GENESEE COUNTY PLANNING BOARD REFERRALS
NOTICE OF FINAL ACTION

GCDP Referral ID	**T-05-BAT-04-24**
Review Date	**4/11/2024**
Municipality	**BATAVIA, T.**
Board Name	**PLANNING BOARD**
Applicant's Name	**Judy Green/Wortendyke Road Solar 1, LLC**
Referral Type	**Special Use Permit**
Variance(s)	
Description:	**Special Use Permit and Site Plan Review for a 15.7 acre, 5 MW ground mounted commercial solar system.**
Location	**Wortendyke Rd., Batavia**
Zoning District	**Agricultural-Residential (A-R) District**

PLANNING BOARD RECOMMENDS:

APPROVAL WITH MODIFICATION(S)

EXPLANATION:

Given that the project parcel is enrolled in Agricultural District No. 1 and that the project will receive public funding, the required modification is that the applicant comply with NYS Agriculture and Markets Law Section 305 (Notice of Intent provision). With this required modification, the proposed solar energy system should pose no significant county-wide or intercommunity impact. It is recommended that the applicant submits the enclosed application for 9-1-1 Address Verification to the Genesee County Sheriff's Office to ensure that the address of the proposed solar system meets Enhanced 9-1-1 standards.

Felipe A. Ottaviano — April 11, 2024

Director — Date

If the County Planning Board disapproved the proposal, or recommends modifications, the referring agency shall NOT act contrary to the recommendations except by a vote of a majority plus one of all the members and after the adoption of a resolution setting forth the reasons for such contrary action. Within 30 days after the final action the referring agency shall file a report of final action with the County Planning Board. An action taken form is provided for this purpose and may be obtained from the Genesee County Planning Department.

SEND OR DELIVER TO:
GENESEE COUNTY DEPARTMENT OF PLANNING
3837 West Main Street Road
Batavia, NY 14020-9404
Phone: (585) 815-7901

DEPARTMENT USE ONLY:
GCDP Referral # **T-05-BAT-04-24**

RECEIVED
Genesee County
Dept. of Planning
4/4/2024

* GENESEE COUNTY * PLANNING BOARD REFERRAL

Required According to:
GENERAL MUNICIPAL LAW ARTICLE 12B, SECTION 239 L, M, N
(Please answer ALL questions as fully as possible)

1. REFERRING BOARD(S) INFORMATION

Board(s) Town of Batavia Planning Board
Address 3833 West Main St Rd
City, State, Zip Batavaia, NY 14020
Phone (585) 343 - 1729 Ext. 238

2. APPLICANT INFORMATION

Name Judy Green/Wortendyke Road Solar 1, LLC
Address 9327 Wortendyke Rd
City, State, Zip Batavia, NY 14020
Phone (678) 617 - 8225 Ext.
Email jlgreen14020@hotmail.com

MUNICIPALITY: ☐ City ☒ Town ☐ Village of Batavia

3. TYPE OF REFERRAL: (Check all applicable items)

- ☐ Area Variance
- ☐ Use Variance
- ☒ Special Use Permit
- ☒ Site Plan Review
- ☐ Zoning Map Change
- ☐ Zoning Text Amendments
- ☐ Comprehensive Plan/Update
- ☐ Other:

Subdivision Proposal
- ☐ Preliminary
- ☐ Final

4. LOCATION OF THE REAL PROPERTY PERTAINING TO THIS REFERRAL:

A. Full Address 9327 Wortendyke Rd Batavia, NY 14020
B. Nearest intersecting road Pike Rd
C. Tax Map Parcel Number 17.-1-17
D. Total area of the property 51.3 Area of property to be disturbed 15.74 acres
E. Present zoning district(s) Ag-Res

5. REFERRAL CASE INFORMATION:

A. Has this referral been previously reviewed by the Genesee County Planning Board?

☒ NO ☐ YES If yes, give date and action taken

B. Special Use Permit and/or Variances refer to the following section(s) of the present zoning ordinance and/or law

Town of Batavia Zoning Code Section 235-53.1

C. Please describe the nature of this request Construction and operation of a 5.0 Mw (AC) ground mounted utility grade community solar energy system.

6. ENCLOSURES – Please enclose copy(s) of all appropriate items in regard to this referral

- ☒ Local application
- ☒ Site plan
- ☐ Subdivision plot plans
- ☒ SEQR forms
- ☐ Zoning text/map amendments
- ☒ Location map or tax maps
- ☐ Elevation drawings
- ☒ Agricultural data statement
- ☐ New or updated comprehensive plan
- ☐ Photos
- ☐ Other:

7. CONTACT INFORMATION of the person representing the community in filling out this form (required information)

Name Matthew Mahaney Title CEO Phone (585) 343 - 1729 Ext. 238
Address, City, State, Zip 3833 West Main St Rd Batavia, NY 14020 Email mmahaney@townofbatavia.com

April 1, 2024

Mr. Daniel Lang, Building Inspector
Town of Batavia
3833 West Main Street Road
Batavia, NY 14020

SUBJECT: Building & Zoning Application: Special Use Permit & Site Plan Approval
Wortendyke Road Solar 1, LLC; 9327 Wortendyke Road, Batavia, NY

Dear Mr. Lang;

On behalf of Wortendyke Road Solar 1, LLC and New Leaf Energy, Inc. (NELI), we are submitting the enclosed Building and Zoning Application documents for the subject site address. Included with this submission is a check from Erdman Anthony (on behalf of the Applicant; Wortendyke Road Solar 1, LLC) payable to the Town of Batavia for a total amount of $300.00 to cover the initial Site Plan and Special Use Permit Application fees.

The proposed project will construct and operate a 5.0 Mw (AC) community solar energy project on a 51.3 acre parcel of agricultural land. We are requesting the enclosed Applications be referred to the Genesee County Planning Board for their April 11, 2024 meeting, and introduced to the Town Planning Board at either their April 16th or May 7th meetings.

Enclosed please find four (4) copies of the Site Plan and Special Use Permit Application documents consisting of the following:

1. Completed and signed "*Building and Zoning Application*", and a "*Site Plan Review Checklist*".
2. Signed Owner's Authorization.
3. Completed & Signed *Agricultural Data Statement*.
4. Completed *Part 1 Full Environmental Assessment Form*.
5. NYS OPRHP Letter dated 08-24-2023 indicating No Impact to archaeological and/or historic resources.
6. Soils Report
7. Farmland Soils Classification Report
8. Stormwater Management Narrative
9. Wetland Delineation Report dated December 2023.
10. Preliminary Screening Analysis for Interconnection (Proof of National Grid Coordination)
11. Single-Line Electrical Drawing (11" x 17").
12. FAA Obstruction Evaluation screening.
13. Glare Analysis
14. A Decommissioning Estimate - Plan
15. A written Operations and Maintenance Plan
16. Site Specific Fire Safety Plan

17. Preliminary Equipment Specification Sheets
    a. *Hyperion* Solar Panel modules
    b. *NexTracker NX Horizon* Solar panel racking and support system.
    c. *Sunny Central* Inverters
    d. *Cooper Power* Pad Mounted Transformer
18. Site Plans: Full Size 24" x 36".

Electronic copies of all the above files will be e-mailed to you and Town Engineer Steve Mountain.

Following the County Planning Board's review and the Town's initial review of the above listed Site Plan Application documents, the following documents will be prepared and submitted:

- A Visual Impact Analysis, including Visual Simulations.
- The required Stormwater Pollution Prevention Plan (SWPPP).
- A Landscaping Plan, if required or warranted, to provide vegetative screening.
- Application for a Driveway Pemit.

As noted on the Site Plans, Sheet C-3.0, Layout and Materials Plan, this site is NOT within a designated Agricultural Production Zone (per Map 6 of the Town's April 2017 Comprehensive Plan). However, to provide and demonstrate compliance with Town's current Zoning Code Section § 235-53.1.G (15) Special Use Permit Standards, sub-section g, paragraphs [2] – [5], the proposed array:

1. Will be constructed in accordance with the construction requirements of the *New York State Department of Agriculture and Markets* per the NOTE on the Site Plan Cover/Title sheet.
2. Will be planted with a 7-seed clover mix (See Site Plan Sheet C-3.0) providing native perennial vegetation and foraging habitat beneficial to game birds, songbirds, and pollinators. This is the same seed mix proposed for the recently approved Oak Orchard Road Solar site.
3. Is laid out to allow continued access and use of an adjacent actively tilled agricultural field within the same land parcel.

If you have any questions or need additional information, please contact me at (585) 427-8888, ext 1012.

Sincerely,

Marc Kenward, PE
Senior Associate
ERDMAN ANTHONY

Enc: As noted above

c: Zachary Longo, New Leaf Energy, Inc.
Wil Nieves, New Leaf Energy, Inc.

Building and Zoning Application Permit No._____

Town of Batavia 3833 West Main Rd. Batavia NY 14020 PH. 585-343-1729

Date 4 / 1 / 24 Zone AG-R Flood Zone N/A Wellhead Protection N/A Corner Lot N/A

New Construction ☑ Fence ☐ Pond ☐ Sign ☐ Alteration(s) ☐ Addition ☐ Demolition ☐

Accessory Bldg. ☐ Mobile Home ☐ Fill Permit ☐ Home Occupation ☐ Land Separation ☐ Site Plan Approval ☑

Special Use Permit ☑ Temporary Use ☐ Subdivision ☐ Zoning Variance Request ☐ Other ☐ Specify:_____

Tax Map No. 17.-1-17

Owners Name Judy Green Phone No. (678) 617 - 8225

Email: jlgreen14020@hotmail.com

Address 9327 Wortendyke Rd., Batavia, NY 14020 Project Road Width 49 ft

Applicants Name Wortendyke Road Solar 1, LLC. c/o New Leaf Energy, Inc. [contact - Zachary Longo] Project Address 9327 Wortendyke Rd., Batavia, NY 14020

Applicant Address: 55 Technology Drive, Suite 102, Lowell, MA 01851

E Mail Address zlongo@newleafenergy.com Phone No (914) 217 - 8701

Description of Project: Construct and operate a 5.0 Mw (AC) ground mounted utility grade Community Solar Energy system on a 51.30 acre parcel of land.

Existing Use Agricultural & Residential Proposed Use Agricultural, Residential & Solar Energy System

Estimated Cost Building_____ Plumbing N/A Mechanical N/A Miscellaneous_____

SEQR CLASSIFICATION Type 1 ☐ Type 2 ☐ Unlisted ☐

Review completed by Planning Board ☐_____ Zoning Board of Appeals ☐_____

Permit Fee $_____ Application Date ____/____/____ Permit Expires On ____/____/____

Issuing Officer _____ Date____/____/____

IN SIGNING THIS DOCUMENT I HEARBY GIVE THE RIGHT OF AN ON SITE INSPECTION TO THE TOWN OF BATAVIA CODE ENFORCEMENT OFFICIAL OR THEIR DESIGNE. ALL PROVISIONS OF LAWS AND ORDINANCES GOVERNING THIS TYPE OF WORK WILL BE COMPLIED WITH WHETHER SPECIFIED HEREIN OR NOT. THE GRANTING OF A PERMIT DOES NOT PRESUME TO GIVE AUTHORITY TO VIOLATE OR CANCEL THE PROVISIONS OF ANY OTHER STATE OR LOCAL LAW REGULATING CONSTRUCTION OR THE PREFORMANCE OF CONSTRUCTION.

I, Zachary Longo, as Owner or Authorized Agent hereby declare that the statements and information on the foregoing application are true and accurate, to the best of my knowledge.

Zachary Longo 3/28/2024

Signature of Owner or Authorized Agent Date

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3833 West Main Street Road Batavia, New York 14020-9402
Phone: (585) 343-1729 Fax: (585) 343-8461 TDD: 1-800-662-1220 www.townofbatavia.com

SITE PLAN REVIEW CHECKLIST

The Town of Batavia would like to work with you to streamline the site plan review process. We strongly encourage that any applicants to schedule an appointment with our Town Building and Zoning Dept. Director **Dan Lang at (585) 343-1729 extension 222 (dlang@townofbatavia.com)** prior to submitting a project for review.

The initial meeting can be scheduled at any time. The site plan submission shall be submitted to the Dan Lang one (1) week prior to the Town Planning Board Meetings held every 1st and 3rd Tuesday of the month at 7:30 pm at the Town Hall. The Town will review the Site Plans and provide comments back to the applicant within one (1) week following the Planning Board Meeting.

Office Use	INITIAL SITE PLAN REVIEW MEETING REQUIREMENTS:
☐ ☐	1. One (1) copy of Zoning Permit Application. 2. One (1) printed copy and an electronic copy of the following: a. Scaled site plans on an instrument survey showing: i. Existing and proposed parking. ii. Existing and proposed buildings. iii. Existing and proposed conceptual drainage improvements including storm water treatment. iv. Existing and proposed property lines and highway Right of Way. v. Existing Environmental features such as wetlands and flood plains.
Office Use	**SITE PLAN SUBMISSION REQUIREMENTS**
☐ ☐ ☐ ☐ ☐	1. SEQRA short or long form or Environmental Impact Statement 2. Three (3) full size, one (1) half size and an electronic copy, Plans shall include: a. site plans and details that are stamped and signed by a PE (see attached checklist) b. Scaled floor plan of all proposed structures c. Scaled elevations of all proposed structures and facades 3. Three (3) copies of color renderings or other type of visual aids depicting any proposed structures in its built conditions within the site. 4. One (1) copy of Storm Water Pollution Prevention Plans (for developments great than one (1) acre). 5. The following applications/ reports as applicable (applications are available on the Town web site): a) Engineering Report providing all basis of design criteria b) Traffic Study as required c) Water- Sewer Service application d) Backflow design report including applicable Health Dept. forms and backflow design checklist e) Sign Permit application f) Driveway and/or Highway Construction Permit Application g) Minor Subdivision application h) Smart Growth application i) Any applicable variance applications

SITE PLAN REVIEW CHECKLIST		
Project Name: 9327 Wortendyke Road Solar Community Project		**Reviewed By:**
Applicant Name: Wortendyke Road Solar 1, LLC. c/o New Leaf Energy, Inc.		
Office Use	**Plan Components**	**Comments**
☐	Instrument Survey including Public Right-of-Way	
☐	North Arrow, Scale, Title and Address	
☐	Lot Coverage, Building Coverage and Open Space Percentage Table	
☐	Setback Dimensions for building and parking	
☐	Building/Structure Details and Elevation Views	
☐	Existing Natural and Topographical Features	
☐	Wetland delineation or boundaries shown if on site	
☐	Proposed Driveway/Roadway with dimensions and details	
☐	Parking layout including aisles and queuing aisles with dimensions and number of spaces	
☐	Snow storage location for parking of more than 10 vehicles	
☐	Drainage and Grading plans and details, use Town std.	
☐	Utility Plan with appropriate details, use Town std. details for all wtr- swr improvements	
☐	Ex. or Proposed Fire hydrants located per NYS Code	
☐	Lighting Plan with lighting contours and appropriate details	
☐	Landscaping, Fencing and Screening Plan and details	
☐	Pedestrian safety around building, curbing, sidewalks and ADA accessible ramps as necessary	
☐	Profiles of roadway and utilities if applicable	
☐	Appropriate notes to include topsoil to remain on site	
☐	Trash Storage/ dumpster enclosure	
☐	Town of Batavia Signature Block on Cover Sheet	
☐	Engineering Report	
☐	Traffic Study (if req'd) and traffic flow easily identified	
☐	Water- Sewer Service Application	
☐	Backflow report and Town Backflow Design checklist	
☐	Ex. and Proposed Sign shown and Sign Permit Application	
☐	Driveway Permit Application	
☐	Storm Water Pollution Prevention Plan	
☐	Storm Water Maintenance Agreement	
☐	SEQRA Short or Long form part 1 or Envir. Impact Stat.	
☐	Smart Growth Application	
☐	Minor Subdivision Application	

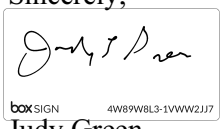
EXHIBIT F

March 1, 2024

To Whom It May Concern:

New Leaf Energy, Inc. and its employees and affiliates are hereby authorized to act as our agent for submission of applications and related plans and documents, and to appear before boards and other officials, with respect to obtaining approvals for solar installations and/or energy storage systems to be constructed on my property located at 9327 Wortendyke Rd, Batavia NY, 14020.

Sincerely,



Judy Green

TOWN VILLAGE CITY OF _____ Application #_____

(circle one)

Agricultural Data Statement

Date 04/01/2024

Instructions: This form must be completed for any application for a special use permit, site plan approval, use variance or a subdivision approval requiring municipal review that would occur on property within 500 feet of a farm operation located in a NYS Dept. of Ag & Markets certified Agricultural District.

Applicant	Owner if Different from Applicant
Name: Wortendyke Road Solar 1, LLC. c/o New Leaf Energy, Inc.[contact - Zachary Longo]	Name: Judy Green
Address: 55 Technology Drive, Sutie 102 Lowell, MA 01851	Address: 9327 Wortendyke Rd., Batavia, NY 14020

1. Type of Application: ☑Special Use Permit; ☑Site Plan Approval ; ☐Use Variance; ☐Subdivision Approval
   (circle one or more)

2. Description of proposed project: Construct and operate a 5.0 Mw (AC) ground mounted utility scale solar energy system on a 51.30 acre parcel of agricultural land.

3. Location of project: Address: 9327 Wortendyke Rd., Batavia, NY 14020
   Tax Map Number (TMP) 17.-1-17

4. Is this parcel within an Agricultural District? ☐NO ☑YES (Check with your local assessor if you do not know)
5. If YES, Agricultural District Number 1
6. Is this parcel actively farmed? ☐NO ☑YES
7. List all farm operations within 500 feet of your parcel. Attach additional sheets if necessary.

1 Name: Sandra Weiler (Tax Map No. 17.-1-19) Address: Wortendyke Rd., Batavia, NY 14020 Mailing: 9263 Wortendyke Rd., Batavia, NY 14020 Is this parcel actively farmed? ☐NO ☑YES	2 Name: Sandra Weiler (Tax Map No. 17.-1-18) Address: 9263 Wortendyke Rd., Batavia, NY 14020 Mailing: Same as above Is this parcel actively farmed? ☐NO ☑YES
3 Name: Erik Lang (Tax Map No. 17.-1-21) Address: 9296 Wortendyke Rd., Batavia, NY 14020 Mailing: 9290 Wortendyke Rd., Batavia, NY 14020 Is this parcel actively farmed? ☑NO ☐YES	4 Name: Andrew Young (Tax Map No. 17.-1-15) Address: 3521 Pike Rd., Batavia, NY 14020 Mailing: 340 W. Main St., Batavia, NY 14020 Is this parcel actively farmed? ☐NO ☑YES

(note - this property is not within the agricultural district but has farming operations)

Zach Longo
Signature of Applicant

See Owner's Authorization
Signature of Owner (if other than applicant)

Reviewed by: _____ _____
Signature of Municipal Official Date

NOTE TO REFERRAL AGENCY: County Planning Board review is required. A copy of the Agricultural Data Statement must be submitted along with the referral to the County Planning Department.

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9327 Wortendyke Road

3/18/2024, 9:19:23 AM

1:12,000

0 0.07 0.15 0.3 mi

0 0.1 0.2 0.4 km

NYS Agricultural Districts

Roads (Large Scale)

Streams (Large Scale)

Parcels with labels

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Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: 9327 Wortendyke Rd., Batavia NY Solar Project		
Project Location (describe, and attach a general location map): 9327 Wortendyke Rd., Batavia, NY 14020 (Tax Map No. 17.-1-17)		
Brief Description of Proposed Action (include purpose or need): Construct and operate a 5.0 Mw (AC) ground mounted, utility grade solar energy system.		
Name of Applicant/Sponsor: Wortendyke Road Solar 1, LLC. c/o New Leaf Energy, Inc. [contact - Zachary Longo]	Telephone: (914) 217 - 8701 E-Mail: zlongo@newleafenergy.com	
Address: 55 Technology Drive, Suite 102		
City/PO: Lowell	State: MA	Zip Code: 01851
Project Contact (if not same as sponsor; give name and title/role): Erdman Anthony Consulting Engineers [Contact - Marc Kenward, PE]	Telephone: (585) 427 - 8888 E-Mail: KenwardMD@erdmananthony.com	
Address: 145 Culver Road, Suite 200		
City/PO: Rochester	State: New York	Zip Code: 14620
Property Owner (if not same as sponsor): Judy Green	Telephone: (678) 617 - 8225 E-Mail: jlgreen14020@hotmail.com	
Address: 9327 Wortendyke Road		
City/PO: Batavia	State: NY	Zip Code: 14020

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Town of Batavia Planning Board: Special use Permit and Site Plan Approvals	April 1, 2024
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	Genesee County Planning Board	April 4, 2024
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDEC GP 0-20-001 for Stormwater Discharges	TBD
h. Federal agencies ☑Yes ☐No	US Army Corps of Engineers - Nationwide Permit 51 (Renewable Energy)	TBD

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☑No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☑Yes ☐No

If Yes, identify the plan(s):

Town of Batavia Agricultural & Farmland Protection Plan

_____

_____

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
Agricultural - Residential

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Pembroke Central School District

b. What police or other public protection forces serve the project site?
Genesee County Sheriff, NYS Police

c. Which fire protection and emergency medical services serve the project site?
Batavia Fire Protection District, Mercy Flight EMS

d. What parks serve the project site?
N/A

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Construct and Operate a Utility grade (large scale) solar energy project.

b. a. Total acreage of the site of the proposed action? 51.30 acres
b. Total acreage to be physically disturbed? 2.2 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 51.30 acres

Project will encompass approximate 15.74 +/- acres of the total parcel area.

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐Yes ☑No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase	_____	_____	_____	_____
At completion of all phases	_____	_____	_____	_____

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☑No

If Yes,

i. Total number of structures _____

ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐Yes ☑No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

i*v.* Will there be onsite dewatering or processing of excavated materials? ☐Yes ☐No

If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐Yes ☐No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☑No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No

If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☐Yes ☑No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☐No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☐No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☑No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

_____

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐Yes ☐No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No

- Do existing sewer lines serve the project site? ☐Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☐No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or 0.014 acres (impervious surface)

_____ Square feet or 51.3 acres (parcel size)

ii. Describe types of new point sources. Electrical Equipment Pads and equipment. Note that solar arrays are considered disconnected roof-top draining onto grass meadow. New access driveway is permeable stone.

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

Sheet flow across grass meadow. Proposed stormwater run-off is equal to the existing conditions with an overall composite (run-off) curve number (CN) of 71 compared to an existing curve number (CN) of 71.

- If to surface waters, identify receiving water bodies or wetlands: Stormwater run-off drains to Wetland 1 and Stream 1 as shown in the Wetland Delineation Report. Stream 1 is an intermittent unclassified, un-named tributary to Bowen Creek.
- Will stormwater runoff flow to adjacent properties? ☑Yes ☐No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend
☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

_____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7:00 am - 6:00 pm
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: Daylight Hours
- Saturday: Daylight Hours
- Sunday: Daylight Hours
- Holidays: Daylight Hours

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☑ No

If yes:

i. Provide details including sources, time of day and duration:

_____

_____

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☐ No

Describe: _____

_____

n. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

_____

_____

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☐ No

Describe: _____

_____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

_____

_____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:_____

_____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

_____

_____

_____

_____

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____

  _____
- Operation: _____

  _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____

  _____
- Operation: _____

  _____

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

_____

_____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

_____

_____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

_____

_____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

_____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

_____

_____

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☐ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☑ Forest ☑ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

_____

_____

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.098	0.112	+0.014
• Forested	28.164	28.098	-0.066
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	1.425	21.253	+19.828
• Agricultural (includes active orchards, field, greenhouse etc.)	23.424	3.337	-20.087
• Surface water features (lakes, ponds, streams, rivers, etc.)	0.467	0.467	0.000
• Wetlands (freshwater or tidal)	8.830	8.830	0.000
• Non-vegetated (bare rock, earth or fill)	0.000	0.000	0.000
• Other Describe: Pervious Driveway	0.000	0.311	+0.311

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐ Yes ☑ No

If Yes,

i. Identify Facilities:

_____

_____

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures:_____

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >6.67 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site:

Manheim silt loam	46.7 %
Mohawk channery silt loam	37.8 %
Ilion silt loam	15.5 %

d. What is the average depth to the water table on the project site? Average: 0-2.1 feet

e. Drainage status of project site soils:

☑	Well Drained:	37.8 % of site
☐	Moderately Well Drained:	_____% of site
☑	Poorly Drained	62.2 % of site

f. Approximate proportion of proposed action site with slopes:

☑	0-10%:	93.12 % of site
☑	10-15%:	4.02 % of site
☑	15% or greater:	2.86 % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑ Yes ☐ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name Intermittent Stream Classification Unclassified
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters Approximate Size 8.83 acres
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☑ Yes ☐ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____
Name - Pollutants - Uses: Bowen Brook (Creek) and tribs - Nutrients; D.O./Oxygen Demand - Recreation; Aquatic Life

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site:

Deer, possum, raccoon, skunk; Fox, woodchucks; Northern Long Eared Bat
Songbirds, Turkey, Hawks, blackbirds; Meadow Moles, Field Mice; Monarch Butterfly

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑ No

If Yes:

i. Species and listing (endangered or threatened): _____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No

If Yes:

i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☑ Yes ☐ No

If yes, give a brief description of how the proposed action may affect that use: _____

Proposed action will limit hunting, trapping & fishing activities to areas outside of the project limits.

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☑ Yes ☐ No

If Yes, provide county plus district name/number: GENE001

b. Are agricultural lands consisting of highly productive soils present? ☑ Yes ☐ No

i. If Yes: acreage(s) on project site? Prime Farmland - 13.7 ac, Prime Farmland if Drained - 23.5 ac, Farmland of Statewide Importance - 13.4 ac

ii. Source(s) of soil rating(s): USDA NRCS Web Soil Survey

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐ Yes ☑ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑ Yes ☐ No

If Yes:

i. Identify resource: Kiwanis Park, Williams Park Trail, Williams Park, Austin Park, Centennial Park, Lambert Park, Lions Park MacArthur Park

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): Local Parks & Trail

iii. Distance between project and resource: 3.23, 3.42, 3.75, 4.27, 4.51, 4.62, 4.80, 4.91 miles

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Marc Kenward Date April 1, 2024

Signature Marc Kenward Title Senior Associate

Erdman Anthony Consulting Engineers
145 Culver Road, Suite 200
Rochester, NY 14620 (585) 427 - 8888
KenwardMD@erdmananthony.com

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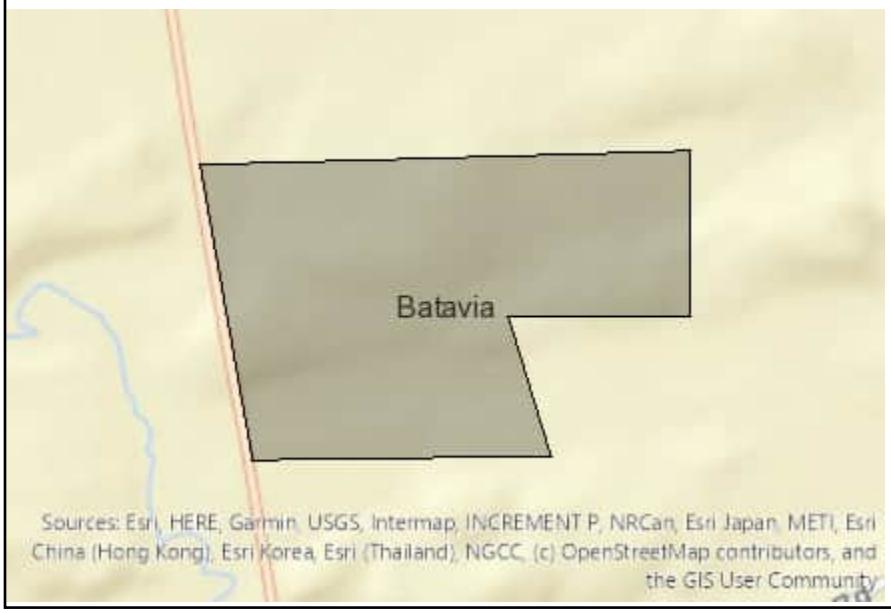
EAF Mapper Summary Report

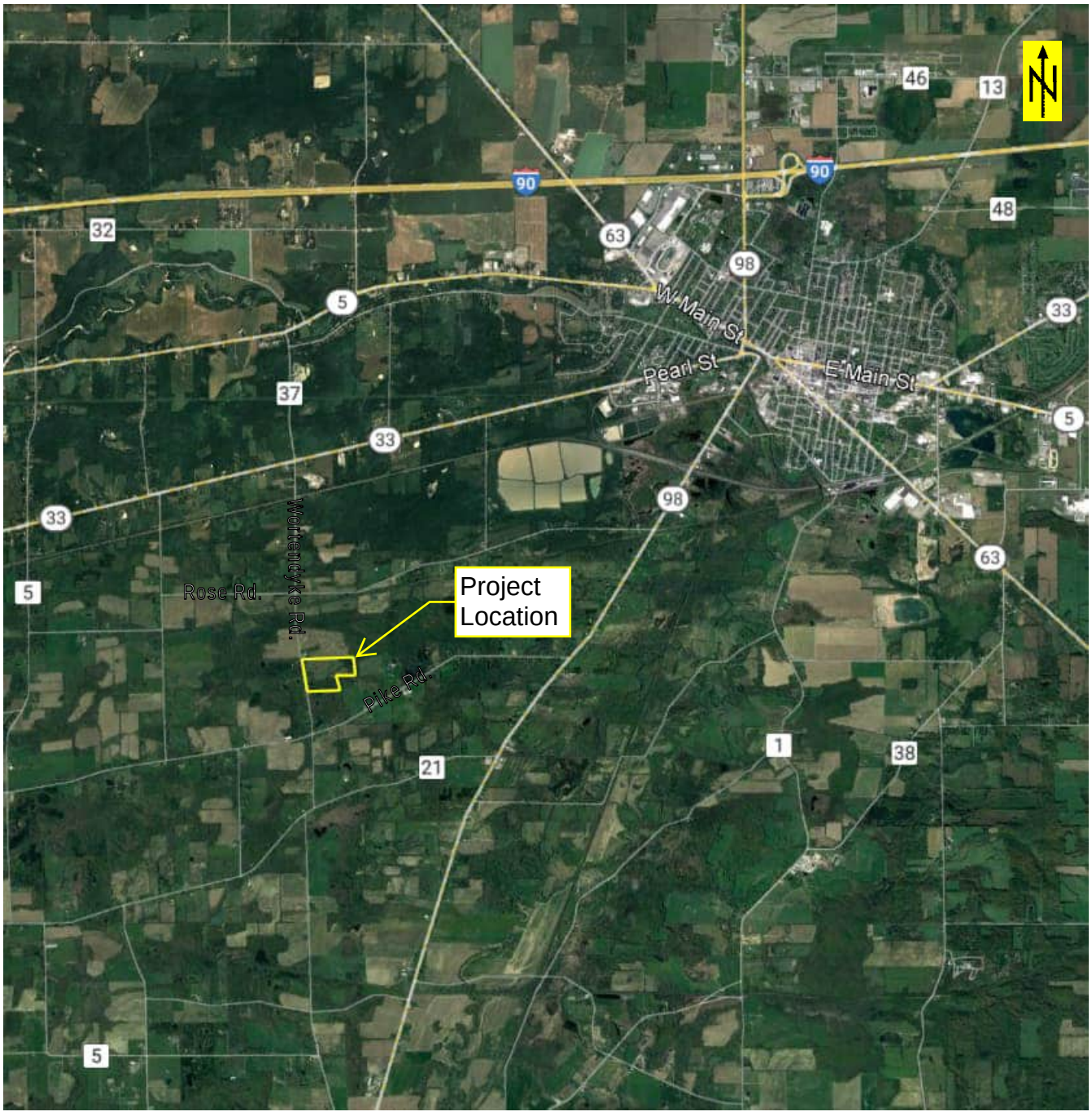
Monday, March 18, 2024 11:22 AM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	Yes
E.2.h.v [Impaired Water Bodies - Name and Basis for Listing]	Name - Pollutants - Uses:Bowen Brook and tribs – Nutrients;D.O./Oxygen Demand – Recreation;Aquatic Life
E.2.i. [Floodway]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.j. [100 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.k. [500 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.

E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	Yes
E.3.a. [Agricultural District]	GENE001
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No



ERDMAN ANTHONY

145 Culver Road, Suite 200
Rochester, NY 14620
(585) 427-8888

TITLE:

PROJECT LOCATION MAP

9327 Wortendyke Road, Batavia, New York

Prepared For: New Leaf Energy, Inc.

DRAWING BY:	DATE:	PROJECT:
NA	April, 2024	19715.11

SCALE: NTS

REFERENCE: FIGURE I

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New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

August 24, 2023

John Osterhoudt
New Leaf Energy
22 Century Hill Dr
Suite 303
Latham, NY 12220

Re: DEC
9327 Wortendyke Rd - Batavia / 5 MW / 20 Acre
9327 Wortendyke Rd, Batavia, NY 14020
23PR07198

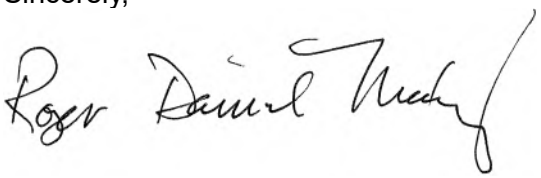
Dear John Osterhoudt:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

Based upon this review, it is the opinion of OPRHP that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,



R. Daniel Mackay

Deputy Commissioner for Historic Preservation
Division for Historic Preservation

rev: V. Bartos

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 Genesee County, New York

9237 Wortendyke Rd

March 18, 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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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 (9327 Wortendyke Rd)

Map Scale: 1:3,510 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N 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: Genesee County, New York
Survey Area Data: Version 24, 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: Jun 15, 2020—Jun 17, 2020

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

Map Unit Legend (9327 Wortendyke Rd)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
IoA	Ilion silt loam, 0 to 3 percent slopes	7.9	15.5%
MhA	Manheim silt loam, 0 to 3 percent slopes	9.7	19.1%
MhB	Manheim silt loam, 3 to 8 percent slopes	14.1	27.6%
MoB	Mohawk channery silt loam, 2 to 8 percent slopes	13.7	26.9%
MoC	Mohawk channery silt loam, 8 to 15 percent slopes	5.5	10.8%
MoD	Mohawk channery silt loam, 15 to 25 percent slopes	0.0	0.1%
Totals for Area of Interest		**50.9**	**100.0%**

Map Unit Descriptions (9327 Wortendyke Rd)

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.

Genesee County, New York

IoA—Ilion silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: b3yx
Elevation: 600 to 1,800 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Ilion and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ilion

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy till derived from calcareous dark shale

Typical profile

H1 - 0 to 14 inches: silt loam
H2 - 14 to 36 inches: silty clay loam
H3 - 36 to 72 inches: channery silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: F101XY014NY - Wet Till Depression
Hydric soil rating: Yes

Minor Components

Fonda

Percent of map unit: 5 percent
Landform: Depressions

Hydric soil rating: Yes

Alden

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Lyons

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Unnamed soils

Percent of map unit: 5 percent
Hydric soil rating: No

MhA—Manheim silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: b3zh
Elevation: 500 to 1,800 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Manheim and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Manheim

Setting

Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till dominated by black or dark gray shale that is neutral or calcareous

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 42 inches: silty clay loam
H3 - 42 to 72 inches: channery silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

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

Minor Components

Darien

Percent of map unit: 5 percent
Hydric soil rating: No

Danley

Percent of map unit: 5 percent
Hydric soil rating: No

Burdett

Percent of map unit: 5 percent
Hydric soil rating: No

Ilion

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

MhB—Manheim silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: b3zj
Elevation: 500 to 1,800 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Manheim and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Manheim

Setting

Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till dominated by black or dark gray shale that is neutral or calcareous

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 42 inches: silty clay loam
H3 - 42 to 72 inches: channery silt loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

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

Minor Components

Mohawk

Percent of map unit: 5 percent
Hydric soil rating: No

Ilion

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Burdett

Percent of map unit: 5 percent
Hydric soil rating: No

Darien

Percent of map unit: 5 percent
Hydric soil rating: No

MoB—Mohawk channery silt loam, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: 1hb22
Elevation: 850 to 1,260 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Mohawk and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mohawk

Setting

Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till that is generally calcareous, derived mainly from black soft shale

Typical profile

H1 - 0 to 8 inches: channery silt loam
H2 - 8 to 26 inches: channery silt loam
H3 - 26 to 72 inches: channery loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 15 to 25 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Minor Components

Manheim
Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed soils
Percent of map unit: 5 percent
Hydric soil rating: No

Darien
Percent of map unit: 5 percent
Hydric soil rating: No

Nunda
Percent of map unit: 5 percent
Hydric soil rating: No

MoC—Mohawk channery silt loam, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 1hb23
Elevation: 850 to 1,300 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Mohawk and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mohawk

Setting
Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till that is generally calcareous, derived mainly from black soft shale

Typical profile
H1 - 0 to 8 inches: channery silt loam
H2 - 8 to 26 inches: channery silt loam
H3 - 26 to 72 inches: channery loam

Properties and qualities
Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 15 to 25 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Minor Components

Manheim

Percent of map unit: 5 percent
Hydric soil rating: No

Palatine

Percent of map unit: 5 percent
Hydric soil rating: No

Darien

Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 5 percent
Hydric soil rating: No

MoD—Mohawk channery silt loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 1hb24
Elevation: 870 to 1,050 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Mohawk and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mohawk

Setting

Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till that is generally calcareous, derived mainly from black soft shale

Typical profile

H1 - 0 to 8 inches: channery silt loam
H2 - 8 to 26 inches: channery silt loam
H3 - 26 to 72 inches: channery loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 15 to 25 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Minor Components

Darien

Percent of map unit: 5 percent
Hydric soil rating: No

Manheim

Percent of map unit: 5 percent
Hydric soil rating: No

Palatine

Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 5 percent
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Erosion Factors

Soil Erosion Factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

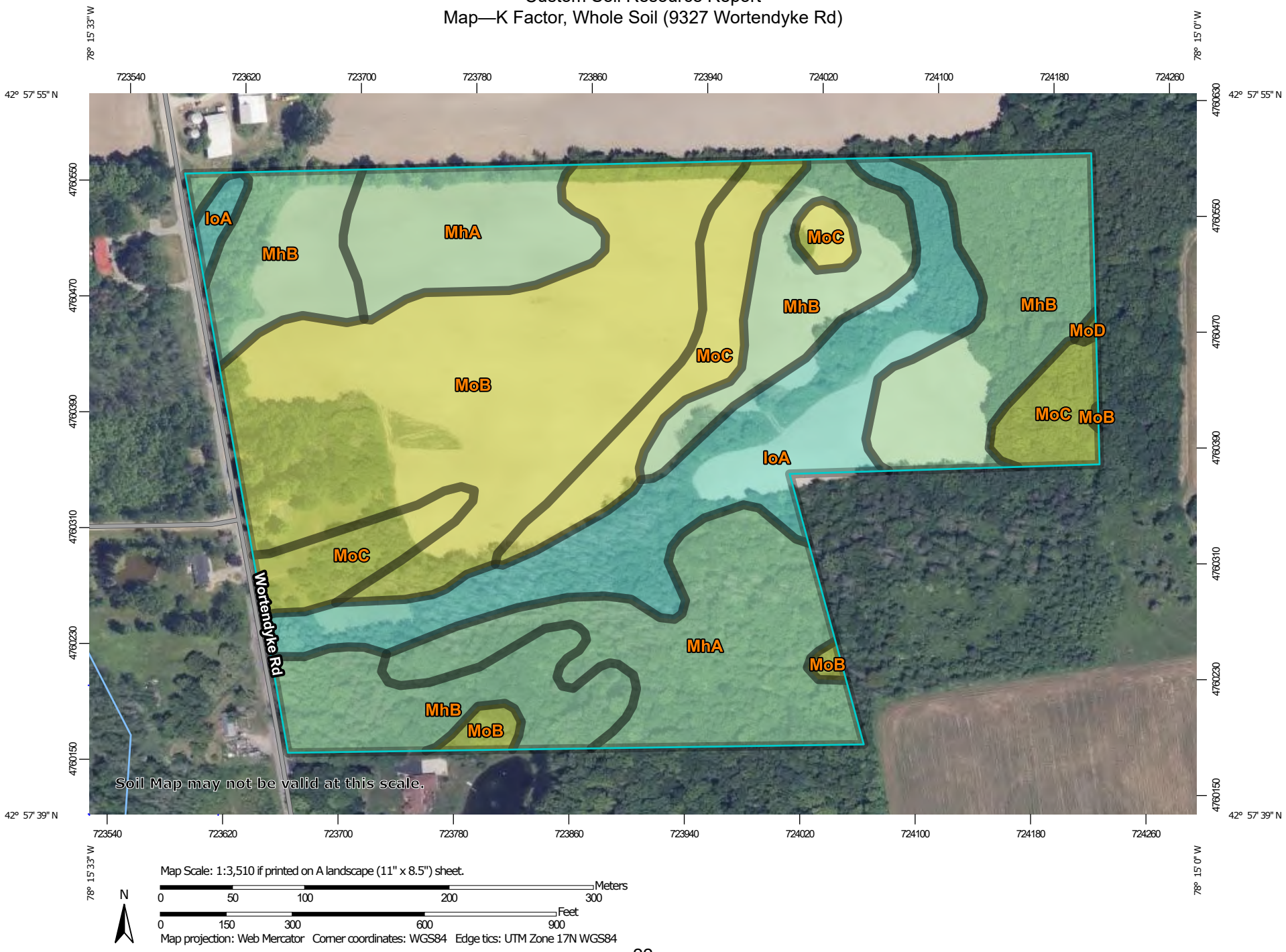
K Factor, Whole Soil (9327 Wortendyke Rd)

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Factor K does not apply to organic horizons and is not reported for those layers.

Custom Soil Resource Report
Map—K Factor, Whole Soil (9327 Wortendyke Rd)



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Soil Rating Lines

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
Not rated or not available

Soil Rating Points

.02
.05
.10
.15
.17
.20
.24
.28
.32
.37
.43
.49
.55
.64
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: Genesee County, New York
Survey Area Data: Version 24, 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: Jun 15, 2020—Jun 17, 2020

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

Table—K Factor, Whole Soil (9327 Wortendyke Rd)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
IoA	Ilion silt loam, 0 to 3 percent slopes	.32	7.9	15.5%
MhA	Manheim silt loam, 0 to 3 percent slopes	.28	9.7	19.1%
MhB	Manheim silt loam, 3 to 8 percent slopes	.28	14.1	27.6%
MoB	Mohawk channery silt loam, 2 to 8 percent slopes	.20	13.7	26.9%
MoC	Mohawk channery silt loam, 8 to 15 percent slopes	.20	5.5	10.8%
MoD	Mohawk channery silt loam, 15 to 25 percent slopes	.20	0.0	0.1%
Totals for Area of Interest			**50.9**	**100.0%**

Rating Options—K Factor, Whole Soil (9327 Wortendyke Rd)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

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.

