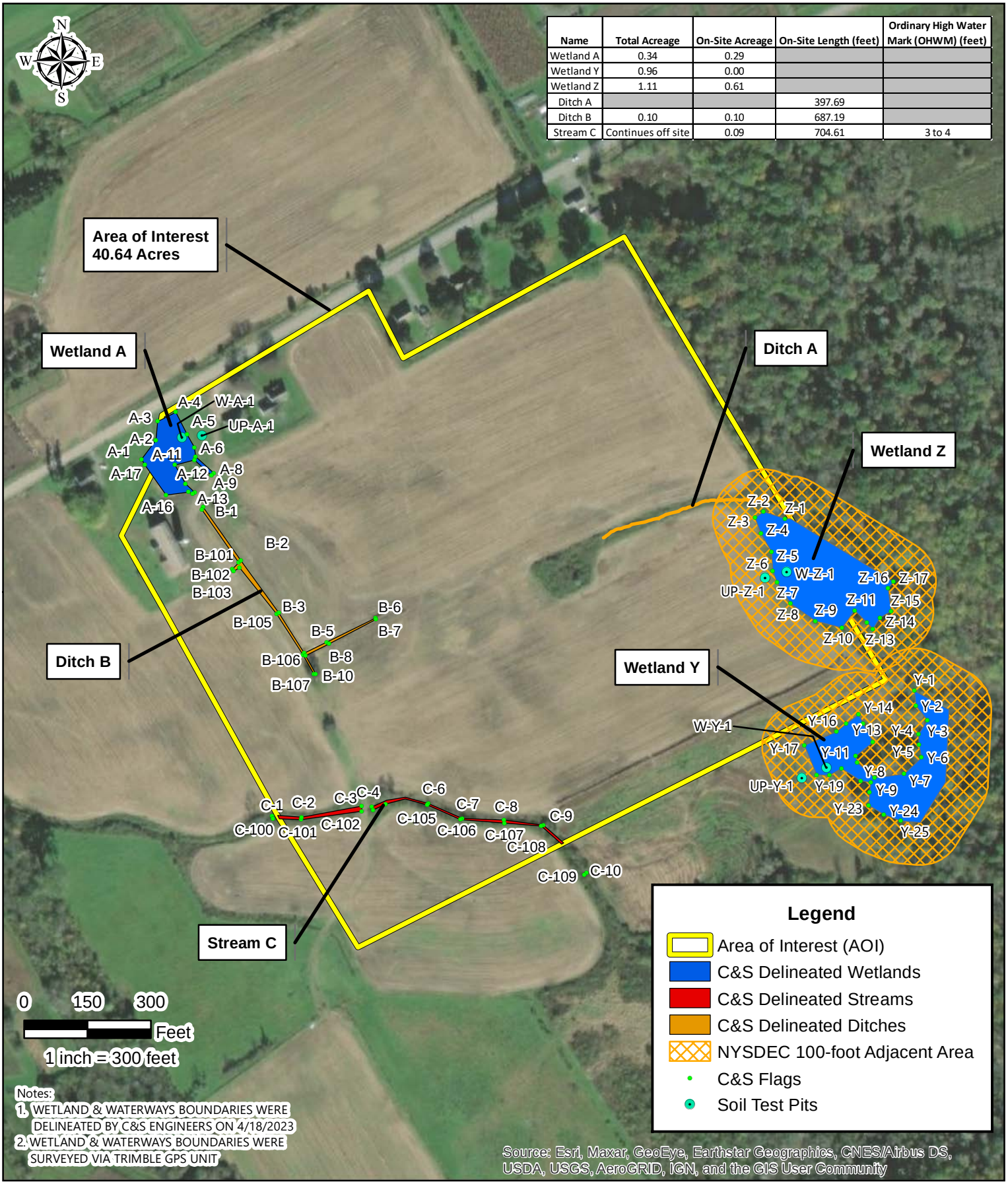
Project: NY Rome Old Oneida Rd 1 Solar Farm
NY Rome Old Oneida Rd 1 Solar Farm, LLC

Photo 13 – Photo at UP-Z-1 Data Point

Photo 14 – Photo of at W-Y-1 Data Point.

Photo 15 – Photo of soil at W-Y-1 Data Point.

Photo 16 – Photo of at UP-Y-1 Data Point.



Name	Total Acreage	On-Site Acreage	On-Site Length (feet)	Ordinary High Water Mark (OHWM) (feet)
Wetland A	0.34	0.29		
Wetland Y	0.96	0.00		
Wetland Z	1.11	0.61		
Ditch A			397.69	
Ditch B	0.10	0.10	687.19	
Stream C	Continues off site	0.09	704.61	3 to 4

Notes:
1. WETLAND & WATERWAYS BOUNDARIES WERE DELINEATED BY C&S ENGINEERS ON 4/18/2023
2. WETLAND & WATERWAYS BOUNDARIES WERE SURVEYED VIA TRIMBLE GPS UNIT

Sources: Created by C&S Engineers, Inc.