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United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

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 Genesee County, New York

9237 Wortendyke Rd: Farmland Classification Report

March 18, 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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Soil Information for All Uses.....8
Suitabilities and Limitations for Use.....8
Land Classifications.....8
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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 Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

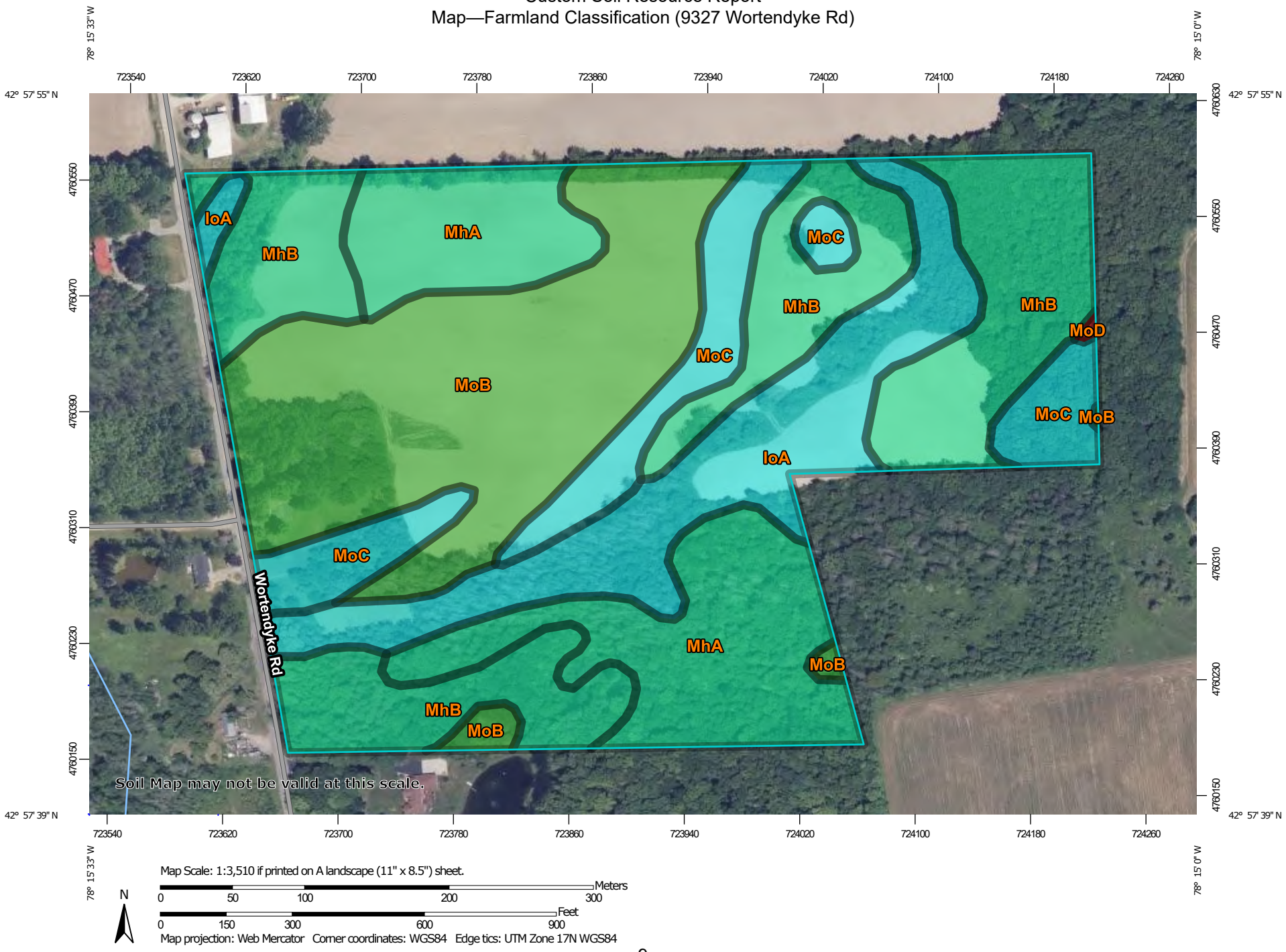
Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification (9327 Wortendyke Rd)

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Custom Soil Resource Report
Map—Farmland Classification (9327 Wortendyke Rd)



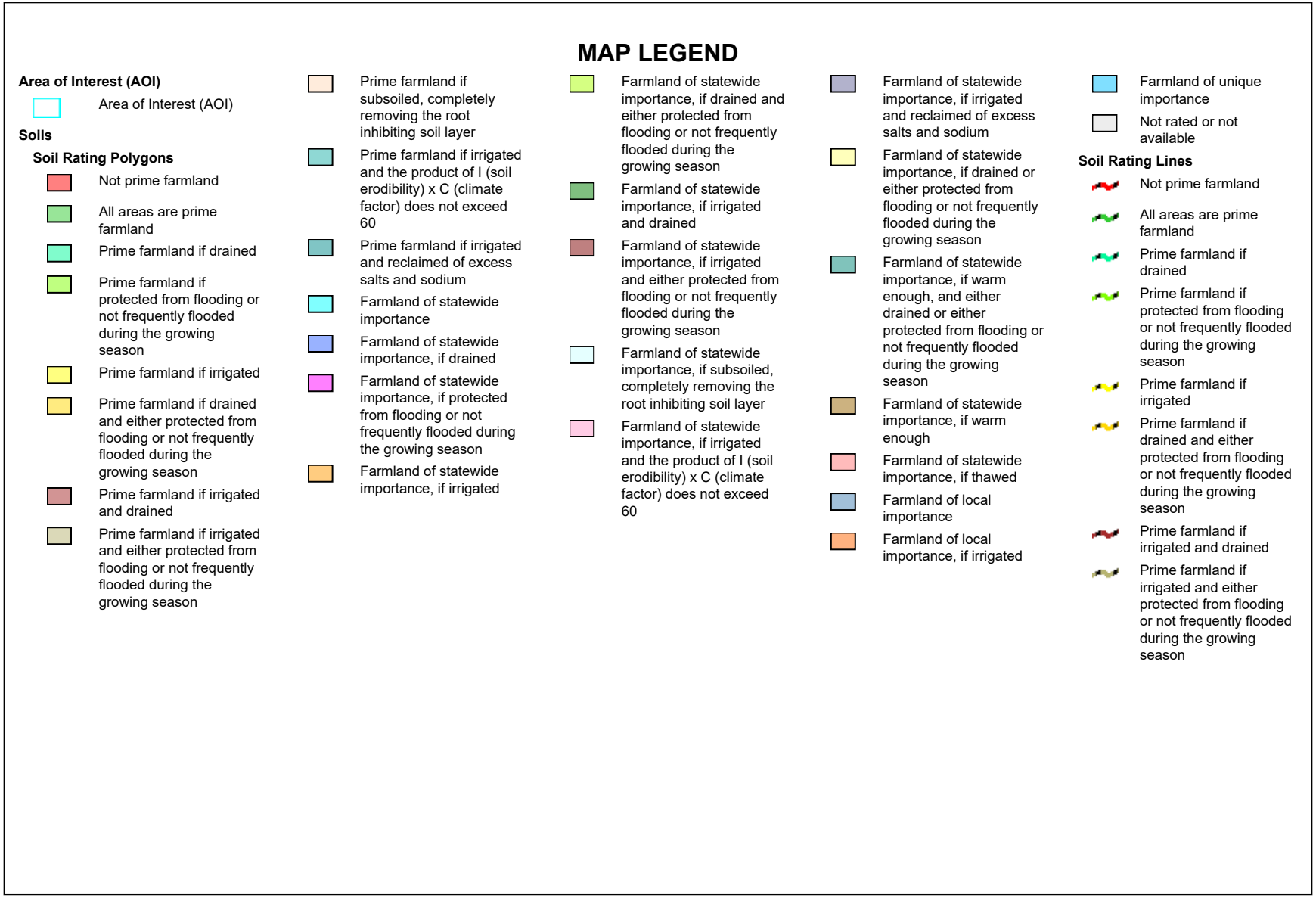
Map Scale: 1:3,510 if printed on A landscape (11" x 8.5") sheet.

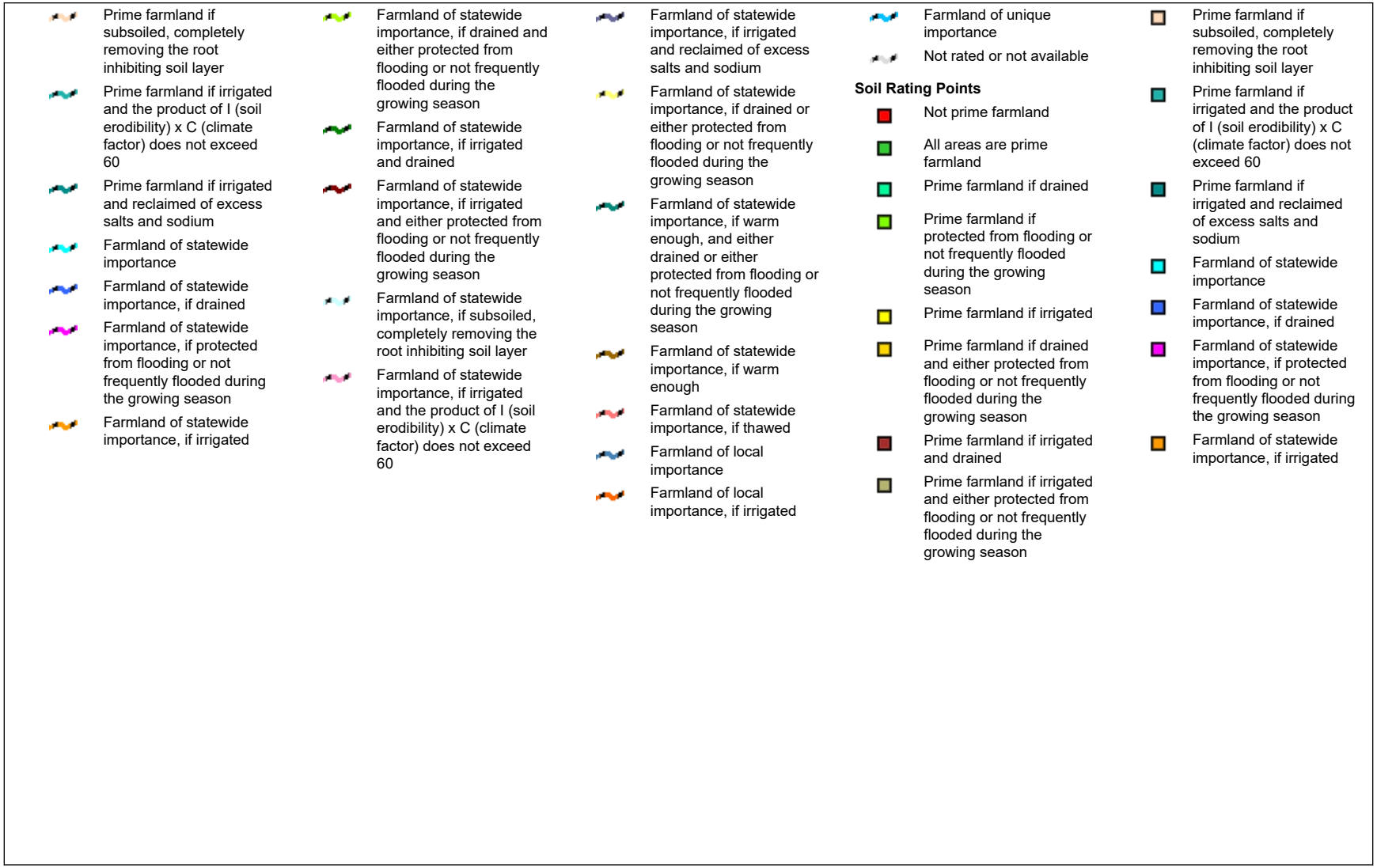
N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84


MAP LEGEND
Area of Interest (AOI)
Area of Interest (AOI)
Soils
Soil Rating Polygons
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Lines
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season


Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Points
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

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: Genesee County, New York
Survey Area Data: Version 24, 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: Jun 15, 2020—Jun 17, 2020

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

Table—Farmland Classification (9327 Wortendyke Rd)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
IoA	Ilion silt loam, 0 to 3 percent slopes	Farmland of statewide importance	7.9	15.5%
MhA	Manheim silt loam, 0 to 3 percent slopes	Prime farmland if drained	9.7	19.1%
MhB	Manheim silt loam, 3 to 8 percent slopes	Prime farmland if drained	14.1	27.6%
MoB	Mohawk channery silt loam, 2 to 8 percent slopes	All areas are prime farmland	13.7	26.9%
MoC	Mohawk channery silt loam, 8 to 15 percent slopes	Farmland of statewide importance	5.5	10.8%
MoD	Mohawk channery silt loam, 15 to 25 percent slopes	Not prime farmland	0.0	0.1%
Totals for Area of Interest			**50.9**	**100.0%**

Rating Options—Farmland Classification (9327 Wortendyke Rd)

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

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9327 Wortendyke Rd.
Batavia, NY

Stormwater Management Narrative

The proposed stormwater management for the proposed solar array field will be based on improved ground cover compared to existing conditions in order to yield a similar or lesser stormwater runoff. The proposed solar array area is currently tilled agricultural land. Following the installation of the solar array, the finished ground covers/surfaces will be small impervious equipment pads, a pervious gravel access driveway and a low maintenance, shade tolerant meadow seed mix (See picture on the following page of a meadow ground cover). As demonstrated in this narrative for the solar array, the curve number (CN) for proposed conditions is equal to the existing, which indicates equal stormwater runoff for any given storm event.

The following table depicts the calculations of weighted CN values for existing and proposed conditions. Under proposed conditions, the overall CN for the project limits will be equal to the existing conditions. In addition, the run-off from the impervious solar panels is treated as a disconnected impervious cover which reduces runoff by promoting overland filtering and infiltration.

Composite CN Value Calculations & Comparison					
Existing Conditions			Proposed Conditions		
Cover Type / Finish	Area (acres)	CN	Cover Type / Finish	Area (acres)	CN
Meadow, non-grazed	0	71	Meadow, non-grazed	19.828	71
Woods (& heavy brush), Good	28.164	70	Woods (& heavy brush), Good	28.098	70
Impervious Areas – Roof / Building	0.041	98	Impervious Areas – Roof / Building	0.041	98
Tilled Farm – Straight Row (SR) (Modeled as Meadow PER NYSDEC SWDM)	23.424	71	Tilled Farm – Straight Row (SR) (Modeled as Meadow PER NYSDEC SWDM)	3.337	71
Mowed Lawn	1.377	74	Mowed Lawn	1.377	74
Impervious Areas - Asphalt	0.053	98	Impervious Areas - Asphalt	0.053	98
Impervious Areas - Pond	0.467	98	Impervious Areas - Pond	0.497	98
Farmstead	0.048	82	Farmstead	0.048	82
Impervious Areas - Concrete	0.003	98	Impervious Areas – Concrete	0.018	98
			Pervious Driveway	0.311	85
TOTAL & Weighted CN	53.577	71	TOTAL & Weighted CN	53.577	71
Note 1: All CN values based on an HSG Soil Rating of C.					

WETLAND AND STREAM DELINEATION REPORT

Wortendyke Road Batavia Solar
9327 Wortendyke Road, Batavia, New York 14020
LaBella Project No. 2223966.069

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1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

New Leaf Energy (Client) retained LaBella Associates, D.P.C. (LaBella) to perform a wetland and stream delineation for the Wortendyke Road Batavia Solar Project (the Project). For the purposes of the wetland and stream delineation, the Study Area is defined as an approximately 40-acre portion of a greater 51.3-acre area consisting of tax parcel 17.-7-17 in the Town of Batavia, Genesee County, New York. Please refer to Appendix A, Figure 1 for the Study Area location and boundary. The geographic coordinates of the approximate Study Area center are: 42.963710, -78.254629 (NAD83). Wetland and stream delineation field work was performed on September 12, 2023.

1.2 PURPOSE

This report was prepared for the purpose of obtaining concurrence from the United States Army Corps of Engineers (USACE)–Buffalo District and New York State Department of Environmental Conservation (NYSDEC) on jurisdictional wetland and stream boundaries within the Study Area, in support of the Project. Specific tasks performed for this report include a field delineation of Federal Waters of the United States (WOUS) encompassing wetlands and streams, New York State Article 24 Freshwater Wetlands (State wetlands), and Article 15 State-classified Streams within the Study Area, a survey of jurisdictional water boundaries, and a detailed description of the delineated waters based on hydrology, vegetation, and soils information collected in the field.

This report describes the results of the delineation and data collection efforts performed by LaBella, and a description of the wetlands and streams that were delineated. This document is intended to provide the information required to support a Jurisdictional Determination with the USACE-Buffalo District or a Joint Permit Application if regulatory permit authorizations are required.

2.0 METHODOLOGY

2.1 RESOURCES

Materials and literature supporting this investigation are derived from a number of sources, including: United States Geological Survey (USGS) 7.5-minute Topographic Quadrangles; United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Genesee County, New York Soil Survey (USDA-NRCS, 1969); USDA-NRCS Soil Map Unit shapefiles; USDA-NRCS Field Indicators of Hydric Soils in the United States (USDA-NRCS, 2018); Munsell Soil Color Charts (Kollmorgen Corporation, 1988); Federal Emergency Management Agency (FEMA) digital Flood Hazard data; United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) shapefiles; New York State Department of Environmental Conservation (NYSDEC) Freshwater Wetland shapefiles; NYSDEC Environmental Resource Mapper (NYSDEC, 2019); and NYSDEC Stream Classification shapefiles. Vascular plant names follow nomenclature found in the USDA PLANTS database (USDA, 2021). Wetland indicator status for vegetative species was determined by reference to the National Wetland Plant List (Lichvar et al., 2020). Jurisdictional features are characterized according to the NWI mapped wetlands and deepwater habitat classification system (Cowardin, 1979).

2.2 JURISDICTIONAL AREA DELINEATION

LaBella field staff performed the wetland and stream delineation within the Study Area on September 12, 2023, in accordance with the methods presented in the *1987 Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987), as supplemented by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0* (USACE, 2012).

Wetland and stream boundaries were defined in the field with sequentially-numbered pink surveyor's flagging or pink pin flags. Each flag was digitally recorded using a sub-foot Global Positioning System unit. Data and observations were collected from both wetland and upland data points within the Study Area. These data points were recorded on routine USACE Wetland Determination Data Forms (Appendix B).

Representative photographs were taken of the data point locations, delineated wetlands, and streams within the Study Area (Appendix C).

The USACE has jurisdiction of WOUS under section 404 of the Clean Water Act (CWA) (40 Code of Federal Regulations [CFR] 230) (CFR, 2010).

The Freshwater Wetlands Act (FWA) (Article 24 and Title 23 of Article 71 of the Environmental Conservation Law [ECL]) gives the NYSDEC jurisdiction over State wetlands and a 100-foot adjacent area. Article 24 of the FWA requires the NYSDEC to map all State-protected wetlands (generally 12.4 acres or greater) to allow landowners and other interested parties a means to determine where State jurisdictional wetlands exist.

Under Article 15 of the ECL (Protection of Waters), the NYSDEC has jurisdiction over any activity that disturbs the bed or banks of protected streams. A protected stream is any stream, or particular portion of a stream, that has been assigned by the NYSDEC any of the following classifications or standards: AA, AA(t), A, A(t), A(ts), B, B(t), B(ts), C(t), or C(ts) (6 NYCRR Part 701). Additional NYSDEC stream classifications include C and D.

3.0 PHYSICAL CHARACTERISTICS AND RESOURCES

3.1 PHYSIOGRAPHY

The Project is located in the Lake State Fruit, Truck Crop, and Dairy Land Resource Region (LRR L), Ontario-Erie Plain and Finger Lakes Major Land Resource Area (MLRA 101). The Study Area topography consists of relatively flat plains with gentle sloping hillsides. Land cover within the Study Area consists of forested and old-field successional areas, including a developed area on the southwest corner. Elevations within the Study Area range from approximately 893 feet above mean sea level (AMSL) to approximately 996 feet AMSL.

3.2 SOILS

The Soil Survey of Genesee County, New York and NRCS Web Soil Survey indicates there are six soil map units within the Project Study Area, as outlined in Table 1.

Table 1. Soil Map units within the Study Area

NRCS Soil Map Unit	Map Unit Symbol	Drainage Class	Hydric Soil?	Hydric Rating (%)
Ilion silt loam, 0 to 3 percent slopes	IoA	Poorly drained	Yes	95
Manheim silt loam, 0 to 3 percent slopes	MhA	Somewhat poorly drained	Yes	5
Manheim silt loam, 3 to 8 percent slopes	MhB	Somewhat poorly drained	Yes	5
Mohawk channery silt loam, 2 to 8 percent slopes	MoB	Well drained	No	0
Mohawk channery silt loam, 8 to 15 percent slopes	MoC	Well drained	No	0
Mohawk channery silt loam, 15 to 25 percent slopes	MoD	Well drained	No	0

Source: USDA, NRCS, 1969; Soil Survey Staff, 2023

The Hydric Soil ratings outlined in Table 1 and the Web Soil Survey map provided in Appendix D, indicate there are three soil map units containing hydric components. Hydric soil ratings range from 5 to 95 percent.

3.3 HYDROLOGY

The Study Area is located in the Niagara watershed (USGS Hydrologic Unit code 04120104). The source of hydrology for the Study Area is precipitation and surface waters from the adjacent hillsides. The nearby City of Batavia receives an average of 36.29 inches of precipitation annually (NRCC, 2023).

4.0 AGENCY RESOURCES

4.1 USFWS NATIONAL WETLAND INVENTORY

USFWS NWI mapping indicates there are four NWI-mapped wetlands within the Study Area (refer to Appendix A, Figure 2).

Table 2. USFWS-NWI Mapped Wetlands within the Study Area

NWI Wetland Code	Classification Code description	Delineated Wetland
PFO1E	Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded/Saturated	Wetland 1
PFO1C	Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded	Wetland 1
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	Stream 1
PUBHh	Palustrine, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded	N/A

4.2 NYSDEC FRESHWATER WETLANDS AND PROTECTED STREAMS

NYSDEC freshwater wetland mapping indicates there are no State-mapped wetlands within the Study Area (refer to Appendix A, Figure 3). The closest NYSDEC freshwater wetland (AX-9, Class 3) is located approximately 740 feet to the north of the Study Area. According to NYSDEC stream classification mapping there are no State-classified streams within the Study Area (refer to Appendix A, Figure 3). The closest NYSDEC classified stream is Bowen Creek, a Class C Stream, and is located approximately 460 feet west of the Study Area.

4.3 FEMA 100-YEAR FLOOD ZONES

There are no FEMA 100-year Flood Zones within the Study Area. The nearest flood zone is located approximately 1,800 feet to the south of the Study Area and is associated with Bowen Creek (refer to Appendix A, Figure 4).

5.0 RESULTS

LaBella field staff delineated one palustrine forested (PFO) wetland and one intermittent stream within the Study Area (see Appendix A, Figures 5). Tables 3 and 4 provide areas and classifications of the delineated wetlands and streams. The remainder of the Study Area is considered to be upland forest, semi-active agricultural fields, and old successional fields. These habitats lack wetland hydrology, hydrophytic vegetation, and/or hydric soils.

Table 3. Delineated Wetlands

Wetland ID	Cowardin Classification	Acreage On-site	Latitude, Longitude (NAD83)	Jurisdiction
Wetland 1	PFO	8.83	42.963382, -78.253417	USACE

Table 4. Delineated Streams

Stream ID	Flow Regime/Stream Order	NYSDEC Class	Stream Length/Width in Study Area (lf)	Stream Bed Substrate	Latitude, Longitude (NAD83)	Jurisdiction
Stream 1	Intermittent/1st	Unclassified	325/4	Silt	42.964377, -78.258167	USACE

5.1 UPLANDS

The upland habitat is characterized as upland forest, semi-active agricultural fields, and old successional fields. Dominant vegetation within the forested areas includes white oak (*Quercus alba*), green ash (*Fraxinus pennsylvanica*), box elder (*Acer negundo*), American hophornbeam (*Ostrya virginiana*), bitternut hickory (*Carya cordiformis*), black cherry (*Prunus serotina*), black walnut (*Juglans nigra*), Colorado blue spruce (*Picea pungens*), common buckthorn (*Rhamnus cathartica*), gray dogwood (*Cornus racemosa*), Japanese honeysuckle (*Lonicera japonica*), Virginia creeper

(*Parthenocissus quinquefolia*), hairy agrimony (*Agrimonia gryposepala*), and poison ivy (*Toxicodendron radicans*). Field areas are dominated by soybean (*Glycine max*), yellow foxtail (*Setaria pumila*), three-seeded Mercury (*Acalypha rhomboidea*), giant ragweed (*Ambrosia trifida*), curly dock (*Rumex crispus*), and other successional field herbs. These uplands lacked the hydrological features necessary to classify them as wetlands. Data Forms, provided in Appendix B, summarize the observed conditions adequate to characterize all uplands and wetlands within the Study Area.

5.2 WETLANDS

5.2.1 Wetland 1

Wetland 1 is an 8.83-acre PFO wetland that originates in a concave depression in the northeastern corner of the Study Area. Wetland 1 extends diagonally to the southwestern boundary, continuing offsite northeast and south of the Study Area. The hydrologic regime at the time of the site visit seems to be driven by surface runoff from adjacent hillsides and precipitation.

The plant community of PFO Wetland 1 is dominated by silver maple (*Acer saccharinum*) and highbush blueberry (*Vaccinium corymbosum*) in the northeastern portion. Successional species such as eastern cottonwood (*Populus deltoides*) and dogwoods (*Cornus spp.*) exist within the remainder. Hydrology indicators observed included moss trim lines, sparsely vegetated concave surface, microtopographic relief, water-stained leaves, buttress roots, and a FAC-Neutral Test. Soils at 0-6 inches below ground surface consist of clayey loams with a black (10YR 2/1) matrix with 10% dark yellowish brown (10YR 3/6) redoximorphic concentrations in the matrix. Soils at 6-20 inches below ground surface consists of clayey loams with a gray (10YR 5/1) matrix with 5% dark yellowish brown (10YR 3/6) redoximorphic concentrations in the matrix. Soils qualify as a depleted matrix hydric soil indicator.

5.3 STREAMS

5.3.1 Stream 1

Stream 1 is an intermittent ditched stream that flows southwest for approximately 325 linear feet in the northwest corner of the Study Area. The stream drains offsite through a culvert along Wortendyke Road and appears to eventually connect with Bowen Creek to the west. This stream is approximately 4 linear feet wide, has a silt bottom, and overhanging vegetation.

6.0 CONCLUSIONS

LaBella delineated one PFO wetland and one intermittent stream within the Study Area. The wetland was identified based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology indicators. Streams are generally identified by the presence of a continuous bed and bank and an ordinary high-water mark (OHWM). The primary function of the wetlands on site appear to include water retention, water quality improvement, wildlife habitat, nutrient cycling, groundwater recharge and discharge.

All observed wetlands and streams may be jurisdictional WOUS under the CWA due to their potential connection to off-site, downstream Waters. These project WOUS appear to eventually drain to Bowen Creek, west of the Study Area. Any Project-related filling or disturbances within the delineated boundaries of the wetlands and streams (as approved by USACE) will require Federal CWA 404-authorization through the USACE, and a 401 Water Quality Certification with NYSDEC. The final

jurisdictional status and boundaries of all wetlands and streams are subject to verification by the USACE Buffalo District.

7.0 SIGNATURE OF WETLAND PROFESSIONALS

We appreciate the opportunity to serve your professional environmental needs. If you have any questions, please do not hesitate to contact Dustin Bradley at (716) 867-1810.

Report Prepared By:

Dustin Bradley
Wetland Ecologist | Certified Floodplain Manager

Report Prepared By:

Michaela Freeman
Environmental Scientist

8.0 REFERENCES

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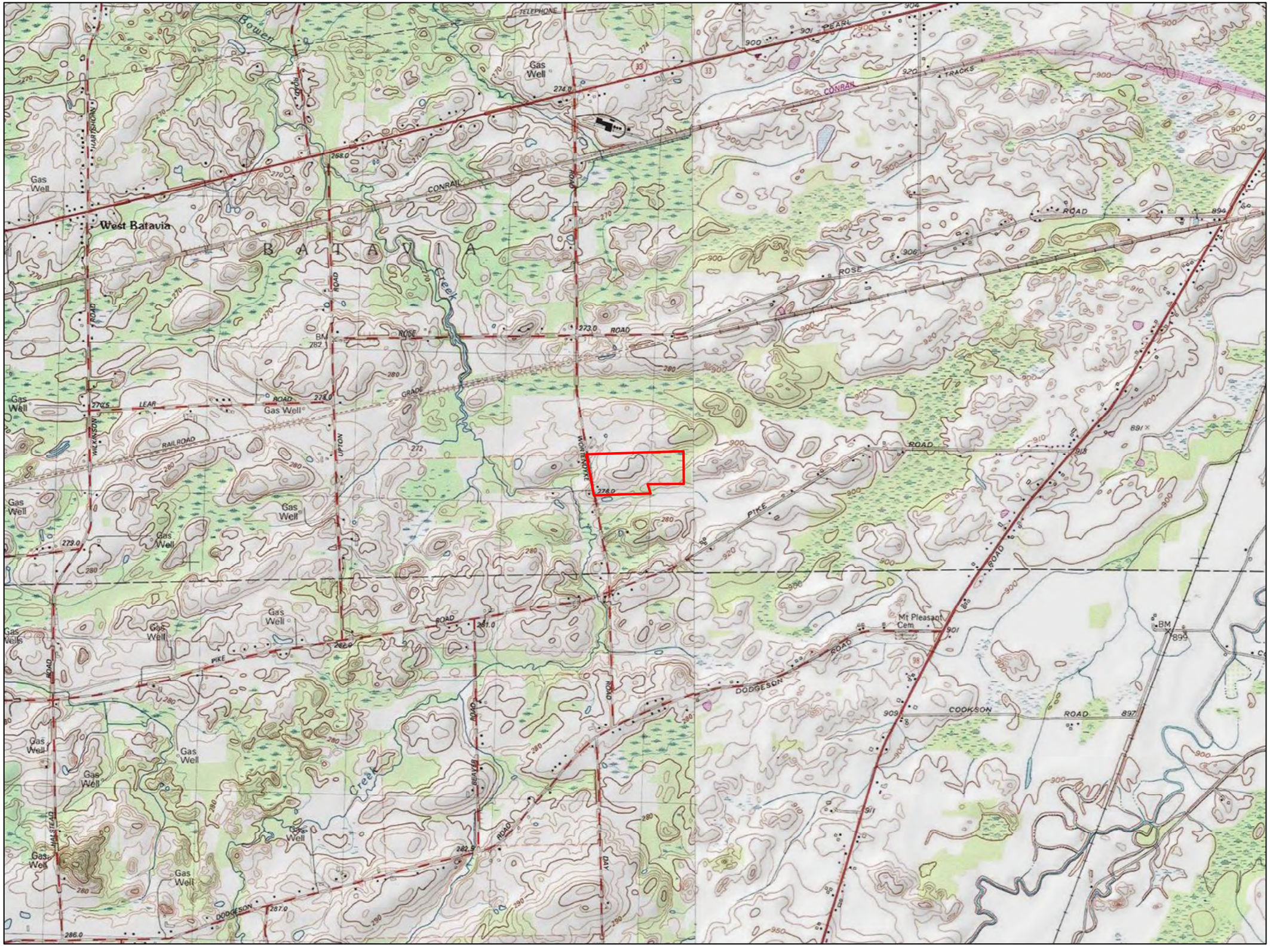
APPENDIX A

FIGURES



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New Leaf Energy

Wetland and Stream Delineation Report

9327 Wortendyke Road Batavia, NY

N

0 1,000 2,000 Feet

1 inch = 2,000 feet

Legend

Study Area

Sources:
1. Study Area: Created by LaBella using information provided by the client.
2. Basemap: ESRI USA Topomap (Updated: 2020) in reference to USGS Topographic Alexander (1984) and Batavia South (1978) Quadrangles.

USGS Site Location

FIGURE 1

LaBella Project No: 2223966.069
Date: December 2023

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New Leaf Energy

Wetland and Stream Delineation Report

9327 Wortendyke Road Batavia, NY

N

0 500 1,000 Feet

1 inch = 1,000 feet

Legend

- Study Area

National Wetland Inventory

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

Sources:
1. Study Area: Created by LaBella using information provided by the client.
2. Basemap: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community (2023).

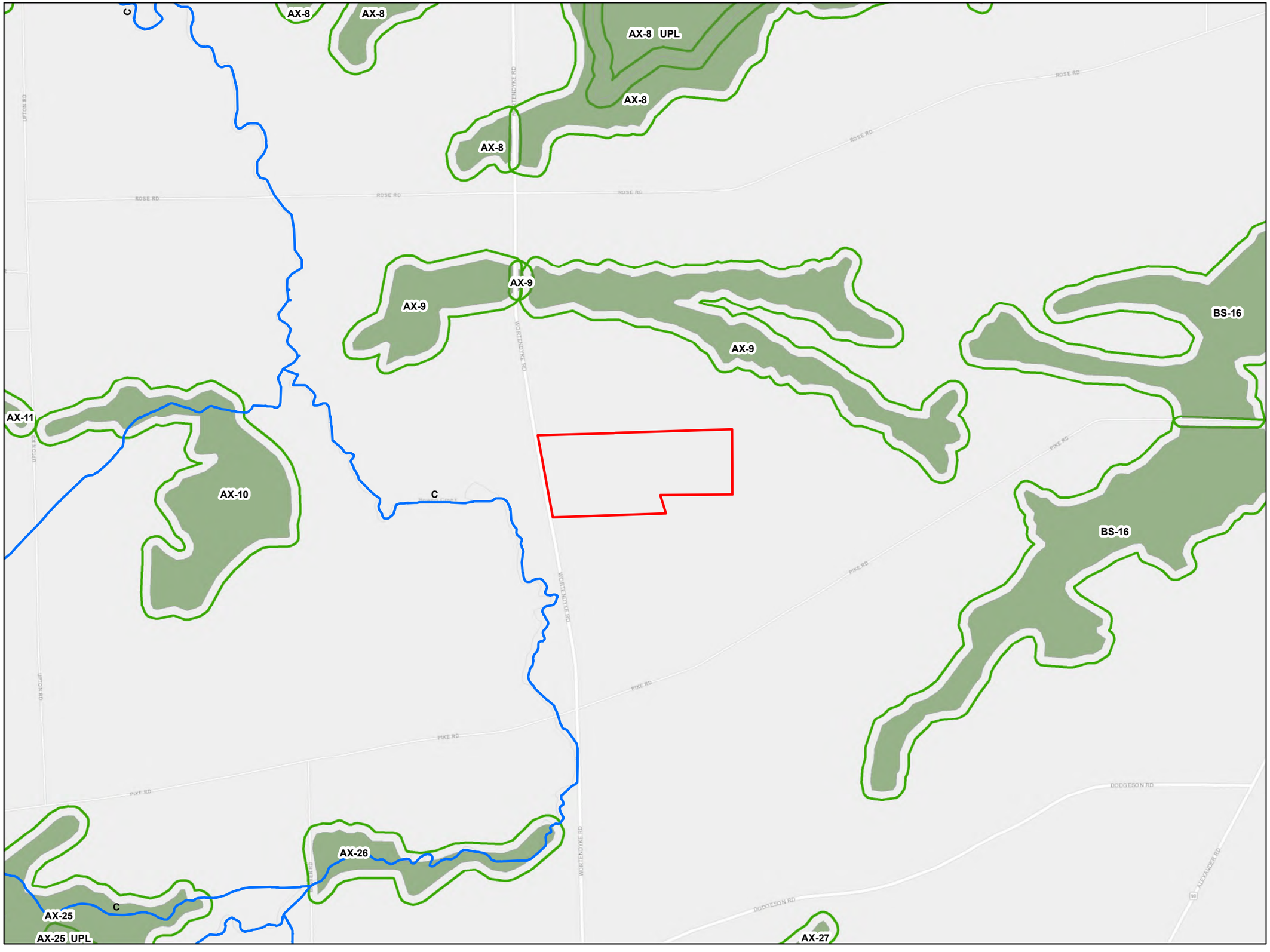
NWI-Mapped Resources

FIGURE 2

LaBella Project No: 2223966.069
Date: December 2023

Creator: MF Reviewer: LD

Path: \\cash.lab\u\Projects\New Leaf Energy\2223966.069 - Wortendyke Rd\06_Drawings\Environmental\Wetland Delineation\Report Figures\Figure 2 - NWI-Mapped Resources.mxd



Creator: MF Reviewer: LD

Path: \\cash.lab\u\Projects\New Leaf Energy\2223966.069 - Wortendyke Rd\06_Drawings\Environmental\Wetland Delineation\Report Figures\Figure 3 - NYSDEC-Mapped Wetlands and Streams.mxd

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New Leaf Energy

Wetland and Stream Delineation Report

9327 Wortendyke Road Batavia, NY

N

0 500 1,000 Feet

1 inch = 1,000 feet

Legend

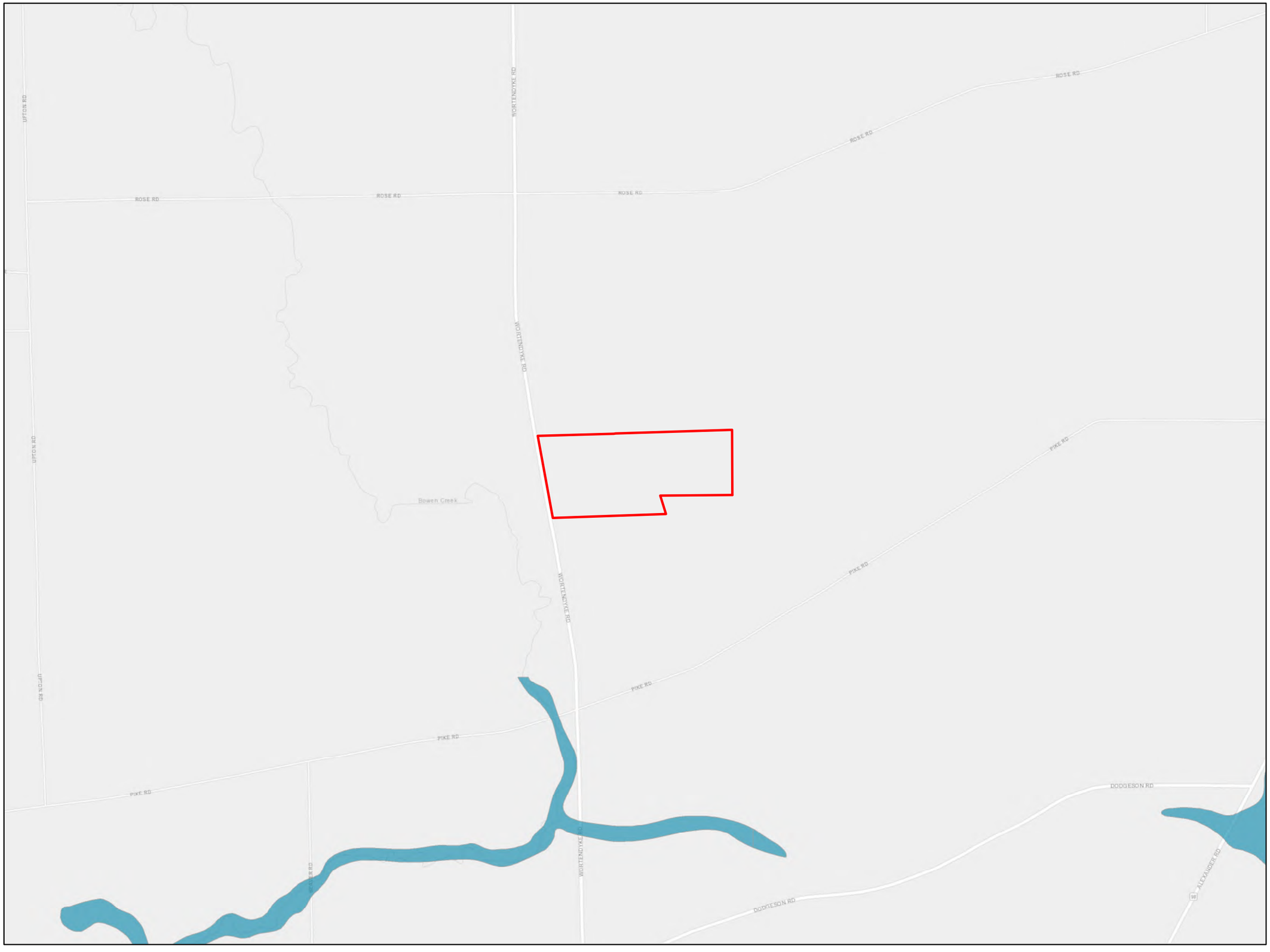
- Study Area
- NYSDEC-Classified Stream
- NYSDEC Wetland
- NYSDEC Wetland 100-Foot Adjacent Area

Sources:
1. Study Area: Created by LaBella using information provided by the client.
2. Basemap: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community (2023).

NYSDEC-Mapped Wetlands and Streams

FIGURE 3

LaBella Project No: 2223966.069
Date: December 2023



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New Leaf Energy

Wetland and Stream Delineation Report

9327 Wortendyke Road Batavia, NY

N

0 500 1,000 Feet

1 inch = 1,000 feet

Legend

- Study Area
- 100-Year FEMA Flood Zone

Sources:
1. Study Area: Created by LaBella using information provided by the client.
2. Basemap: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community (2023).
3. FEMA Flood Zone: FIRM Panel #3602780005B (Effective 1/16/1985).

FEMA Flood Zones

FIGURE 4

LaBella Project No: 2223966.069
Date: December 2023

Creator: MF Reviewer: LD

Path: \\cash.lab.\u\Projects\New Leaf Energy\2223966.069 - Wortendyke Rd\06_Drawings\Environmental\Wetland Delineation\Report Figures\Figure 4 - FEMA Flood Zones.mxd

Notes
1) Wetland/stream delineation flag locations were surveyed using a sub-foot GPS unit.
2) All areas outside of the wetlands/stream delineated within the study area are considered to be upland.
3) Only select wetland/stream flag locations are labeled.
4) All wetland/stream boundaries and jurisdictions are subject to verification by USACE.

Stream 1
Intermittent

Wetland 1
PFO

UPV-1
UPV-2
UPV-3
UPV-4
UPL1-A
WET1-A
Culvert

S1-2
S1-5
S1-7

W1-2
W1-6
W1-8
W1-10
W1-12
W1-15
W1-19
W1-23
W1-26
W1-29
W1-102
W1-104
W1-107
W1-109
W1-113
W1-116
W1-120

Wortendyke Rd

MoB
MhA
MhB
MoC
MoD
Ld
Ma
Wy
ReB
IoA

Wetland ID	Cowardin Classification	Approximate Area within Study Area (acres)	Jurisdiction
Wetland 1	PFO	8.83	USACE

Stream Name	Classification	NYSDEC Waterbody Classification	Approximate Stream Length within Study Area (lf)	Jurisdiction
Stream 1	Intermittent	Unclassified	325	USACE

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New Leaf Energy

Wetland and Stream Delineation Report

9327 Wortendyke Road Batavia, NY

N

0 100 200 Feet

1 inch = 200 feet

Legend

- Study Area
- Data Point Location
- Wetland/Stream Flag Location
- Culvert
- Forested Wetland (PFO)
- Intermittent Stream
- Approximate Offsite Wetland/Stream Boundary
- Stream Flow Direction
- Road
- Soil

Sources:
1. Study Area: Created by LaBella using information provided by the client.
2. Basemap: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and GIS User Community, 2020.
3. Mapped soil data were obtained from the NRCS online Soil Data (soildatamart.nrcs.usda.gov).

Wetland and Stream Delineation Survey

FIGURE 5

LaBella Project No: 2223966.069
Date: December 2023

Creator: MF Reviewer: LD
Path: \\cash.lab\us\Projects\New Leaf Energy\2223966.069 - Wortendyke Rd\06_Drawings\Environmental\Wetland Delineation\Report Figures\Figure 5 - Wetland and Stream Delineation.mxd

APPENDIX B

Data Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wortendyke Road Batavia Solar City/County: Batavia/Genesee Sampling Date: 9/12/2023

Applicant/Owner: New Leaf Energy State: NY Sampling Point: WET1-A

Investigator(s): Dustin Bradley, Nicole Stephan Section, Township, Range:

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 42.964149 Long: -78.251115 Datum: NAD83

Soil Map Unit Name: MhB - Manheim silt loam, 3 to 8 percent slopes (Hydric Rating - 5) NWI classification: PFO

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: Wetland 1

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)
- X Sparsely Vegetated Concave Surface (B8)
- X 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)
- X Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- X 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)
- X Microtopographic Relief (D4)
- X 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** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Buttress roots

VEGETATION – Use scientific names of plants.

Sampling Point: WET1-A

Tree Stratum (Plot size: R=30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	85	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	85	=Total Cover	
Sapling/Shrub Stratum (Plot size: R=15)			
1. *Vaccinium corymbosum*	15	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
Herb Stratum (Plot size: R=5)			
1. *Acer saccharinum*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10	=Total Cover	
Woody Vine Stratum (Plot size: R=30)			
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	0	x 1 =	0
FACW species	110	x 2 =	220
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	110 (A)		220 (B)

Prevalence Index = B/A = 2.00

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 supportir 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: WET1-A

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
0-6	10YR 2/1	90	10YR 3/6	10	C	M	Loamy/Clayey	Prominent redox concentrations
6-20	10YR 5/1	95	10YR 3/6	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)
- X 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)
- X 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: Wortendyke Road Batavia Solar City/County: Batavia/Genesee Sampling Date: 9/12/2023

Applicant/Owner: New Leaf Energy State: NY Sampling Point: UPL1-A

Investigator(s): Dustin Bradley, Nicole Stephan Section, Township, Range:

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope %: 4

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 42.964011 Long: -78.251066 Datum: NAD83

Soil Map Unit Name: MhB - Manheim silt loam, 3 to 8 percent slopes (Hydric Rating - 5) 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 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: UPL1-A

Tree Stratum (Plot size: R=30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus alba*	65	Yes	FACU
2. *Carya cordiformis*	10	No	FAC
3. *Tilia americana*	10	No	FACU
4. *Acer rubrum*	10	No	FAC
5. *Ostrya virginiana*	10	No	FACU
6.			
7.			
	105	=Total Cover	
Sapling/Shrub Stratum (Plot size: R=15)			
1. *Ostrya virginiana*	10	Yes	FACU
2. *Carya cordiformis*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Herb Stratum (Plot size: R=5)			
1. *Parthenocissus quinquefolia*	5	Yes	FACU
2. *Carya cordiformis*	5	Yes	FAC
3. *Fraxinus pennsylvanica*	5	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	15	=Total Cover	
Woody Vine Stratum (Plot size: R=30)			
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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	35	x 3 =	105
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals	140 (A)		515 (B)

Prevalence Index = B/A = 3.68

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 supportir 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: UPL1-A

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
0-6	10YR 3/2	100					Loamy/Clayey	
6-20	10YR 5/3	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)
- ___ 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)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wortendyke Road Batavia Solar City/County: Batavia/Genesee Sampling Date: 9/12/2023

Applicant/Owner: New Leaf Energy State: NY Sampling Point: UPV-1

Investigator(s): Dustin Bradley, Nicole Stephan Section, Township, Range:

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope %: 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 42.963162 Long: -78.256719 Datum: NAD83

Soil Map Unit Name: MoB - Mohawk channery silt loam, 2 to 8 percent slopes (Hydric Rating - 0) 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 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 X	No ____	**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)
- X 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:
No in-field hydro indicators

VEGETATION – Use scientific names of plants.

Sampling Point: UPV-1

Tree Stratum (Plot size: R=30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: R=15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: R=5)			
1. *Setaria pumila*	35	Yes	FAC
2. *Rumex crispus*	10	No	FAC
3. *Cyperus esculentus*	15	No	FACW
4. *Acalypha rhomboidea*	20	Yes	FACU
5. *Glycine max*	25	Yes	UPL
6. *Ambrosia spp.*	10	No	UPL
7. *Trifolium repens*	5	No	FACU
8.			
9.			
10.			
11.			
12.			
	120 =Total Cover		
Woody Vine Stratum (Plot size: R=30)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	45	x 3 =	135
FACU species	25	x 4 =	100
UPL species	35	x 5 =	175
Column Totals	120 (A)		440 (B)

Prevalence Index = B/A = 3.67

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 supportir 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: UPV-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
0-6	10YR 4/2	95	10YR 3/6	5	C	M	Loamy/Clayey	Prominent redox concentrations
6-20	10YR 4/1	95	10YR 3/6	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)
- X 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** 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: Wortendyke Road Batavia Solar City/County: Batavia/Genesee Sampling Date: 9/12/2023

Applicant/Owner: New Leaf Energy State: NY Sampling Point: UPV-2

Investigator(s): Dustin Bradley, Nicole Stephan Section, Township, Range:

Landform (hillside, terrace, etc.): Plain Local relief (concave, convex, none): None Slope %: 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 42.964461 Long: -78.258288 Datum: NAD83

Soil Map Unit Name: IoA - Ilion silt loam, 0 to 3 percent slopes (Hydric Rating - 95) 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 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 ____	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: UPV-2

Tree Stratum (Plot size: R=30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	25	Yes	FACW
2. *Acer negundo*	15	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	40	=Total Cover	
Sapling/Shrub Stratum (Plot size: R=15)			
1. *Lonicera japonica*	90	Yes	FACU
2. *Rhamnus cathartica*	5	No	FAC
3.			
4.			
5.			
6.			
7.			
	95	=Total Cover	
Herb Stratum (Plot size: R=5)			
1. *Toxicodendron radicans*	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5	=Total Cover	
Woody Vine Stratum (Plot size: R=30)			
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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	25	x 3 =	75
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals	140 (A)		485 (B)

Prevalence Index = B/A = 3.46

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supportir 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: UPV-2

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
0-20	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)
- ___ 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)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wortendyke Road Batavia Solar City/County: Batavia/Genesee Sampling Date: 9/12/2023

Applicant/Owner: New Leaf Energy State: NY Sampling Point: UPV-3

Investigator(s): Dustin Bradley, Nicole Stephan Section, Township, Range:

Landform (hillside, terrace, etc.): Plain Local relief (concave, convex, none): Concave Slope %: 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 42.964064 Long: -78.255501 Datum: NAD83

Soil Map Unit Name: MoB - Mohawk channery silt loam, 2 to 8 percent slopes (Hydric Rating - 0) 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 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 ____	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)
- X 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:
No in-field hydro indicators

VEGETATION – Use scientific names of plants.

Sampling Point: UPV-3

Tree Stratum (Plot size: R=30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: R=15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: R=5)			
1. *Setaria pumila*	50	Yes	FAC
2. *Ambrosia trifida*	10	Yes	FAC
3. *Rumex crispus*	10	Yes	FAC
4. *Cyperus esculentus*	5	No	FACW
5. *Acalypha rhomboidea*	5	No	FACU
6. *Glycine max*	10	Yes	UPL
7. *Chenopodium album*	5	No	FACU
8. *Bidens spp.*	5	No	FACW
9.			
10.			
11.			
12.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: R=30)			
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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	70	x 3 =	210
FACU species	10	x 4 =	40
UPL species	10	x 5 =	50
Column Totals	100 (A)		320 (B)

Prevalence Index = B/A = 3.20

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supportir 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: UPV-3

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
0-20	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)
- ___ 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)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wortendyke Road Batavia Solar City/County: Batavia/Genesee Sampling Date: 9/12/2023

Applicant/Owner: New Leaf Energy State: NY Sampling Point: UPV-4

Investigator(s): Dustin Bradley, Nicole Stephan Section, Township, Range:

Landform (hillside, terrace, etc.): Plain Local relief (concave, convex, none): Convex Slope %: 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 42.962442 Long: -78.254708 Datum: NAD83

Soil Map Unit Name: IoA - Ilion silt loam, 0 to 3 percent slopes (Hydric Rating - 95) NWI classification: PFO

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: UPV-4

Tree Stratum (Plot size: R=30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus americana*	10	Yes	FACU
2. *Prunus serotina*	10	Yes	FACU
3. *Juglans nigra*	10	Yes	FACU
4. *Picea pungens*	10	Yes	FACU
5. *Rhamnus cathartica*	10	Yes	FAC
6.			
7.			
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size: R=15)			
1. *Lonicera japonica*	5	Yes	FACU
2. *Rhamnus cathartica*	5	Yes	FAC
3. *Cornus racemosa*	10	Yes	FAC
4.			
5.			
6.			
7.			
	20	=Total Cover	
Herb Stratum (Plot size: R=5)			
1. *Parthenocissus quinquefolia*	15	Yes	FACU
2. *Agrimonia gryposepala*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	25	=Total Cover	
Woody Vine Stratum (Plot size: R=30)			
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: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 30.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	70	x 4 =	280
UPL species	0	x 5 =	0
Column Totals	95 (A)		355 (B)

Prevalence Index = B/A = 3.74

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 supportir 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: UPV-4

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
0-6	10YR 4/2	100					Loamy/Clayey	
6-20	10YR 5/3	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)
- ___ 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)

STREAM DETERMINATION DATA FORM

complete for each new stream section

Investigator:	**DB/NS**	**Project Name:**	Wortendyke Rd
Stream Name:	Stream 1	**Date:**	9/12/2023
Bank Width:	5 ft	**Flow Regime:**	Intermittent
Stream Width:	4 ft	**Flow Direction:**	Southwest
Depth of Water:	0 in	**OHWM Indicators:**	
Regular Inundation Indicators:		**Insect Indicators:**	

Document with notes and photos: Break between streams and wetlands, break on different flow regimes, start/end of OHWM, Indicators including (OHWM, Inundation, frequency/duration of flooding, Insects, etc.)

Culvert Type (Photo requried):	CPP
Width/Diameter	18in

SUBSTRATE

	Bed Rock		Clay
	Boulder		Organic
	Cobble		Vegetation
	Gravel		Algal
	Sand		Aquatic Moss
X	Silt		

INSTREAM COVER

	Undercut bank
X	Overhanging veg.
	Logs/woody debris
	Deep pools

Field Notes:

Ditched stream channel, upper reach

continue on back as needed

APPENDIX C

Photo Log

Wetland and Stream Delineation Photos – Wortendyke Road Batavia Solar

9327 Wortendyke Road, Batavia, NY September 12th, 2023

PFO Wetland 1

PFO Wetland 1

Intermittent Stream 1

Eastern Forest (UPL1-A)

Central Field (UPV-1)

Northwest Woods (UPV-2)

Central Field (UPV-3)

Southeast Field

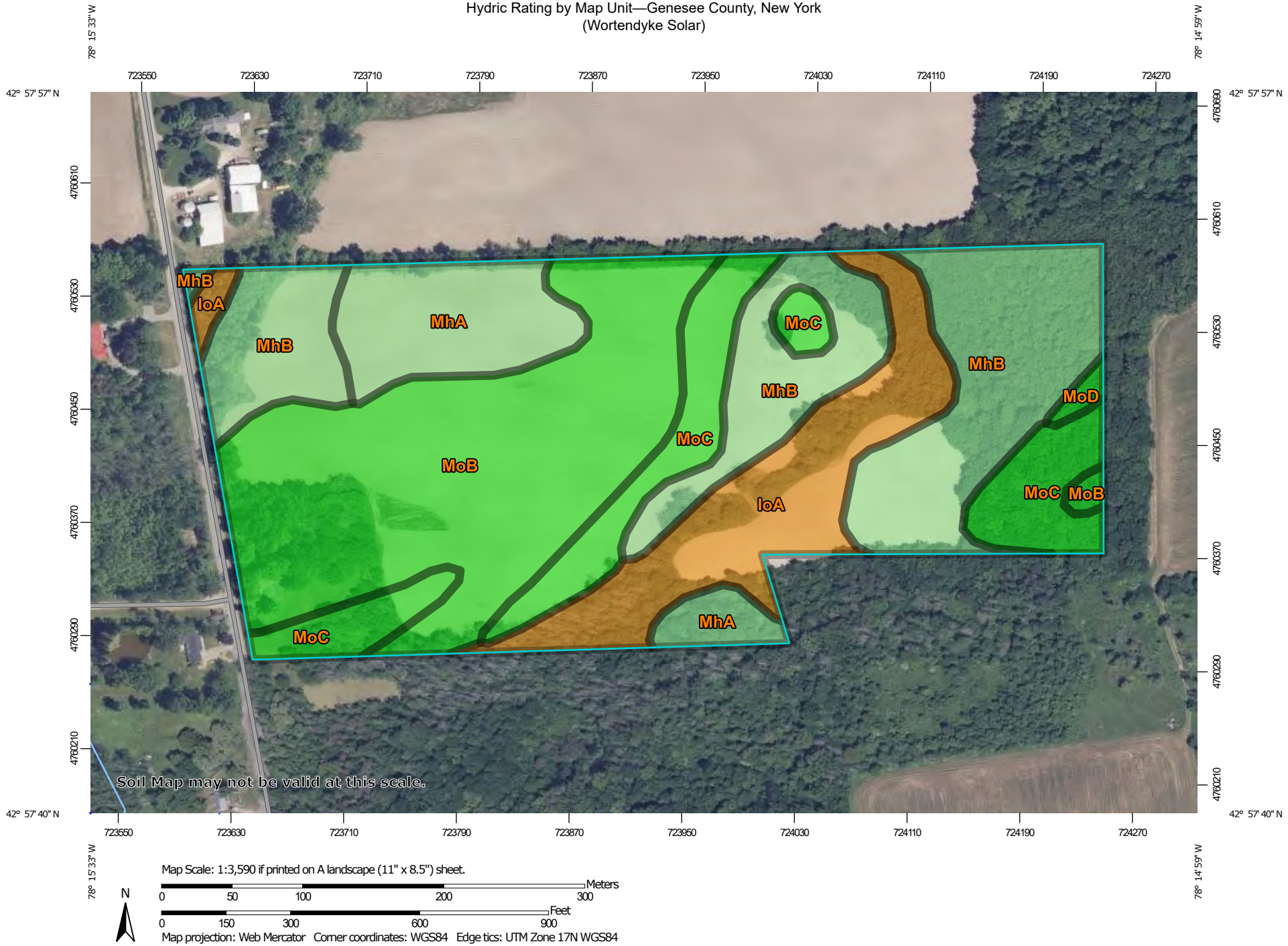
Southern Woods (UPV-4)

Western Residential Area

APPENDIX D

Hydric Soil Map

Hydric Rating by Map Unit—Genesee County, New York
(Wortendyke Solar)



Map Scale: 1:3,590 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N 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: Genesee County, New York
Survey Area Data: Version 24, 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: Jun 15, 2020—Jun 17, 2020

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

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
IoA	Ilion silt loam, 0 to 3 percent slopes	95	5.8	14.7%
MhA	Manheim silt loam, 0 to 3 percent slopes	5	4.0	10.1%
MhB	Manheim silt loam, 3 to 8 percent slopes	5	11.1	27.9%
MoB	Mohawk channery silt loam, 2 to 8 percent slopes	0	12.9	32.6%
MoC	Mohawk channery silt loam, 8 to 15 percent slopes	0	5.7	14.2%
MoD	Mohawk channery silt loam, 15 to 25 percent slopes	0	0.2	0.5%
Totals for Area of Interest			**39.7**	**100.0%**

Back

PRELIMINARY SCREENING ANALYSIS

(re: May 2023 NYS SIR)

Interconnecting Customer:**Christian Bain**

CLA.25.1-13:**00549221**

5000.00 kW (AC) Inverter Based Interconnection Project

Project Address:**9327 Wortendyke Rd, Batavia, New York, 14020**

I. Executive Summary:

The Interconnecting Customer (IC) has submitted an application for the interconnection of the generating system described herein to the National Grid (Company) Electrical Power System (EPS). When reviewed against the requirements of the NYS DPS SIR (Effective May 2023) and National Grid's Electrical Service Bulletin 756 Appendix B, the Company has determined that the local area is not suitable for the interconnection of the generator system as proposed and further evaluation would be required. The IC shall not proceed with the proposed installation of the system until these technical requirements are satisfied.

The IC Applicant may proceed to a Preliminary Analysis Results Meeting within 10 business days to help determine if they wish to i.) proceed with a Supplemental Analysis, or ii.) proceed to the full CESIR review, or iii.) withdraw their application. Significant upgrades such as substation transformer ground overvoltage protection and feeder anti-islanding protection among others will be evaluated in a Supplemental Analysis and, if necessary, in the final CESIR.

II. NYS SIR Appendix G Screening Review:

Screen A: Is the PCC on a Networked Secondary System?

Does the proposed system connect to a secondary network system?

National Grid Review Result:*No, Screen A passes. Continue to Screen B.*

Screen B: Is Certified Equipment Used?

Does the applicant propose to use equipment that has been listed to meet UL 1741 (Inverters,Converters and Charge Controllers for Use in Independent Power Systems) and for inverter basedequipment, UL 1741 and its supplement SB, by a nationally recognized testing laboratory?

National Grid review result:*Yes, Screen B passes. Continue to Screen C.*

Screen C: Is the Electric Power System (EPS) Rating Exceeded?

Does the maximum aggregated generation or loading capacity connected to an EPS (existing and approved prior to application) exceed any EPS ratings (modified per established utility practice)?

National Grid review result:*Yes, Screen C fails, as the site's size, technology type, or configuration is such that further engineering study is required.*

Note that the following information is based on the current status of the EPS and available information at the time of this report's issue, and are not binding if the applicant proceeds to Supplemental Screening Analysis or full CESIR. Additionally, the thermal limitation described in this screen is the device with the largest margin of failure based on aggregate DG queue. It should be noted that other equipment on the feeder and substation may also fail thermal limitations. This information will be conveyed in a Final CESIR should the project choose to proceed.

Interconnected and In-Process Generating Facilities Data:

- Total Interconnected DG on the Subject Feeder: 9.00 DG sites; 4075.90 kW total
- Total In-Process DG on Subject Feeder (Incl. Applicant): 2.00 DG sites; 5012.00 kW total
- Applicant DG Size: 5000.00 kW

National Grid EPS data related to this proposed DG application's location:

- Substation Bank Nameplate Rating: 33.00 MVA
- Feeder Number: 36_04_0153
- Feeder Nominal Voltage: 13.20 kV
- PCC Section Line to Line Voltage: 4.80 kV
- Est. Feeder Minimum Load: 958.55 kVA
- Number of Distribution Reclosers or Regulators Upstream of DG location: 2

Limiting Element Information:

- Element Type: Fuse
- Element Rating: 221.7 kVA

Is aggregate DER >15% of peak load supplied through a voltage regulator?: Yes

Does DG exceed existing service transformer rating?: No

Is DG site greater than or equal to 500kW, and therefore requires further protection analysis?: No

Is DG site greater than or equal to 300kW on a 5kV class feeder, which will require monitor and control?: No

Does the DG include energy storage that requires further analysis?: Yes

Screen D: Is the Line and Grounding Configuration Compatible with the Interconnection Type?

Identify primary distribution line configuration that will serve the distributed generation or energy storage.

- DER Connection to Primary: 3 Phase
- DER Grounding: Grounded
- National Grid Primary Configuration: TwoPhase

National Grid review result:
Proposed Interconnection to Primary Distribution Line Type is a(n)Grounded , 3 Phase DER system connected to a TwoPhase distribution line configuration.

Fail Screen D - The customer's line and/or grounding configuration is not compatible with National Grid's existing infrastructure. Further study is required. Continue to Screen E.

Screen E: Simplified Penetration Test

If the aggregate DER capacity on any medium voltage line section (existing and approved prior to application) is less than 15% of the annual peak load for all line sections bounded by automatic sectionalizing devices upstream of the DER?

- Annual Peak Load at Feeder Head: 3834.19 kVA
- Sectionalizing Device Section: 36_04_0153 , Equipment Type: Source
- Annual Peak Load at Sectionalizing Device: 3,834.19 kVA
- Downstream DG: 9087.90 kVA
- 15% of Annual Peak Load at sectionalizing device: 575.13 kVA

Is downstream DG < 15% of Annual Peak Load at sectionalizing device section?
No. Screen E Fails. Further study is required. Continue to Screen F.

Screen F: Is Feeder Capacity Adequate for Individual and Aggregate DER?

Is the feeder available short circuit capacity at the medium voltage PCC, divided by the rating of the individual DER, greater than 25? Is the feeder available short circuit capacity at the substation divided by the capacity all aggregate DG on the feeder, greater than 25?

- DER Size: 5.00 MVA
- Fault Power at PCC: 0 MVA
- Fault Power at Substation: 356.72 MVA
- Stiffness Factor at PCC: 0
- Stiffness Factor at Substation: 39.25

Do both stiffness factor tests (PCC and Substation) pass?
No. Screen F Fails.Further study is required.

III. References (Universal for every customer):

National Grid's New York Distributed Generation Website:
https://ngus.force.com/s/ (https://ngus.force.com/s/)

ESB 750 and ESB 756 are available on National Grid's website at:
https://ngus.force.com/s/article/NY-BUSINESS-Interconnection-Documents
(https://ngus.force.com/s/article/NY-BUSINESS-Interconnection-Documents)

IV. Revision History:

Version	Date	Revision Description
1.0	09-15-2016	Template to align with NYS SIR effective April 29, 2016
1.1	10-27-2016	Revised Screen F method and other edits to template response choices
1.2	11-22-2016	Screen F response choices changed due to Screens B-E and voltage analyses are performed in Supplemental or CESIR stages

Version	Date	Revision Description
1.3	03-20-2017	Screen D revised to include 5kV class 3-phase interconnection projects
1.4	07-19-2018	Template revised to align with NY SIR effective July 19, 2018
1.5	10-03-2018	Template revised to align with NY SIR effective October 03, 2018
1.6	12-13-2019	Template revised to align with NY SIR effective December 13, 2019
1.7	08-08-2023	Template revised to align with NY SIR effective May 1, 2023

The customer has 10 business days to respond to National Grid indicating how they would like to proceed:

CUSTOMER RESPONSE TO PRELIMINARY SCREENING ANALYSIS

1. Proceed to Full Study (Estimated Study Fee: $21300.00 - payment due upon receipt of invoice)
2. Proceed to Supplemental Review (Fixed Supplemental Review Fee: $2500.00 - payment due upon receipt of invoice)
3. Request Preliminary Results Meeting (To be scheduled by National Grid)
4. Withdraw (Request that the application is cancelled)

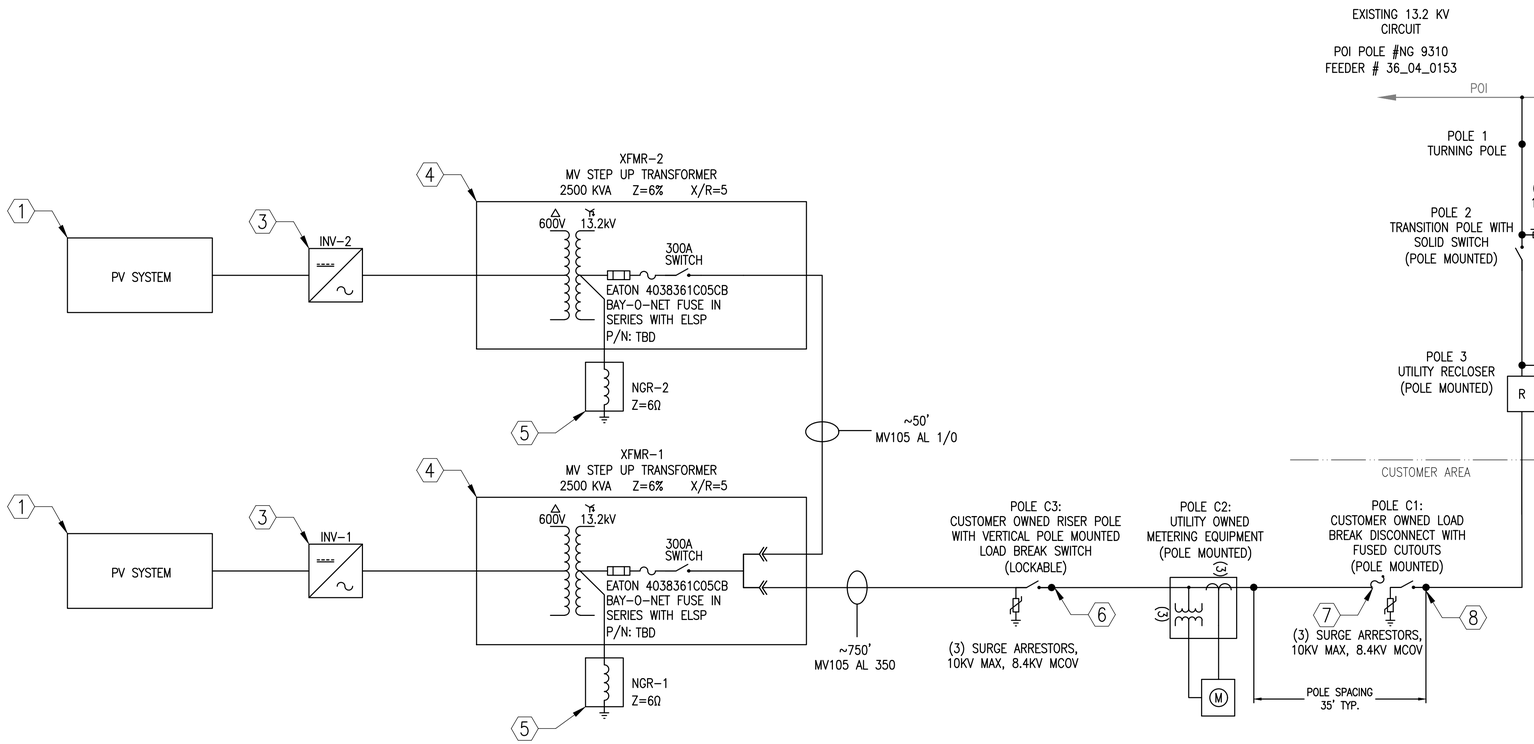
In order to proceed to a Fully Study or Supplemental Review, please submit any additional documentation or updates noted in the report. Please only submit payments based on the instructions provided in the invoice or the online payment system. Other methods of submitting payments may result in delays.

Applicant Decision For Next Steps --None--

Save

PRESALE AC SINGLE LINE DIAGRAM - 9327 WORTENDYKE RD - 5000.00 KWAC PV PROJECT

SCALE: NTS



PROPOSED INVERTER SETTINGS

DEVICE	PICKUP	UNITS	TIME DELAY	DESCRIPTION
27-1	265	Volts	1.10	UNDERVOLTAGE RELAY
27-2	466	Volts	2.00	
59-1	583	Volts	2.00	OVERVOLTAGE RELAY
59-2	636	Volts	0.16	
81U-1	56.5	Hz	0.16	UNDERFREQUENCY
81U-2	58.5	Hz	300.00	
810-1	61.2	Hz	300.00	OVERFREQUENCY
810-2	62.0	Hz	0.16	

ELECTRICAL EQUIPMENT SCHEDULE

REF. #	QTY.	DESCRIPTION
1	9230	SOLAR MODULES HYPERION HY-DH144N8
3	2	SMA SUNNY CENTRAL 2660 UP-US FACTORY LIMITED TO 2500KV
4	2	2500kVA, 13.2 KV WYE-GROUNDED PRIMARY - 600V DELTA SECONDARY TRANSFORMER, Z=6%, X/R= 5
5	2	NGR, Z=6 OHMS, CONTINUOUS RATING =100A
6	1	S&C15KV POLE MOUNTED, LOAD BREAK SWITCH, 900A, 65KAIC, GANG OPERATED AIR-BREAK LOCKABLE VERTICAL DISCONNECT, 147532R4-B-P1/ED-713R4-S10
7	1	S&C SMD40, 14.4kV, 25kA, 110kV BIL, CATALOG #192322, SMU40, 14.4kV, 250E, CATALOG #822250
8	1	S&C 15KV POLE MOUNTED,LOAD BREAK SWITCH 900A, 65KAIC, GANG OPERATED AIR-BREAK LOCKABLE HORIZONTAL DISCONNECT, 147442R4-A2-P1/ED-711R4-S1

new leaf energy
55 TECHNOLOGY DRIVE, SUITE 102
LOWELL, MA 01851
PHONE: (800) 818-5249
FAX: (888) 678-8991
WWW.NEWLEAFENERGY.COM

NOT FOR CONSTRUCTION

STATE OF NEW YORK
AARON N. WRIGHT
100356
LICENSED PROFESSIONAL ENGINEER
02/26/2024

IDP
SITE: 9327 WORTENDYKE RD
SITE: BATAVIA, NY 14020

PROJECT NUMBER:
120-1542

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
	12/19/23	DL		IDP

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

PL-2.0

SINGLE LINE DIAGRAM

9327 Wortendyke Rd., Batavia, NY 14020 - FAA Screening

Northing	Point Elev...	Name	Raw Desc...	Full Descr...	Descripti...	Grid Easti...	Grid Nort...	Longitude	Latitude	Scale Fact...	Co
0321.0112'	899.000'		NW CORNE	NW CORNE		35499.2558'	30321.0112'	W078° 15' 27.06"	N042° 57' 52.35"	1.000	° 1
0341.3789'	906.230'		NE CORNEI	NE CORNEI		36661.7295'	30341.3789'	W078° 15' 11.43"	N042° 57' 52.50"	1.000	° 1
9993.7237'	905.340'		SE CORNER	SE CORNER		36616.7295'	79993.7237'	W078° 15' 12.05"	N042° 57' 49.07"	1.000	° 1
9703.6126'	910.570'		SW CORNE	SW CORNE		35724.2558'	79703.6126'	W078° 15' 24.07"	N042° 57' 46.24"	1.000	° 1
0169.4482'	920.310'		HIGHEST P(	HIGHEST P(		36320.6017'	30169.4482'	W078° 15' 16.03"	N042° 57' 50.82"	1.000	° 1

*** Structure Type:** SOLAR | Solar Panel

Please select structure type and complete location point information.

Latitude: 42 Deg 57 M 50.82 S N

Longitude: 78 Deg 15 M 16.03 S W

Horizontal Datum: NAD83

Site Elevation (SE): 920 (nearest foot)

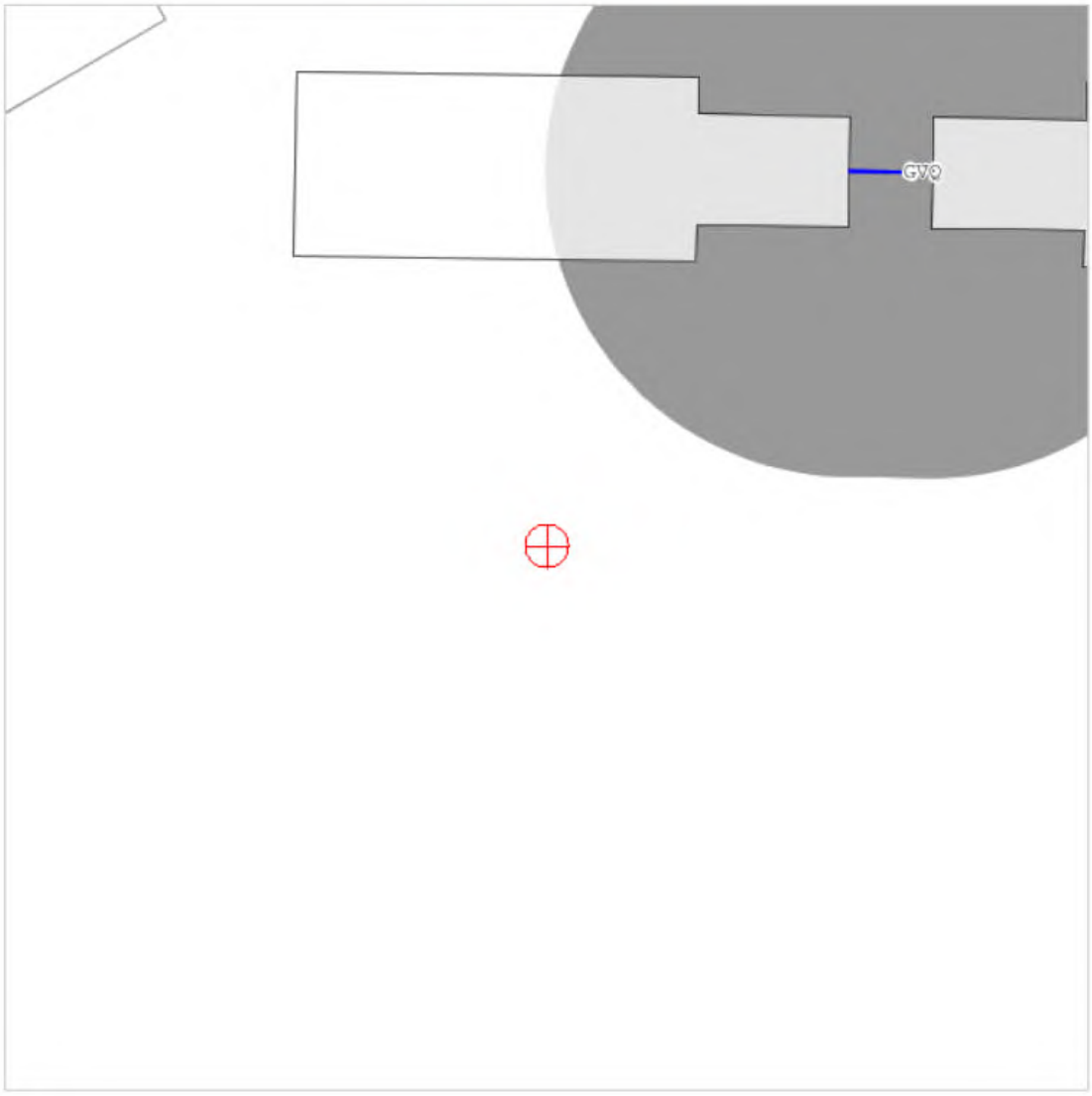
Structure Height : 15 (nearest foot)

Is structure on airport: (•) No ( ) Yes

Submit

Results

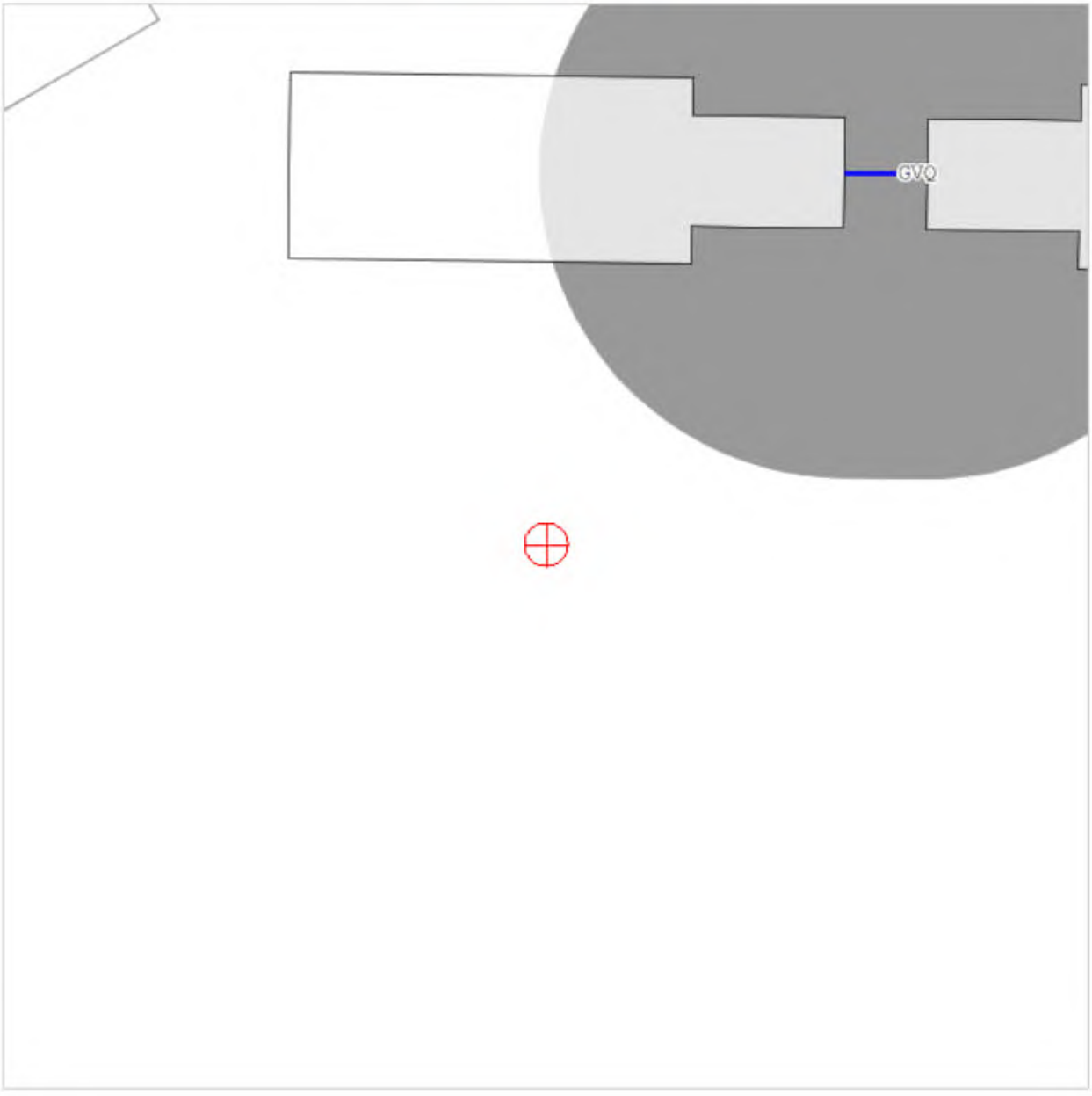
You do not exceed Notice Criteria.



* Structure Type:	SOLAR | Solar Panel Please select structure type and complete location point information.
Latitude:	42 Deg 57 M 52.5 S N
Longitude:	78 Deg 15 M 11.43 S W
Horizontal Datum:	NAD83
Site Elevation (SE):	906 (nearest foot)
Structure Height :	15 (nearest foot)
Is structure on airport:	(•) No ( ) Yes
	Submit

Results

You do not exceed Notice Criteria.

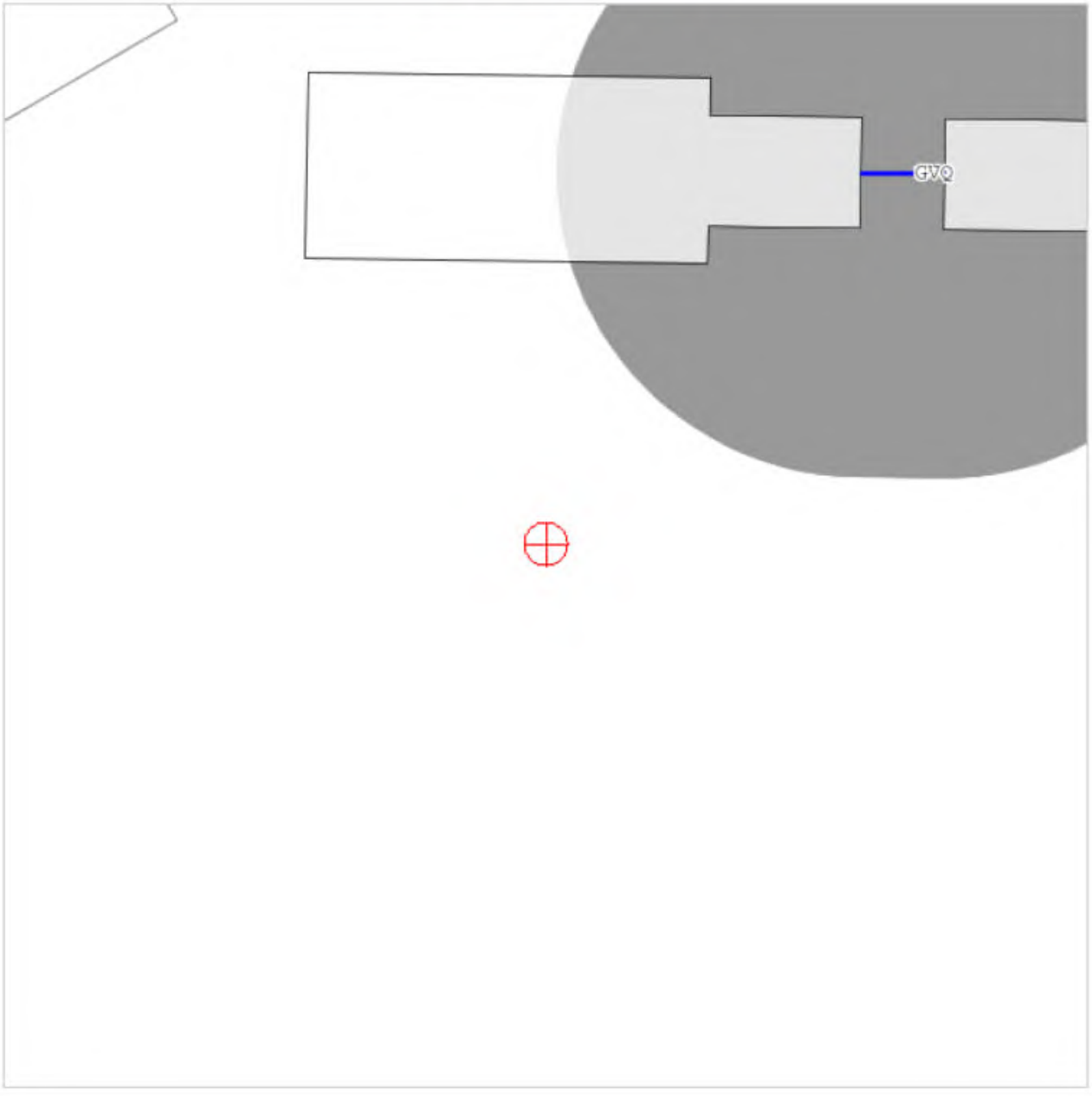


* Structure Type:	SOLAR | Solar Panel Please select structure type and complete location point information.
Latitude:	42 Deg 57 M 52.35 S N
Longitude:	78 Deg 15 M 27.06 S W
Horizontal Datum:	NAD83
Site Elevation (SE):	899 (nearest foot)
Structure Height :	15 (nearest foot)
Is structure on airport:	◉ No ○ Yes

Submit

Results

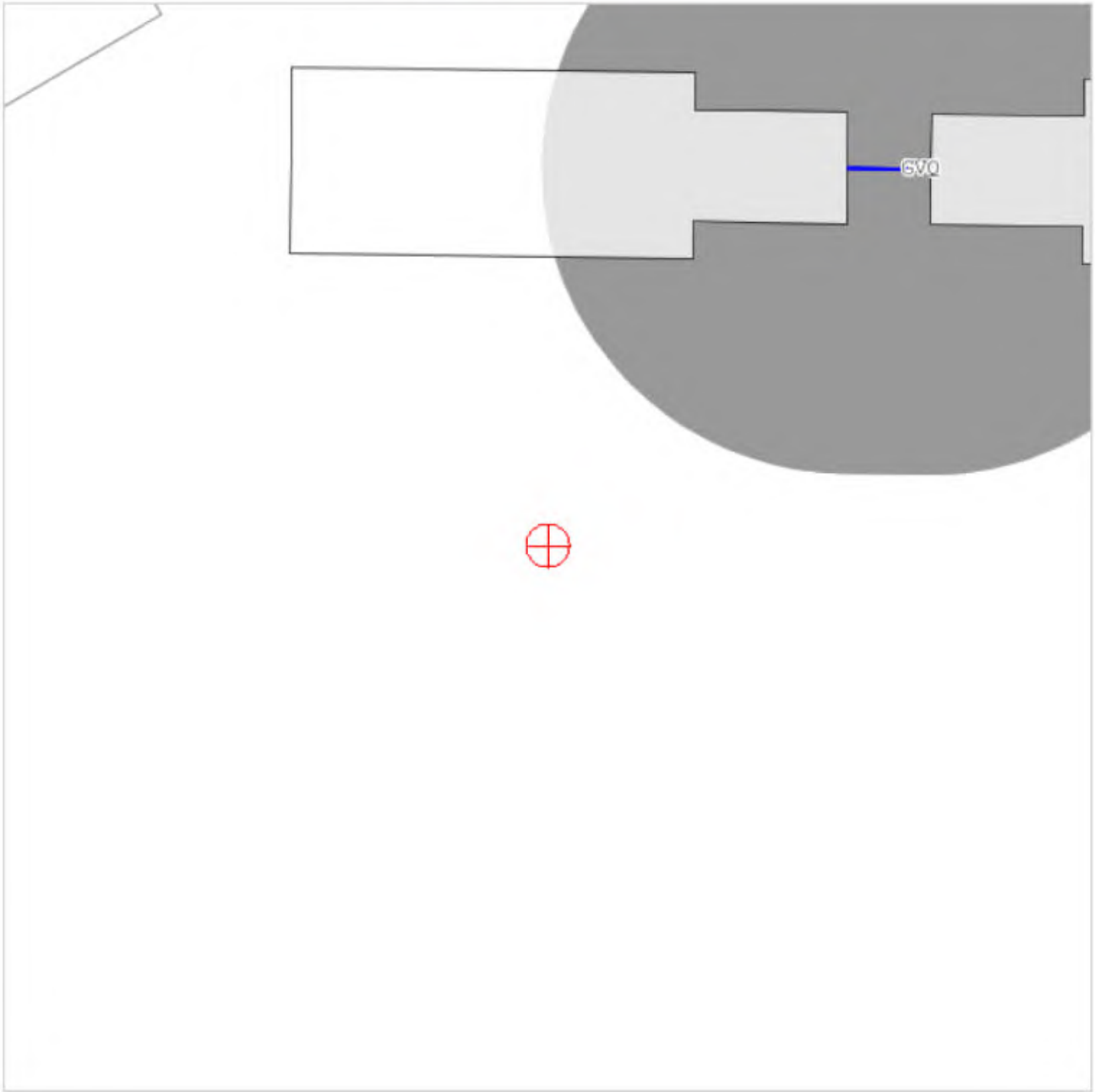
You do not exceed Notice Criteria.