Modified: 4/24/2023 @ 8:37:59 AM

Document Path: F:\Project\V32 - Renesola Power Holdings, LLC\V320070\02 - Old Oneida Site Permitting\Planning Study\GIS\Projects\Wetland_Delineation\Figure_6_C&S_Wetland.mxd

C&S COMPANIES®

Figure 6 | C&S Wetlands & Surface Water Delineation Map

Renesola Power Holdings
NY Rome Old Oneida Road 1 Solar Farm
City of Rome, Oneida County, New York

May 13, 2024

Mr. Arif Alam
Emeren
100 First Stamford Place, Suite 302
Stamford, Connecticut 06902

Re: Decommissioning Estimate
NY Old Oneida Solar Farm, LLC
Rome, Oneida County, New York

Mr Alam:

NY Old Oneida Solar Farm, LLC proposes to construct and operate a ground mounted single axis tracker photovoltaic (PV) solar system, approximately 4.2 megawatts-AC in capacity. The NY Old Oneida Solar Farm, LLC Project (Project) is located on privately owned land at 5792 Old Oneida Road, in the City of Rome, New York (hereafter "subject property"). The approximate 144 acre subject property is located on the south side of Old Oneida Road.

Ground-mounted solar facilities are designed, engineered and constructed to operate for at least 20 years, and in some cases for as long as 30 years. During construction, portions of the site may be compacted, excavated and graded for optimal installation and operation. The decommissioning plan, provided under separate cover, outlines the steps that will be taken to remove the solar system and its associated appurtenances from the project site and return the parcel to conditions similar to pre-installation.

It is estimated that the physical removal work will take approximately 6-8 weeks to complete. Inverters, transformers and switchgear will be removed from their concrete pads. The electrical equipment will be sold back to the manufacturers or to a recycling facility. Racking materials and fencing will be pulled from the ground and folded for transport. All other facility fencing, concrete pads, access roads and other components will be removed as described previously, and the site will be restored as required. The facility owner will be responsible for all decommissioning costs and will obtain all permits and approvals required by the Town prior to commencement of the decommissioning work. The current day estimated cost of decommissioning the facility is $307,840 (2024 dollars, see the attached table for a breakdown of the estimate) and this would be the amount of the initial bond provided.

Should you have any questions or require additional information, please feel free to contact us.

Sincerely,

C&S ENGINEERS, INC.

Eric N. Kenna, P.E.
Service Group Manager
(315) 703-4109
ekenna@cscos.com

NY Old Oneida Solar Farm, LLC

Decommissioning Estimate

			Unit	Rate	
1	Remove approximately 5,968 linear feet of chain link fencing - 8' tall. (4 men, 7 days)	224	mh	$ 75.00	$ 16,800.00
2	Rental of bobcat for fence removal - 1 week including delivery and pickup.	1	week	$ 2,500.00	$ 2,500.00
3	Remove two (2) concrete pads (size not defined) Assume one hour each for excavator and operator.	2	each	$ 1,500.00	$ 3,000.00
4	Remove 191 single axis tracker frames (assume two hours per frame for a two-man crew)	764	mh	$ 95.00	$ 72,580.00
5	Disposal of Racking Materials - 20 yard dumpsters	15	each	$ 1,000.00	$ 15,000.00
6	Remove 20 ft wide gravel access road. 4,639SY=1,531CY=152 truckloads (haul away and spoil)	152	loads	$ 150.00	$ 22,800.00
7	Remove 9,568 PV panels (assumes 45 panels removed per hour with a 6 man crew - general laborers)	1,276	mh	$ 60.00	$ 76,560.00
8	Remove overhead wires and six poles (utility crew) (4 men, 2 days)	1	lsum	$ 10,000.00	$ 10,000.00
9	Remove Underground conduit and conductors and backfill (operator, helper and excavator)	60	mh	$ 450.00	$ 27,000.00
10	Spot regrading of site as needed.(operator and excavator)	60	mh	$ 300.00	$ 18,000.00
11	Reseeding of disturbed areas of the site	1	lsum	$ 2,500.00	$ 2,500.00
12	Move topsoil from stockpile area to infill road removal and basin (operator, helper and excavator)	40	mh	$ 450.00	$ 18,000.00
13	SWPPP Preparation and NOI Submittal	1	lsum	$ 10,500.00	$ 10,500.00
14	Erosion and Sediment Control Measures (4 men, 2 days)	64.00	mh	$ 75.00	$ 4,800.00
15	Weekly SWPPP Inspections	12.00	lsum	$ 650.00	$ 7,800.00
16					
				Current Day Total	**$ 307,840.00**

NY Old Oneida Road Solar LLC PV Solar Generator Facility
Decommissioning & Reclamation Plan

5792 Old Oneida Road, Rome, NY 13440

Contact Information:

NY Old Oneida Road Solar LLC US, LLC

100 First Stamford Place, Suite 302

Stamford, CT 06902

bradley.davis@emeren.com

Telephone: (647) 624-4566

Table of Contents

1. INTRODUCTION

The purpose of this document is to outline the operation, maintenance, and the decommissioning plan for NY Old Oneida Road Solar LLC's proposed 4.2 MW AC photovoltaic solar electric generating facility (PVSGF) NY Old Oneida Road Solar LLC. This plan covers the initial commissioning, long-term operation, and outlines decommissioning the facility at the end of its service. The PVSGF will be built on private land owned by James Elliott. NY Old Oneida Road Solar LLC has entered into an agreement to lease the land for 30 years.

The photovoltaic solar electric generating system will be a facility that participates in National Grid's Community Distributed Generation (CDG) Program

The facility generates electricity by harvesting the sun's energy through 13,488 anti-reflective with 500 W direct current (DC) photovoltaic bi-facial panels. The PVSGF would generate clean renewable energy from solar power. The generated energy would be sold to various local off-takers. The PVSGF project is in the application process for a Special Use Permit and Site Plan Review approval from the City of Rome, NY under the project company name NY Old Onedia Road Solar LLC Power Holdings LLC.