* Structure Type:	SOLAR | Solar Panel Please select structure type and complete location point information.
Latitude:	42 Deg 57 M 49.07 S N
Longitude:	78 Deg 15 M 12.05 S W
Horizontal Datum:	NAD83
Site Elevation (SE):	905 (nearest foot)
Structure Height :	15 (nearest foot)
Is structure on airport:	(•) No ( ) Yes
	Submit

Results

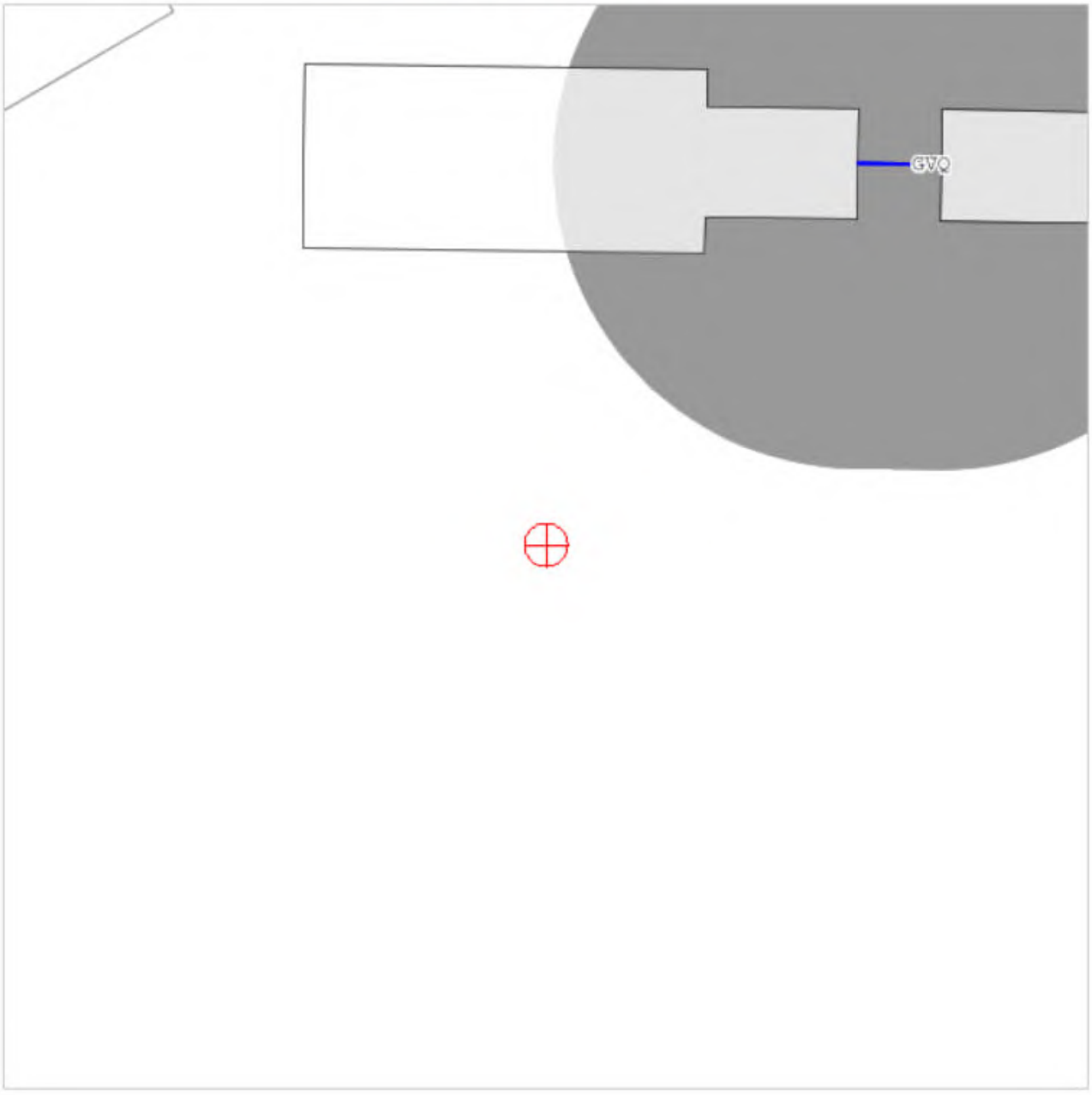
You do not exceed Notice Criteria.



* Structure Type:	SOLAR | Solar Panel Please select structure type and complete location point information.
Latitude:	42 Deg 57 M 46.24 S N
Longitude:	78 Deg 15 M 24.07 S W
Horizontal Datum:	NAD83
Site Elevation (SE):	911 (nearest foot)
Structure Height :	15 (nearest foot)
Is structure on airport:	◉ No ○ Yes
	Submit

Results

You do not exceed Notice Criteria.



FORGESOLAR GLARE ANALYSIS

Project: **9327 Wortendyke Rd Tracker**

A proposed tracker solar site located on Wortendyke Rd

Site configuration: **9327 Wortendyke Rd Site**

Site description: 5MW Tracker Site 15' Panels

Created 26 Mar, 2024
Updated 26 Mar, 2024
Time-step 1 minute
Timezone offset UTC-5
Minimum sun altitude 0.0 deg
DNI peaks at 1,040.0 W/m^2
Category 1 MW to 5 MW
Site ID 115419.19871

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 V2

Summary of Results No glare predicted

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

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

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Pike Road	0	0.0	0	0.0
Wortendyke Road	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0

Component Data

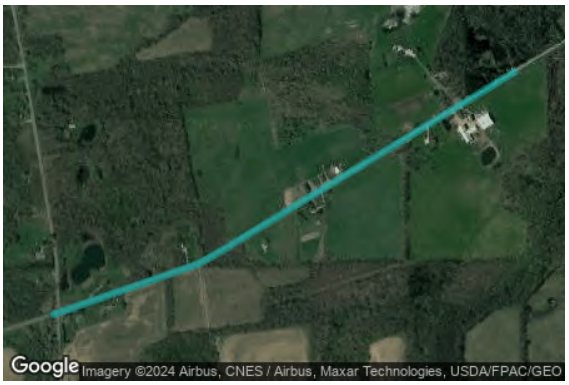
PV Arrays

Name: Tracker Array
Axis tracking: Single-axis rotation
Backtracking: None
Tracking axis orientation: 180.0°
Tracking axis tilt: 5.0°
Tracking axis panel offset: 0.0°
Max tracking angle: 52.0°
Rated power: -
Panel material: Smooth glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	42.964569	-78.257582	898.32	15.00	913.32
2	42.964584	-78.253193	904.89	15.00	919.89
3	42.964038	-78.253179	909.04	15.00	924.04
4	42.964033	-78.253347	908.97	15.00	923.97
5	42.963687	-78.253336	905.10	15.00	920.10
6	42.963678	-78.253725	905.47	15.00	920.47
7	42.963455	-78.253722	900.76	15.00	915.76
8	42.963412	-78.254488	909.74	15.00	924.74
9	42.963107	-78.254515	903.91	15.00	918.91
10	42.963104	-78.255057	908.55	15.00	923.55
11	42.962880	-78.255039	903.23	15.00	918.23
12	42.962838	-78.255669	907.34	15.00	922.34
13	42.962604	-78.255690	900.86	15.00	915.86
14	42.962592	-78.256278	901.86	15.00	916.86
15	42.962995	-78.256294	910.29	15.00	925.29
16	42.962979	-78.256594	909.76	15.00	924.76
17	42.963711	-78.256594	914.41	15.00	929.41
18	42.963688	-78.257554	905.15	15.00	920.15

Route Receptors

Name: Pike Road
Path type: Two-way
Observer view angle: 50.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	42.962548	-78.241322	915.56	5.00	920.56
2	42.958134	-78.251232	908.44	5.00	913.44
3	42.957736	-78.252187	916.95	5.00	921.95
4	42.956474	-78.257147	909.03	5.00	914.03

Name: Wortendyke Road
Path type: Two-way
Observer view angle: 50.0°

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	42.966754	-78.259096	897.46	5.00	902.46
2	42.963040	-78.258273	902.74	5.00	907.74
3	42.960326	-78.257602	893.11	5.00	898.11
4	42.957953	-78.257051	906.05	5.00	911.05
5	42.956335	-78.256985	912.50	5.00	917.50

Discrete Observation Point Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
OP 1	1	42.965175	-78.258063	898.85	5.50
OP 2	2	42.964430	-78.259259	894.78	5.50
OP 3	3	42.962717	-78.257764	909.19	5.50
OP 4	4	42.962381	-78.258463	903.39	5.50
OP 5	5	42.961415	-78.258223	890.64	5.50
OP 6	6	42.960999	-78.256610	902.94	5.50
OP 7	7	42.958181	-78.252547	911.38	5.50
OP 8	8	42.957228	-78.255401	914.76	5.50
OP 9	9	42.959454	-78.248804	921.86	5.50
OP 10	10	42.962996	-78.245263	929.55	5.50
OP 11	11	42.964056	-78.248108	931.37	5.50

Obstruction Components

Name: Treeline
Top height: 40.0 ft

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)
1	42.963746	-78.258338	893.79
2	42.964793	-78.257840	897.38
3	42.964879	-78.253247	906.99
4	42.964148	-78.252054	951.21
5	42.962582	-78.254970	905.19
6	42.962319	-78.256620	943.46
7	42.963436	-78.257086	910.14
8	42.963298	-78.258175	898.05
9	42.963475	-78.258240	895.23

Glare Analysis Results

Summary of Results No glare predicted

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

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

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Pike Road	0	0.0	0	0.0
Wortendyke Road	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0

PV: Tracker Array no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Pike Road	0	0.0	0	0.0
Wortendyke Road	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0

Tracker Array and Route: Pike Road

No glare found

Tracker Array and Route: Wortendyke Road

No glare found

Tracker Array and OP 1

No glare found

Tracker Array and OP 2

No glare found

Tracker Array and OP 3

No glare found

Tracker Array and OP 4

No glare found

Tracker Array and OP 5

No glare found

Tracker Array and OP 6

No glare found

Tracker Array and OP 7

No glare found

Tracker Array and OP 8

No glare found

Tracker Array and OP 9

No glare found

Tracker Array and OP 10

No glare found

Tracker Array and OP 11

No glare found

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year.
Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare. This primarily affects V1 analyses of path receptors.
Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.
The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.
The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.
The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.
The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
Refer to the Help page at **www.forgesolar.com/help/** for assumptions and limitations not listed here.

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

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

March 27, 2024

Town of Batavia
3833 West Main Street Road
Batavia, NY 14020

RE: Wortendyke Road Solar 1, LLC
Decommissioning Estimate/Plan

Project Introduction:

Wortendyke Road Solar 1, LLC is proposing to install a large-scale, ground-mounted, solar photovoltaic system. The existing 51.3 AC± parcel is located to the east of Wortendyke Road in the Town of Batavia. The project will consist of a 5.0-MW AC system with 9,386 ± panels. The system will be secured with a 7'H chain-link fence. The area inside the fenced areas will be 15.6 AC±. Equipment pads will be located near the panels & will consist of inverters, transformers, data systems & switch gear. Gravel roads will be added for access within the system area.

Scope of Decommissioning Work Required:

Decommissioning will occur at the end of our lease with the landowner, which is typically after 25 years and will be completed through a third-party Subcontractor. The subcontractor's typical scope includes a pre-decommissioning inspection at the job site prior to decommissioning, decommissioning checklist & supervision, labor to remove all system parts.

Other activities associated with removing a photovoltaic system from service include removal of all other electrical equipment such as transformers, breaking up concrete pads and footings, removing electrical wiring, fencing and power poles. Internal site roads will be removed. The site will be re-vegetated after construction work.

Expected Decommissioning Schedule:

Decommissioning of the project should take no more than one year from start. The work is to be completed in a timely manner by the third-party subcontractor selected by the owner/operator of the solar collecting facility. A detailed plan and schedule will be created by the owner/operator prior to the start of decommissioning at the end of the project's life. The following are some typical schedule and timelines that can be expected once the contractor begins decommissioning. These will be revised during the owner/operator's recurring estimation of the decommissioning cost and plan.

The following decommissioning procedure should be sequentially followed:

1. Electrical Equipment Removal
   All above ground wiring, cable, and electrical equipment will be removed along with PV modules, inverters, racking and posts will be removed from the site. Underground feeders, conduit, and utility poles will be pulled and removed from the site.

2. Fencing Removal
   All fencing material will be pulled and removed from the site.

3. Access Road
   Access roads shall be the final structure to be removed. Gravel will be stripped, then the underlying geotextile will be removed and disposed of. Compacted soils beneath the removed road shall be decompacted as needed. Some road areas may be retained by the landowner as an improvement if so desired.

Expected Timing

- Removal of all electrical equipment, energy storage equipment, and fencing: 2-4 weeks
- Removal of road and swales: 2-4 weeks
- Re-establishment of vegetation: 1-3 months

Site Restoration

Following project decommissioning, the sub-grade and affected areas will be decompacted and restored to pre-construction conditions. All unexcavated areas compacted by decommissioning activities shall also be decompacted and restored to be consistent with the nearby area. Topsoil in disturbed areas will be applied if necessary and disturbed areas will be reseeded to promote revegetation.

Establishment of Decommissioning Fund:

Prior to the start of construction, a security to cover the full cost of the removal and disposal of the utility-scale solar collector system and any associated accessory structures less the salvage value of the utility scale solar collector system upon abandonment of said facility shall be provided by the owner/operator. The owner/operator shall provide an updated Decommissioning Cost Estimate prepared by a N.Y.S. Licensed Engineer every five (5) years, and the decommissioning surety shall be adjusted, if necessary, to reflect the then current decommissioning cost. Any such security must be provided pursuant to a written security agreement with the Town, approved by the Town Board and also approved by the Town Attorney as to form, sufficiency and manner or execution. The form of security shall be limited to those permissible under NYS Town Law. If the owner of the site fails to comply with any conditions of the approval during construction or as part of the long-term maintenance of the site, all costs of the Town incurred to comply with conditions of the approval shall be paid using the surety provided by the applicant. Failure to comply with the conditions of the approval or to maintain an acceptable level of surety will result in revocation of the certificate of occupancy.

Decommissioning Estimate/Plan

new leaf energy

Date: 3/27/2024
Calculated By: AR

9327 Wortendyke Rd
Batavia, NY

This Decommissioning Estimate has been prepared by New Leaf Energy in an attempt to predict the cost associated with the removal of the proposed solar facility. The primary cost of decommissioning is the labor to dismantle and load as well as the cost of trucking and equipment. All material will be removed from the site, including the concrete equipment pads, which will be broken up at the site and hauled to the nearest transfer station.

The salvage values of the racking, foundation screws, and fencing have been calculated in this estimate. Solar module salvage has been ommitted because there is insuffient data on module salvage value.

The following values were used in this Decommissioning Estimate:

System Specifications	
Number of Modules	9,386
Linear Feet of Racking (ft)	35,198
Number of Inverters	2
Number of Transformers	2
Number of Tracker Motors	141
Electrical Wiring Length (ft)	1,815
Number of Foundation Piles	2,134
Length of Perimeter Fence (ft)	3,445
Number of Power Poles	3
Access Rd Material Volume (YD)	274
Total Disturbed Area (SF)	12,078
Total Fence Weight (lbs)	2,446
Total Racking Weight (lbs)	220,571
Total Foundation Pile Weight (lbs)	288,090

Labor and Equipment Costs		
Labor Rate ($/hr)	$	57.46
Operator Rate ($/hr)	$	82.65
Bobcat Cost ($/hr)	$	94.00
Front End Loader Cost ($/Day)	$	780.20
Excavator Cost ($/Day)	$	1,259.60
Trucking Cost ($/hr)	$	117.50
Backhoe Cost ($/hr)	$	94.00
Power Pole Removal Cost ($/pole)	$	1,500.00
Grader Cost ($/day)	$	1,222.00
Gravel Export Cost ($/YD)	$	8.00
Loam Import Cost ($/YD)	$	20.00
Seeding Cost ($/SF)	$	0.10
Fuel Cost ($/mile)	$	0.50

Equipment & Material Removal Rates	
Module Removal Rate (min/module)	1.5
Rack Wiring Rem. Rate (min/mod)	0.5
Racking Dismantling Rate (min/LF)	0.4
Inverter Removal Rate (hr/unit)	0.5
Transformer Removal Rate (hr/unit)	1
Motor Removal Rate (hr/unit)	1
Rack Loading Rate (min/LF)	0.2
Elect. Wiring Removal Rate (min/LF)	0.5
Pile Rem. Rate (piles/day)	300
Fence Removal Rate (min/LF)	1
Days req. to break up concrete pads	1
Days req. with Rough Grader	1
Days req. with Fine Grader	1
Total Truckloads Required	21
Round-Trip Dist. to Trans. Sta.(miles)	33
Round-Trip Time to Trans. Sta. (hr)	1.75

Salvage Values		
Galvanized Steel Salvage Value ($/lb)	$	0.05

Labor, Material, and Equipment Costs

1. Remove Modules

The solar modules are fastened to racking with clamps. They slide in a track. A laborer needs only unclamp the module and reach over and slide the module out of the track.

Module Removal Rate • Total Number of Solar Modules • Labor Rate = Module Removal Cost

Total = $ 13,482.99

2. Remove Rack Wiring

The modules are plugged together in the same manner as an electrical cord from a light is plugged into a wall socket. The string wires are in a tray. A laborer needs only unplug the module, reach into the tray and remove the strands of wire.

Wire Removal Rate • Total Number of Solar Modules • Labor Rate = Rack Wiring Removal Cost

Total = $ 4,494.33

3. Dismantle Racks

Tracker module racking primarily consists of torque tubes and a driveline. These are supported on driven piles. The torque tubes and driveline unbolt from the foundation piles.

Linear feet of Racking • Rack Dismantling Rate • Labor Rate = Rack Dismantling Cost

Total = $ 13,483.18

4. Remove and Load Electrical Equipment

Electrical equipment includes transformers, inverters, and tracker motors.

(Number of Inverters • Inverter Removal Rate + Number of Transformers • Transformer Removal Rate + Number of Motors • Motor Removal Rate) • (Operator Rate + Bobcat Cost) = Electrical Equipment Removal Cost

Total = $ 25,437.60

5. Break Up Concrete Pads

Concrete pads are broken up using an excavator and jackhammer.

Number of Demolition Days • (Excavator Cost + Operator Cost) = Total Concrete Pad Removal

Total = $ 1,441.40

6. Load Racks

Once the racking has been dismantled, it will be loaded onto trucks for removal from the site. The trucking cost associated with this line item represents the additional time a truck will be needed during loading. Please see item # 13 for the cost of trucking off-site.

Linear feet of Racking • Rack Loading Rate • (Operator Cost + Front End Loader Cost + Trucking Cost) = Total Rack Removal Cost

Total = $ 34,511.64

7. Remove Electrical Wiring

Electrical wiring will be removed from all underground conduits.

Cable Length • Cable Removal Rate • (Operator Cost + Backhoe Cost) = Total Cable Removal Cost

Total = $ 2,671.83

8. Remove Foundation Piles

Foundation piles will be pulled out of the ground and loaded onto a truck to be removed from site.

(Total Number of Piles / Daily Pile Removal Rate) • (Operator Rate + Excavator Cost) = Total Pile Removal Cost

Total = $ 20,494.94

9. Remove Fencing

Fencing posts, mesh, and foundations will be loaded onto a truck and removed from site. Trucking costs included in this line item are for the removal process. Trucking to a recycling facility are included in item #13.

(Total Length of Fence • Fence Removal Rate) • (Operator Rate + Bobcat Cost + Trucking Cost) =

Total = $ 16,889.11

10. Remove Power Poles

Power poles will be removed and shipped off site.

Number of Power Poles • Pole Removal cost = Total Power Pole Removal Cost

Total = $ 4,500.00

11. Gravel Road Reclamation

Reclamation of the gravel access road will entail removing the gravel material and exporting it off site. The area will then be backfilled with loam and graded.

(Days with Rough Grader + Days with Fine Grader) • (Grader Cost per Day+Operator Cost per Day) + [Roadway Material Volume • (Gravel Export Cost + Loam Import Cost)] = Gravel Road Reclamation Cost

Total = $ 11,444.31

12. Seed Disturbed Areas

Seeding cost includes labor and materials for reseeding all disturbed areas including the reclaimed gravel road area, former electrical areas, and areas disturbed by racking foundation removal.

Seeding Cost • Disturbed Area = Total Seeding Cost

Total = $ 1,207.75

13. Truck to Transfer Station

All material will be trucked to the nearest Transfer station that accepts construction material. The nearest transfer station is Casella Waste Transfer Station

(Total Truckloads • Roundtrip Distance • Fuel Cost) + (Total Truckloads • Round Trip Time • Trucking Cost) = Total Trucking Cost to Transfer Station

Total = $ 4,664.63

Salvage Values

1S. Fencing, Racking, and Foundation Pile Salvage Value

The racking, foundations, and fencing are all made of galvanized steel, which is recyclable. They will be trucked to Casella Waste Transfer Station.

(Total Fencing Weight + Total Racking Weight + Total Screw Weight) • Galvanized Steel Salvage

Total = $ (22,219.30)

Total = $ (22,219.30)

Summary of Decommissioning Costs and Salvage Values

Line Item	Task	Cost
1	Module Removal	$ 13,482.99
2	Rack Wiring Removal	$ 4,494.33
3	Rack Dismantling	$ 13,483.18
4	Electrical Equipment Loading and Removal	$ 25,437.60
5	Break Up Concrete Pads	$ 1,441.40
6	Load Racks	$ 34,511.64
7	Electrical Wiring Removal	$ 2,671.83
8	Foundation Pile Removal	$ 20,494.94
9	Fence Removal	$ 16,889.11
10	Power Pole Removal	$ 4,500.00
11	Gravel Road Reclamation	$ 11,444.31
12	Seed Disturbed Areas	$ 1,207.75
13	Trucking to Transfer Station	$ 4,664.63
	Subtotal =	$ 154,723.70

Additional Item	Task	Value
1S	Fencing, Racking, and Foundation Salvage Value	$ (22,219.30)
	Additional Item Subtotal	$ (22,219.30)

Present Value Total = $ 132,504.41

Operation and Maintenance Plan

The following plan outlines the typical Operation and Maintenance services anticipated to be included in the O&M contract for the project. The owner shall overtake and become responsible for all inspecting, monitoring and maintaining erosions control features and drainage structures over the lifetime of the feature. The inspection of on-site stabilization measures will become part of routine and preventive maintenance practices developed by the owner and/or his representatives.

On-call Service Technician

Each System will be installed with an Internet-based Data Acquisition System (DAS). The DAS will have the capability to send alarms identifying communication and power generation issues. In response to an automated DAS (Data Acquisition System) alarm or alert or request by the system owner, a technician will be required to visit the site within three (3) business days. This call is most often for an under-performing system or outage.

System Electrical Inspection & Maintenance

a. Electrical Maintenance
The technician will:
   i. Perform a visual inspection of PV modules and array wiring, strain relief, mounting system, trackers, inverters, switchgear, transformers, combiner boxes, wireways and conduit, data acquisition system, weather sensors and outdoor lighting.
   ii. Check pyranometers and reference cells.
   iii. Record operational data from inverters and meters.
   iv. IR Thermography may be used as part of the visual inspection process.

b. Inspect External and/or Internal DC Disconnects and Combiner Boxes During the inspection, the technician will:
   i. Ensure that Imp testing is performed on all DC strings, and values are logged on the provided form.
   ii. Spot check torque values and tighten loose electrical connections.

c. Inverter and Transformer The technician will:
   i. Clean out all electrical enclosures
   ii. Clean inverter air filters
   iii. Perform Preventive Maintenance per manufacturer protocol as required to maintain inverter manufacturer's warranty.

d. AC Disconnects
   i. The technician will check for proper operation.

e. DAS
   i. Verify with O&M representative before leaving site that the DAS system is functioning properly.

f. Fencing, Gates, Civil
   i. Annual visit will include a visual inspection of any fences, gates, equipment pads, etc. Facility improvements installed for the project such as gravel access roads, etc. shall be inspected on a periodic basis per schedules outlines below.

g. Service Report

i. A report must be filed noting results of the annual inspection.

Module Washing

At a maximum, modules might be washed once per year. Only clean water will be used. No chemical additives or cleaners will be used. Additional washings may be requested by the Owner based upon system performance objectives and site-specific environmental conditions.

Vegetation Management

Ground cover shall be mowed a minimum of once per year. Additional mowing may be necessary and will be noted in the annual report. Annual report to be provided to the local building inspector.

The site shall be inspected for evidence of erosion and rilling in any slopes. Any such conditions shall be noted in the annual report for re-vegetating.

Growth of trees or other vegetation that is having a shade impact on the arrays should be noted in the annual report. Vegetation growth (saplings, bush, large weeds, etc.) within any array fences or inverter enclosures shall be removed.

Plantings within the visual buffer shall be inspected quarterly for survivability until well established (2 years). Any trees not surviving shall be replaced as required. Contractor shall provide a 2 year warranty on plantings.

Beyond the 2 year monitoring period, trees that die or are severely damaged in the landscape buffer through natural causes shall be replaced by the system operator to ensure project screening is maintained. The system operator shall inspect and perform any necessary maintenance to the buffer on a quarterly basis.

Gravel Access Road

The road and roadside swales shall be inspected for evidence of erosion, rilling and clogging. These conditions shall be noted and supported with photographs and locations as part of the annual report.

Stormwater Management Maintenance

The entire site should be inspected regularly for the presence of erosion gullies, cracking and wash-outs caused by heavy storm events. The cause of any irregularities should be identified and addressed in a timely manner. At a minimum, eroded areas should be topsoiled, seeded and mulched, as necessary, depending upon the identified irregularity.

The stormwater management system (i.e. roadway drainage ditches, stormwater management ponds, pipe inlets and outlets, etc.) shall be inspected at least yearly for sediment build-up, debris and structural integrity. Stormwater management pond outlet control structures should be checked more frequently for debris blockages.

The inspection should include, but not be limited to the following:

- Accumulation of pollutants such as grease and oils
- Stabilization and condition of vegetative ground cover areas
- Cracking, settlement, sliding or gully erosions of embankments
- Sedimentation of downstream water bodies, culvert or swales
- Sedimentation of lawns, pavement areas or catch basin sumps
- Erosion or disruption of flow paths from stormwater management areas
- Structural integrity of spillways and obstruction of overflow
- Inlet and outlet riprap for scouring or dislodged stones or obstructions

Any sediment build-up should be removed and disposed of utilizing acceptable practices. Care should be exercised to avoid storing snow on any stormwater facilities, including the outfall swale.

Fire Safety Plan

Wortendyke Road Solar

Applicant:

Project Company
For Activities At:
9327 Wortendyke Road
Batavia, NY 14020

Prepared by:

New Leaf Energy
22 Century Hill Drive, Suite 303
Latham, NY12110

Dated: March 27th, 2024

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Attachment B Emergency Equipment
Attachment C List of Emergency Contacts

1.0 Fire Department Access

Fire Department access will be provided via a knox box at the vehicle access gate if required by the fire department. The access road will be via a 20' wide gravel access driveway off the existing solar array driveway.

The plan shown in appendix A shows the Truck turning analysis for a typical fire truck accessing the Wortendyke Road Solar Site. Vehicle Tracking software was utilized using the geometry of the towns fire vehicle to ensure the site can accommodate the towns fire apparatus. It was determined that the access and turnaround is sufficiently sized, and the 20' wide access road is sufficient for the design vehicles. Please see appendix A for vehicle movements and vehicle specifications used in the analysis.

The solar project is un-manned, and no building structures will be constructed. The 20-foot-wide gravel access road and emergency turn arounds are designed in accordance with the state fire code. The electrical equipment to be installed includes:

- Transformers
- Central Inverters
- Data Acquisition System (DAS)

The equipment pad including the Central inverter, transformers and DAS will be accessible via the 20' wide gravel access driveway inside the gates area. The rest of the site will be accessible via the grassed accessways between the solar array rows via 4-wheel drive or all-terrain vehicles. The gravel access driveway will be completed prior to commercial operation of the facility.

2.0 Initial Fire Actions

- Upon observing smoke or fire, contact the Site Manager as soon as possible to expedite a response.
- Vegetation fires should be extinguished as soon as practically possible, keeping in mind the limitations of access. Consideration should be paid to containing fires to access roads, and other natural, or man-made anchors. Class A foams are recommended for vegetation fires under and between the array rows.
- Smoke or fires in combiner boxes, disconnect switches, inverters, or other electrical enclosures may be difficult to access, and personnel should not attempt to open the enclosure doors to effect extinguishment without authorization of First Responder command. Dry chemical agents are appropriate in these situations where applicable. Fires in these situations should be monitored for extension to vegetation.
- If equipment or electrical systems are involved in the fire, the Project and/or entire Project Site should be de-energized via remote or local manual disconnect switches. At no time should unqualified personnel attempt to cut or disconnect any wiring.
- If application of dry chemical, or water agent is not effective in extinguishment, it should be noted that arcing from wiring might not subside until after sundown, and personnel should plan accordingly.
- Metallic components may remain energized even with severe fire damage after extinguishment of fire. Do not touch components.

3.0 Minimizing Risk

Project Personnel shall be responsible for implementing the following preventative measures for Class A, B, and C combustibles, as described below.

- Class A Combustibles: Fires involving ordinary combustible materials, such as cloth, wood, paper, rubber, and many plastics.
- Class B Combustibles: Fires involving flammable and combustible liquids such as gasoline, alcohol, oil-based paints, lacquers.
- Class C Combustibles: Fires involving energized electrical equipment.

3.1 De-Energizing System

To de-energize all or a portion of the Project, the Project staff and/or First Responders should always coordinate where possible with the O&M Service Provider's staff and the National Grid utility staff.

The solar Project will be energized from both the utility grid that provides AC electricity, and from the photovoltaic (PV) modules that produce DC electricity whenever exposed to light. The Project includes a DC power collection system fed by the PV modules, and an AC power collection system fed by both the power conversion units (inverters) and by the utility grid. The power conversion units (inverters) separate the DC and AC cable systems.

To de-energize a system or equipment within the Project Site, the system must be isolated from both the DC side and AC side.

3.1.1 AC Power System

Upon operation, the Project will be connected to the existing pole-mounted roadside electric infrastructure. The Project may be disconnected from the utility grid through a Gang Operated Air Break (GOAB) switch or recloser, depending on the existing infrastructure. The electrical poles will be labeled in order to be able to identify the disconnect.

Once the grid power is disconnected from the Project, the power conversion units (inverters) will automatically shut down and cease to produce AC power, and the AC system should be de-energized. For safety, all cables should be assumed energized until tested or Project Personnel or utility staff verifies that the systems are de-energized.

The Project will consist of multiple power conversion units or inverters connected into an AC electrical collection cable system that feeds into the main Project electrical switchboard & transformer. The AC collection system may include individual system disconnect switches and AC combiner boxes that may facilitate isolating individual AC cable systems.

3.1.2 DC Power System

The Project will include multiple DC power systems that connect the PV modules to the multiple power conversion units (inverters) that separate the DC system from the AC system. Once the main utility AC power is disconnected

from an individual inverter, that inverter will automatically shut down and cease to generate AC power. However, the DC system will remain energized while the PV modules are exposed to light (sunlight or artificial light).

The PV modules and DC collection cables should be considered energized at all times when exposed to light. Unqualified personnel cannot turn off the PV modules.

Depending on the final design, the PV modules may feed DC power into a series of DC combiner boxes located between the inverters and PV modules, or to combiner boxes located at each inverter. The DC combiner boxes provide a means to disconnect the individual DC sub-system from the rest of the Project, thereby allowing further isolation from the DC power system. Even after isolating the DC collection cabling, any cables connected to the PV modules will remain energized while the modules are exposed to light.

3.1.3 Power Conversion Units (Inverters)

The Project will include two power conversion units (inverters) located in the Project Site that will convert DC electricity to AC electricity. Each inverter can be shut down and disconnected from both the utility AC main power and the DC power system. First Responders must coordinate with the O&M Service Provider to shut down and isolate an inverter.

3.1.4 De-energizing Methods

In the event of a fire, inverters may or may not be automatically shut down by safety features within the Project's controls system. Firefighting personal protective equipment (PPE) does not offer electrical protection and personnel should avoid physical contact with any electrical components. Personnel must always maintain a safe distance from live equipment (at least 15 feet or as otherwise indicated on arc flash labeling located on the equipment). First Responders must coordinate with the O&M Service Provider to shut down and isolate an inverter.

To de-energize the Project or subsystems, the First Responders should always coordinate when possible with the O&M Service Provider's staff or the National Grid utility staff to:

- Disconnect the Project from the utility AC power grid at GOAB or recloser on the existing pole-mounted infrastructure;
- Shut down and isolate inverters;
- Disconnect AC sub-systems at AC combiner boxes and at inverters;
- Disconnect DC sub-systems at DC combiner boxes and at inverters; and
- If backup low voltage service power is installed, disconnect the utility service disconnect switch.

3.2 Water Application

Application of water to energized electrical equipment requires a broken stream hose pattern of at least 10 degrees, with a minimum distance of at least 10 feet. This should mirror the same firefighting techniques that would be used on a fire at a substation. Class foams are conductive and should be used for vegetation fires only, and not directed at solar panels or other energized electrical equipment. Active extinguishment should not engage with inverters, transformers, switchgear or other equipment on fire due to the potential for significantly higher voltages and fault currents available. The goal is to contain fire from spreading.

3.3 Possible Types of Fire

In case of a fire on the Project Site, Project Personnel should assess the severity and contact the Site Manager. Project Personnel should be aware of the location of the fire extinguishers and how to use them. In case of fire, personnel should assess the type and severity and take the following steps:

- Notify the Site Manager of the fire and provide clear, accurate details;
- If the fire is small enough to not endanger personnel, determine the appropriate extinguisher and attempt to extinguish the fire. If successful, notify the Site Manager and monitor to ensure the fire does not re-ignite;
- If the fire is too large, inform Site Manager to call 911;
- Depending on the severity, the Site Manager may call for all personnel to evacuate the area and proceed to the muster points;
- Take note of physically handicapped individuals in your area that may need assistance; and

If First Responders are called, personnel should meet the First Responders at main gate to guide access. Additional response steps for selected type of fire are below.

3.3.1 Brush Fire

A brush fire within the Project Site would most likely be caused by a spark from a nearby piece of equipment or flying ember from off-site. Vegetation fires would be relatively short in duration as vegetative fuels are consumed rapidly. In the event of a vegetation fire near the PV solar arrays, the following procedures apply:

- Notify the Site Manager
- The Site Manager (or designee) will shut down energized equipment in the affected area;
- Do not attempt to extinguish a fire located near electrical equipment with water or other chemicals due to electric shock risk;
- Let the fire burn vegetation and self-extinguish; and
- As instructed, personnel should evacuate the area and proceed to the muster points.
- If the brush fire is allowed to burn and self-extinguish, a fire watch will be maintained until qualified personnel arrive to provide safe circuit terminations of any damaged equipment.

3.3.2 PV Equipment Fire

In the event of a PV equipment fire at the Project Site:

- Notify the Site Manager;
- Site Manager (or designee) should de-energize equipment in the affected area;
- Do no attempt to extinguish fire near electrical equipment with water or other chemicals as an electric shock or arc could occur. Appropriate fire extinguishers may be used if fire is small;
- Project Personnel shall protect surrounding areas from flying embers with fire extinguishers if safe to do so. If unsafe, the area shall be evacuated; and
- Locate Material Safety Data Sheets (MSDSs) for the equipment if needed.

Emergency Contact – The final system owner and company responsible for all inquiries for the life of the installation is to be determined and will be provided when applying for the building permit.

Sincerely,

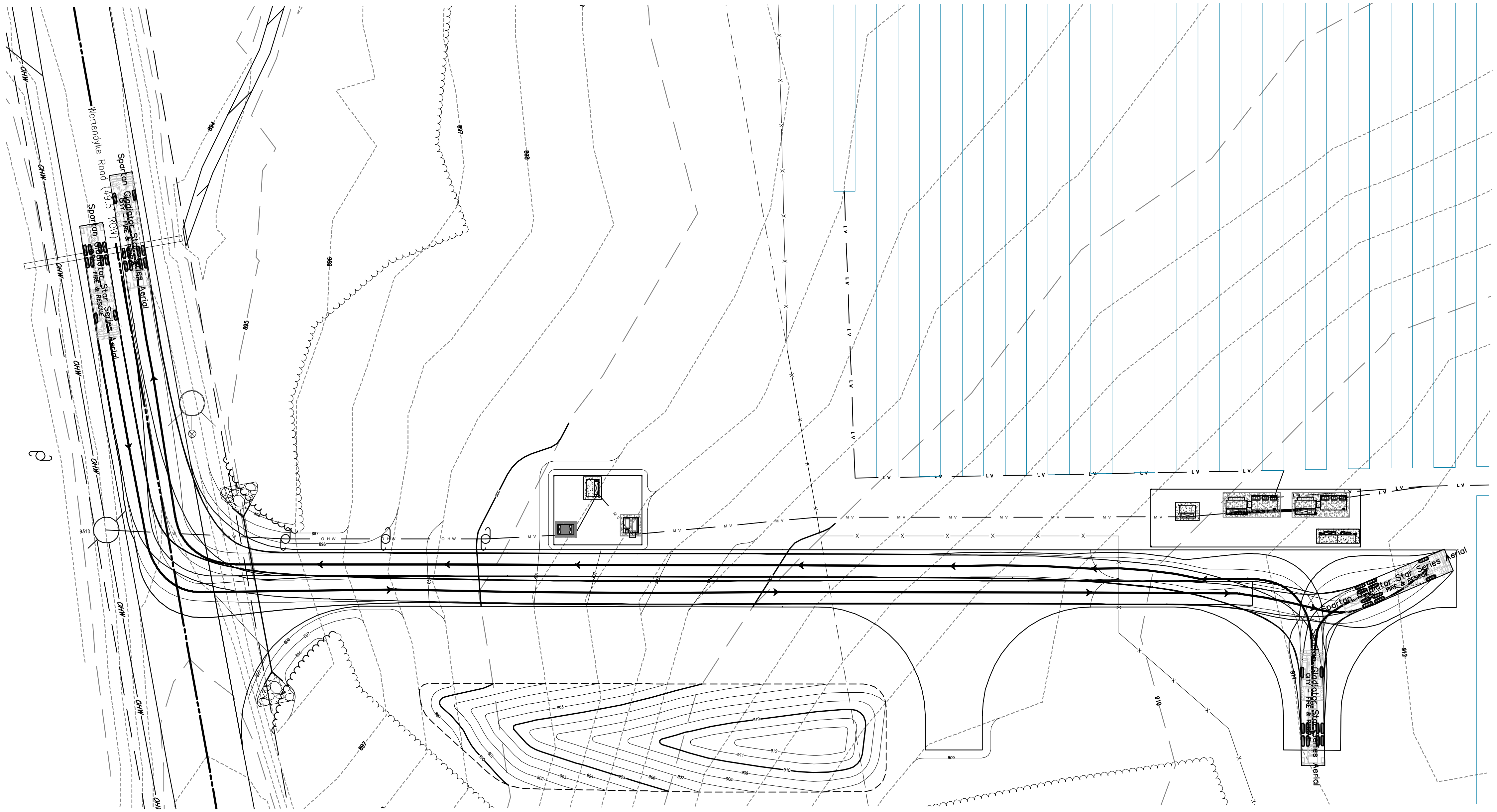
Zachary Longo

Project Civil Engineer

zlongo@newleafenergy.com

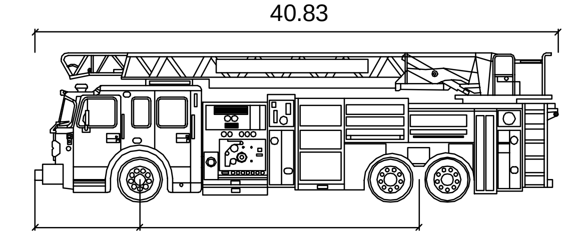
914-217-8701

ATTACHMENT A Site Access Plan and Layout



PROPOSED ACCESS: ENTERING-NORTH, EXITING-NORTH

SCALE: 1:20



Spartan Gladiator Star Series Aerial

	feet
Width	: 8.25
Track	: 7.87
Lock to Lock Time	: 6.0
Steering Angle	: 46.3

FIRE ACCESS SITE PLAN

SCALE: ####

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE

new leaf energy
55 TECHNOLOGY DRIVE, SUITE 102
LOWELL, MA 01851
PHONE: (800) 818-5249
FAX: (888) 678-8991
WWW.NEWLEAFENERGY.COM

ERDMAN ANTHONY
145 Culver Road, Suite 200
Rochester, NY 14620
Telephone 585 427 8888
www.erdmananthony.com

NOT FOR CONSTRUCTION

SITE USE PERMIT SET
SITE: 9327 WORTENDYKE RD
BATAVIA, NY 14020

PROJECT NUMBER: 120-1542

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
	04/1/24	DL/KJR	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

C-4.2

FIRE ACCESS SITE PLAN

ATTACHMENT B Emergency Equipment

ATTACHMENT B LIST OF EMERGENCY EQUIPMENT

The following table describes all on-site equipment and systems to be provided to prevent or handle fire emergencies and hazardous substantives incidents, in compliance with the fire code section of the New York State Uniform Fire Prevention and Building Code.

Emergency Response Supplies	Location
First Aid Kit/CPR Kit	Construction Trailers
Automatic External Defibrillator (AED)	Construction Trailers
Oil Spill Kit	Near Fuel Storage Area
Chemical Spill Kit	Near Fuel Storage Area
Fire Extinguishers	Construction Trailers and near Fuel Storage Area
Portable Loudspeaker and/or Audible Signal Alarm	Construction Trailers

ATTACHMENT C List of Emergency Contacts

ATTACHMENT C LIST OF EMERGENCY CONTACTS

Contact	Phone
General Emergency	911
Town of Batavia Fire Department 8382 Lewsiton Rd. Batavia, NY 14020	Emergency: 911 Non-Emergency: 585-344-3284
Genesee County Sheriff's Office 165 Park Road Batavia, NY 14020	Emergency: 911 Non-Emergency: 585-343-5000
New York State Department of Environmental Conservation Officer 6274 East Avon-Lima Rd Avon, NY 14414	Emergency: 911 Non-Emergency: 1-(585)-226-6706
Ambulance Services	911
HOSPITAL United Memorial Medical Center (UMMC) Emergency Room 127 North Street Batavia, NY 14020	585-343-6030
National Response Center	NRC Hotline: 1-(800) 424-8802
New York State Spill Hotline	1-(800) 457-7362

Contact	Phone
New York State Emergency Response Commission (SERC)	518-292-2366
U.S. EPA Region 2 Main Regional Office 290 Broadway New York, NY 10007-1866	1-(877) 251-4575
Town of Batavia 3833 West Main Street Road Batavia, NY 14020	585-343-1729
Genesee County Emergency Management 7690 State Street Road Batavia, NY 14020	585-344-0078

Contact	Phone
New York State Department of Emergency Management Office	
Genesee & Orleans County Health Department 3837 West Main Street Road #2 Batavia, NY	585-344-2580
National Grid	800-642-4272
Construction Contractor TBD	TBD
O&M Service Provider TBD	TBD

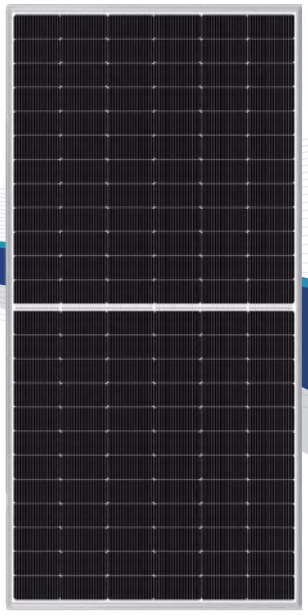
HYPERION SOLAR

MADE IN THAILAND

HY-DH144N8

560-585W

144 Pieces | HALF-CELL | N-Type



22.6% Max.Efficiency

N-Type
Bifacial & Dual Glass

High Conversion Efficiency

Module efficiency up to 22.6% based on N-Type wafer and advanced N-Type cell technology

Excellent Energy Yield

More power output in field operation due to better thermal behaviors, weak-light performance and bifaciality

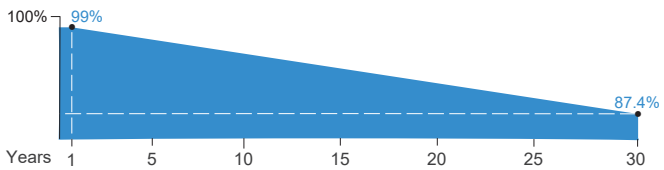
Outstanding Anti-degradation

Unsusceptible to LID, LeTID and less annual degradation due to special charateristics of N-Type

Quality Guarantee

High module quality ensures long-term reliability

IEC61215 / IEC61730 / UL61730
IEC61701 / IEC62716 / IEC60068
ISO9001



Hyperion N-Type Dual Glass Product Performance Warranty

warranty for materials and workmanship — 12 Years

warranty for extra linear power output — 30 Years

American Hyperion Solar LLC.
2880 Zanker Road, Suite 203, San Jose, CA 95134

info@hyperion-usa.com
www.hyperion-solar.com

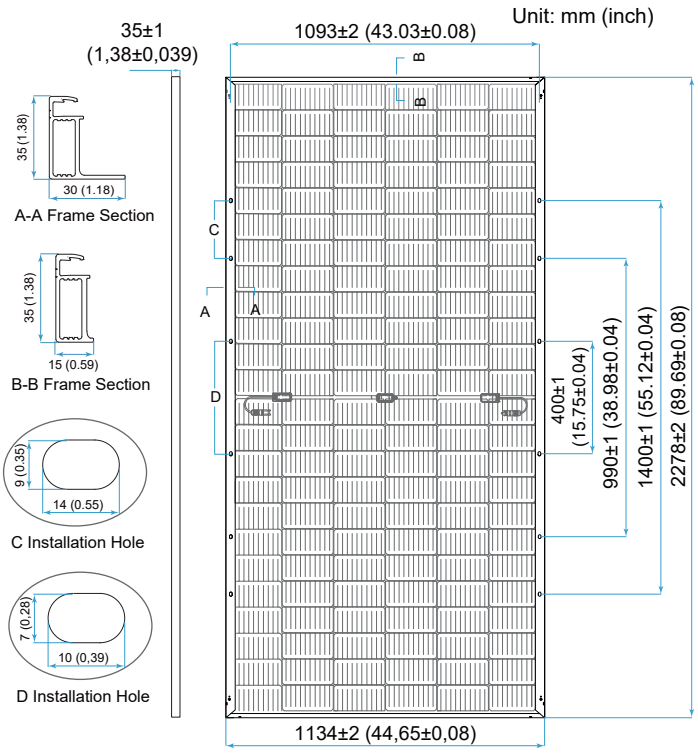
HY-DH144N8-560/585

Mechanical Parameters

Solar Cell	Mono N-Type 182 mm
No. of Cells	144(6 × 24)
Dimensions	2278 × 1134 × 35mm(89.69× 44.65 × 1.38in.)
Weight	32.7kg(72.09lbs)
Junction Box	IP68 rated (3 bypass diodes)
Output Cable	4mm² (IEC), 12 AWG(UL) +400/-200mm (+15.75/-7.87in.) or customized
Connector	RY01, QC4.10 or similar
Front Cover	2.0mm (0.079in.)semi-tempered AR glass
Back Cover	2.0mm (0.079in.)semi-tempered glass
Container	31 pcs/Pallet, 558 pcs/40' HC

Operating Parameters

Max. System Voltage	DC 1500V（IEC/UL）
Operating Temperature	-40°C ~ +85°C(-40°F ~ +185°F)
Max. Fuse Rating	30A
Frontside Max. Loading	5400Pa(112lb/ft²)
Backside Max. Loading	2400Pa(50lb/ft²)
Bifaciality	80%±10%
Fire Resistance	IEC Class A , UL Type 29



Electrical Characteristics - STC

Irradiance 1000 W/m², ambient temperature 25 °C, AM1.5.

Maximum Power at STC (Pmax/W)	585	580	575	570	565	560
Power Tolerance (W)	0 ~ +5					
Optimum Operating Voltage (Vmp/V)	42.74	42.59	42.44	42.29	42.14	41.95
Optimum Operating Current (Imp/A)	13.69	13.62	13.55	13.48	13.41	13.35
Open Circuit Voltage (Voc/V)	51.67	51.47	51.27	51.07	50.87	50.67
Short Circuit Current (Isc/A)	14.43	14.37	14.31	14.25	14.19	14.13
Module Efficiency	22.6%	22.5%	22.3%	22.1%	21.9%	21.7%

Electrical Characteristics - NMOT

Irradiance 800 W/m², ambient temperature 20 °C, AM1.5, wind speed 1 m/s.

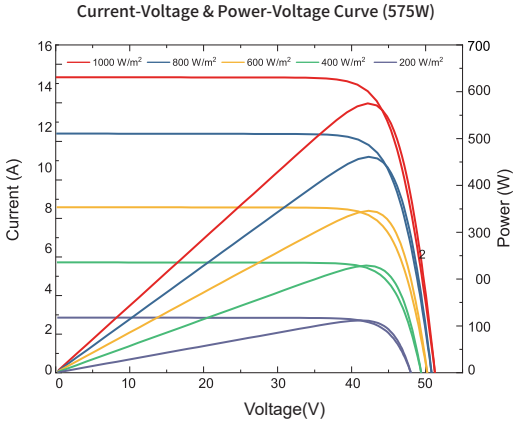
Maximum Power at NMOT (Pmax/W)	446.5	442.7	438.9	435.0	431.3	427.4
Optimum Operating Voltage (Vmp/V)	40.92	40.77	40.63	40.49	40.34	40.16
Optimum Operating Current (Imp/A)	10.91	10.86	10.80	10.75	10.69	10.64
Open Circuit Voltage (Voc/V)	49.47	49.27	49.08	48.89	48.70	48.51
Short Circuit Current (Isc/A)	11.61	11.56	11.51	11.46	11.41	11.37

Rearside Power Gain (Reference to 585W Front)

Rearside Power Gain	5%	15%	25%
Maximum Power (Pmax/W)	614	673	731
Optimum Operating Voltage (Vmp/V)	42.74	42.84	42.84
Optimum Operating Current (Imp/A)	14.37	15.70	17.07
Open Circuit Voltage (Voc/V)	51.67	51.77	51.77
Short Circuit Current (Isc/A)	15.15	16.56	18.00
Module Efficiency	23.8%	26.1%	28.3%

Temperature Characteristics

Nominal Module Operating Temperature	42 ± 2 °C
Nominal Cell Operating Temperature	45 ± 2 °C
Temperature Coefficient of Pmax	-0.31%/°C
Temperature Coefficient of Voc	-0.26%/°C
Temperature Coefficient of Isc	0.05%/ °C



HY-DH144N8-US-V2.0

Specifications included in this datasheet are subject to change without notice.

NX Horizon

Smart Solar Tracking System

Serving as the backbone on over 35 gigawatts of solar power plants around the world, the NX Horizon™ smart solar tracker system combines best-in-class hardware and software to help EPCs and asset owners maximize performance and minimize operational costs.

Flexible and Resilient by Design

With its self-aligning module rails and vibration-proof fasteners, NX Horizon can be easily and rapidly installed. The self-powered, decentralized architecture allows each row to be commissioned in advance of site power, and is designed to withstand high winds and other adverse weather conditions. On a recent 838 megawatt project in Villanueva, Mexico, these design features allowed for the project to go online nine months ahead of schedule.

TrueCapture and Bifacial Enabled

Incorporating the most promising innovations in utility scale solar, NX Horizon with TrueCapture™ smart control system can add additional energy production by up to six percent. Further unlocking the advantages of independent-row architecture and the data collected from thousands of sensors across its built-in wireless network, the software continuously optimizes the tracking algorithm of each row in response to site terrain and changing weather conditions. NX Horizon can also be paired with bifacial PV module technology, which can provide even more energy harvest and performance. With bifacial technology, NX Horizon outperforms conventional tracking systems with over 1% more annual energy.

Quality and Reliability from Day One

Quality and reliability are designed and tested into every NX Horizon component and system across our supply chain and manufacturing operations. Nextracker is the leader in dynamic wind analysis and safety stowing, delivering major benefits in uptime and long-term durability NX Horizon is certified to UL 2703 and UL 3703 standards, underscoring Nextracker's commitment to safety, reliability and quality.

Features and Benefits

5 years in a row

Global Market Share Leader (2015-18)

35 GW

Delivered on 5 Continents

Best-in Class

Software Ecosystem and Global Services

Up to 6%

Using TrueCapture Smart Control System

GENERAL AND MECHANICAL

Tracking type	Horizontal single-axis, independent row.
String voltage	1,500 V_{DC} or 1,000 V_{DC}
Typical row size	78-90 modules, depending on module string length.
Drive type	Non-backdriving, high accuracy slew gear.
Motor type	24 V brushless DC motor
Array height	Rotation axis elevation 1.3 to 1.8 m / 4'3" to 5'10"
Ground coverage ratio (GCR)	Configurable. Typical range 28-50%.
Modules supported	Mounting options available for virtually all utility-scale crystalline modules, First Solar Series 6 and First Solar Series 4.
Bifacial features	High-rise mounting rails, bearing + driveline gaps and round torque tube.
Tracking range of motion	Options for ±60° or ±50°
Operating temperature range	SELF POWERED: -30°C to 55°C (-22°F to 131°F) AC POWERED: -40°C to 55°C (-40°F to 131°F)
Module configuration	1 in portrait. 3 x 1,500 V or 4 x 1,000 V strings per standard tracker. Partial length trackers available.
Module attachment	Self-grounding, electric tool-actuated fasteners.
Materials	Galvanized steel
Allowable wind speed	Configurable up to 200 kph (125 mph) 3-second gust
Wind protection	Intelligent wind stowing with symmetric dampers for maximum array stability in all wind conditions
Foundations	Standard W6 section foundation posts

ELECTRONICS AND CONTROLS

Solar tracking method	Astronomical algorithm with backtracking. TrueCapture™ upgrades available for terrain adaptive backtracking and diffuse tracking mode
Control electronics	NX tracker controller with inbuilt inclinometer and backup battery
Communications	Zigbee wireless communications to all tracker rows and weather stations via network control units (NCUs)
Nighttime stow	Yes
Power supply	SELF POWERED: NX provided 30 or 60W Smart Panel AC POWERED: Customer-provided 120-240 V_{AC} circut

INSTALLATION, OPERATIONS AND SERVICE

PE stamped structural calculations and drawings	Included
Onsite training and system commissioning	Included
Installation requirements	Simple assembly using swaged fasteners and bolted connections. No field cutting, drilling or welding.
Monitoring	NX Data Hub™ centralized data aggregation and monitoring
Module cleaning compatibility	Compatible with NX qualified cleaning systems
Warranty	10-year structural, 5-year drive and control components.
Codes and standards	UL 3703 / UL 2703 / IEC 62817

6200 Paseo Padre Parkway | Fremont, CA 94555 | USA | +1 510 270 2500 | nextracker.com

Efficient

- Up to 4 inverters can be transported in one standard shipping container
- Overdimensioning up to 150% is possible
- Full power at ambient temperatures of up to 35°C

Robust

- Intelligent air cooling system OptiCool for efficient cooling
- Suitable for outdoor use in all climatic ambient conditions worldwide

Flexible

- Conforms to all known grid requirements worldwide
- Q on demand
- Available as a single device or turnkey solution, including Medium Voltage Power Station

Easy to Use

- Improved DC connection area
- Connection area for customer equipment
- Integrated voltage support for internal and external loads

SUNNY CENTRAL
2660 UP-US / 2800 UP-US / 2930 UP-US / 3060 UP-US

The new Sunny Central: more power per cubic meter

With an output of up to 3060 kVA and system voltages of 1500 V DC, the SMA central inverter allows for more efficient system design and a reduction in specific costs for PV power plants. A separate voltage supply and additional space are available for the installation of customer equipment. True 1500 V technology and the intelligent cooling system OptiCool ensure smooth operation even in extreme ambient temperature as well as a long service life of 25 years.

SUNNY CENTRAL 2660 UP-US / 2800 UP-US

Technical data*	SC 2660 UP-US	SC 2800 UP-US
Input (DC)		
MPP voltage range V_{DC} (at 35 °C / at 50 °C)	880 to 1325 V / 1100 V	921 to 1325 V / 1100 V
Min. input voltage $V_{DC, min}$ / Start voltage $V_{DC, Start}$	849 V / 1030 V	891 V / 1071 V
Max. input voltage $V_{DC, max}$	1500 V	
Max. input current $I_{DC, max}$ / with DC coupling	3200 A / 4800 A	
Max. short-circuit current $I_{DC, sc}$	6400 A	
Number of DC inputs	24 double pole fused (32 single pole fused)	
Number of DC inputs with optional DC coupling of battery	18 double pole fused (36 single pole fused) for PV, 6 double pole fused for batteries	
Max. number of DC cables per DC input (for each polarity)	2 x 800 kcmil, 2 x 400 mm²	
Integrated zone monitoring	○	
Available PV fuse sizes (per input)	200 A, 250 A, 315 A, 350 A, 400 A, 450 A, 500 A	
Available DC-DC converter fuse size (per input)	750 A	
Output (AC)		
Nominal AC power at cos φ =1 (at 35°C / at 50°C)	2667 kVA / 2400 kVA	2800 kVA / 2520 kVA
Nominal AC power at cos φ =0.8 (at 35°C / at 50°C)	2134 kW / 1920 kW	2240 kW / 2016 kW
Nominal AC current $I_{AC, nom}$ (at 35°C / at 50°C)	2566 A / 2309 A	
Max. total harmonic distortion	< 3% at nominal power	
Nominal AC voltage / nominal AC voltage range[1) 8)]	600 V / 480 V to 720 V	630 V / 504 V to 756 V
AC power frequency / range	50 Hz / 47 Hz to 53 Hz 60 Hz / 57 Hz to 63 Hz	
Min. short-circuit ratio at the AC terminals[9)]	> 2	
Power factor at rated power / displacement power factor adjustable[8) 10)]	1 / 0.8 overexcited to 0.8 underexcited	
Efficiency		
Max. efficiency[2)] / European efficiency[2)] / CEC efficiency[3)]	98.7%* / 98.6%* / 98.5%*	98.7%* / 98.6%* / 98.5%*
Protective Devices		
Input-side disconnection point	DC load break switch	
Output-side disconnection point	AC circuit breaker	
DC overvoltage protection	Surge arrester, type I	
AC overvoltage protection (optional)	Surge arrester, class I	
Lightning protection (according to IEC 62305-1)	Lightning Protection Level III	
Ground-fault monitoring / remote ground-fault monitoring	○ / ○	
Insulation monitoring	○	
Degree of protection	NEMA 3R	
General Data		
Dimensions (W / H / D)	2815 / 2318 / 1588 mm (110.8 / 91.3 / 62.5 inch)	
Weight	< 3400 kg / < 7500 lb	
Self-consumption (max.[4)] / partial load[5)] / average[6)])	< 8100 W / < 1800 W / < 2000 W	
Self-consumption (standby)	< 370 W	
Internal auxiliary power supply	○ Integrated 8.4 kVA transformer	
Operating temperature range[8)]	−25°C to 60°C / −13°F to 140°F	
Noise emission[7)]	67.0 dB(A)*	
Temperature range (standby)	−40°C to 60°C / −40°F to 140°F	
Temperature range (storage)	−40°C to 70°C / −40°F to 158°F	
Max. permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 month/year) / 0% to 95%	
Maximum operating altitude above MSL[8)] 1000 m / 2000 m	● / ○ (earlier temperature-dependent derating)	
Fresh air consumption	6500 m³/h	
Features		
DC connection	Terminal lug on each input (without fuse)	
AC connection	With busbar system (three busbars, one per line conductor)	
Communication	Ethernet, Modbus Master, Modbus Slave	
Communication with SMA string monitor (transmission medium)	Modbus TCP / Ethernet (FO MM, Cat-5)	
Enclosure / roof color	RAL 9016 / RAL 7004	
Supply transformer for external loads	○ (2.5 kVA)	
Standards and directives complied with	UL 62109-1, UL 1741 (Chapter 31, CDR 6I), UL 1741-SA, UL 1998, IEEE 1547, MIL-STD-810G	
EMC standards	FCC Part 15 Class A	
Quality standards and directives complied with	VDI/VDE 2862 page 2, DIN EN ISO 9001	
● Standard features ○ Optional * preliminary		

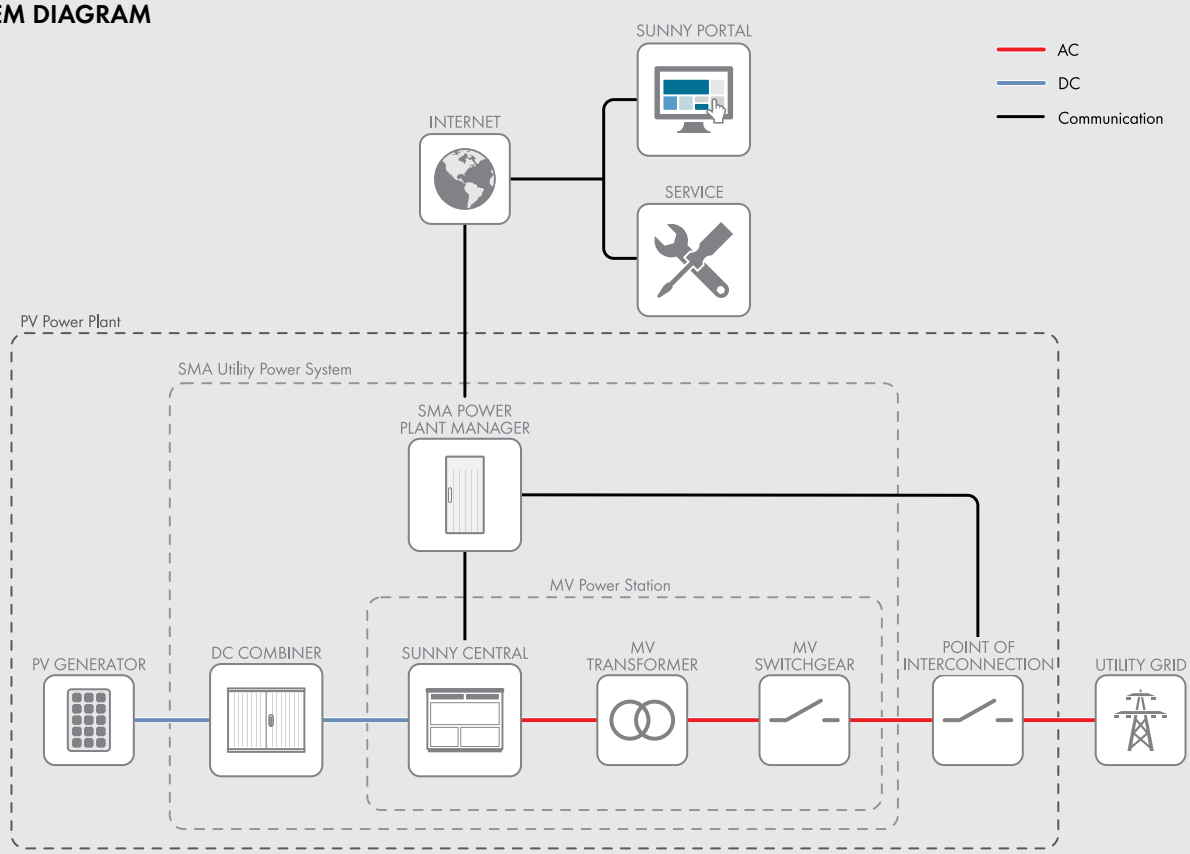
1) At nominal AC voltage, nominal AC power decreases in the same proportion
2) Efficiency measured without internal power supply
3) Efficiency measured with internal power supply
4) Self-consumption at rated operation
5) Self-consumption at < 75% Pn at 25°C
6) Self-consumption averaged out from 5% to 100% Pn at 25°C
7) Sound pressure level at a distance of 10 m
8) Values apply only to inverters. Permissible values for SMA MV solutions from SMA can be found in the corresponding data sheets.
9) A short-circuit ratio of < 2 requires a special approval from SMA
10) Depending on the DC voltage

SUNNY CENTRAL 2930 UP-US / 3060 UP-US

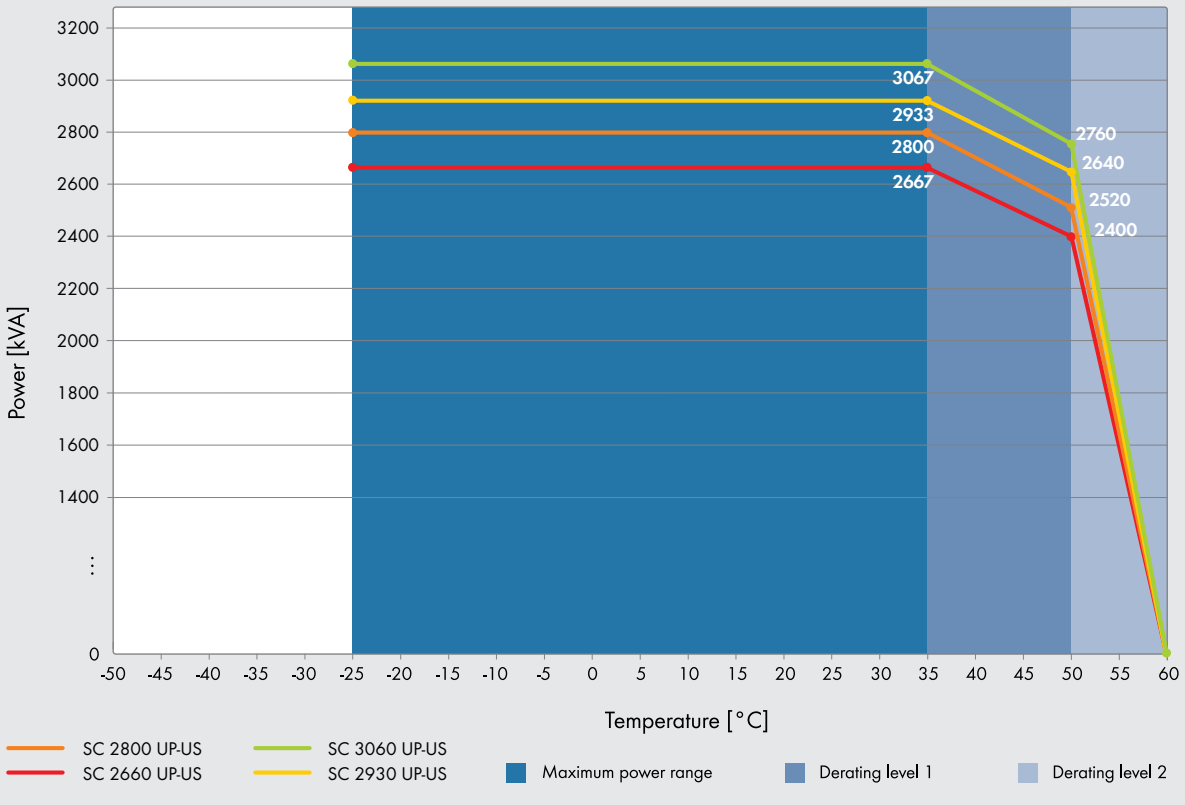
Technical data*	SC 2930 UP-US	SC 3060 UP-US
Input (DC)		
MPP voltage range V_{DC} (at 35 °C / at 50 °C)	962 to 1325 V / 1100 V	1003 to 1325 V / 1100 V
Min. input voltage $V_{DC, min}$ / Start voltage $V_{DC, Start}$	934 V / 1112 V	976 V / 1153 V
Max. input voltage $V_{DC, max}$	1500 V	
Max. input current $I_{DC, max}$ / with DC coupling	3200 A / 4800 A	
Max. short-circuit current $I_{DC, sc}$	6400 A	
Number of DC inputs	24 double pole fused (32 single pole fused)	
Number of DC inputs with optional DC coupling of battery	18 double pole fused (36 single pole fused) for PV, 6 double pole fused for batteries	
Max. number of DC cables per DC input (for each polarity)	2 x 800 kcmil, 2 x 400 mm²	
Integrated zone monitoring	○	
Available PV fuse sizes (per input)	200 A, 250 A, 315 A, 350 A, 400 A, 450 A, 500 A	
Available DC-DC converter fuse size (per input)	750 A	
Output (AC)		
Nominal AC power at cos φ =1 (at 35°C / at 50°C)	2933 kVA / 2640 kVA	3067 kVA / 2760 kVA
Nominal AC power at cos φ =0.8 (at 35°C / at 50°C)	2346 kW / 2112 kW	2454 kW / 2208 kW
Nominal AC current $I_{AC, nom}$ (at 35°C / at 50°C)	2566 A / 2309 A	
Max. total harmonic distortion	< 3% at nominal power	
Nominal AC voltage / nominal AC voltage range[1) 8)]	660 V / 528 V to 759 V	690 V / 552 V to 759 V
AC power frequency / range	50 Hz / 47 Hz to 53 Hz 60 Hz / 57 Hz to 63 Hz	
Min. short-circuit ratio at the AC terminals[9)]	> 2	
Power factor at rated power / displacement power factor adjustable[8) 10)]	1 / 0.8 overexcited to 0.8 underexcited	
Efficiency		
Max. efficiency[2)] / European efficiency[2)] / CEC efficiency[3)]	98.7%* / 98.6%* / 98.5%*	98.7%* / 98.6%* / 98.5%*
Protective Devices		
Input-side disconnection point	DC load break switch	
Output-side disconnection point	AC circuit breaker	
DC overvoltage protection	Surge arrester, type I	
AC overvoltage protection (optional)	Surge arrester, class I	
Lightning protection (according to IEC 62305-1)	Lightning Protection Level III	
Ground-fault monitoring / remote ground-fault monitoring	○ / ○	
Insulation monitoring	○	
Degree of protection	NEMA 3R	
General Data		
Dimensions (W / H / D)	2815 / 2318 / 1588 mm (110.8 / 91.3 / 62.5 inch)	
Weight	< 3400 kg / < 7500 lb	
Self-consumption (max.[4)] / partial load[5)] / average[6)])	< 8100 W / < 1800 W / < 2000 W	
Self-consumption (standby)	< 370 W	
Internal auxiliary power supply	○ Integrated 8.4 kVA transformer	
Operating temperature range[8)]	−25°C to 60°C / −13°F to 140°F	
Noise emission[7)]	67.0 dB(A)*	
Temperature range (standby)	−40°C to 60°C / −40°F to 140°F	
Temperature range (storage)	−40°C to 70°C / −40°F to 158°F	
Max. permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 month/year) / 0% to 95%	
Maximum operating altitude above MSL[8)] 1000 m / 2000 m	● / ○ (earlier temperature-dependent derating)	
Fresh air consumption	6500 m³/h	
Features		
DC connection	Terminal lug on each input (without fuse)	
AC connection	With busbar system (three busbars, one per line conductor)	
Communication	Ethernet, Modbus Master, Modbus Slave	
Communication with SMA string monitor (transmission medium)	Modbus TCP / Ethernet (FO MM, Cat-5)	
Enclosure / roof color	RAL 9016 / RAL 7004	
Supply transformer for external loads	○ (2.5 kVA)	
Standards and directives complied with	UL 62109-1, UL 1741 (Chapter 31, CDR 6I), UL 1741-SA, UL 1998 IEEE 1547, MIL-STD-810G	
EMC standards	FCC Part 15 Class A	
Quality standards and directives complied with	VDI/VDE 2862 page 2, DIN EN ISO 9001	
● Standard features ○ Optional * preliminary		

1) At nominal AC voltage, nominal AC power decreases in the same proportion
2) Efficiency measured without internal power supply
3) Efficiency measured with internal power supply
4) Self-consumption at rated operation
5) Self-consumption at < 75% Pn at 25°C
6) Self-consumption averaged out from 5% to 100% Pn at 25°C
7) Sound pressure level at a distance of 10 m
8) Values apply only to inverters. Permissible values for SMA MV solutions from SMA can be found in the corresponding data sheets.
9) A short-circuit ratio of < 2 requires a special approval from SMA
10) Depending on the DC voltage

SYSTEM DIAGRAM



TEMPERATURE BEHAVIOR (at 1000 m)



Toll Free +1 888 4 SMA USA
www.SMA-America.com

SMA America, LLC

Three-phase pad-mounted compartmental type transformer

General

At Eaton, we are constantly striving to introduce new innovations to the transformer industry, bringing you the highest quality, most reliable transformers. Eaton's Cooper Power series Transformer Products are ISO 9001 compliant, emphasizing process improvement in all phases of design, manufacture, and testing. In order to drive this innovation, we have invested both time and money in the Thomas A. Edison Technical Center, our premier research facility in Franksville, Wisconsin. Such revolutionary products as distribution-class UltraSIL™ Polymer-Housed Evolution™ surge arresters and Envirotemp™ FR3™ fluid have been developed at our Franksville lab.

With transformer sizes ranging from 45 kVA to 12 MVA and high voltages ranging from 2400 V to 46 kV, Eaton has you covered. From fabrication of the tanks and cabinets to winding of the cores and coils, to production of arresters, switches, tap changers, expulsion fuses, current limit fuses, bushings (live and dead) and molded rubber goods, Eaton does it all. Eaton's Cooper Power series transformers are available with electrical grade mineral oil or Envirotemp™ FR3™ fluid, a less-flammable and bio-degradable fluid. Electrical codes recognize the advantages of using Envirotemp™ FR3™ fluid both indoors and outdoors for fire sensitive applications. The bio-based fluid meets Occupational Safety and Health Administration (OSHA) and Section 450.23 NEC Requirements.

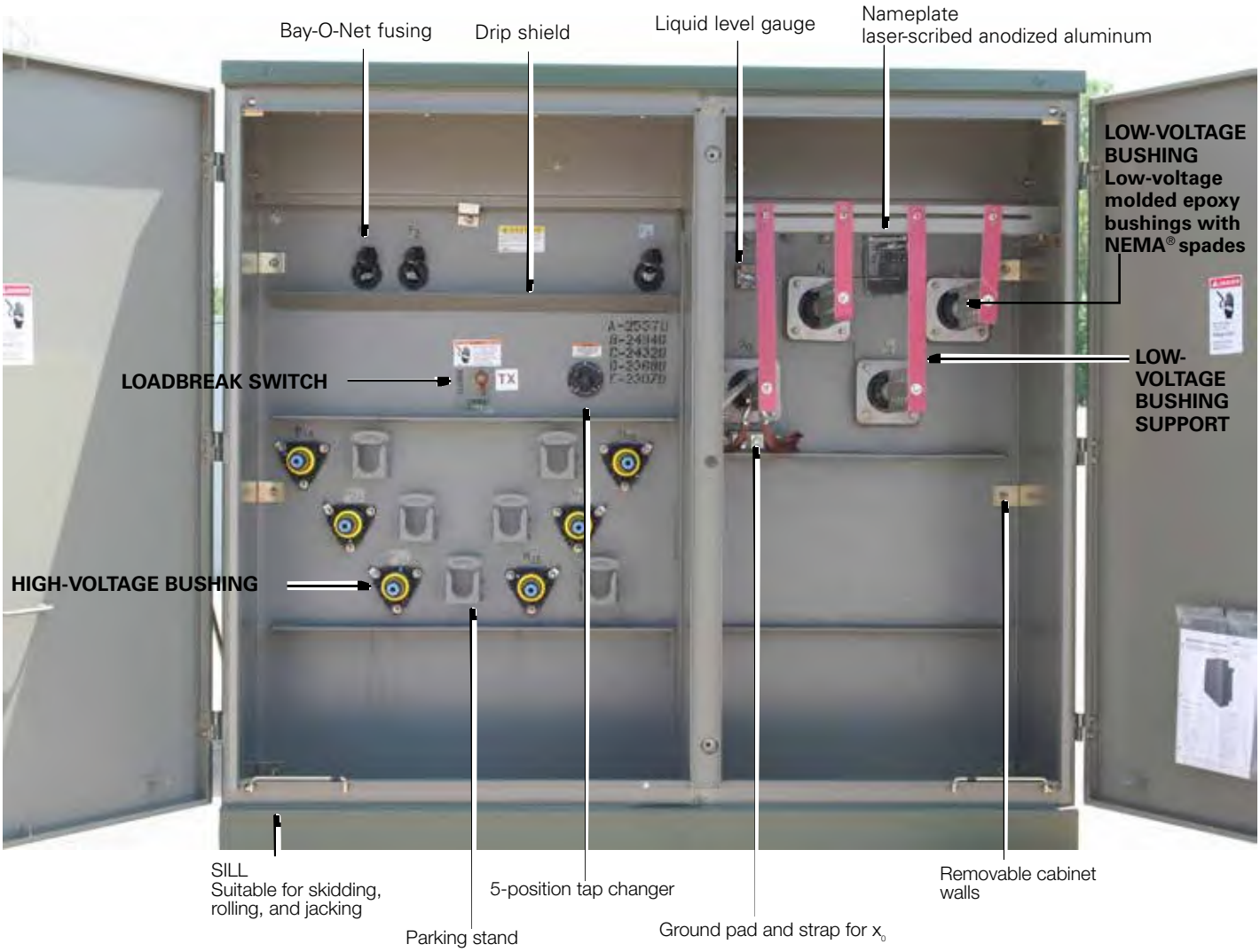


Figure 1. Three-phase pad-mounted compartmental type transformer.

Table 1. Product Scope

Type	Three Phase, 50 or 60 Hz, 65 °C Rise (55 °C, 55/65 °C), 65/75 °C, 75 °C
Fluid Type	Mineral oil or Envirotemp™ FR3™ fluid
Coil Configuration	2-winding or 4-winding or 3-winding (Low-High-Low), 3-winding (Low-Low-High)
Size	45 – 10,000 kVA
Primary Voltage	2,400 – 46,000 V
Secondary Voltage	208Y/120 V to 14,400 V
Specialty Designs	Inverter/Rectifier Bridge
	K-Factor (up to K-19)
	Vacuum Fault Interrupter (VFI)
	UL® Listed & Labeled and Classified
	Factory Mutual (FM) Approved®
	Solar/Wind Designs
	Differential Protection
	Seismic Applications (including OSHPD)
	Hardened Data Center

Table 2. Three-Phase Ratings

Three-Phase 50 or 60 Hz
kVA Available[1]: 45, 75, 112.5, 150, 225, 300, 500, 750, 1000, 1500, 2000, 2500, 3000, 3750, 5000, 7500, 10000

[1]Transformers are available in the standard ratings and configurations shown or can be customized to meet specific needs.

Table 3. Impedance Voltage

	Low-voltage rating		
Rating (kVA)	**≤ 600 V**	**2400 Δ through 4800 Δ**	**6900 Δ through 13800GY/7970 or 13800 Δ**
45-75	2.70-5.75	2.70-5.75	2.70-5.75
112.5-300	3.10-5.75	3.10-5.75	3.10-5.75
500	4.35-5.75	4.35-5.75	4.35-5.75
750-2500	5.75	5.75	5.75
3750	5.75	5.75	6.00
5000		6.00	6.50

Note: The standard tolerance is ± 7.5%

Table 4. Audible Sound Levels

	NEMA® TR-1 Average
Self-Cooled, Two Winding kVA Rating	**Decibels (dB)**
45-500	56
501-700	57
701-1000	58
1001-1500	60
1501-2000	61
2001-2500	62
2501-3000	63
3001-4000	64
4001-5000	65
5001-6000	66
6001-7500	67
7501-10000	68

Table 5. Insulation Test Levels

KV Class	Induced Test 180 or 400 Hz 7200 Cycle	kV BIL Distribution	Applied Test 60 Hz (kV)
1.2	Twice Rated Voltage	30	10
2.5		45	15
5		60	19
8.7		75	26
15		95	34
25		125	40
34.5		150	50

Table 6. Temperature Rise Ratings 0-3300 Feet (0-1000 meters)

	Standard	Optional
Unit Rating (Temperature Rise Winding)	65 °C	55 °C, 55/65 °C, 75 °C
Ambient Temperature Max	40 °C	50 °C
Ambient Temperature 24 Hour Average	30 °C	40 °C
Temperature Rise Hotspot	80 °C	65 °C

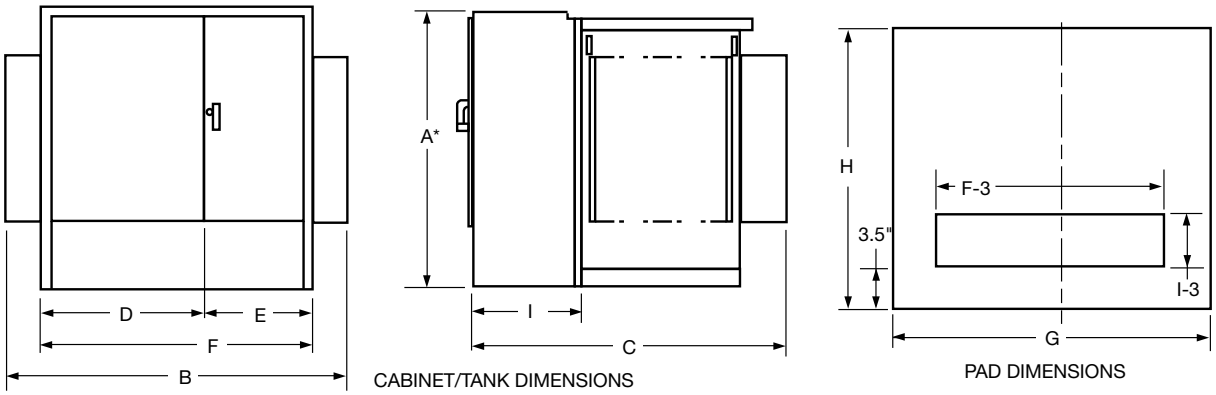


Figure 2. Transformer and pad dimensions.

* Add 9" for Bay-O-Net fusing.

Table 7. Fluid-filled—aluminum windings 55/65 °C Rise[1]

65° Rise	DEAD-FRONT—LOOP OR RADIAL FEED—BAY-O-NET FUSING OIL FILLED—ALUMINUM WINDINGS										
	OUTLINE DIMENSIONS (in.)									Gallons of	Approx. Total
kVA Rating	A*	B	C	D	E	F	G	H	I	Fluid	Weight (lbs.)
45	50	68	39	42	26	68	72	43	20	110	2,100
75	50	68	39	42	26	68	72	43	20	115	2,250
112.5	50	68	49	42	26	68	72	53	20	120	2,350
150	50	68	49	42	26	68	72	53	20	125	2,700
225	50	72	51	42	30	72	76	55	20	140	3,150
300	50	72	51	42	30	72	76	55	20	160	3,650
500	50	89	53	42	30	72	93	57	20	190	4,650
750	64	89	57	42	30	72	93	61	20	270	6,500
1000	64	89	59	42	30	72	93	63	20	350	8,200
1500	73	89	86	42	30	72	93	90	24	410	10,300
2000	73	72	87	42	30	72	76	91	24	490	12,500
2500	73	72	99	42	30	72	76	103	24	530	14,500
3000	73	84	99	46	37	84	88	103	24	620	16,700
3750	84	85	108	47	38	85	88	112	24	660	19,300
5000	84	96	108	48	48	96	100	112	24	930	25,000
7500	94	102	122	54	48	102	100	126	24	1,580	41,900

1 Weights, gallons of fluid, and dimensions are for reference only and not for construction. Please contact Eaton for exact dimensions.

* Add 9" for Bay-O-Net fusing.

Table 8. Fluid-Filled—Copper Windings 55/65 °C Rise[1]

65° Rise	DEAD-FRONT—LOOP OR RADIAL FEED—BAY-O-NET FUSING OIL FILLED—COPPER WINDINGS										
	OUTLINE DIMENSIONS (in.)									Gallons of	Approx. Total
kVA Rating	A*	B	C	D	E	F	G	H	I	Fluid	Weight (lbs.)
45	50	64	39	34	30	64	69	43	20	110	2,100
75	50	64	39	34	30	64	69	43	20	115	2,350
112.5	50	64	49	34	30	64	69	53	20	115	2,500
150	50	64	49	34	30	64	69	53	20	120	2,700
225	50	64	51	34	30	64	73	55	20	140	3,250
300	50	64	51	34	30	64	75	55	20	160	3,800
500	50	81	53	34	30	64	85	57	20	200	4,800
750	64	89	57	42	30	72	93	61	20	255	6,500
1000	64	89	59	42	30	72	93	63	20	300	7,800
1500	73	89	86	42	30	72	93	90	24	410	10,300
2000	73	72	87	42	30	72	76	91	24	420	11,600
2500	73	72	99	42	30	72	76	103	24	500	14,000
3000	73	84	99	46	37	84	88	103	24	720	18,700
3750	84	85	108	47	38	85	88	112	24	800	20,500
5000	84	96	108	48	48	96	100	112	24	850	25,000
7500	94	102	122	54	48	102	100	126	24	1,620	46,900

[1] Weights, gallons of fluid, and dimensions are for reference only and not for construction. Please contact Eaton for exact dimensions.

* Add 9" for Bay-O-Net fusing.

Standard features

Connections and neutral configurations

- Delta - Wye: Low voltage neutral shall be a fully insulated X0 bushing with removable ground strap.
- Grounded Wye-Wye: High voltage neutral shall be internally tied to the low voltage neutral and brought out as the H0X0 bushing in the secondary compartment with a removable ground strap.
- Delta-Delta: Transformer shall be provided without a neutral bushing.
- Wye-Wye: High voltage neutral shall be brought out as the H0 bushing in the primary compartment and the low voltage neutral shall be brought as the X0- bushing in the secondary compartment.
- Wye-Delta: High voltage neutral shall be brought out as the H0 bushing in the primary compartment. No ground strap shall be provided (line to line rated fusing is required).

High and low voltage bushings

- 200 A bushing wells (15, 25, and 35 kV)
- 200 A, 35 kV Large Interface
- 600 A (15, 25, and 35 kV) Integral bushings (dead-front)
- Electrical-grade wet-process porcelain bushings (live-front)

Tank/cabinet features

- Bolted cover for tank access (45-2500 kVA)
- Welded cover with hand hole (>2500 kVA)
- Three-point latching door for security
- Removable sill for easy installation
- Lifting lugs (4)
- Stainless steel cabinet hinges and mounting studs
- Steel divider between HV and LV compartment
- 20" Deep cabinet (45-1000 kVA)
- 24" Deep cabinet (1500-7500 kVA)
- 30" Deep cabinet (34.5/19.92 kV)
- Pentahead captive bolt
- Stainless steel 1-hole ground pads (45-500 kVA)
- Stainless steel 2-hole ground pads (750-10,000 kVA)
- Parking Stands (dead-front)

Valves/plugs

- One-inch upper filling plug
- One-inch drain plug (45-500 kVA)
- One-inch combination drain valve with sampling device in low voltage compartment (750-10,000 kVA)
- Automatic pressure relief valve

Nameplate

- Laser-scribed anodized aluminum nameplate

Figure 3. Drain valve with sampler.

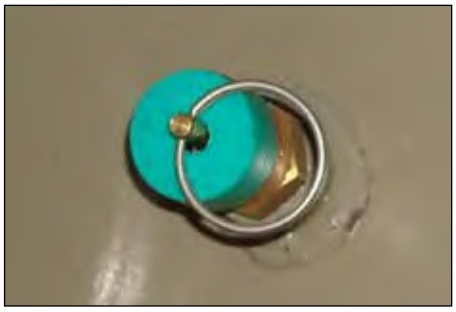


Figure 4. Automatic Pressure relief valve.

Figure 5. Liquid level gauge.

Figure 6. External Gauges.

Figure 7. External visible break with gauges.