SYSTEM DESCRIPTION

System Description: 4.2 MW Solar photovoltaic power system

Location: 5792 Old Oneida Road, Rome, NY 13440

Utility Granting Operating Permission: National Grid

Operator Representative: Bradley Davis

Emergency Contacts for Site: To be determined once an O&M provider is chosen

LOCATION

The Solar Farm project site is located on approximately 20 acres of a 140 acre site in the City of Rome.

2. Procedures for Decommissioning after Ceasing Operation

The Project has an estimated useful lifetime of 35 years or more, with an opportunity for a lifetime of 50 years or more with equipment replacement and repowering. This section, however, assumes that at the end of the 25 year power generation contract with NYSEG, the system will be completely dismantled and the site restored to its preconstruction state unless the power purchase agreement is extended or otherwise transitioned over to the compensation structure in effect at that time.

NY Old Oneida Road Solar LLC is committed to improving the global environment. Therefore, as a renewable energy developer, is dedicated to recycling as many of the products as possible throughout the project site. Along with the recycling of the used equipment on the project we will minimize waste throughout the decommissioning process.

The decommissioning and reclamation plan is intended to provide a secure mechanism for the removal of the solar energy equipment at the end of the life cycle of the system and restoring the land to its previous condition, estimated to take approximately 120-150 days.

Prior to the start of decommissioning of the project, Local, County and State Agencies will be notified as to the impending work on site.

The project will impact water courses. The site will continue with the revised courses at project completion.

2.1 PV Module Collection and Recycling

NY Old Oneida Road Solar LLC will be utilizing solar PV modules with recycling plans to promote the collection and recycling of modules and to minimize the potential for modules to be disposed of as municipal waste. Alternatively, solar panels with remaining useful life can be sold for other applications. The module recycling program includes the glass and the encapsulated semiconductor material, which will be collected by the manufacturer and recycled into new solar modules or other products.

Some key elements of recycling PV Modules include:

- Collection: NY Old Oneida Road Solar LLC will manage the logistics of collecting the modules and provide packing and transportation to the recycling center. The module owner's only requirement is to dismantle and package the modules in accordance with the Mann Engineering's instructions.
- Recycling: The module manufacturer, or a comparable recycler, will recycle or reuse as much of the module as possible. All recycling processes are monitored to ensure compliance with applicable regulatory requirements regarding occupational health & safety, recycling, waste management, etc. Any elements that cannot be recycled will be disposed of outside the project location's municipality and in an environmentally friendly way.

Managing the product life cycle, from raw material sourcing through end-of-life collection and recycling, enables NY Old Oneida Road Solar LLC to create a sustainable product life cycle that strives to provide the most environmental benefits.

2.2 Facility Dismantling and Site Restoration

The Project consists of numerous recyclable materials, including glass, semiconductor material, steel, and wiring. When the Project reaches the end of its operational life, the component parts can be dismantled and recycled. The Project components will be dismantled and removed using minimal impact

conventional construction equipment and recycled or disposed of safely. All components shall be removed from the site using experienced local subcontractors.

2.3 Decommission / Reclamation Methodology:

Please note that no hazardous materials will be stored onsite. The Decommissioning Plan shall consist of the following:

1) A timeline of 120-150 days, including weather delay, comprised of the following phases:
   a) Phase 1: Decommission (30 days).
      i) Removal of solar modules, racking and driven posts or ballast blocks (10 days).
      ii) Removal of the PowerStation electrical equipment (5 days).
      iii) Removal of the below-grade conduits and associated cables (5 days).
      iv) Removal of the concrete pad under the PowerStation or PowerStation ground screws, where applicable (5 days, concurrent with step (iii) above).
      v) Removal of fences and any remaining equipment including but not limited to 3 power poles, security camera, weather station anemometer, rainfall catchment cup, irradiance meter(s), etc. (5 days, concurrent with step (iii) above).
      vi) Removal and haul off of gravel contained in any roads added as part of the Project plus the underlying aggregate, unless the land adjacent to the Premises as defined in the site lease is used for livestock grazing or non-tilled farming such as alfalfa, hay, and/or other grasses in which case the gravel shall be removed to a level of 12" below the surface and the underlying aggregate beneath shall remain in place (10 days).
      vii) No grading will be required
      viii) Note: in the event that the landowner elects to keep the fence and/or the gravel road(s) installed as part of the Project the landowners approve such request in writing either as a part of this permit application or at a later date, NY Old Oneida Road Solar LLC and its assigns shall comply with that request and remove all other equipment pursuant to this Plan.
   b) Phase 2: Reclamation (35 to 55 days).
      i) Order the appropriate Crop seeds (30 days prior to the end of the Term).
      ii) Prepare the soil as needed to plant the Crop (15 days).
      iii) Prepare any necessary temporary irrigation, such as a temporary water tank, hose, or rental of a watering truck to nurture the Crop seeds after planting (15 days, concurrent with step (iv) above).
      iv) Plant the Crop seeds (5 days).
      v) Water and fertilize as needed, using agricultural grade probiotics and if needed additional non-toxic fertilizers (15-35 days).
   c) Weather delay allowance, needed only for below grade removal as described in Phase 1, sections (iii), (iv), and (vi) (20 days).