Optional features

High and low voltage bushings

- 200 A (15, 25 kV) bushing inserts
- 200 A (15, 25 kV) feed thru inserts
- 200 A (15, 25 kV) (HTN) bushing wells with removable studs
- High-voltage 600 A (15, 25, 35 kV) deadbreak one-piece bushings
- Low voltage 6-, 8-holes spade
- Low voltage 12-, 16-, 20-holes spade (750-2500 kVA)
- Low voltage bushing supports

Tank/cabinet features

- Stainless steel tank base and cabinet
- Stainless steel tank base, cabinet sides and sill
- 100% stainless steel unit
- Service entrance (2 inch) in sill or cabinet side
- Touch-up paint (domestic)
- Copper ground bus bar
- Kirk-Key provisions
- Nitrogen blanket
- Bus duct cutout

Special designs

- Factory Mutual (FM)
- UL® Classified
- Triplex
- High altitude
- K-Factors
- Step-up
- Critical application
- Modulation transformers
- Seismic applications (including OSHPD)

Switches

- One, two, or three On/Off loadbreak switches
- 4-position loadbreak V-blade switch or T-blade switch
- Delta-wye switch
- 3-position V-Blade selector switch
- 100 A, 150 A, 300 A tap changers
- Dual voltage switch
- Visible break with VFI interrupter interlock
- External visible break (15, 25, and 35 kV, up to 3 MVA)
- External visible break with gauges (15, 25, and 35 kV, up to 3 MVA)

Gauges and devices

- Liquid level gauge (optional contacts)
- Pressure vacuum gauge (optional contacts and bleeder)
- Dial-type thermometer (optional alarm contacts)
- Cover mounted pressure relief device (optional alarm contacts)
- Ground connectors
- Hexhead captive bolt
- Molded case circuit breaker mounting provisions
- External gauges in padlockable box

Overcurrent protection

- Bay-O-Net fusing (Current sensing, dual sensing, dual element, high amperage overload)
- Bay-O-Net expulsion fuse in series with a partial range under-oil ELSP current limiting fuse (below 23 kV)
- Cartridge fusing in series with a partial range under-oil ELSP current limiting fuse (above 23 kV)
- MagneX™ interrupter with ELSP current-limiting fuse
- Vacuum Fault Interrupter (VFI)
- Visible break window
- Fuse/switch interlock

Valves/plugs

- Drain/sampling valve in high-voltage compartment
- Globe type upper fill valve

Overvoltage protection

- Distribution-, intermediate-, or station-class surge arresters
- Elbow arresters (for dead-front connections)

Metering/fan/control

- Full metering package
- Current Transformers (CTs)
- Metering Socket
- NEMA® 4 control box (optional stainless steel)
- NEMA® 7 control box (explosion proof)
- Fan Packages

Testing

- Customer test witness
- Customer final inspection
- Zero Sequence Impedance Test
- Heat Run Test
- ANSI® Impulse Test
- Audible Sound Level Test
- RIV (Corona) Test
- Dissolved Gas Analysis (DGA) Test
- 8- or 24-Hour Leak Test

Coatings (paint)

- ANSI® Bell Green
- ANSI® #61 Light Gray
- ANSI® #70 Sky Gray
- Special paint available per request

Nameplate

- Stainless steel nameplate

Decals and labels

- High voltage warning signs
- Mr. Ouch
- Bi-lingual warning
- DOE compliant
- Customer stock code
- Customer stenciling
- Shock and arc flash warning decal
- Non-PCB decal

Construction

Core

The three-legged, step-lap mitered core construction is manufactured using a high-quality cutting machine. For maximum efficiency, cores are precisely stacked, virtually eliminating gaps in the corner joints.

Five-legged wound core or shell-type triplex designs are used for wye-wye connected transformers, and other special transformer designs.

Cores are manufactured with precision cut, burr-free, grain-oriented silicon steel or amorphous metal, depending on customer preference or optimal material based upon performance requirements. Many grades of core steel are available for optimizing core loss efficiency.

Coils

Pad-mounted transformers feature a rectangular coil configuration with wire-wound, high-voltage primaries and sheet-wound secondaries. The design minimizes axial stress developed by short circuits and provides for magnetic balancing of tap connections.

Coils are wound using the highest quality winding machines providing exacting tension control and conductor placement for superior short-circuit strength and maximum efficiency.

Extra mechanical strength is provided by diamond pattern, epoxy-coated paper insulation, used throughout the coil, with additional epoxy at heavy stress points. The diamond pattern distribution of the epoxy and carefully arranged ducts, provide a network of passages through which cooling fluid can freely circulate.

Coil assemblies are heat-cured under calculated hydraulic pressure to ensure performance against short-circuit forces.

Core and coil assemblies

Pad-mounted transformer core and coil assemblies are braced with heavy steel ends to prevent the rectangular coil from distorting under short-circuit conditions. Plates are clamped in place using presses, and welded or bolted to form a solid core and coil assembly. Core and coil assemblies exceed ANSI® and IEEE® requirements for short-circuit performance. Due to the rigidity of the design, impedance shift after short-circuit is comparable to that of circular wound assemblies.

Tanks

Transformer tanks are designed for high strength and ease of handling, installation, and maintenance. Tanks are welded using precision-cut, hot rolled, pickled and oiled steel. They are sealed to protect the insulating fluid and other internal components.

Transformer tanks are pressure-tested to withstand 7 psig without permanent distortion and 15 psig without rupture.

Tank finish

An advanced multi-stage finishing process exceeds IEEE Std C57.12.28™-2014 standards. The eight-stage pre-treatment process assures coating adhesion and retards corrosion. It converts tank surfaces to a nonmetallic, water insoluble iron phosphate coating.

The paint method consists of two distinct layers of paint. The first is an epoxy primer (E-coat) layer which provides a barrier against moisture, salt and corrosives. The two-component urethane final coat seals and adds ultraviolet protection.

Vacuum processing

Transformers are dried and filled with filtered insulating fluid under vacuum, while secondary windings are energized. Coils are heated to drive out moisture, ensuring maximum penetration of fluid into the coil insulation system.

Insulating fluid

Eaton's Cooper Power series transformers are available with electrical-grade mineral insulating oil or Envirotemp™ FR3™ fluid. The highly refined fluids are tested and degassed to assure a chemically inert product with minimal acid ions. Special additives minimize oxygen absorption and inhibit oxidation. To ensure high dielectric strength, the fluid is re-tested for dryness and dielectric strength, refiltered, heated, dried, and stored under vacuum before being added to the completed transformer.

Eaton's Cooper Power series transformers filled with Envirotemp™ FR3™ fluid enjoy unique fire safety, environmental, electrical, and chemical advantages, including insulation life extending properties.

A bio-based, sustainable, natural ester dielectric coolant, Envirotemp™ FR3™ fluid quickly and thoroughly biodegrades in the environment and is non-toxic per acute aquatic and oral toxicity tests.

Building for Environmental and Economic Sustainability (BEES) total life cycle assessment software, utilized by the US Dept. of Commerce, reports its overall environmental performance impact score at 1/4th that reported for mineral oil. Envirotemp™ FR3™ fluid has also earned the EPA Environmental Technology Verification of transformer materials.

With a fire point of 360 °C, Envirotemp™ FR3™ fluid is FM Approved® and Underwriters Laboratories (UL®) Classified "Less-Flammable" per NEC® Article 450-23, fitting the definition of a Listed Product per NEC®.

Figure 8. VFI transformer with visible break.

Pad-mounted VFI transformer

Eaton's Cooper Power series VFI transformer combines a conventional distribution transformer with the proven Vacuum Fault Interrupter (VFI). This combination provides both voltage transformation and transformer over current protection in one space saving and money saving package. The pad-mounted VFI transformer protects the transformer and provides proper coordination with upstream protective devices. When a transformer fault or overload condition occurs, the VFI breaker trips and isolates the transformer.

The three-phase VFI breaker has independent single-phase initiation, but is three-phase mechanically gang-tripped. A trip signal on any phase will open all three phases. This feature eliminates single-phasing of three phase loads. It also enables the VFI breaker to be used as a three-phase load break switch.

Due to the resettable characteristics of the VFI breaker, restoring three-phase service is faster and easier.

The sealed visible break window and switch is an option that can be installed to provide visible break contact. This feature provides enhanced safety and allows an operator to see if the loadbreak switch contacts are in an open or closed position before performing

maintenance.

Envirotran™ FM Approved special protection transformer

Eaton's Cooper Power series Envirotran™ transformer is FM Approved and suitable for indoor locations. Factory Mutual Research Corporation's (FMRC) approval of the Envirotran transformer line makes it easy to comply with and verify compliance with Section 450.23, 2008 NEC, Less-Flammable Liquid-Filled Transformer Requirements for both indoor and outdoor locations.

Envirotran FM Approved transformers offer the user the benefit of a transformer that can be easily specified to comply with NEC, and makes FM Safety Data Sheet compliance simpler, while also providing maximum safety and flexibility for both indoor and outdoor installations.

Because the "FM Approved" logo is readily visible on the transformer and its nameplate, NEC compliance is now easily verifiable by the inspector.

Envirotran FM Approved transformers are manufactured under strict compliance with FMRC Standard 3990 and are filled with

FM APPROVED

FM Approved Envirotemp™ FR3™ fluid, a fire-resistant dielectric coolant.

Special application transformers

Data Center transformer

With focus rapidly shifting from simply maximizing uptime and supporting demand to improving energy utilization, the data center industry is continually looking for methods to increase its energy efficiency and reliability. Utilizing cutting edge technology, Eaton's Cooper Power series Hardened Data Center (HDC) transformers are the solution. Designed with special attention given to surge protection, HDC liquid-filled transformers provide superior performance under the harshest electrical environments. Contrary to traditional dry-type units, HDC transformers provide unsurpassed reliability, overloadability, operational life, efficiency, thermal loading and installed footprint. These units have reliably served more than 100 MW of critical data center capacity for a total of more than 6,000,000 hours without any reported downtime caused by a thermal or short-circuit coil failure.

The top priority in data center operations is uninterrupted service. Envirotran HDC transformers from Eaton, having substantially higher levels of insulation, are less susceptible to voltage surges. Eaton has experienced zero failures due to switching transients. The ANSI® and IEEE® standard impulse withstand ratings are higher for liquid-filled transformers, making them less susceptible to insulation failure. The Envirotran HDC transformer provides ultimate protection by increasing the BIL rating one level higher than standard liquid-filled transformer ratings. The cooling system of liquid-filled transformers provides better protection from severe overloads—overloads that can lead to significant loss of life or failure.

Data center design typically includes multiple layers of redundancy, ensuring maximum uptime for the critical IT load. When best in class transformer manufacturing lead times are typically weeks, not days, an unexpected transformer failure will adversely affect the facility's reliability and profitability. Therefore, the ability to determine the electrical and mechanical health of a transformer can reduce the probability of costly, unplanned downtime. Routine diagnostic tests, including key fluid properties and dissolved gas analysis (DGA), can help determine the health of a liquid-filled transformer. Although sampling is not required for safe operation, it will provide the user with valuable information, leading to scheduled repair or replacement, and minimizing the duration and expense of an outage. With a dry-type transformer, there is no reliable way to measure the health or likelihood of an impending failure.

Solar transformer

As a result of the increasing number of states that are adopting aggressive Renewable & Alternative Energy Portfolio Standards, the solar energy market is growing—nearly doubling year over year. Eaton, a key innovator and supplier in this expanding market, is proud to offer its Cooper Power series Envirotran transformers specifically designed for Solar Photovoltaic medium-voltage applications. Eaton is working with top solar photovoltaic developers, integrators and inverter manufacturers to evolve the industry and change the way we distribute power.

In accordance with this progressive stance, every Envirotran Solar transformer is filled with non-toxic, biodegradable Envirotemp™ FR3™ dielectric fluid, made from renewable seed oils. On top of its biodegradability, Envirotemp™ FR3™ fluid substantially extends the life of the transformer insulation, saving valuable resources. What better way to distribute green power than to use a green transformer. In fact, delaying conversion to Envirotran transformers places the burden of today's environmental issues onto tomorrow's generations. Eaton can help you create a customized transformer, based on site specific characteristics including: temperature profile, site altitude, solar profile and required system life. Some of the benefits gained from this custom rating include:

- Reduction in core losses
- Improved payback on investment
- Reduction in footprint
- Improved fire safety
- Reduced environmental impact

For the solar photovoltaic industry, Eaton is offering standard step up transformers and dual secondary designs, including 4-winding, 3-winding (Low-High-Low) and 3-winding (Low-Low-High) designs.

Wind transformer

Eaton is offering custom designs for renewable energy power generation. Eaton manufactures its Cooper Power series Generator Step-Up (GSU) transformers for installation at the base of every wind turbine. Additionally, grounding transformers are available for wind power generation.

DOE efficiency

The United States Department of Energy (DOE) has mandated efficiency values for most liquid type, medium voltage transformers. As a result, all applicable Eaton's Cooper Power series transformers 2500 kVA and below conform to efficiency levels as specified in the DOE ruling "10 CFR Part 431 Energy Conservation Program".

Underwriters Laboratories® (UL®) Listed and Labeled/ Classified

The Envirotran transformer from Eaton can be specified as UL® Listed & Labeled, and/or UL® Classified. Underwriters Laboratories (UL®) listing is a verification of the design and construction of the transformer to the ANSI® and IEEE® standards. UL® listing generally is the most efficient, cost-effective solution for complying with relevant state and local electrical codes. UL® Combination Classification/Listing is another way in which to comply with Section 450.23, 2008 NEC® requirements. This combines the UL® listed transformer with a UL® Classified Less-Flammable Liquid and complies with the use restrictions found within the liquid Classification.

c UL US LISTED

K-Factor transformer

With a drastic increase in the use of ferromagnetic devices, arcing devices, and electric power converters, higher frequency loads have increased significantly. This harmonic loading has the potential to generate higher heat levels within a transformer's windings and leads by as much as 300%. Harmonic loading has the potential to induce premature failure in standard-design distribution transformers.

In addition to standard UL® "K-Factor" ratings, transformers can be designed to customer-provided specifications detailing precise loading scenarios. Onsite measurements of magnitude and frequency, alongside harmonic analysis of the connected load can be performed by Eaton engineers or a third party consultant. These field measurements are used to determine exact customer needs and outline the transformer specifications.

Eaton will design harmonic-resistant transformers that will be subjected to the unique harmonic loads. These units are designed to maintain normal temperature rise under harmonic, full-load conditions. Standard UL® "K-Factor" designs can result in unnecessary costs when the "next-highest" K-Factor must be selected for a calculated design factor. To save the customer these unnecessary costs, Eaton can design the transformer to the specific harmonic spectrum used in the application. Eaton's Cooper Power series K-factor transformers are filled with mineral oil or Envirotemp™ FR3™ fluid and enjoy the added benefits of dielectric cooling such as higher efficiencies than dry-type transformers.

Modulation transformer

Bundled with an Outboard Modulation Unit (OMU) and a Control and Receiving Unit (CRU), a Modulation Transformer Unit (MTU) is designed to remotely achieve two way communication.

The use of an MTU reduces travel time and expense versus traditional meter reading performed by high voltage electricians. Additionally, with MTU it is possible to manage and evaluate energy consumption data, providing reduced metering costs and fewer tenant complaints.

An MTU utilizes existing utility infrastructure, therefore eliminating the need to engineer and construct a dedicated communication network.

Figure 9. Modular transformer.

Inverter/rectifier bridge

Eaton complements its range of applications for transformers by offering dual winding designs. These designs are intended for connection to 12-pulse rectifier bridges.

Product attributes

To set us apart from other transformer manufactures, Eaton includes the following guarantees with every three-phase pad-mounted transformer.

Engineered to order (ETO)

Providing the customer with a well developed, cost-effective solution is the number one priority at Eaton. Using customer specifications, Eaton will work with the customer from the beginning to the end to develop a solution to fit their needs. Whether it is application specific, site specific, or a uniquely specified unit, Eaton will provide transformers with the best in class value and performance, saving the customer time and money.

Made in the U.S.A.

Eaton's three-phase pad-mounted transformers are produced right here in the United States of America. Our manufacturing facilities are positioned strategically for rapid shipment of products. Furthermore, should the need arise, Eaton has a broad network of authorized service repair shops throughout the United States.

Superior paint performance

Protecting transformers from nature's elements worldwide, Eaton's E-coat system provides unrivaled transformer paint life, and exceeds IEEE Std C57.12.28™-2014 and IEEE Std C57.12.29™-2005 standards. In addition to the outside of the unit, each transformer receives a gray E-coat covering in the interior of the tank and cabinet, providing superior rust resistance and greater visibility during service.

If the wide range of standard paint selections does not suit the customer's needs, Eaton will customize the paint color to meet their requirements.

Rectangular coil design

Eaton utilizes a rectangular coil design. This winding technique results in a smaller overall unit footprint as well as reducing the transformer weight. The smaller unit size does not hinder the transformer performance in the least. Units have proven short circuit withstand capabilities up to 10 MVA.

Testing

Eaton performs routing testing on each transformer manufactured including the following tests:

- Insulation Power Factor: This test verifies that vacuum processing has thoroughly dried the insulation system to required limits.
- Ratio, Polarity, and Phase Relation: Assures correct winding ratios and tap voltages; checks insulation of HV and LV circuits. Checks entire insulation system to verify all live-to-ground clearances.
- Resistance: This test verifies the integrity of internal high-voltage and low-voltage connections; provides data for loss upgrade calculations.
- Routine Impulse Tests: The most severe test, simulating a lightning surge. Applies one reduced wave and one full wave to verify the BIL rating.
- Applied Potential: Applied to both high-voltage and low-voltage windings, this test stresses the entire insulation system to verify all live-to-ground clearances.
- Induced Potential: 3.46 times normal plus 1000 volts for reduced neutral designs.
- Loss Test: These design verification tests are conducted to assure that guaranteed loss values are met and that test values are

within design tolerances. Tests include no-load loss and excitation current along with impedance voltage and load loss.

- Leak Test: Pressurizing the tank to 7 psig assures a complete seal, with no weld or gasket leaks, to eliminate the possibility of moisture infiltration or fluid oxidation.

Design performance tests

The design performance tests include the following:

- Temperature Rise: Our automated heat run facility ensures that any design changes meet ANSI® and IEEE® temperature rise criteria.
- Audible Sound Level: Ensures compliance with NEMA® requirements.
- Lightning Impulse: To assure superior dielectric performance, this test consists of one reduced wave, two chopped waves and one full wave in sequence, precisely simulating the harshest conditions.

Thomas A Edison Research and Test Facility

We are constantly striving to introduce new innovations to the transformer industry, bringing you the highest quality transformer for the lowest cost. Eaton's Cooper Power series Transformer Products are ISO 9001 compliant, emphasizing process improvement in all phases of design, manufacture, and testing. We have invested millions of dollars in the Thomas A. Edison Technical Center, our premier research facility in Franksville, Wisconsin affirming our dedication to introducing new innovations and technologies to the transformer industry. This research facility is fully available for use by our customers to utilize our advanced electrical and chemical testing labs.

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

Eaton's Cooper Power Systems Division
2300 Badger Drive
Waukesha, WI 53188
United States
Eaton.com/cooperpowerseries

Printed in USA
Publication No. CA202003EN

For Eaton's Cooper Power series three-phase transformer product information call 1-877-277-4636 or visit: www.eaton.com/cooperpowerseries.

Powering Business Worldwide

SITE USE PERMIT SET

9327 WORTENDYKE RD, BATAVIA, NY 14020
5.0 MWAC RATED SOLAR ELECTRIC SYSTEM

GENERAL NOTES

1. AS CONTAINED HEREIN, "CONTRACTOR" IS ASSUMED TO BE THE EPC PROVIDER HIRED BY THE SYSTEM/PROJECT OWNER.
2. WHEN THERE IS A CONFLICT BETWEEN THESE GENERAL NOTES AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
3. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING: LOCAL BUILDING CODE, LOCAL ELECTRICAL CODE, ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK AND THOSE CODES AND STANDARDS LISTED IN THESE DRAWINGS.
4. THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING A CONSTRUCTION LEVEL DESIGN AND ASSOCIATED DRAWINGS AND DETAILS.
5. COORDINATE THESE DRAWINGS WITH SPECIFICATIONS AND MANUFACTURER INSTALLATION AND OPERATION MANUALS.
6. UNLESS OTHERWISE NOTED, THE DESIGN REPRESENTED ON THESE PLANS IS BASED ON THE INFORMATION AND CRITERIA LISTED IN THE "BASIS OF DESIGN" SECTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SUCH INFORMATION IN PREPARATION OF THE CONSTRUCTION DESIGN.
7. THE EXISTING CONDITIONS REPRESENTED ON THESE PLANS ARE BASED ON PUBLICLY AVAILABLE INFORMATION AND THE SITE DISCOVERY SUMMARIZED IN THESE DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF SUCH INFORMATION AND SUPPLEMENT WITH ANY ADDITIONAL REQUIRED INFORMATION.
8. UNLESS INDICATED AS EXISTING (E), ALL PROPOSED MATERIALS AND EQUIPMENT SHALL BE CONSIDERED TO BE NEW.
9. ALL EQUIPMENT AND COMPONENTS SHALL BE MOUNTED IN COMPLIANCE WITH THE MANUFACTURER'S REQUIREMENTS, CONSTRUCTION DETAILS, AND/OR PRUDENT INDUSTRY STANDARDS.
10. TO THE EXTENT THAT TREES AND OTHER FEATURES AFFECT THE SYSTEM'S PRODUCTION, SUCH PRODUCTION MODELING IS BASED ON THE EXISTING APPROXIMATE HEIGHTS AND LOCATIONS RELATIVE TO THE SYSTEM AND MAY BE IMPACTED AS TREES GROW AND OTHER FEATURES CHANGE.

NEW YORK STATE DEPARTMENT OF AGRICULTURE AND MARKETS

CONSTRUCTION OF THIS PROJECT IS TO COMPLY TO THE EXTENT PRACTICAL WITH THE LATEST NEW YORK STATE DEPARTMENT OF AGRICULTURE AND MARKETS GUIDELINES FOR SOLAR ENERGY PROJECTS – CONSTRUCTION MITIGATION FOR AGRICULTURAL LANDS. THIS INCLUDES COMPLIANCE WITH ENVIRONMENTAL MONITORING, CONSTRUCTION REQUIREMENTS, POST CONSTRUCTION RESTORATION AND POST CONSTRUCTION ENVIRONMENTAL MONITORING AND REMEDIATION.

PROJECT SCOPE

THIS PROJECT CONSISTS OF THE INSTALLATION OF SOLAR MODULES PER THE SYSTEM DESCRIPTION, BELOW. THE MODULES WILL BE INSTALLED ON A TRACKER MOUNTED RACKING SYSTEM. THE MODULES WILL BE WIRED IN SERIES STRINGS AND CONNECTED IN PARALLEL TO THE INVERTER(S), WHICH CONVERT THE PHOTOVOLTAIC OUTPUT POWER FROM DC TO AC. THE SOLAR ELECTRIC SYSTEM WILL BE INTERCONNECTED WITH THE EXISTING SITE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE APPLICABLE ELECTRICAL CODE AND NATIONALGRID REQUIREMENTS.

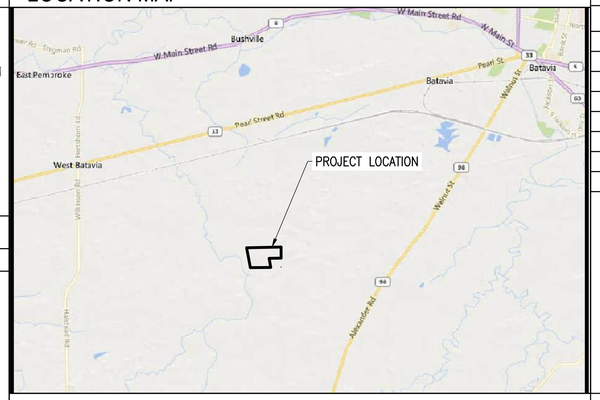
SYSTEM DESCRIPTION

SYSTEM SIZE (DC STC)	5,350.02 kWDC	SYSTEM SIZE (AC)	5,000 KWAC
MODULES	(9386) HYPERION HY-DH144N8	INVERTER(S)	(2) SMA SC 2660-UP-US
STC RATING (W)	570 WDC	CEC EFFICIENCY	98.5 %
MODULES PER STRING	26	AZIMUTH	180
# OF STRINGS	361	TILT ANGLE	+,- 52
RACKING	NEXTRACKER HORIZON	ESTIMATED FOUNDATIONS	1300

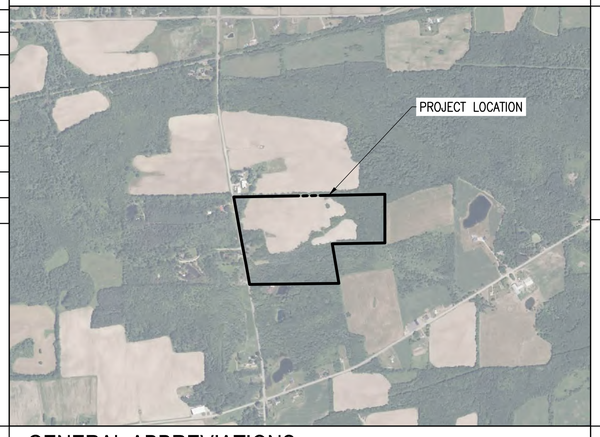
SPECIAL INSPECTIONS

GENERAL CONSTRUCTION SPECIAL INSPECTIONS	CODE/SECTION
1. FIRE RESISTANT PENETRATIONS AND JOINTS	BC 1704.27
2. ENERGY CODE COMPLIANCE INSPECTIONS	BC 110.3.5
FINAL	

LOCATION MAP



AERIAL VIEW



DRAWING LIST

Sheet Number	Sheet Title
T-1.0	TITLE PAGE
	CIVIL
C-1.0	EXISTING CONDITIONS PLAN
C-2.0	TREE CLEARING PLAN
C-3.0	LAYOUT AND MATERIALS PLAN
C-4.0	GRADING AND EROSION CONTROL PLAN
C-4.1	GRADING AND EROSION CONTROL PLAN
C-5.0	CIVIL DETAILS

LOCAL APPROVALS:

TOWN OF BATAVIA:

PLANNING BOARD CHAIR — DATE

TOWN ENGINEER — DATE

APPLICABLE CODES AND STANDARDS

2017 NATIONAL ELECTRICAL CODE
2018 INTERNATIONAL BUILDING CODE WITH NJ AMENDMENTS
UL-1703 – SOLAR MODULES
UL-1741 – INVERTERS, COMBINER BOXES
UL-2703 – RACKING MOUNTING SYSTEMS AND CLAMPING DEVICES FOR PV MODULES

PROJECT DIRECTORY

SYSTEM / PROJECT OWNER
WORTENDYKE ROAD SOLAR 1, LLC.
C/O NEW LEAF ENERGY, INC.
55 TECHNOLOGY DRIVE, SUITE 102
LOWELL, MA 01851

LAND OWNER / HOST
JUDY GREEN
9327 WORTENDYKE RD.
BATAVIA, NY 14020
(678) 617-8225

AUTHORITY HAVING JURISDICTION
TOWN OF BATAVIA
3833 WEST MAIN STREET RD.
BATAVIA, NY 14020
(585) 343-1729

UTILITY
NATIONALGRID

CIVIL ENGINEER
FIRM: ERDMAN ANTHONY & ASSOCIATES
CONTACT: MARC D. KENWARD, P.E.
PHONE: (585) 427-8888

DESIGN ENGINEER
FIRM: NEW LEAF ENERGY, INC.
CONTACT: DAO LIN, P.E.
PHONE: (347) 242-8598

GENERAL ABBREVIATIONS

(E)	EXISTING
AHJ	AUTHORITY HAVING JURISDICTION
AL	ALUMINUM
APPROX	APPROXIMATE
ARY	ARRAY
BLDG	BUILDING
NLE	NEW LEAF ENERGY
CL	CENTERLINE
DAS	DATA ACQUISITION SYSTEM
DIA	DIAMETER
DO	DITTO
EW	EAST-WEST
ESS	ENERGY STORAGE SYSTEM
ESU	ENERGY STORAGE UNIT
FBO	FURNISHED BY OTHERS
FF	FORWARD FACING
GALV	GALVANIZED
HDG	HOT DIP GALVANIZED
HVAC	HEATING VENTILATION AND AIR CONDITIONING
ID	INSIDE DIAMETER
MFR	MANUFACTURER
MOD	SOLAR MODULE
NS	NORTH-SOUTH
NTS	NOT TO SCALE
OAE	OR APPROVED EQUAL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PCS	POWER CONVERSION SYSTEM
PV	PHOTOVOLTAIC
PVC	POLY VINYL CHLORIDE
SCH	SCHEDULE
SS	STAINLESS STEEL
SSS	SOLAR SUPPORT STRUCTURE
STC	STANDARD TEST CONDITIONS
TBD	TO BE DETERMINED
TP	TAMPER PROOF
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VIF	VERIFY IN FIELD
WP	WEATHER PROOF

REV 1.0

BASIS OF DESIGN

BOUNDARY & TOPOGRAPHIC SURVEY:
LAWSON SURVEYING & MAPPING
JANUARY 2024

WETLAND STREAM AND DELINEATION REPORT:
LABELLA ASSOCIATES, D.P.C.
DECEMBER 2023

new leaf energy
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Rochester, NY 14620
Telephone: 585.427.8888
www.erdmananthony.com

NOT FOR CONSTRUCTION

STATE OF NEW YORK — MARC DAVID KENWARD — 070251 — PROFESSIONAL ENGINEER
4/1/24

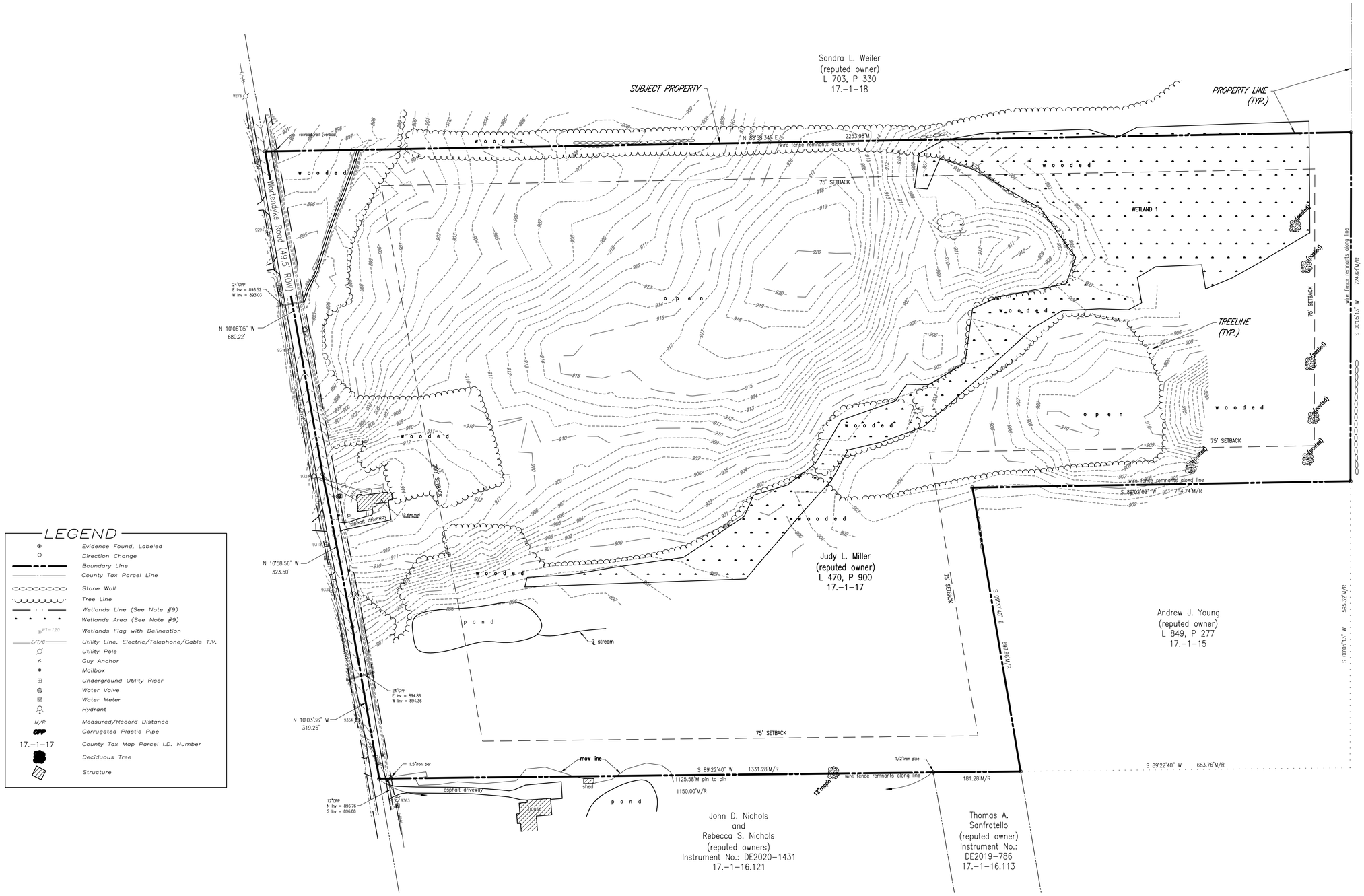
SITE USE PERMIT SET
SITE: 9327 WORTENDYKE RD
BATAVIA, NY 14020

PROJECT NUMBER: 120-1542

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
0	04/1/24	DL/KJR	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

T-1.0
TITLE PAGE



LEGEND

- Evidence Found, Labeled
- Direction Change
- Boundary Line
- County Tax Parcel Line
- Stone Wall
- Tree Line
- Wetlands Line (See Note #9)
- Wetlands Area (See Note #9)
- #1-120 — Wetlands Flag with Delineation
- E/T/C — Utility Line, Electric/Telephone/Cable T.V.
- Utility Pole
- Guy Anchor
- Mailbox
- Underground Utility Riser
- Water Valve
- Water Meter
- Hydrant
- M/R — Measured/Record Distance
- CPP — Corrugated Plastic Pipe
- 17.-1-17 — County Tax Map Parcel I.D. Number
- Deciduous Tree
- Structure

EXISTING CONDITIONS PLAN

SCALE: 1" = 100'

0 100' 200'

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE

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NOT FOR CONSTRUCTION

STATE OF NEW YORK
MARC DAVID KENNEDY
Resident
027029
PROFESSIONAL ENGINEER

4/1/24

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BATAVIA, NY 14020

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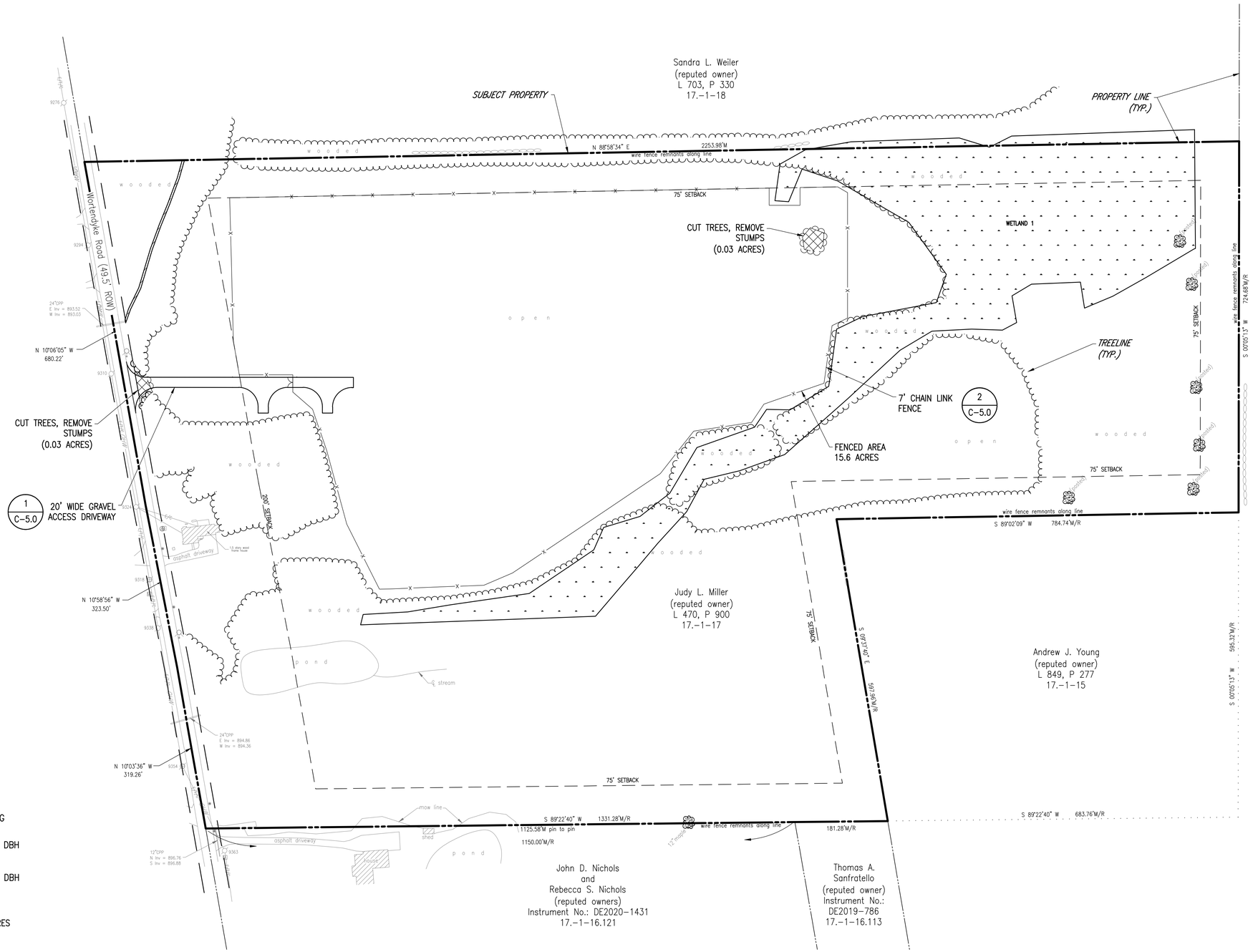
C-1.0
EXISTING CONDITIONS PLAN



LEGEND:

- TREE CUTTING ONLY
- TREE CUTTING AND STUMPING
- BRUSH MOWING, TREES >4" DBH CUTTING ONLY
- BRUSH MOWING, TREES >4" DBH CUTTING AND STUMPING

TREE CUTTING ONLY = 0.06 ACRES
TREE CUTTING AND STUMPING = 0.0 ACRES
TOTAL = 0.06 ACRES

TREE CLEARING PLAN

SCALE: 1" = 100'

0 100' 200'

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE

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NOT FOR CONSTRUCTION

STATE OF NEW YORK
MARC DAVID KENNEDY
PROFESSIONAL ENGINEER
No. 127025

4/1/24

SITE USE PERMIT SET
SITE: 9327 WORTENDYKE RD
BATAVIA, NY 14020

PROJECT NUMBER: 120-1542

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
0	04/1/24	DL/KJR	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

C-2.0

TREE CLEARING PLAN

P1: DIRECTORY MAP
LOCATION: ALL VEHICLE GATES
BACKGROUND COLOR: RED; TEXT COLOR: WHITE

CAUTION

POWER TO THIS SITE IS SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECTING MEANS LOCATED AS SHOWN

SITE MAP

8" x 8"

P2: CONTACT INFORMATION
LOCATION: ALL VEHICLE GATES
BACKGROUND COLOR: YELLOW; TEXT COLOR: BLACK

SOLAR OWNER

NAME: TBD

TEL CONTACT: TBD

8" x 3½"

P3: DANGEROUS VOLTAGE
LOCATION: ALL ACCESS POINTS TO THE SITE
NEC: 110.27(C)
BACKGROUND COLOR: ORANGE; TEXT COLOR: BLACK

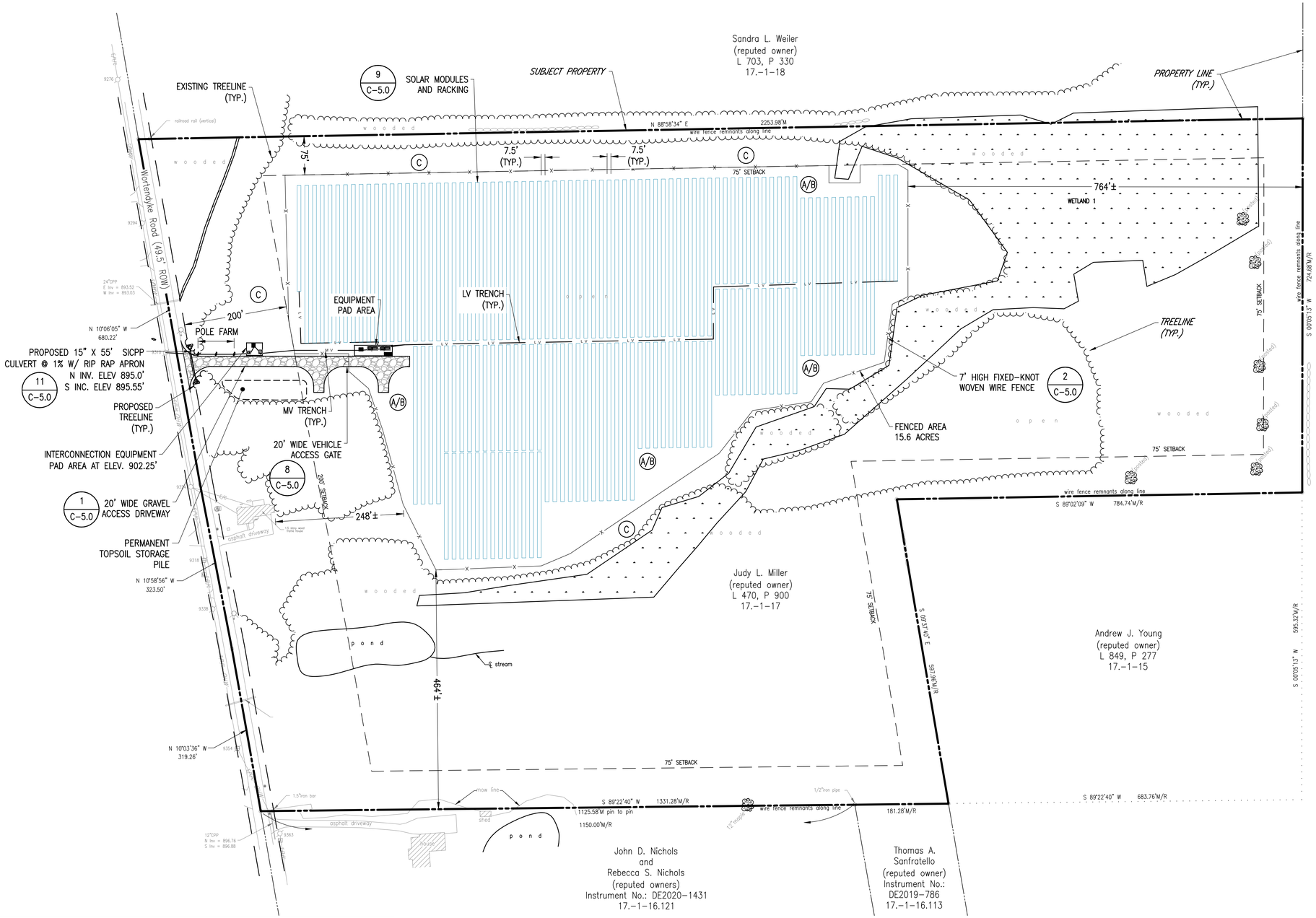
WARNING

DANGEROUS VOLTAGE
KEEP OUT
QUALIFIED PERSONNEL ONLY

10" x 7"

NOTE:

1. ALL GROUND MOUNTED ELECTRICAL EQUIPMENT TO HAVE WARNING AND ADVISORY SIGNAGE PER NATIONAL ELECTRIC CODE.



SEEDING SPECIFICATIONS:			
AREA	LOCATION	NAME/SPECIES	SUPPLIER
A/B	UNDER SOLAR PANELS	HONEY BEE FORAGE MIX; ERNMX-157 (SEE NOTE 1 BELOW)	ERNST SEEDS
A/B	BETWEEN PANEL ROWS & AREA WITHIN FENCE	HONEY BEE FORAGE MIX; ERNMX-157 (SEE NOTE 1 BELOW)	ERNST SEEDS
C	DISTURBED AREA OUTSIDE FENCE	HONEY BEE FORAGE MIX; ERNMX-157 (SEE NOTE 1 BELOW)	ERNST SEEDS
1. BETWEEN DECEMBER 1ST AND APRIL 1ST, EACH TYPE OF SEED SHALL HAVE AN ADDITIONAL 1#/1,000 SF OF WINTER RYE GRASS OR GRAIN RYE GRASS SEED INCLUDED.			
2. IT SHALL BE THE SUBCONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE PROJECT LIMIT OF WORK IS STABILIZED (IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS/REQUIREMENTS/PERMIT APPROVALS) DURING THE DURATION OF THE PROJECT'S CONSTRUCTION.			