2.4 Decommissioning Security

For the purposes of decommissioning, a financial security will be provided by NY Old Oneida Road in the form of a bond, cash collateral, security deposit, escrow account, letter of credit or other form of acceptable financial surety in the amount of $91,619/MW AC (which is 125% of the estimated cost of removal) annually for the life of the facility plus 2% annual inflation. The bond will be issued at the time of commencement of construction of the project. Once decommissioning activities have been completed, any remaining portion of the financial surety not used is expected to be returned to NY Old Oneida Road Solar LLC.

Operation and Maintenance Manual

NY Old Oneida Road Solar LLC

January 5, 2024

NY Old Oneida Road Solar LLC

Table of Contents

Reference Documents

- **System Info, Including all serial number**
  - **Panels**
  - **Inverter(s)**
- **Warranties for all major components**
  - **Racking System**
  - **Panels**
  - **Inverter(s)**
  - **Monitoring System**
- **Complete AS-Recorded Documents (with stamp on each)**
  - **SLD**
  - **Ballast Drawing (If Applicable)**
- **Equipment Specifications/Shop drawing**
  - **Racking System**
  - **Panels**
  - **Inverter(s)**
  - **Monitoring System**
- **Fuse/Breaker schedule**
- **Replacement parts list**

- **Monitoring Installation Checklist**

1 Introduction

Project Proponents

NY Old Oneida Road 2 Solar LLC, a New York limited liability company ("Lessee") and James Elliott ("Lessor"). The Lease Term has a twenty-five (25) year term with three (3) additional and successive extension periods of five (5) years available.

The Leased Area can be found in the ALTA Survey provided in the Site Plan Section of the application.

The area outside of the Leased Area will continue to be a woodlot with no future development in mind at this point in time.

1-1 Purpose of Operation and Maintenance Manual

The purpose of this manual is to outline the minimal procedures and precautions that need to be taken to ensure proper operations and maintenance of the solar system installed at project site listed below. The manual covers the importance of safety and the steps to properly operate and maintain the main system components. Additionally, it provides troubleshooting and operation aspects of the system. It is the system O&M contractor responsibility to ensure proper maintenance of the solar system and document (including photo documentation) of all maintenance activity for the life of the system, failure to do so could jeopardize the safety and performance of the system and void NY OLD ONEIDA ROAD SOLAR LLC workmanship warranty.

1-2 Terminology

The table below defines the common solar terminology used in this Manual (not limited to).

Terminology
• **PV Modules** Photovoltaic solar panels used for this project are 405 Watt, Trina TSM – DE 15M(II) 405W Mono
• **Source Circuit Combiner Panels** Junction panel mounted in the ground that combines the photovoltaic AC source circuits to a single output. Main disconnect for Combiner located at switchgear and local inverter breakers within correlating panel.
• **DC Disconnect** There are 16-32 DC switches localized at inverter that provides a disconnecting means to the photovoltaic inputs. NOTE*: DC wiring is still live within breaker. Proceed with proper PPE and arc flash protocol when servicing DC strings.
• **DC to AC Inverters** ABB PVS-166-TL US & ABB PVS-175-TL US inverters that converts DC to AC current for feeding into the electrical grid.
• **AC Disconnect** A safety switch as part of the inverter that provides a disconnecting means to the AC input. This lockable, open blade safety switch qualifies as the utility-required PV System Master Disconnect. AC disconnects are also located on AC side in switchgear and combiner panels.
• **Data Acquisition System (DAS)** Manufactured by AlsoEnergy, the Data Acquisition system collects current weather and system AC output conditions and sends the data via communications line to the internet display.

- **Main Distribution Panel / AC Switchgear**
  The main electrical d i s t r i bu t i o n p a n e l for the Solar Farm that contains circuit breakers & main disconnect for the farm's electrical system.
- **SEL 735 Metering**
  The point where the local PPA utility measures the output of the photovoltaic system.
- **Interconnection Point**
  the location where the PV system output is connected to the utility grid.

1-3 Contact List

Primary Contact			
Name	Bradley Davis		
Company	NY Old Oneida Road Solar LLC		
Address	100 First Stamford Place, Suite 302, Stamford, CT 06902		
Phone / Email			

Electrician Contact / Photovoltaic Module Installer			
Name			
Company			
Address			
Phone / Email			

Inverter Supplier			
Name			
Company	ABB		
Address			
Phone / Email	www.abb.com	contact.center@us.abb.com	1.800.435.7365

Racking Supplier	
Name	
Company	Nextracker
Address	6200 Paseo Pkwy, Fremont, CA 94555
Phone / Email	(510) 793-8388

Photovoltaic Module Supplier	
Name	
Company	Trina Solar
Address	100 Century Center Ct. Ste 501, San Jose, CA 95112
Phone / Email	(408) 459-6700

1- 4 Warranty Obligations

Terms:

Free from defects in materials and workmanship for the term specified below (see attached Warranty documents attached).

The installing contractor will provide a varied warranty (1-5 year(s)) on the completed system including liaison with the manufacturers on the facilities behalf regarding their 'pass-through' component warranties. In addition, the manufacturer's warranty covers components of the generating s y s t e m against degradation in electrical o u t p u t from their original rated electrical output. This warranty covers the costs, not including labor of repair or replacement of defective components of system.

For all m a n u f a c t u r e r s ' warranty information please refer to their respective documents attached or table below.

Major Components – Manufacturers' Warranties

	Warrantor	Term (Years)	Start Definition	Start Day
System Installation	**[electrical]**	**2**	**Final Completion**	*To be Announced*
Photovoltaic Modules	**Trina**	**25**	**Delivery Date**	
Inverter(s)	**ABB**	**10**	**Startup Date**	
Racking System	**Nextracker**	**15**	**Delivery Date**	

For more details please refer to the manufacturing reference documents provided

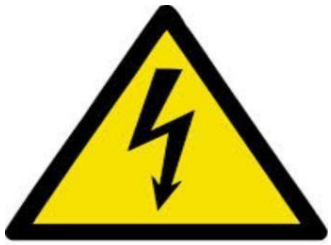
1-5 Safety Key Points

**No unauthorized persons shall shut down the solar electric system or open any system enclosure.

**Never disconnect any wires under load.

**Never work on the solar electric system alone or without authorization.

**Never walk, lean or sit on the solar panels.



2 System Description

2-1 General System Overview

The solar electric system installed on the ground of the project site is an array designed to minimize spacing between modules while avoiding shading. PV Modules are mounted directly on the single tracking g r o u n d m o u n t rack system. The inverter converts the DC electricity produced by the PV system to AC power. The solar generated electricity is back fed into the grid and measured power is analyzed at the SEL meter located at the transformer pad.

2-2 Project Description

Project Owner	**NY Old Oneida**
Project Address	**835 Crossett Road, Arkport, NY 14807**
Peak rated DC power	**134 A**
Rated AC power	**185 W**
Approximate Acreage	
Type of Photovoltaic (PV) Modules	**Trina TSM-SE-15M(II) 405W**
Number of PV Modules	**11,856**
Type of Inverter	**ABB PVS-166-TL US & PVS-175-TL US**
Number of Inverters	**23**
Racking System	**Nextracker**

2-3 System Configuration

Solar system is configured in the following manor.

Configuration
• The Photovoltaic Modules are ground mounted using Nextracker Racking.
• The Modules are electrically connected in series of 13 or 14 (forming source circuits) using weatherproof electrical multi contact quick-connects (MC4).
• The source circuit wiring exits each array and into inverter (adjacent to racking) MPPT terminals insider lower part of inverter and converted to AC. DC disconnect for source circuit located on correlating inverter.
• The combined AC source circuit outputs then run in conduit from inverter to AC combiner Panel or directly back to switchgear. AC disconnects located at inverter (lockable) or Combiner/Switchgear level (breaker).
• The inverter's AC output, Racking data, meter data interfaces with the Data Acquisition System (DAS) which is localized at basic station located next to Switchgear pad. All relative data outputs are sent to the internet display.
• The measured PV system output is connected to the utility grid at the Interconnection Point. SEL 735 meter reads PV system output for PPA revenue reading.
• Point of Interconnection though on dip pole can be considered on most sites at the Transformer primary side. All transformers are NY Old Oneida Road Solar LLC owned expect in Lumbee River EMC. Request for primary shut down is required to be coordinated with local

2-4 System Electrical Specifications and Inverter operation specification

2-4-1 System Electrical Specifications

System Array	
Power Rating	Maximum Rated Output
	4.80 MW

Photovoltaic Modules	
Manufacturer	Tallmax
Model	Trina TSM-DE15M(II)
Module open circuit voltage (Voc)	49.1 V
Module peak power voltage (Vmp)	38.5 V
Module short circuit current (Isc)	10.37 A
Module peak power current (Imp)	9.86 A

Photovoltaic Array (STC)	
Number of modules per source circuit	26
Number of source circuits	160
Total number of modules	11,856
String open circuit voltage	49.1 V
String peak power voltage	38.5 V
String short circuit current	8.36 A
String peak power current	9.86 A
Total Rated Power at STC	405 W

2-4-2 Inverter Operating Specifications

The PV system c onsists of PV Powered Inverters. Refer to Inverter Operation and Maintenance Manual for the specifications.

3 Site Safety and Operation Specifications

! WARNING !

- **The equipment contains lethal AC and DC voltages!**
- **Site access is intended for authorized personnel only!**
- **These servicing instructions are for use by qualified personnel only!**
- **Equipment is supplied from multiple sources; photovoltaic and utility!**
- **The inverters contain energy storage devices (capacitors) that require 15 minutes after they are switched off to safely discharge lethal voltages!**

DO NOT VIOLATE SITE SAFETY AND OPERATION PROCEDURES

3-1 Site Safety Procedure

The following describes safety procedures to be followed when performing installations, operations, services, repairs and tests of the Photovoltaic System. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture and intended use of the equipment. NY OLD ONEIDA ROAD SOLAR LLC Solar assumes no liability for the customer's failure to comply with these requirements.

3-2 First Aid

Do not work on the PV modules or components unless another person capable of rendering first aid and cardiopulmonary resuscitation (CPR) is also present.

3-3 Warning

The installation, adjustment, repairs or testing of the Photovoltaic System involves possible contact with **potentially lethal voltages and currents**. No attempt to install or service the system should be made by anyone who is not a qualified, trained technician familiar with power electronic equipment. Always open disconnect devices and tag-out/lock-out AC and DC power sources. Always wait at least fifteen (15) minutes after turning off the DC power source and utility AC power to allow internal energy storage devices to discharge prior to working on the inverter system. Read the Inverter Operation and Maintenance Manual, prior to servicing the inverter unit.