LAYOUT AND MATERIALS PLAN

SCALE: 1" = 100'

0 100' 200'

ZONING SUMMARY			
ASSESSORS PARCEL: 17.-1-17	ZONED: AGRICULTURAL/RESIDENTIAL (NOT IN AN AG PRODUCTION ZONE)		
SETBACKS:	REQUIRED:	PROVIDED:	NOTES:
FRONT	200'	200'	TO THE FENCE
SIDE	75'	75'	TO THE FENCE
REAR	N/A	764'±	TO THE FENCE
MAX. HEIGHT	15'	10'±	TOP OF RACK
MAXIMUM LOT COVERAGE (50%):	< 25.65 AC.	15.743 AC.	30.7% (INCLUDES PROPOSED FENCE, DRIVEWAY & EQUIPMENT PADS)
PROPOSED FENCED ARRAY, DRIVEWAY & EQUIPMENT PADS OUTSIDE OF FENCED ARRAY	N/A	15.743 AC.	15.525 AC. (FENCED ARRAY) 0.091 AC. (DRIVEWAY OUTSIDE FENCED ARRAY) 0.034 AC (EQUIPMENT PADS OUTSIDE FENCED ARRAY)

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE

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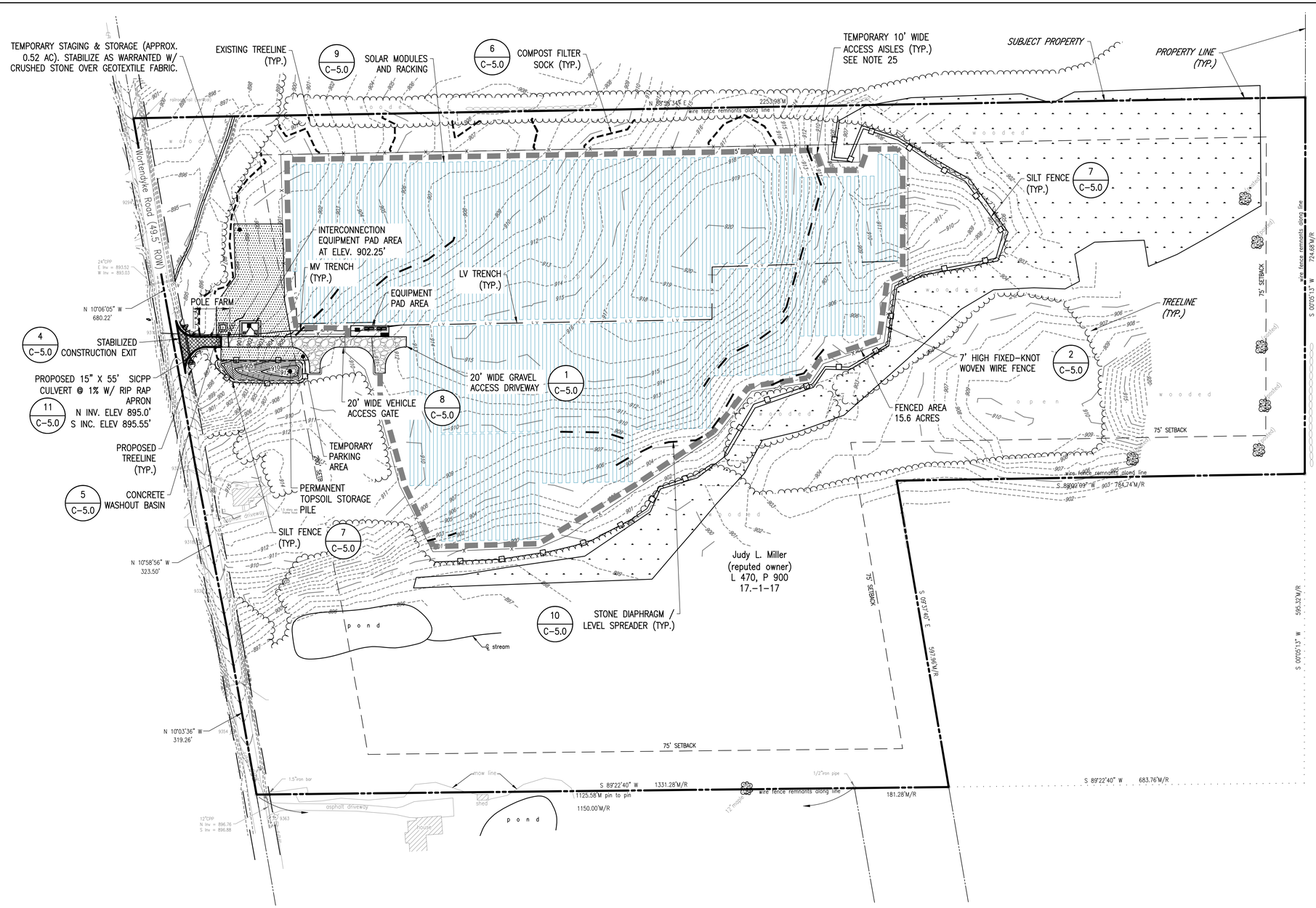
C-3.0
LAYOUT AND MATERIALS PLAN

EROSION AND SEDIMENT CONTROL NOTES:

1. A SPDES PERMIT SHALL BE IN PLACE PRIOR TO COMMENCING ANY EARTH DISTURBANCE. THE SPDES PERMIT # IS (TBD), AND WAS ISSUED ON (DD/MM/20YY).
2. EROSION CONTROLS SHALL BE PROVIDED IN ACCORDANCE WITH THE SEQUENCE OF STAGED CONSTRUCTION PROVIDED IN THE SWPPP. A COPY OF THE APPROVED SWPPP SHALL BE MAINTAINED ON THE SITE.
3. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR DISTURBANCE AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.
4. SEDIMENT BARRIERS SHALL BE INSPECTED AND APPROVED BY THE CEOR BEFORE CONSTRUCTION CAN START.
5. STRAW AND MULCH SHALL BE MOWINGS OF ACCEPTABLE HERBACEOUS GROWTH, FREE OF NOXIOUS WEEDS OR WOODY STEMS, AND SHALL BE DRY WHEN INSTALLED.
6. IN AREAS WHERE SOIL DISTURBANCE ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, THE APPLICATION OF SOIL STABILIZATION MEASURES MUST BE INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN FOURTEEN (14) DAYS FROM THE DATE THE CURRENT SOIL DISTURBANCE ACTIVITY CEASED.
7. SEDIMENT BARRIERS SHALL BE CONSTRUCTED AROUND ALL SOIL STOCKPILE AREAS.
8. CLEAN OUT PROJECT DRAINAGE FEATURES AND STRUCTURES (I.E. CULVERTS, BASINS, SWALES, ETC.) AFTER COMPLETION OF CONSTRUCTION AND AS REQUESTED BY THE CEOR.
9. SEDIMENT COLLECTED DURING CONSTRUCTION BY THE VARIOUS EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM EROSION CONTROL SYSTEMS WHEN THE HEIGHT OF THE SEDIMENT EXCEEDS ONE-HALF OF THE HEIGHT OF THE SEDIMENT CONTROL MEASURE OR IN ACCORDANCE WITH SYSTEMS STANDARD SPECIFICATION.
10. THE "TRAINED CONTRACTOR" IS RESPONSIBLE FOR DAILY INSPECTIONS, MAINTENANCE, AND DIRECTING REPAIR ACTIVITIES.
11. DAMAGED OR DETERIORATED ITEMS WILL BE REPAIRED IMMEDIATELY AFTER IDENTIFICATION OR AS DIRECTED BY THE CONTRACTOR/CEOR.
12. PIPE OUTLETS (IF ANY) SHALL BE STABILIZED WITH STONE. REFER TO DETAILS.
13. TEMPORARY SEEDING (perennial RYE gRASS) SHALL BE AT A RATE OF 45 LBS PER ACRE. DISTURBED AREAS OUTSIDE AND DOWN SLOPE FROM THE CONSTRUCTION LIMITS SHALL BE SIMILARLY SEEDED.
14. WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION DEWATERING SHALL BE FILTERED. A DEWATERING PLAN SHALL BE SUBMITTED FOR APPROVAL BY THE CONTRACTOR TO THE CEOR AND ADDED TO THE SWPPP.
15. WHEN TEMPORARY DRAINAGE IS ESTABLISHED, EROSION/SEDIMENTATION CONTROL MEASURES MAY BE REQUIRED BY THE CEOR AND WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
16. A STABILIZED CONSTRUCTION EXIT SHALL BE PROVIDED. A VEHICLE WASH DOWN FACILITIES SHALL BE PROVIDED IF THE STABILIZED CONSTRUCTION ENTRANCE IS INEFFECTIVE IN PREVENTING SOIL FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL REACHING A PUBLIC OR PRIVATE ROADWAY SHALL BE REMOVED IMMEDIATELY.
17. NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR POLLUTION RUNOFF. NO RE-FUELING SHALL OCCUR WITHIN 100 FEET OF ANY WETLAND RESOURCE AREA AND 200 FEET FROM RIVERFRONT. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
18. THE COST OF REPAIRING EROSION CONTROL MEASURES OR REMOVING SEDIMENT FROM EROSION CONTROL SYSTEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE APPLICABLE EROSION CONTROL ITEM.
19. EROSION CONTROL MEASURES SHALL BE KEPT OPERATIONAL AND MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD OF LAND DISTURBANCE UNTIL PERMANENT SEDIMENT AND EROSION CONTROL MEASURES ARE OPERATIONAL.
20. CONTRACTOR SHALL SPRAY WATER FROM A WATER TRUCK ON DRY AND WINDY DAYS TO PREVENT DUST FROM FORMING. OTHER ALLOWED FORMS OF DUST CONTROL INCLUDE: CALCIUM CHLORIDE.



21. FINAL STABILIZATION MEANS THAT ALL SOIL DISTURBANCE ACTIVITIES HAVE CEASED AND A UNIFORM, PERENNIAL VEGETATIVE COVER WITH A DENSITY OF EIGHTY (80) PERCENT OVER THE ENTIRE PERVIOUS SURFACE HAS BEEN ESTABLISHED; OR OTHER EQUIVALENT STABILIZATION MEASURES, SUCH AS PERMANENT LANDSCAPE MULCHES, ROCK RIP-RAP OR WASHED/CRUSHED STONE HAVE BEEN APPLIED ON ALL DISTURBED AREAS THAT ARE NOT COVERED BY PERMANENT STRUCTURES, CONCRETE OR PAVEMENT.
22. AFTER ALL DISTURBED AREAS HAVE REACHED FINAL STABILIZATION, THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AT THE DIRECTION OF THE CEOR.
23. AFTER THE REMOVAL OF TEMPORARY EROSION CONTROL MEASURES, THE CONTRACTOR SHALL HAND RAKE AND SEED THE AREA OF THE TEMPORARY EROSION CONTROL MEASURE.
24. EROSION CONTROL MEASURES AS SHOWN ON THESE DRAWINGS IS INTENDED TO CONVEY MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES AS NECESSARY TO PREVENT SOIL EROSION AND TO ACCOMPLISH THE PROJECT'S STORMWATER POLLUTION PREVENTION PLAN (SWPPP) OBJECTIVES.
25. TEMPORARY ACCESS ROADS/AISLES TO BE USED FOR DELIVERY & DISTRIBUTION OF MATERIALS THROUGH THE SITE. CONTRACTOR SHALL NOT PLACE ACCESS AISLES THROUGH WETLAND AREAS. TEMPORARY ACCESS AISLES AND TEMPORARY STAGING, STORAGE & PARKING AREAS ARE TO BE DE-COMPACTED AND RESTORED PER SWPPP.
26. ALL EXCESS TOPSOIL IS TO REMAIN ON-SITE, STOCKPILED AND PERMANENTLY STABILIZED WITH SEEDING.
27. PARKING AREA SHALL NOT ENCROACH INTO PUBLIC ROAD RIGHT-OF-WAY. NO PARKING VEHICLES, EQUIPMENT, OR MATERIAL WITH ROAD RIGHT-OF-WAY.

GRADING AND EROSION CONTROL PLAN

SCALE: 1" = 100'

0 100' 200'

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE

new leaf energy
55 TECHNOLOGY DRIVE, SUITE 102
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145 Culver Road, Suite 200
Rochester, NY 14620
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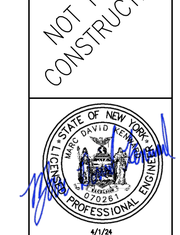
www.erdmananthony.com

NOT FOR CONSTRUCTION



4/1/24

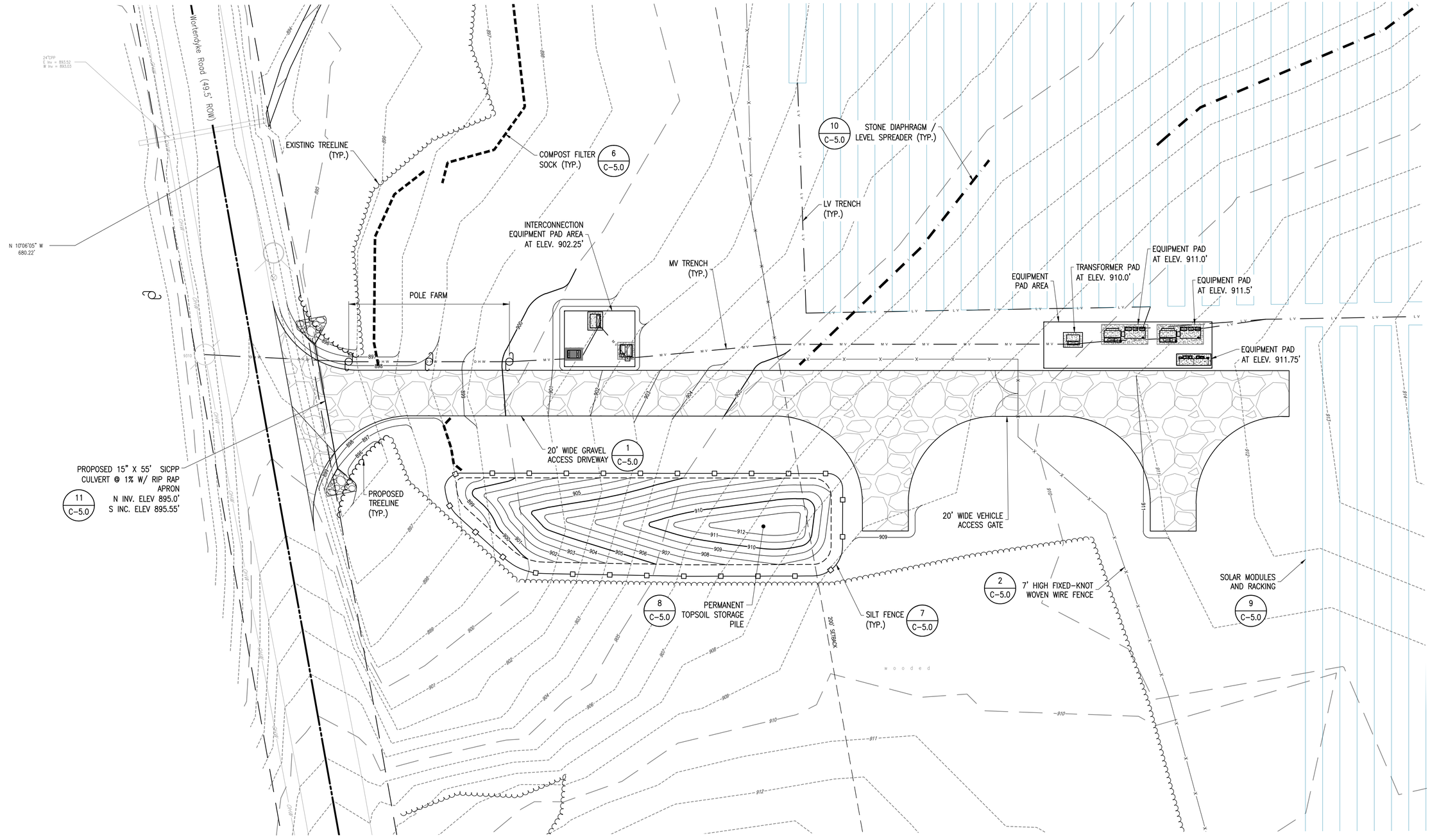
SITE USE PERMIT SET
SITE: 9327 WORTENDYKE RD
BATAVIA, NY 14020

PROJECT NUMBER: 120-1542

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
0	04/1/24	DL/KJR	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

C-4.0
GRADING AND EROSION CONTROL PLAN



PROPOSED ACCESS DRIVEWAY, CULVERT & EQUIPMENT PADS
SCALE: 1:20

GRADING AND EROSION CONTROL PLAN

SCALE: 1" = 20'

0 100' 200'

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
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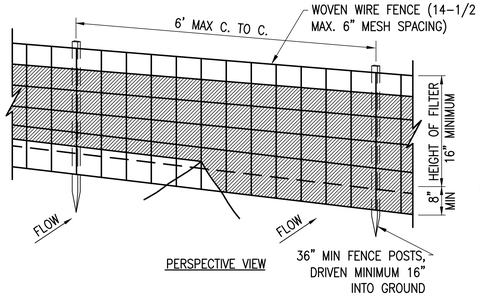
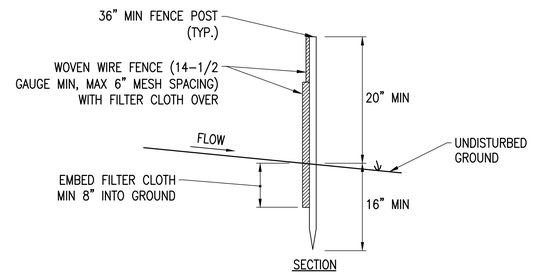
C-4.1
GRADING AND EROSION CONTROL PLAN

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE





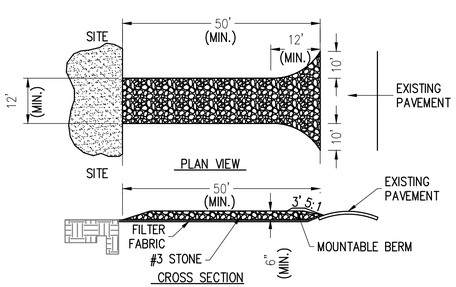
CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE.

POSTS: STEEL, EITHER T OR U TYPE OR 2" HARDWOOD
FENCE: WOVEN WIRE, 14 GAUGE 6" MAX. MESH OPENING
FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

7 SILT FENCE DETAIL

SCALE: NTS



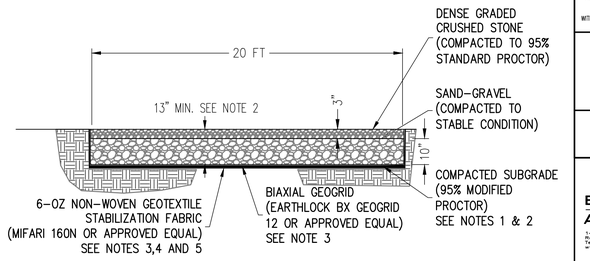
NOTES:

1. STONE SIZE – USE NYSDOT 703-0201 SIZE DESIGNATION #3 STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH– NOT LESS THAN 50 FEET.
3. THICKNESS–NOT LESS THAN 6 INCHES.
4. WIDTH–NOT LESS THAN 12 FEET WHERE MORE THAN ONE (1) ACCESS POINT TO THE SITE. WHERE ONE (1) ACCESS POINT A MINIMUM OF 24 FEET IS REQUIRED.
5. GEOTEXTILE–SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER–SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH 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 TRACKED ONTO PUBLIC RIGHTS–OF–WAY SHALL BE REMOVED IMMEDIATELY.
8. WHEN WHEEL 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.

4 STABILIZED CONSTRUCTION EXIT

SCALE: NTS

XD_CIVIL_TEMPORARY CONSTRUCTION_STABILIZED CONSTRUCTION EXIT_NY 2019-04-02



NOTES:

1. SUBCONTRACTOR SHALL EXCAVATE TO SUITABLE MATERIAL FOR SUBGRADE.
2. SUBCONTRACTOR SHALL COMPACT SUBGRADE TO PROVIDE SUITABLE SURFACE TO PLACE ROAD. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPERATION CRITERIA.
3. SUBCONTRACTOR SHALL FOLLOW MANUFACTURER INSTALLATION PROCEDURES.
4. WHERE OVERLAPPING OF GEOTEXTILE FABRIC IS REQUIRED, SUBCONTRACTOR SHALL OVERLAP A MINIMUM OF 24".
5. SUBCONTRACTOR SHALL REMOVE TEMPORARY CONSTRUCTION ACCESS ROADS, AND RESTORE TO PRE–CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CEOR AND THE GOVERNING AGENCIES.
6. SUBCONTRACTOR SHALL INSTALL CONDUITS FOR ALL ELECTRICAL CONDUIT CROSSINGS PRIOR TO INSTALLATION OF THE GEOGRID MATERIAL. THE GEOGRID SHALL NOT BE HORIZONTALLY CUT ONCE INSTALLED.

1 GRAVEL ACCESS ROAD

SCALE: NTS

XD_CIVIL_GRAVEL_ROAD_IL 04-30-2019

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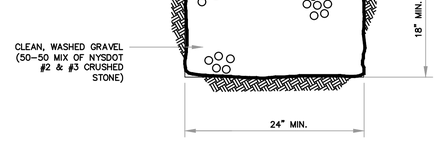
NOT FOR CONSTRUCTION

4/1/24

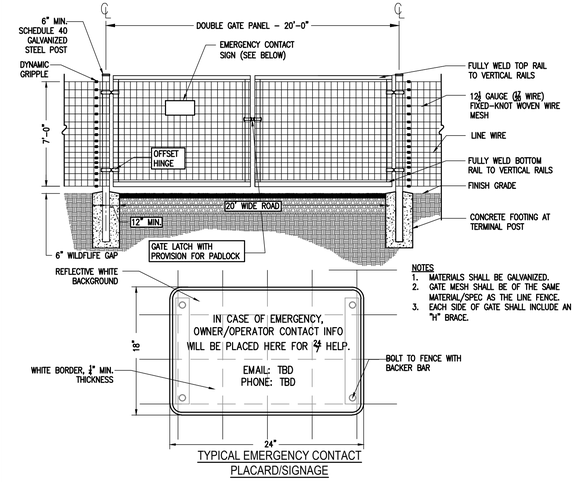
NOTES:
1. STABILIZE ALL AREAS OF SPOIL MATERIAL PLACEMENT WITH SEED AND ROLLED EROSION CONTROL BLANKET NORTH AMERICAN GREEN SC150 OR APPROVED EQUAL.

SLOPE (%)	SPACING (FT.)
< 5	N/A
5–10	100
10–20	75
20–35	50
> 35	25



10 STONE DIAPHRAGM / LEVEL SPREADER

SCALE: N.T.S.

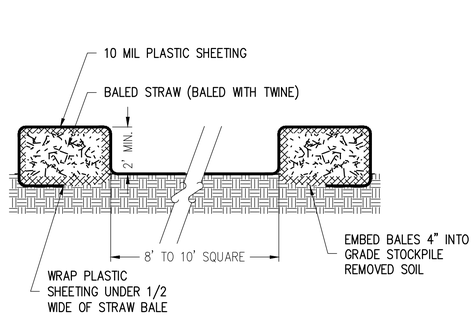


NOTES
1. MATERIALS SHALL BE GALVANIZED.
2. GATE MESH SHALL BE OF THE SAME MATERIAL/SPEC AS THE LINE FENCE.
3. EACH SIDE OF GATE SHALL INCLUDE AN "H" BRACE.

8 7' WOVEN WIRE VEHICLE GATE & PLACARD

SCALE: NTS

XD_CIVIL_FENCE_8'_AC_VEHICLE GATE & PLACARD 01-12-2021

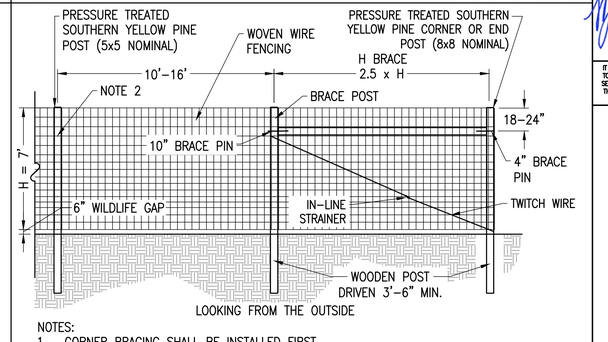


NOTES:
1. BASIN SHALL BE INSPECTED DAILY.
2 .PLASTIC SHEETING SHALL BE FREE OF TEARS OR HOLES. DAMAGED OR LEAKING BASINS SHALL BE REPLACED OR REPAIRED IMMEDIATLY.
3. ACCUMULATED HARDENED MATERIAL SHALL BE REMOVED WHEN 75% OF THE STORAGE CAPACITY OF THE BASIN IS FILLED. WASHWATER FROM WASHOUT BASIN SHALL EVAPORATE OR BE VACUUMED OUT. REMOVE REMAINING HARDENED SOLIDS. REPLACE PLASTIC SHEETING WITH EACH CLEANING. REPLACE STRAWBALES AS REQUIRED.
4. DISPOSE OF HARDENED MATERIAL OFF–SITE OR PER THE PROJECTS SWPPP.

5 CONCRETE WASHOUT BASINS

SCALE: NTS

XD_CIVIL_CONCRETE WASHOUT BASINS 07-26-2017



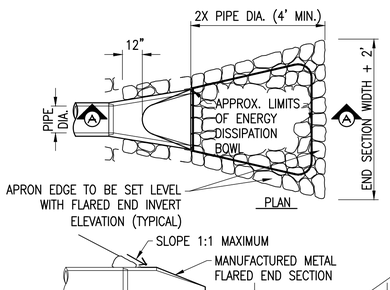
NOTES:

1. CORNER BRACING SHALL BE INSTALLED FIRST.
2. FENCE FABRIC SHALL BE BEKAERT SOLIDLOCK PRO, 12 ½ GAUGE HIGH–TENSILE FIXED KNOT WOVEN WIRE FENCE OR APPROVED EQUAL.
3. FENCE SHALL BE ATTACHED TO WOOD POSTS USING CLASS 3 BARB STAPLES AND ATTACHMENT LOCATIONS (SPACING) SHALL BE PER MANUFACTURERS RECOMMENDATIONS.
4. THIS DETAIL NOT APPLICABLE FOR PRIVACY FENCE OR FENCE WITH SLATS.
5. MINIMUM # OF HORIZONTAL WIRES SHALL BE 17 WITH 6" MAX. SPACING BETWEEN WIRES.
6. BRACE PINS SHALL BE ⅜" GALVANIZED PINS.

2 7' HIGH FIXED-KNOT WOVEN WIRE FENCE

SCALE: NTS

SITE USE PERMIT SET
SITE: 9327 WORTENDYKE RD
BATAVIA, NY 14020

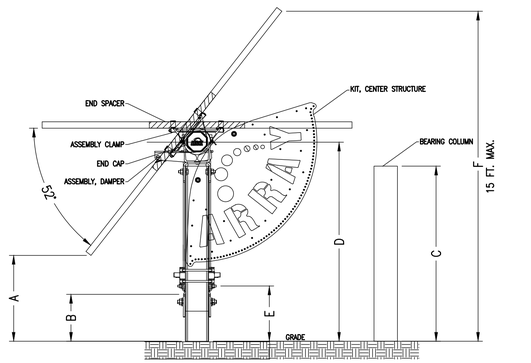


NOTES:

1. CUT OFF WALL TO BE POURED IF INDICATED ON THE PLANS.

11 FLARED END SECTION/RIP-RAP APRON

SCALE: N.T.S.



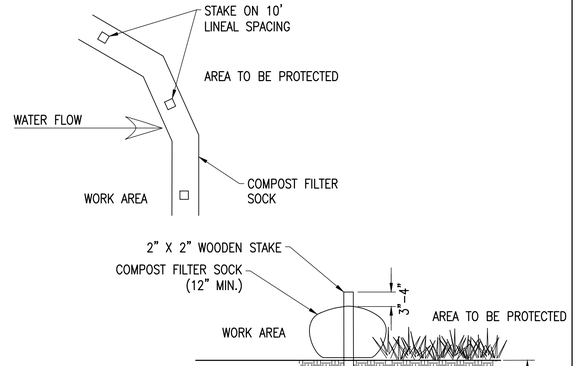
A	B	C	D	E	F
BOTTOM EDGE OF 90° MODULE AT 52° (IN)	GEARBOX COLUMN (IN)	BEARING COLUMN HEIGHT (IN)	CENTER OF ROTATION (IN)	TO BOTTOM OF DRIVELINE (IN)	TOP EDGE OF 90° MODULE AT 52° (IN)
36	22	54	60	24	104

NOTE: CLEARANCES HAVE ± INSTALL TOLERANCES.

ATI

9 VERTICAL MOUNT MOTOR CLEARANCES

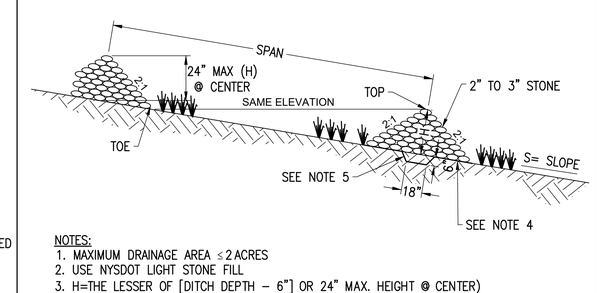
SCALE: N.T.S.



NOTE: MAY BE USED WHEREVER EROSION CONTROL IS SPECIFIED AT THE DISCRETION OF THE CONTRACTOR.

6 COMPOST FILTER SOCK

SCALE: NTS



NOTES:

1. MAXIMUM DRAINAGE AREA ≤ 2 ACRES
2. USE NYSDOT LIGHT STONE FILL
3. H=THE LESSER OF [DITCH DEPTH – 6"] OR 24" MAX. HEIGHT @ CENTER)
4. STONE SHALL BE PLACED ON A FILTER FABRIC FOUNDATION
5. INSTALL 6" DEEP CUT–OFF TRENCH BELOW
6. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM

3 ROCK CHECK DAM

SCALE: N.T.S.

PROJECT NUMBER: 120–1542

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
0	04/1/24	DL/KJR	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

C-5.0

CIVIL DETAILS

SITE USE PERMIT SET

9327 WORTENDYKE RD, BATAVIA, NY 14020
5.0 MWAC RATED SOLAR ELECTRIC SYSTEM

GENERAL NOTES

1. AS CONTAINED HEREIN, "CONTRACTOR" IS ASSUMED TO BE THE EPC PROVIDER HIRED BY THE SYSTEM/PROJECT OWNER.
2. WHEN THERE IS A CONFLICT BETWEEN THESE GENERAL NOTES AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
3. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING: LOCAL BUILDING CODE, LOCAL ELECTRICAL CODE, ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK AND THOSE CODES AND STANDARDS LISTED IN THESE DRAWINGS.
4. THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING A CONSTRUCTION LEVEL DESIGN AND ASSOCIATED DRAWINGS AND DETAILS.
5. COORDINATE THESE DRAWINGS WITH SPECIFICATIONS AND MANUFACTURER INSTALLATION AND OPERATION MANUALS.
6. UNLESS OTHERWISE NOTED, THE DESIGN REPRESENTED ON THESE PLANS IS BASED ON THE INFORMATION AND CRITERIA LISTED IN THE "BASIS OF DESIGN" SECTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SUCH INFORMATION IN PREPARATION OF THE CONSTRUCTION DESIGN.
7. THE EXISTING CONDITIONS REPRESENTED ON THESE PLANS ARE BASED ON PUBLICLY AVAILABLE INFORMATION AND THE SITE DISCOVERY SUMMARIZED IN THESE DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF SUCH INFORMATION AND SUPPLEMENT WITH ANY ADDITIONAL REQUIRED INFORMATION.
8. UNLESS INDICATED AS EXISTING (E), ALL PROPOSED MATERIALS AND EQUIPMENT SHALL BE CONSIDERED TO BE NEW.
9. ALL EQUIPMENT AND COMPONENTS SHALL BE MOUNTED IN COMPLIANCE WITH THE MANUFACTURER'S REQUIREMENTS, CONSTRUCTION DETAILS, AND/OR PRUDENT INDUSTRY STANDARDS.
10. TO THE EXTENT THAT TREES AND OTHER FEATURES AFFECT THE SYSTEM'S PRODUCTION, SUCH PRODUCTION MODELING IS BASED ON THE EXISTING APPROXIMATE HEIGHTS AND LOCATIONS RELATIVE TO THE SYSTEM AND MAY BE IMPACTED AS TREES GROW AND OTHER FEATURES CHANGE.

NEW YORK STATE DEPARTMENT OF AGRICULTURE AND MARKETS

CONSTRUCTION OF THIS PROJECT IS TO COMPLY TO THE EXTENT PRACTICAL WITH THE LATEST NEW YORK STATE DEPARTMENT OF AGRICULTURE AND MARKETS GUIDELINES FOR SOLAR ENERGY PROJECTS – CONSTRUCTION MITIGATION FOR AGRICULTURAL LANDS. THIS INCLUDES COMPLIANCE WITH ENVIRONMENTAL MONITORING, CONSTRUCTION REQUIREMENTS, POST CONSTRUCTION RESTORATION AND POST CONSTRUCTION ENVIRONMENTAL MONITORING AND REMEDIATION.

PROJECT SCOPE

THIS PROJECT CONSISTS OF THE INSTALLATION OF SOLAR MODULES PER THE SYSTEM DESCRIPTION, BELOW. THE MODULES WILL BE INSTALLED ON A TRACKER MOUNTED RACKING SYSTEM. THE MODULES WILL BE WIRED IN SERIES STRINGS AND CONNECTED IN PARALLEL TO THE INVERTER(S), WHICH CONVERT THE PHOTOVOLTAIC OUTPUT POWER FROM DC TO AC. THE SOLAR ELECTRIC SYSTEM WILL BE INTERCONNECTED WITH THE EXISTING SITE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE APPLICABLE ELECTRICAL CODE AND NATIONALGRID REQUIREMENTS.

SYSTEM DESCRIPTION

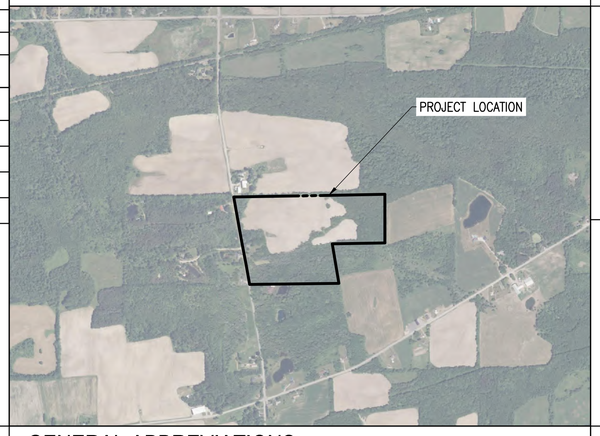
SYSTEM SIZE (DC STC)	5,350.02 kWDC	SYSTEM SIZE (AC)	5,000 KWAC
MODULES	(9386) HYPERION HY-DH144N8	INVERTER(S)	(2) SMA SC 2660-UP-US
STC RATING (W)	570 WDC	CEC EFFICIENCY	98.5 %
MODULES PER STRING	26	AZIMUTH	180
# OF STRINGS	361	TILT ANGLE	+,- 52
RACKING	NEXTRACKER HORIZON	ESTIMATED FOUNDATIONS	1300

SPECIAL INSPECTIONS

GENERAL CONSTRUCTION SPECIAL INSPECTIONS	CODE/SECTION
1. FIRE RESISTANT PENETRATIONS AND JOINTS	BC 1704.27
2. ENERGY CODE COMPLIANCE INSPECTIONS	BC 110.3.5
FINAL	

LOCATION MAP

AERIAL VIEW



DRAWING LIST

Sheet Number	Sheet Title
T-1.0	TITLE PAGE
	CIVIL
C-1.0	EXISTING CONDITIONS PLAN
C-2.0	TREE CLEARING PLAN
C-3.0	LAYOUT AND MATERIALS PLAN
C-4.0	GRADING AND EROSION CONTROL PLAN
C-4.1	GRADING AND EROSION CONTROL PLAN
C-5.0	CIVIL DETAILS

LOCAL APPROVALS:

TOWN OF BATAVIA:

PLANNING BOARD CHAIR — DATE

TOWN ENGINEER — DATE

APPLICABLE CODES AND STANDARDS

2017 NATIONAL ELECTRICAL CODE
2018 INTERNATIONAL BUILDING CODE WITH NJ AMENDMENTS
UL-1703 – SOLAR MODULES
UL-1741 – INVERTERS, COMBINER BOXES
UL-2703 – RACKING MOUNTING SYSTEMS AND CLAMPING DEVICES FOR PV MODULES

PROJECT DIRECTORY

SYSTEM / PROJECT OWNER
WORTENDYKE ROAD SOLAR 1, LLC.
C/O NEW LEAF ENERGY, INC.
55 TECHNOLOGY DRIVE, SUITE 102
LOWELL, MA 01851

LAND OWNER / HOST
JUDY GREEN
9327 WORTENDYKE RD.
BATAVIA, NY 14020
(678) 617-8225

AUTHORITY HAVING JURISDICTION
TOWN OF BATAVIA
3833 WEST MAIN STREET RD.
BATAVIA, NY 14020
(585) 343-1729

UTILITY
NATIONALGRID

CIVIL ENGINEER
FIRM: ERDMAN ANTHONY & ASSOCIATES
CONTACT: MARC D. KENWARD, P.E.
PHONE: (585) 427-8888

DESIGN ENGINEER
FIRM: NEW LEAF ENERGY, INC.
CONTACT: DAO LIN, P.E.
PHONE: (347) 242-8598

GENERAL ABBREVIATIONS

(E)	EXISTING
AHJ	AUTHORITY HAVING JURISDICTION
AL	ALUMINUM
APPROX	APPROXIMATE
ARY	ARRAY
BLDG	BUILDING
NLE	NEW LEAF ENERGY
CL	CENTERLINE
DAS	DATA ACQUISITION SYSTEM
DIA	DIAMETER
DO	DITTO
EW	EAST-WEST
ESS	ENERGY STORAGE SYSTEM
ESU	ENERGY STORAGE UNIT
FBO	FURNISHED BY OTHERS
FF	FORWARD FACING
GALV	GALVANIZED
HDG	HOT DIP GALVANIZED
HVAC	HEATING VENTILATION AND AIR CONDITIONING
ID	INSIDE DIAMETER
MFR	MANUFACTURER
MOD	SOLAR MODULE
NS	NORTH-SOUTH
NTS	NOT TO SCALE
OAE	OR APPROVED EQUAL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PCS	POWER CONVERSION SYSTEM
PV	PHOTOVOLTAIC
PVC	POLY VINYL CHLORIDE
SCH	SCHEDULE
SS	STAINLESS STEEL
SSS	SOLAR SUPPORT STRUCTURE
STC	STANDARD TEST CONDITIONS
TBD	TO BE DETERMINED
TP	TAMPER PROOF
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VIF	VERIFY IN FIELD
WP	WEATHER PROOF

REV 1.0

BASIS OF DESIGN

BOUNDARY & TOPOGRAPHIC SURVEY:
LAWSON SURVEYING & MAPPING
JANUARY 2024

WETLAND STREAM AND DELINEATION REPORT:
LABELLA ASSOCIATES, D.P.C.
DECEMBER 2023

new leaf energy
55 TECHNOLOGY DRIVE, SUITE 102
LOWELL, MA 01851
PHONE: (800) 818-5249
FAX: (888) 678-8991
WWW.NEWLEAFENERGY.COM

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145 Culver Road, Suite 200
Rochester, NY 14620
Telephone: 585.427.8888
www.erdmananthony.com

NOT FOR CONSTRUCTION

STATE OF NEW YORK — MARC DAVID KENWARD — 070261 — PROFESSIONAL ENGINEER

4/1/24

SITE USE PERMIT SET
SITE: 9327 WORTENDYKE RD
BATAVIA, NY 14020

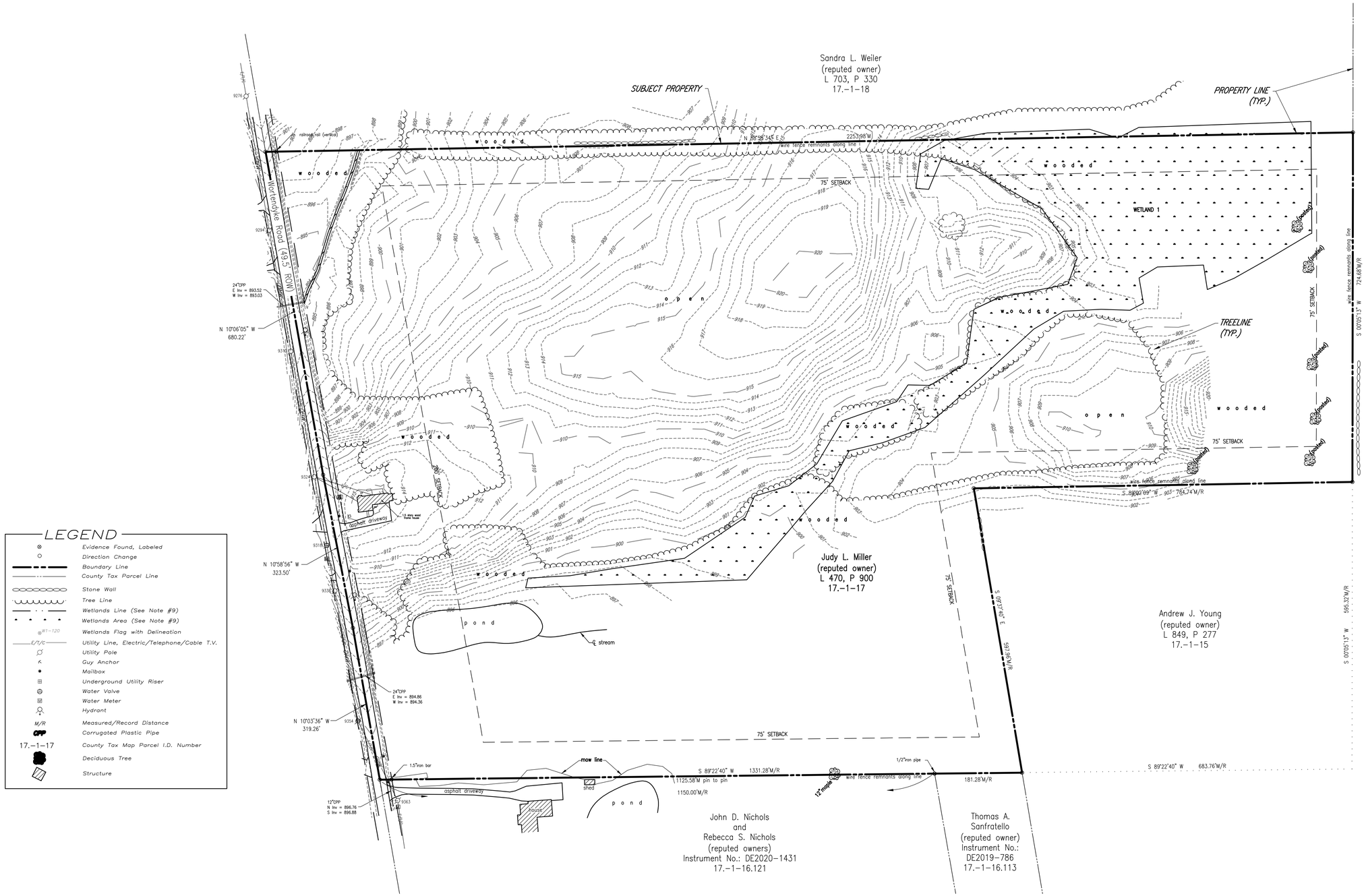
PROJECT NUMBER: 120-1542

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
0	04/1/24	DL/KJR	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

T-1.0

TITLE PAGE



LEGEND

- Evidence Found, Labeled
- Direction Change
- Boundary Line
- County Tax Parcel Line
- Stone Wall
- Tree Line
- Wetlands Line (See Note #9)
- Wetlands Area (See Note #9)
- W1-120 — Wetlands Flag with Delineation
- E/T/C — Utility Line, Electric/Telephone/Cable T.V.
- Utility Pole
- Guy Anchor
- Mailbox
- Underground Utility Riser
- Water Valve
- Water Meter
- Hydrant
- M/R — Measured/Record Distance
- CPP — Corrugated Plastic Pipe
- 17.-1-17 — County Tax Map Parcel I.D. Number
- Deciduous Tree
- Structure

EXISTING CONDITIONS PLAN

SCALE: 1" = 100'

0 100' 200'

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE

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STATE OF NEW YORK
MARC DAVID KENNEDY
Notary Public
01KE7027626
PROFESSIONAL ENGINEER
4/1/24