3-4 Inverter Start / Re-Start

Use the following procedures for system start-up and restart (follow all or a part of the instructions that may apply):

1. Remove the tag-out/lock-off tag and move the DG System Disconnect Switch to **ON**.
2. Remove the tag-out/lock-off tag and move the DC Disconnects to **ON**.
3. Turn the Stop switch to **ON**.

4. The inverter will come back on after a short delay where the inverter confirms proper DC and AC operating specifications. If either the DC or AC electrical characteristics are out of range, the inverters will not operate properly.

After a short initialization period, the inverters will transition to "initial Startup" provided that the PV voltage is greater than the PV voltage Start set point. After another short period (typically 5 minutes) the system will start up (Run).

3-5 Inverter Shutdown

Use the following procedures for system shutdown (follow all or a part of the instructions that may apply):

1. Turn the AC switch to immediately stop AC output. The switch will remain in that position until manually reset.
2. Once the AC switch is in the OPEN position, it will present fault and the unit enters Standby state (screen clears) and resumes **5 min.** start sequence once powering on again.
3. Move the DC System Disconnect Switch to **OFF/OPEN** and apply a tag-out/lock off tag.

3-6 Substitute Parts

Because of the danger of introducing unknown hazards, **DO NOT** substitute parts or perform unauthorized modification to the equipment.

3-7 Procedures While in the Vicinity of the Photovoltaic System

1. Safety glasses and electrical insulating gloves must be worn when handling or working near the array, modules, electrical boxes, or wiring.
2. Two persons shall always be present when working on the array or handling modules. Do not attempt service or adjustment unless another person capable of rendering first aid and cardiopulmonary resuscitation (CPR) is also present.
3. Any accidents/incidents must be reported immediately to the supervisor & owner.
4. The modules are made of glass and can be broken. Dropping or banging the modules may cause them to break, as may any impact with sharp, hard, or heavy objects. Along with the electrical hazard, sharp edges or broken glass can cause injury. Be careful not to break modules and take care to properly handle and dispose of modules if they are cracked or broken.
5. Any crack or hole in a module can expose the person touching the

module to the full voltage and current of the array. If the module is wet, touching a cracked module anywhere will expose the person to the full voltage and current of the array. Do not touch module when the module or panel is exposed to the sun without wearing electrical insulating gloves. Do not touch a wet cracked module anywhere without wearing electrical insulating gloves.

6. A module may contain an unknown crack or wire or connector failure. Do not touch, handle, or carry any wet module without wearing electrical insulating gloves.

3-8 Procedures When Handling Modules

1. Prior to handling any module it should be visually inspected for cracks, loose wires, or improperly mounted connectors. If there are any of these conditions, document the findings and resolve with an authorized person. Anomalous modules are to be handled with electrical insulating gloves and removed from the work area and covered (i.e. modules should be covered whenever they are not being used) or placed out of the sun. They are to be marked with a tag noting their condition.
2. Wearing electrical insulating gloves is mandatory when handling a single module or when handling modules that are electrically attached to other modules.

3-9 Hazardous Locations

The following are deemed hazardous (animals, insects, spiders, bees, snakes, electrical voltage, mechanical movement, etc) locations:

1. Within the **Main Electrical Switch Gear** where all Medium Voltage gear is located.
2. **Inverter and AC Combiner Disconnects**: Stand clear of inverter and disconnects. For Hazardous locations within the inverter, refer to the Inverter's Operation and Maintenance Manual.
3. **Close Proximity of the Photovoltaic Array.**
4. **Field Wiring, Electrical Junction Boxes and Electrical Fuses.**
5. **High Grass Areas.**

4 Operation Performance and Maintenance Repair

!WARNING!

- **The equipment contains lethal AC and DC voltages!**
- **Site access is intended for authorized personnel only!**
- **These servicing instructions are for use by qualified personnel only!**
- **Equipment is supplied from multiple sources; photovoltaic and utility!**
- **The inverters contain energy storage devices (capacitors) that require 15 minutes after they are switched off to safely discharge lethal voltages!**

DO NOT VIOLATE SITE SAFETY AND OPERATION PROCEDURES

4-1 Adjustment and Servicing Assistance

For assistance in servicing the Photovoltaic System, contact NY Old Oneida Road Solar LLC or appropriate vendor contact. (Please refer to project contact section)

4-2 Facility Access

The acreage where the PV systems are located shall be treated as private property and is accessible only by authorized personnel after permission has been granted. Access to the farm and to any equipment should be arranged by contacting the Site Access Contact. (Please refer to project contact section)

4-3 Tools and Materials Required

The following tools and materials are required when performing routine maintenance:

1. Appropriate Mechanical and Electrical PPE (personal protective equip.)
2. Standard MV (med. Voltage), LV (low voltage), DC and mechanical tools.
3. DC Ammeter
4. Multi-meter
5. Full, OSHA required, electrical shut-down suit if working on or near the low voltage switchgear, metering cabinet or transformer.
6. Torque wrenches required to tighten electrical connections, see product manuals for specifications.

4-4 Inspection

The following preventive maintenance procedures are recommended for the Photovoltaic Systems:

4-4-1 Regular System Output Checks

Customer should regularly view the logged data from the DAS system web page to verify PV array output. If equipment is not working or identifies an alert, a site visit will be necessary to confirm that the system is in a proper operation mode.

4-4-2 O&M Scope of Services

Scope of services provided by O&M contract will follow the direct scope identified & agreed upon during contract negotiations. Scope of services is included as an attachment to this document.

4-4-3 Maintenance Records

A separate Binder should be created for Inspection and Maintenance records, which should be filed correlating and in conjunction with this Operation and Maintenance Manual.

4-5 Maintenance Proposal

This maintenance proposal contains:

- General Preventative Maintenance
- Combiner Preventative Maintenance
- Module Preventative Maintenance
- Inverter & Recombiner Preventative Maintenance
- MV Pad Mount Transformer Preventative Maintenance
- Tracker/Racking Preventative Maintenance
- Monitoring/MET Station Preventative Maintenance
- MV Substation/Gen-tie Preventative Maintenance
- Remote Operations Center (ROC) Preventative Maintenance
- Issue Resolution and On-site requests
- Service Support
- Documentation and Reporting

4-5-1 General Good Practices for Visual Inspection and Cleaning

- Inspect the PV arrays for any modules for any debris that may be on them or on the surrounding adjacent surfaces.
- If excessive dirt or grime is observed on the array, follow the cleaning instructions listed in the scope management plan.
- Verify that all the clips, fasteners and brackets securing the modules and deflectors are tight and not out of place, missing or loose. Confirm that all wiring is still bundled and secured.
- Verify that all fuses are set properly within the inverter enclosures. Inspect the interior of the enclosures for debris or moisture. A continuity test should be performed to test fuses that could be blown.
- Inspect the components on the electrical pad and basic station. Confirm that all the electrical equipment is clear of any obstructions or vegetation.
- Verify that the inverters are operating properly. This is done by inspecting the LCD display on the front of the inverter. Read the message that is being displayed and then consult the inverter manual for a description of the code identification (if applicable).

- Verify that all DC and AC disconnects are in the “on” or closed position.

4-5-2 General Good Practice for Visual Inspection and Cleaning

Regular maintenance is required to keep modules clear of snow, bird droppings, seeds, pollen, leaves, branches, dirt spots and dust. Rainfall will have a self-cleaning effect and generally make it not necessary to wash the modules. When there is a noticeable buildup of soiling deposits on the module surface; wash PV array using best practices and during the cooler part of the day. Dirt must never be scraped or rubbed away when dry; this will cause micro- scratches.

- DO NOT clean PV modules during the middle of the day when the glass is hot. Thermal shock of cold water on hot, tempered glass can shatter the glass. Clean only at dawn/dusk when the module glass is cool or when ambient module temperatures are relatively safe to avoid thermal shock. It is good practice to have the water and the PV modules at a similar temperature to avoid thermal shock.
- DO NOT clean PV modules if the local inverter is identifying a “Ground Fault” code. Address the ground fault first to avoid potentially hazardous conditions or harm.
- If snow is present; soft bristle brushes can be used to clean the surface of module.
- Always inspect the system wiring attachments on racking and supports to confirm bundling is intact and not causing issue or defect.

If you need electrical or mechanical inspection or maintenance, it is recommended to have an authorized professional (plus assisting personnel) to carry out the job to avoid hazards of electrical shock or injury.

4-5-3 Power Production Check

Use the DAS remote portal to check that the inverters are producing power relative to the installed PV nameplate. Also check that the power of each inverter is in the right range for the current weather conditions. The power produced by the inverters is directly proportional to the amount of sunlight that falls on the array. During a bright, sunny, spring or fall day, the inverters will be reaching their optimum production of 80-85% STC. In addition, the current ambient temperature, wind speed and sun location relative to each of the arrays will affect the production of the solar. The PV cells operate best when they are cool. Hot, non-windy summer days will not necessarily produce the highest energy levels due to excessive heat. Trends of PV production are another way to determine if the system is producing optimum power. The user of the DAS page can choose different views to compare system performance on an hourly, daily, weekly, monthly and yearly basis. The array should perform similarly for different periods with similar weather and sun location conditions. Additional data, such as instantaneous irradiance,

ambient temperature, wind speed, and estimated greenhouse gases avoided, is also stored on the DAS web portal. This information is tabular and is helpful for diagnostics and troubleshooting. Contact NY OLD ONEIDA ROAD SOLAR LLC for additional instruction to access this information.

4-6 System Controls

System controls consist of:

- AC Source Circuit Combiners
- AC Source Circuit Breakers
- AC Main Distribution (Switchgear) Disconnect
- DC Disconnect Switch (Inverter level)
- AC Disconnect Switch (Inverter level)

4-7 Component Status Indicators

Component Status Indicators include:

- Inverter display on the face of the inverter
- Meter
- Online DAS/SCADA portal

4-8 System Shutdown / Startup Procedure

Any work done on the solar electric system must be approved in writing and/or performed by authorized personnel with previous experience with solar generation systems. The inverters need to be off and tagged out in order to work on the DC side of the system. To work on the DC side of the solar system or to reset the inverter, use steps outlined in section 3 or from manufacturer manual attached to this document.

4-9 Electrical System Troubleshooting

The following describes possible problems and recommended procedures when making repairs to the Photovoltaic System. Please note that problems outlined here are common and resolutions are basic. All appropriate troubleshooting should be evaluated and verified against troubleshooting manuals from manufacturer attached to this document:

4-9-1 Common Troubleshooting – System Not Producing Power Properly

Refer to error code in manual for identification of issue.

Inverter LCD screen has ability to tell technician the current operating status and error code by holding down enter button on LCD for 2secs before releasing.
Check DC & AC disconnects are on or in the closed position.
Check AC main source circuit disconnects to make sure there is no trip fault.
Check proper AC voltage at each termination point (inverter, combiner, main breaker)
Check DC voltage of the affected source circuit(s)
Always follow up with manufacturer technical support if outside knowledge area.

4-9-2 Common Troubleshooting – Suspected Array Imbalance

The most effective way to determine if the system is working properly is to compare system inverter output:

Use the DAS web portal to check that the inverter is producing power relative to the installed PV array. Also check that the power of the inverter is in the right range for the current weather conditions.

Each of the source circuits in the array will see the same sun levels (irradiance) at a specific time of day (10-3pm). Early in the morning and late in the afternoon the irradiance will vary across the array because of the low sun angle and potential for shading.

The power produced by the inverter is directly proportional to the amount of sunlight that falls on the arrays. During a bright sunny spring or fall day, the inverter will be reaching its optimum production of 80 - 85% of STC. In addition, the current ambient temperature, wind speed and sun location relative to the array will affect the production of the solar electric systems.

4-9-3 Common Troubleshooting – Suspected Array Imbalance

Check Source Circuit Voltage Levels:

Testing source circuit voltage can be extremely dangerous, even after shutting the array down. Inspect the DC MPPT Terminals for nominal DC voltages of each source circuit.

These readings should be compared to one of the confirmed properly working source circuits or As-builts to judge if they are correct.

If a source circuit voltage is low, there may be a bad module, faulty electrical connector, a connector may be disconnected, or a module could be obscured by debris or excessive shading.

Visually inspect the modules of the faulty source circuit for an indication of surface cracking, debris or a loose or faulty connector.

Check Source Circuit Current Levels:

If the array voltages are similar, then a short circuit test will need to be performed. Despite the array being disconnected, with the use of multimeter, technicians can still determine a short circuit reading on the source circuit. This current is potentially harmful to the technician.

4-9-4 Common Troubleshooting – DAS Not Functioning Properly

To troubleshoot the DAS, consult and contact monitoring manufacturer. Coordination with NY Old Oneida Road Solar LLC is an additional tool in the event of no response from manufacturer while on-site.

4-9-5 Common Troubleshooting – Low AC Output

For concerns about the performance of the solar electric system contact NY Old Oneida Road Solar LLC. If there is an abrupt decrease in AC power output over time or the system stops producing power all together; an onsite inspection of the system may be needed. If there is a gradual decrease in AC power output, it is possible that one or more of the PV system source circuits are not functioning properly. In this case, please contact NY Old Oneida Road Solar LLC to aid in troubleshooting and remedying the problem.

4-9-6 Inverter Troubleshooting

Inverter operational status is displayed on the front panel. If the inverter fails to turn on, there should be a fault code. Please refer to ABB Operation and Maintenance manual, after following these simple troubleshooting steps:

- Confirm that there are no obstructions on modules
- Verify that there is enough sun to run the system.
- Verify that the inverter is switched in the "**ON**" position.
- Verify that the AC and DC disconnects are in the "**ON**" position.
- Confirm proper startup voltage is present on DC bus. (Qualified Technicians ONLY).
- Confirm proper AC voltage is present on AC bus (Qualified Technicians ONLY).

4-10 System Testing Procedures

4-10-1 Open Circuit voltage Test

The purpose of this test is to ensure that all source circuits are producing the same operating current according to specifications. It is essential that adequate sunlight is present during this test. A source circuit that contains problem cells or poor electrical connections will sometimes show proper Voc; yet produce little current due to the voltage drop through the poor connections.

Equipment:

- Ammeter/Voltmeter
- High voltage gloves
- Engineering specs for short circuit current and short circuit voltage

Procedure:

1. Shut off AC & DC disconnects at inverter
2. Open lower portion of inverter where MPPT terminals are located.
3. Remove all the fuses on specific source circuit. Keep in mind that source circuits are still live.
4. Close one fuse and measure the short circuit current and voltage.

5. Compute the average panel current and voltage.
6. If the resultant values deviate by more than 5% from the value specified by the manufacturer, check the individual string to find the defective panel.
7. Record the serial number of that panel
8. Open the closed fuse, and repeat steps 1 through 6 for the remaining fuses in the inverter.
9. Repeat steps 1 through 7 for all inverters in the system.

4-10-1 Open Circuit voltage Test

If a low power source circuit is identified it is time to isolate the defective module(s) or string. This is accomplished by dividing the common ampacity of a properly working source circuit and dividing it by the number of PV modules in series. This result will give the technician what each module should be contributing to the circuit. Remove one module at a time from the defective source circuit until the correct power is measured relative to the number of modules left in the circuit. As indicated by the safety procedures above, disconnecting any module or combiner connection needs to be done while the corresponding system is off or LOTO (Lock Out/Tag Out). No connection should be broken under load. The only way to safely isolate the defective module is turning on and off the inverter before and after each testing operation.

5.1 Maintenance of Land outside of Leased Area

Currently, much of the property is a woodlot. The area within the boundaries of the fence line is very rocky. It will be seeded with native species in order to produce low ground cover. Outside of the fenced area will continue to be a woodlot with no plans to alter the landscape.