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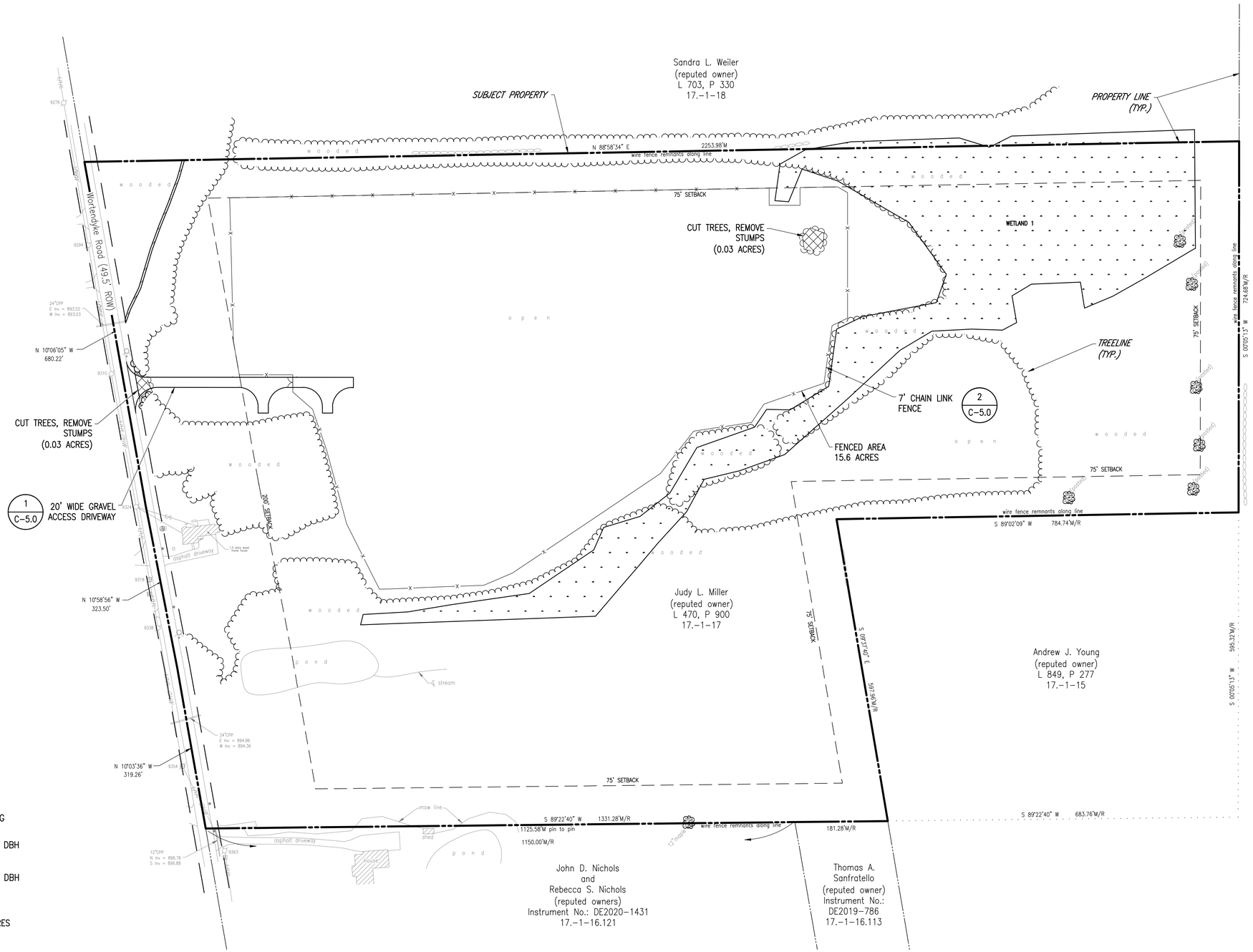
EXISTING CONDITIONS PLAN



LEGEND:

- TREE CUTTING ONLY
- TREE CUTTING AND STUMPING
- BRUSH MOWING, TREES >4" DBH CUTTING ONLY
- BRUSH MOWING, TREES >4" DBH CUTTING AND STUMPING

TREE CUTTING ONLY = 0.06 ACRES
TREE CUTTING AND STUMPING = 0.0 ACRES
TOTAL = 0.06 ACRES

TREE CLEARING PLAN

SCALE: 1" = 100'

0 100' 200'

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE

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MARC DAVID KENNEDY
Resident
070261
PROFESSIONAL ENGINEER
4/1/24

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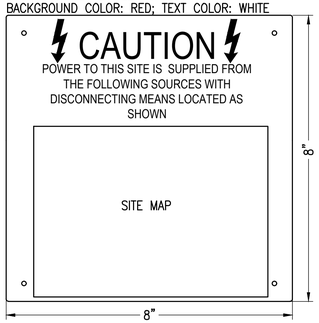
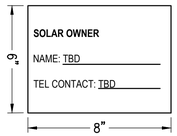
C-2.0

TREE CLEARING PLAN

P1: DIRECTORY MAP
LOCATION: ALL VEHICLE GATES
BACKGROUND COLOR: RED; TEXT COLOR: WHITE



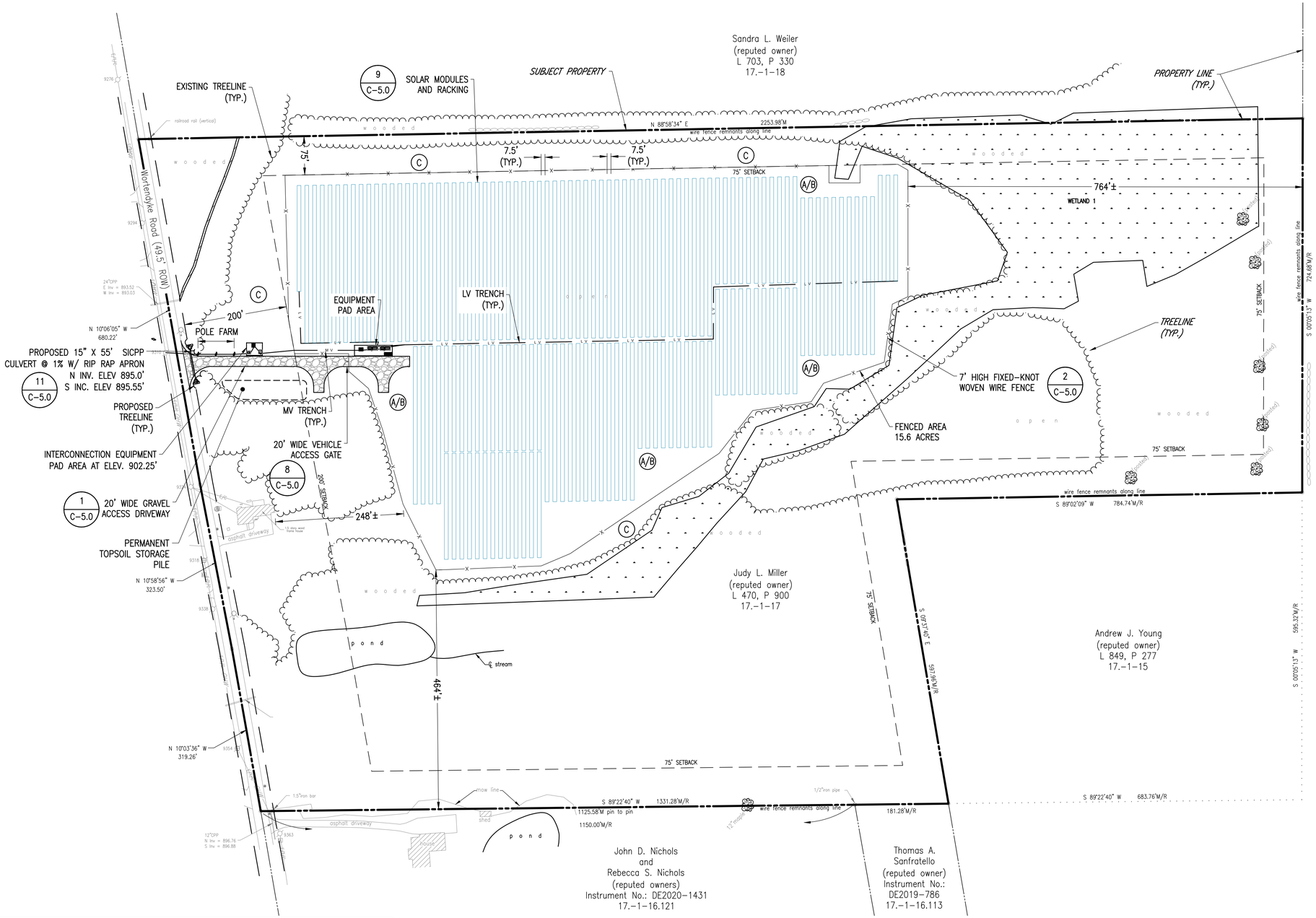
P2: CONTACT INFORMATION
LOCATION: ALL VEHICLE GATES
BACKGROUND COLOR: YELLOW; TEXT COLOR: BLACK



P3: DANGEROUS VOLTAGE
LOCATION: ALL ACCESS POINTS TO THE SITE
NEC: 110.27(C)
BACKGROUND COLOR: ORANGE; TEXT COLOR: BLACK

NOTE:

1. ALL GROUND MOUNTED ELECTRICAL EQUIPMENT TO HAVE WARNING AND ADVISORY SIGNAGE PER NATIONAL ELECTRIC CODE.



SEEDING SPECIFICATIONS:			
AREA	LOCATION	NAME/SPECIES	SUPPLIER
A/B	UNDER SOLAR PANELS	HONEY BEE FORAGE MIX; ERNMX-157 (SEE NOTE 1 BELOW)	ERNST SEEDS
A/B	BETWEEN PANEL ROWS & AREA WITHIN FENCE	HONEY BEE FORAGE MIX; ERNMX-157 (SEE NOTE 1 BELOW)	ERNST SEEDS
C	DISTURBED AREA OUTSIDE FENCE	HONEY BEE FORAGE MIX; ERNMX-157 (SEE NOTE 1 BELOW)	ERNST SEEDS
1. BETWEEN DECEMBER 1ST AND APRIL 1ST, EACH TYPE OF SEED SHALL HAVE AN ADDITIONAL 1#/1,000 SF OF WINTER RYE GRASS OR GRAIN RYE GRASS SEED INCLUDED.			
2. IT SHALL BE THE SUBCONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE PROJECT LIMIT OF WORK IS STABILIZED (IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS/REQUIREMENTS/PERMIT APPROVALS) DURING THE DURATION OF THE PROJECT'S CONSTRUCTION.			

LAYOUT AND MATERIALS PLAN

SCALE: 1" = 100'

0 100' 200'

ZONING SUMMARY			
ASSESSORS PARCEL: 17.-1-17	ZONED: AGRICULTURAL/RESIDENTIAL (NOT IN AN AG PRODUCTION ZONE)		
SETBACKS:	REQUIRED:	PROVIDED:	NOTES:
FRONT	200'	200'	TO THE FENCE
SIDE	75'	75'	TO THE FENCE
REAR	N/A	764'±	TO THE FENCE
MAX. HEIGHT	15'	10'±	TOP OF RACK
MAXIMUM LOT COVERAGE (50%):	< 25.65 AC.	15.743 AC.	30.7% (INCLUDES PROPOSED FENCE, DRIVEWAY & EQUIPMENT PADS)
PROPOSED FENCED ARRAY, DRIVEWAY & EQUIPMENT PADS OUTSIDE OF FENCED ARRAY	N/A	15.743 AC.	15.525 AC. (FENCED ARRAY) 0.091 AC. (DRIVEWAY OUTSIDE FENCED ARRAY) 0.034 AC (EQUIPMENT PADS OUTSIDE FENCED ARRAY)

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

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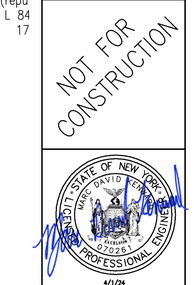

4/1/24

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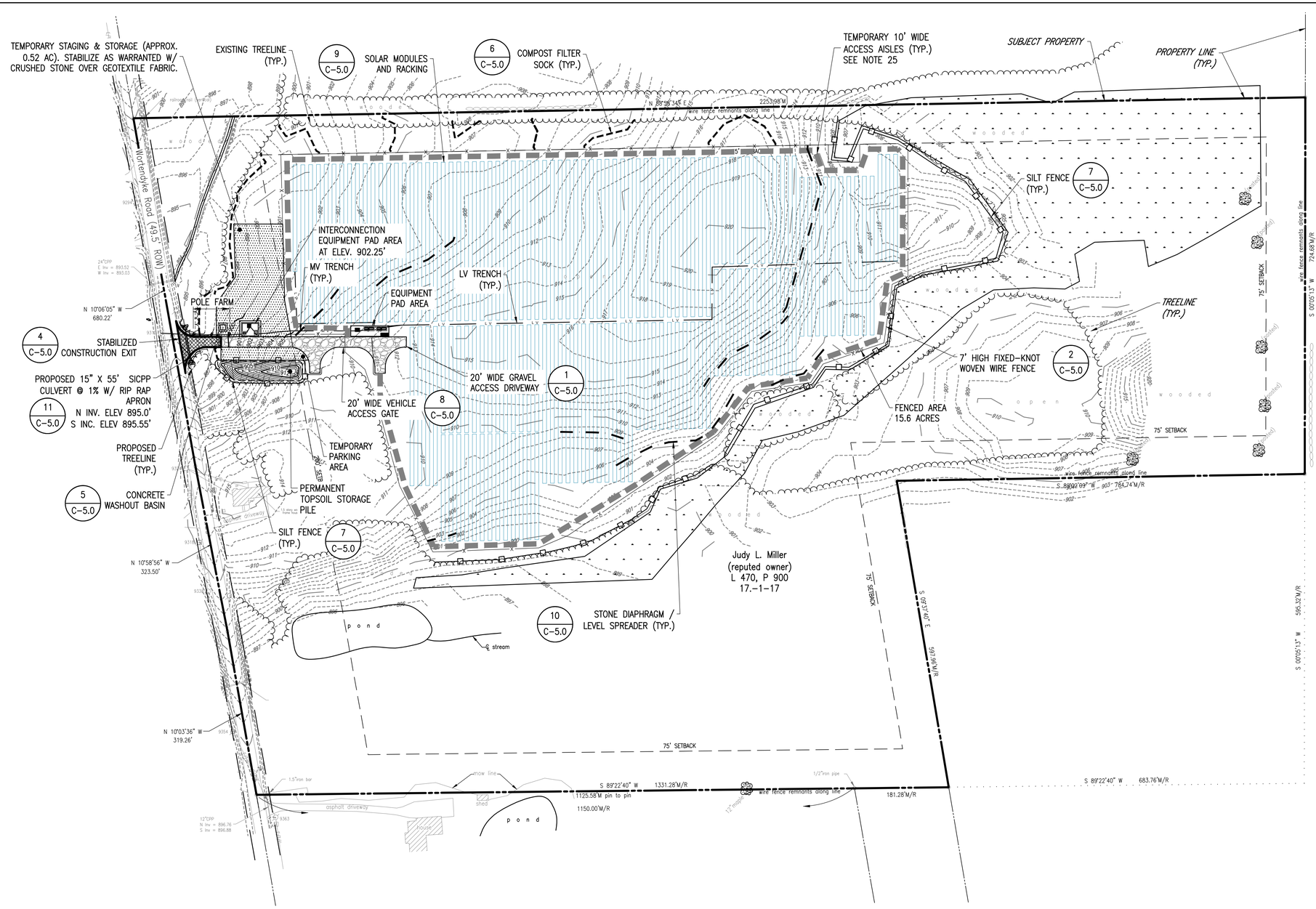
C-3.0
LAYOUT AND MATERIALS PLAN

EROSION AND SEDIMENT CONTROL NOTES:

1. A SPDES PERMIT SHALL BE IN PLACE PRIOR TO COMMENCING ANY EARTH DISTURBANCE. THE SPDES PERMIT # IS (TBD), AND WAS ISSUED ON (DD/MM/20YY).
2. EROSION CONTROLS SHALL BE PROVIDED IN ACCORDANCE WITH THE SEQUENCE OF STAGED CONSTRUCTION PROVIDED IN THE SWPPP. A COPY OF THE APPROVED SWPPP SHALL BE MAINTAINED ON THE SITE.
3. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR DISTURBANCE AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.
4. SEDIMENT BARRIERS SHALL BE INSPECTED AND APPROVED BY THE CEOR BEFORE CONSTRUCTION CAN START.
5. STRAW AND MULCH SHALL BE MOWINGS OF ACCEPTABLE HERBACEOUS GROWTH, FREE OF NOXIOUS WEEDS OR WOODY STEMS, AND SHALL BE DRY WHEN INSTALLED.
6. IN AREAS WHERE SOIL DISTURBANCE ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, THE APPLICATION OF SOIL STABILIZATION MEASURES MUST BE INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN FOURTEEN (14) DAYS FROM THE DATE THE CURRENT SOIL DISTURBANCE ACTIVITY CEASED.
7. SEDIMENT BARRIERS SHALL BE CONSTRUCTED AROUND ALL SOIL STOCKPILE AREAS.
8. CLEAN OUT PROJECT DRAINAGE FEATURES AND STRUCTURES (I.E. CULVERTS, BASINS, SWALES, ETC.) AFTER COMPLETION OF CONSTRUCTION AND AS REQUESTED BY THE CEOR.
9. SEDIMENT COLLECTED DURING CONSTRUCTION BY THE VARIOUS EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM EROSION CONTROL SYSTEMS WHEN THE HEIGHT OF THE SEDIMENT EXCEEDS ONE-HALF OF THE HEIGHT OF THE SEDIMENT CONTROL MEASURE OR IN ACCORDANCE WITH SYSTEMS STANDARD SPECIFICATION.
10. THE "TRAINED CONTRACTOR" IS RESPONSIBLE FOR DAILY INSPECTIONS, MAINTENANCE, AND DIRECTING REPAIR ACTIVITIES.
11. DAMAGED OR DETERIORATED ITEMS WILL BE REPAIRED IMMEDIATELY AFTER IDENTIFICATION OR AS DIRECTED BY THE CONTRACTOR/CEOR.
12. PIPE OUTLETS (IF ANY) SHALL BE STABILIZED WITH STONE. REFER TO DETAILS.
13. TEMPORARY SEEDING (perennial RYE gRASS) SHALL BE AT A RATE OF 45 LBS PER ACRE. DISTURBED AREAS OUTSIDE AND DOWN SLOPE FROM THE CONSTRUCTION LIMITS SHALL BE SIMILARLY SEEDED.
14. WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION DEWATERING SHALL BE FILTERED. A DEWATERING PLAN SHALL BE SUBMITTED FOR APPROVAL BY THE CONTRACTOR TO THE CEOR AND ADDED TO THE SWPPP.
15. WHEN TEMPORARY DRAINAGE IS ESTABLISHED, EROSION/SEDIMENTATION CONTROL MEASURES MAY BE REQUIRED BY THE CEOR AND WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
16. A STABILIZED CONSTRUCTION EXIT SHALL BE PROVIDED. A VEHICLE WASH DOWN FACILITIES SHALL BE PROVIDED IF THE STABILIZED CONSTRUCTION ENTRANCE IS INEFFECTIVE IN PREVENTING SOIL FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL REACHING A PUBLIC OR PRIVATE ROADWAY SHALL BE REMOVED IMMEDIATELY.
17. NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR POLLUTION RUNOFF. NO RE-FUELING SHALL OCCUR WITHIN 100 FEET OF ANY WETLAND RESOURCE AREA AND 200 FEET FROM RIVERFRONT. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
18. THE COST OF REPAIRING EROSION CONTROL MEASURES OR REMOVING SEDIMENT FROM EROSION CONTROL SYSTEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE APPLICABLE EROSION CONTROL ITEM.
19. EROSION CONTROL MEASURES SHALL BE KEPT OPERATIONAL AND MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD OF LAND DISTURBANCE UNTIL PERMANENT SEDIMENT AND EROSION CONTROL MEASURES ARE OPERATIONAL.
20. CONTRACTOR SHALL SPRAY WATER FROM A WATER TRUCK ON DRY AND WINDY DAYS TO PREVENT DUST FROM FORMING. OTHER ALLOWED FORMS OF DUST CONTROL INCLUDE: CALCIUM CHLORIDE.



21. FINAL STABILIZATION MEANS THAT ALL SOIL DISTURBANCE ACTIVITIES HAVE CEASED AND A UNIFORM, PERENNIAL VEGETATIVE COVER WITH A DENSITY OF EIGHTY (80) PERCENT OVER THE ENTIRE PERVIOUS SURFACE HAS BEEN ESTABLISHED; OR OTHER EQUIVALENT STABILIZATION MEASURES, SUCH AS PERMANENT LANDSCAPE MULCHES, ROCK RIP-RAP OR WASHED/CRUSHED STONE HAVE BEEN APPLIED ON ALL DISTURBED AREAS THAT ARE NOT COVERED BY PERMANENT STRUCTURES, CONCRETE OR PAVEMENT.
22. AFTER ALL DISTURBED AREAS HAVE REACHED FINAL STABILIZATION, THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AT THE DIRECTION OF THE CEOR.
23. AFTER THE REMOVAL OF TEMPORARY EROSION CONTROL MEASURES, THE CONTRACTOR SHALL HAND RAKE AND SEED THE AREA OF THE TEMPORARY EROSION CONTROL MEASURE.
24. EROSION CONTROL MEASURES AS SHOWN ON THESE DRAWINGS IS INTENDED TO CONVEY MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES AS NECESSARY TO PREVENT SOIL EROSION AND TO ACCOMPLISH THE PROJECT'S STORMWATER POLLUTION PREVENTION PLAN (SWPPP) OBJECTIVES.
25. TEMPORARY ACCESS ROADS/AISLES TO BE USED FOR DELIVERY & DISTRIBUTION OF MATERIALS THROUGH THE SITE. CONTRACTOR SHALL NOT PLACE ACCESS AISLES THROUGH WETLAND AREAS. TEMPORARY ACCESS AISLES AND TEMPORARY STAGING, STORAGE & PARKING AREAS ARE TO BE DE-COMPACTED AND RESTORED PER SWPPP.
26. ALL EXCESS TOPSOIL IS TO REMAIN ON-SITE, STOCKPILED AND PERMANENTLY STABILIZED WITH SEEDING.
27. PARKING AREA SHALL NOT ENCROACH INTO PUBLIC ROAD RIGHT-OF-WAY. NO PARKING VEHICLES, EQUIPMENT, OR MATERIAL WITH ROAD RIGHT-OF-WAY.

GRADING AND EROSION CONTROL PLAN

SCALE: 1" = 100'

0 100' 200'

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE

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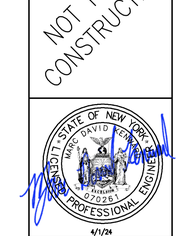

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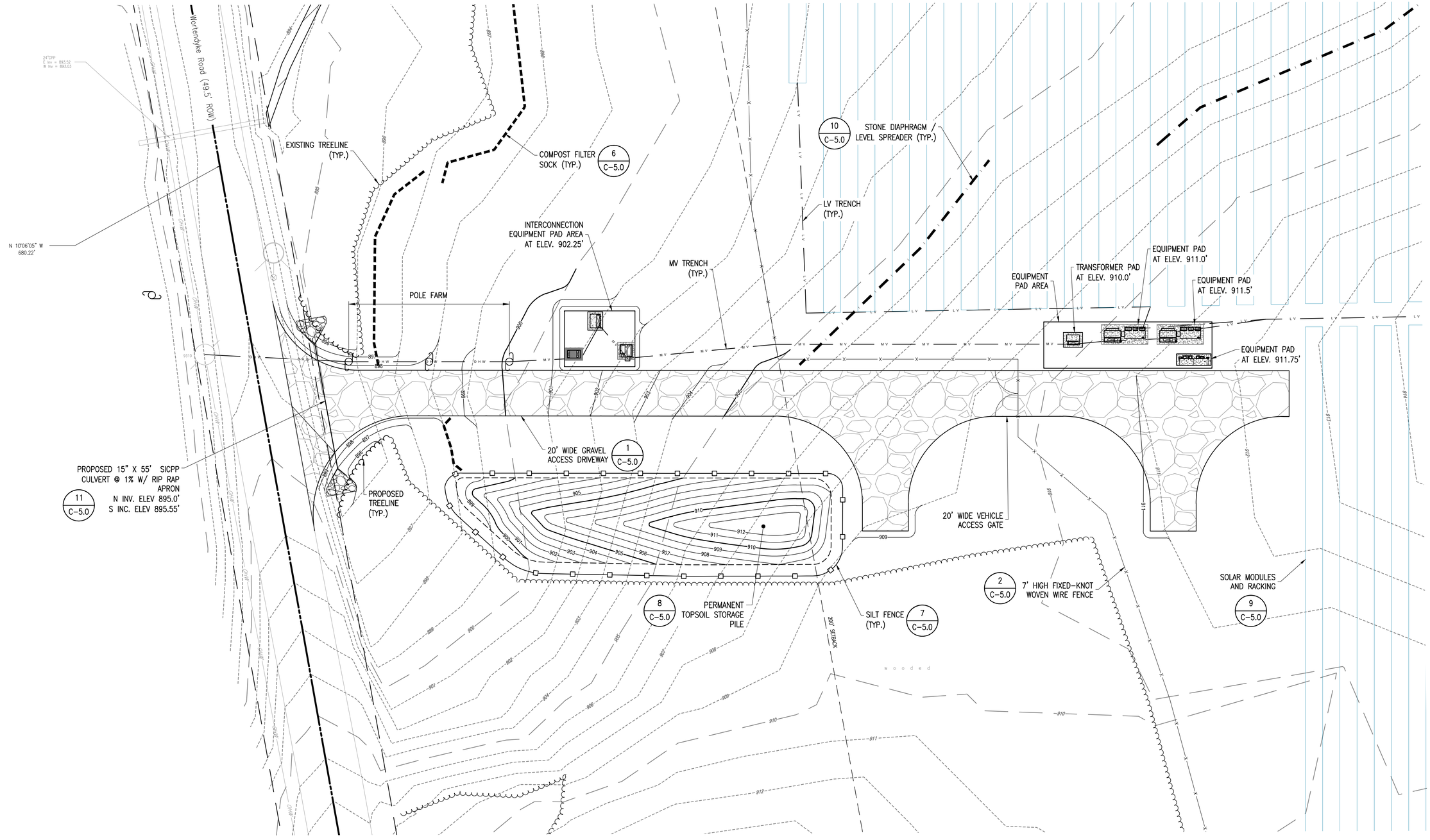
C-4.0
GRADING AND EROSION CONTROL PLAN



PROPOSED ACCESS DRIVEWAY, CULVERT & EQUIPMENT PADS
SCALE: 1:20

GRADING AND EROSION CONTROL PLAN

SCALE: 1" = 20'

0 100' 200'

APPROVAL SIGNATURE:

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MARC DAVID KENNEDY
087026
LICENSED PROFESSIONAL ENGINEER
4/1/24

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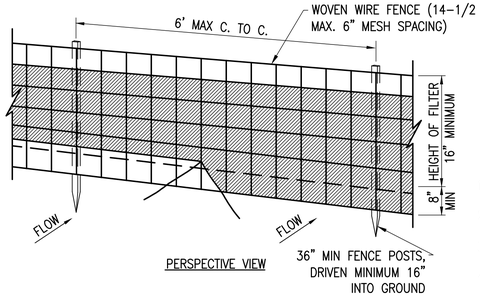
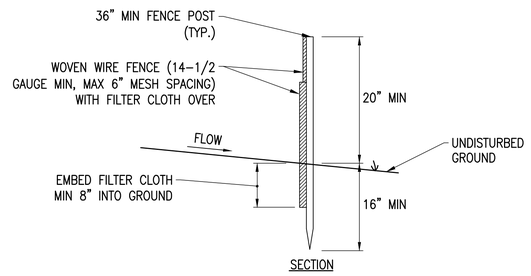




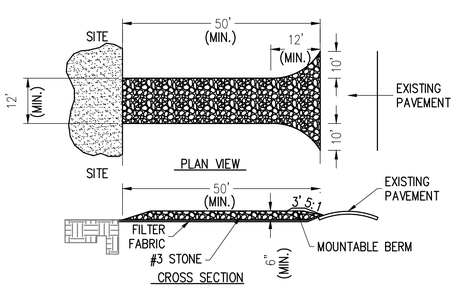
CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE.

POSTS: STEEL, EITHER T OR U TYPE OR 2" HARDWOOD
FENCE: WOVEN WIRE, 14 GAUGE 6" MAX. MESH OPENING
FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

7 SILT FENCE DETAIL

SCALE: NTS



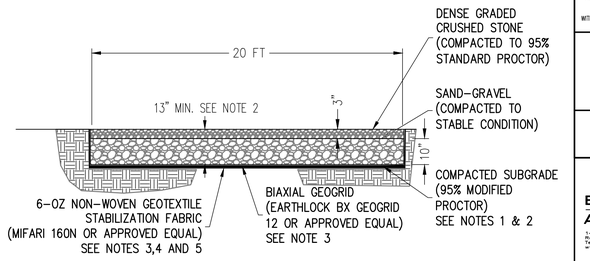
NOTES:

1. STONE SIZE – USE NYSDOT 703-0201 SIZE DESIGNATION #3 STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH– NOT LESS THAN 50 FEET.
3. THICKNESS–NOT LESS THAN 6 INCHES.
4. WIDTH–NOT LESS THAN 12 FEET WHERE MORE THAN ONE (1) ACCESS POINT TO THE SITE. WHERE ONE (1) ACCESS POINT A MINIMUM OF 24 FEET IS REQUIRED.
5. GEOTEXTILE–SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER–SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH 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 TRACKED ONTO PUBLIC RIGHTS–OF–WAY SHALL BE REMOVED IMMEDIATELY.
8. WHEN WHEEL 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.

4 STABILIZED CONSTRUCTION EXIT

SCALE: NTS

XD_CIVIL_TEMPORARY CONSTRUCTION_STABILIZED CONSTRUCTION EXIT_NY 2019-04-02



NOTES:

1. SUBCONTRACTOR SHALL EXCAVATE TO SUITABLE MATERIAL FOR SUBGRADE.
2. SUBCONTRACTOR SHALL COMPACT SUBGRADE TO PROVIDE SUITABLE SURFACE TO PLACE ROAD. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPERATION CRITERIA.
3. SUBCONTRACTOR SHALL FOLLOW MANUFACTURER INSTALLATION PROCEDURES.
4. WHERE OVERLAPPING OF GEOTEXTILE FABRIC IS REQUIRED, SUBCONTRACTOR SHALL OVERLAP A MINIMUM OF 24".
5. SUBCONTRACTOR SHALL REMOVE TEMPORARY CONSTRUCTION ACCESS ROADS, AND RESTORE TO PRE–CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CEOR AND THE GOVERNING AGENCIES.
6. SUBCONTRACTOR SHALL INSTALL CONDUITS FOR ALL ELECTRICAL CONDUIT CROSSINGS PRIOR TO INSTALLATION OF THE GEOGRID MATERIAL. THE GEOGRID SHALL NOT BE HORIZONTALLY CUT ONCE INSTALLED.

1 GRAVEL ACCESS ROAD

SCALE: NTS

XD_CIVIL_GRAVEL_ROAD_IL 04-30-2019

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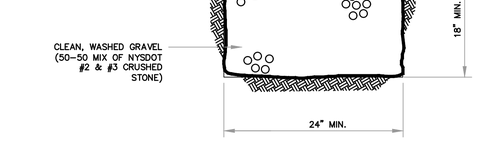
SITE USE PERMIT SET
SITE: 9327 WORTENDYKE RD
BATAVIA, NY 14020

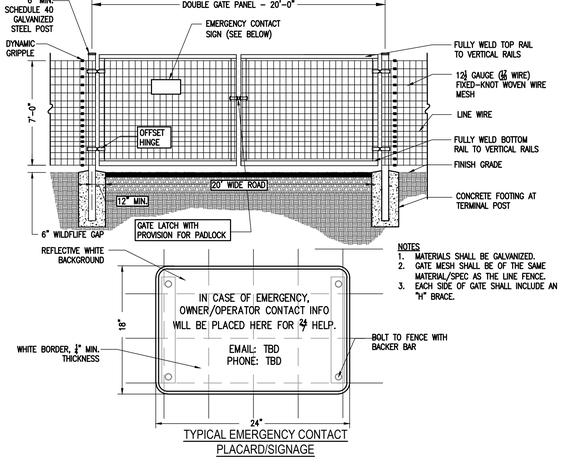
NOTES:
1. STABILIZE ALL AREAS OF SPOIL MATERIAL PLACEMENT WITH SEED AND ROLLED EROSION CONTROL BLANKET NORTH AMERICAN GREEN SC150 OR APPROVED EQUAL.

SLOPE (%)	SPACING (FT.)
< 5	N/A
5–10	100
10–20	75
20–35	50
> 35	25



10 STONE DIAPHRAGM / LEVEL SPREADER

SCALE: N.T.S.

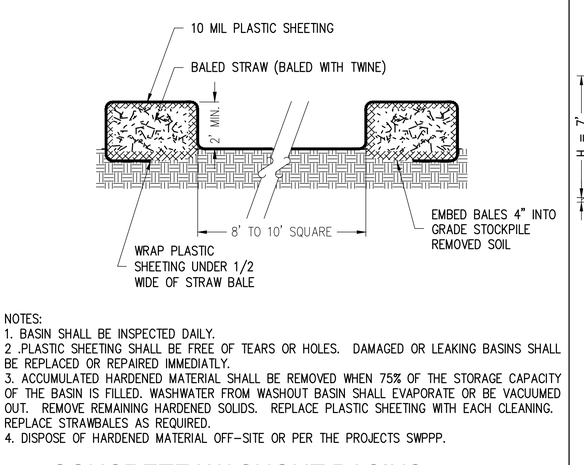


NOTES
1. MATERIALS SHALL BE GALVANIZED.
2. GATE MESH SHALL BE OF THE SAME MATERIAL/SPEC AS THE LINE FENCE.
3. EACH SIDE OF GATE SHALL INCLUDE AN "H" BRACE.

8 7' WOVEN WIRE VEHICLE GATE & PLACARD

SCALE: NTS

XD_CIVIL_FENCE_8'_AC_VEHICLE GATE & PLACARD 01-12-2021

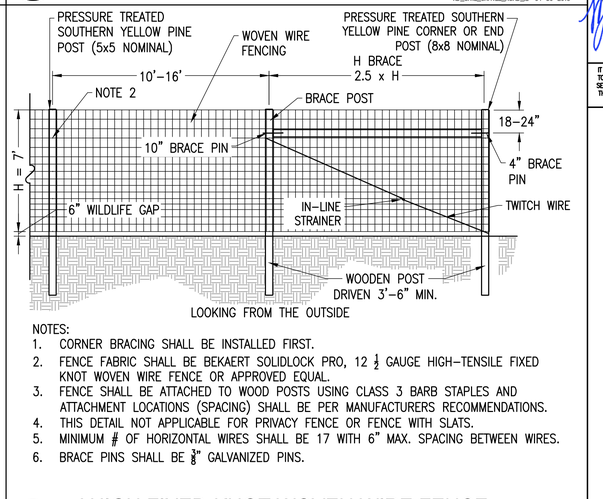


NOTES:
1. BASIN SHALL BE INSPECTED DAILY.
2 .PLASTIC SHEETING SHALL BE FREE OF TEARS OR HOLES. DAMAGED OR LEAKING BASINS SHALL BE REPLACED OR REPAIRED IMMEDIATLY.
3. ACCUMULATED HARDENED MATERIAL SHALL BE REMOVED WHEN 75% OF THE STORAGE CAPACITY OF THE BASIN IS FILLED. WASHWATER FROM WASHOUT BASIN SHALL EVAPORATE OR BE VACUUMED OUT. REMOVE REMAINING HARDENED SOLIDS. REPLACE PLASTIC SHEETING WITH EACH CLEANING. REPLACE STRAWBALES AS REQUIRED.
4. DISPOSE OF HARDENED MATERIAL OFF–SITE OR PER THE PROJECTS SWPPP.

5 CONCRETE WASHOUT BASINS

SCALE: NTS

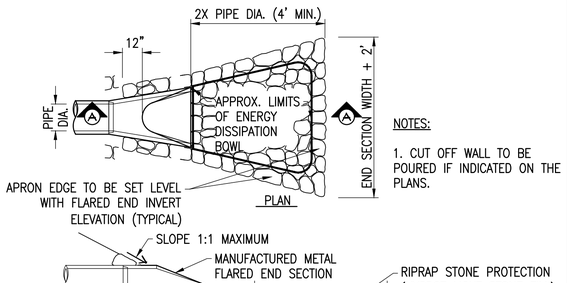
XD_CIVIL_CONCRETE WASHOUT BASINS 07-26-2017



NOTES:
1. CORNER BRACING SHALL BE INSTALLED FIRST.
2. FENCE FABRIC SHALL BE BEKAERT SOLIDLOCK PRO, 12 ½ GAUGE HIGH–TENSILE FIXED KNOT WOVEN WIRE FENCE OR APPROVED EQUAL.
3. FENCE SHALL BE ATTACHED TO WOOD POSTS USING CLASS 3 BARB STAPLES AND ATTACHMENT LOCATIONS (SPACING) SHALL BE PER MANUFACTURERS RECOMMENDATIONS.
4. THIS DETAIL NOT APPLICABLE FOR PRIVACY FENCE OR FENCE WITH SLATS.
5. MINIMUM # OF HORIZONTAL WIRES SHALL BE 17 WITH 6" MAX. SPACING BETWEEN WIRES.
6. BRACE PINS SHALL BE ⅜" GALVANIZED PINS.

2 7' HIGH FIXED-KNOT WOVEN WIRE FENCE

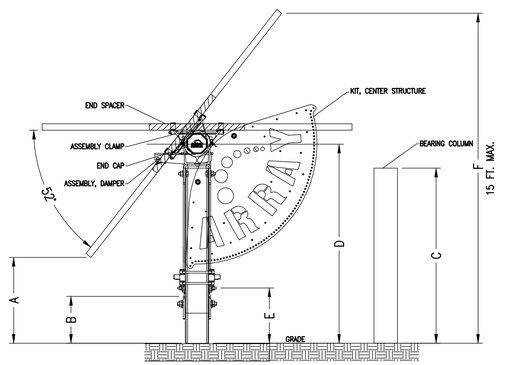
SCALE: NTS



NOTES:
1. CUT OFF WALL TO BE POURED IF INDICATED ON THE PLANS.

11 FLARED END SECTION/RIP-RAP APRON

SCALE: N.T.S.



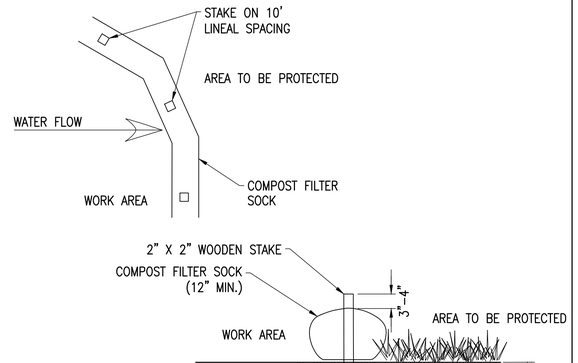
A	B	C	D	E	F
BOTTOM EDGE OF 90° MODULE AT 52° (IN)	GEARBOX COLUMN (IN)	BEARING COLUMN HEIGHT (IN)	CENTER OF ROTATION (IN)	TO BOTTOM OF DRIVELINE (IN)	TOP EDGE OF 90° MODULE AT 52° (IN)
36	22	54	60	24	104

NOTE: CLEARANCES HAVE ± INSTALL TOLERANCES.

9 VERTICAL MOUNT MOTOR CLEARANCES

ATI

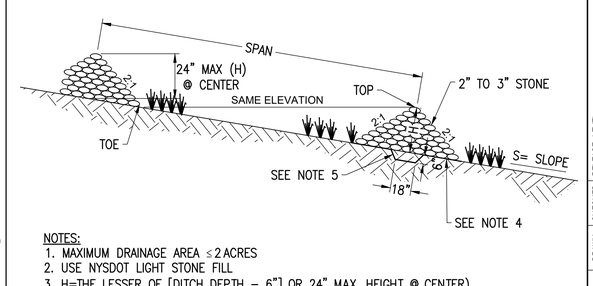
SCALE: N.T.S.



NOTE: MAY BE USED WHEREVER EROSION CONTROL IS SPECIFIED AT THE DISCRETION OF THE CONTRACTOR.

6 COMPOST FILTER SOCK

SCALE: NTS



NOTES:
1. MAXIMUM DRAINAGE AREA ≤ 2 ACRES
2. USE NYSDOT LIGHT STONE FILL
3. H=THE LESSER OF [DITCH DEPTH – 6"] OR 24" MAX. HEIGHT @ CENTER)
4. STONE SHALL BE PLACED ON A FILTER FABRIC FOUNDATION
5. INSTALL 6" DEEP CUT–OFF TRENCH BELOW
6. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM

3 ROCK CHECK DAM

SCALE: N.T.S.

PROJECT NUMBER: 120–1542

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
0	04/1/24	DL/KJR	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

C-5.0

CIVIL DETAILS

SITE USE PERMIT SET

9327 WORTENDYKE RD, BATAVIA, NY 14020
5.0 MWAC RATED SOLAR ELECTRIC SYSTEM

GENERAL NOTES

1. AS CONTAINED HEREIN, "CONTRACTOR" IS ASSUMED TO BE THE EPC PROVIDER HIRED BY THE SYSTEM/PROJECT OWNER.
2. WHEN THERE IS A CONFLICT BETWEEN THESE GENERAL NOTES AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
3. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING: LOCAL BUILDING CODE, LOCAL ELECTRICAL CODE, ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK AND THOSE CODES AND STANDARDS LISTED IN THESE DRAWINGS.
4. THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING A CONSTRUCTION LEVEL DESIGN AND ASSOCIATED DRAWINGS AND DETAILS.
5. COORDINATE THESE DRAWINGS WITH SPECIFICATIONS AND MANUFACTURER INSTALLATION AND OPERATION MANUALS.
6. UNLESS OTHERWISE NOTED, THE DESIGN REPRESENTED ON THESE PLANS IS BASED ON THE INFORMATION AND CRITERIA LISTED IN THE "BASIS OF DESIGN" SECTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SUCH INFORMATION IN PREPARATION OF THE CONSTRUCTION DESIGN.
7. THE EXISTING CONDITIONS REPRESENTED ON THESE PLANS ARE BASED ON PUBLICLY AVAILABLE INFORMATION AND THE SITE DISCOVERY SUMMARIZED IN THESE DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF SUCH INFORMATION AND SUPPLEMENT WITH ANY ADDITIONAL REQUIRED INFORMATION.
8. UNLESS INDICATED AS EXISTING (E), ALL PROPOSED MATERIALS AND EQUIPMENT SHALL BE CONSIDERED TO BE NEW.
9. ALL EQUIPMENT AND COMPONENTS SHALL BE MOUNTED IN COMPLIANCE WITH THE MANUFACTURER'S REQUIREMENTS, CONSTRUCTION DETAILS, AND/OR PRUDENT INDUSTRY STANDARDS.
10. TO THE EXTENT THAT TREES AND OTHER FEATURES AFFECT THE SYSTEM'S PRODUCTION, SUCH PRODUCTION MODELING IS BASED ON THE EXISTING APPROXIMATE HEIGHTS AND LOCATIONS RELATIVE TO THE SYSTEM AND MAY BE IMPACTED AS TREES GROW AND OTHER FEATURES CHANGE.

NEW YORK STATE DEPARTMENT OF AGRICULTURE AND MARKETS

CONSTRUCTION OF THIS PROJECT IS TO COMPLY TO THE EXTENT PRACTICAL WITH THE LATEST NEW YORK STATE DEPARTMENT OF AGRICULTURE AND MARKETS GUIDELINES FOR SOLAR ENERGY PROJECTS – CONSTRUCTION MITIGATION FOR AGRICULTURAL LANDS. THIS INCLUDES COMPLIANCE WITH ENVIRONMENTAL MONITORING, CONSTRUCTION REQUIREMENTS, POST CONSTRUCTION RESTORATION AND POST CONSTRUCTION ENVIRONMENTAL MONITORING AND REMEDIATION.

PROJECT SCOPE

THIS PROJECT CONSISTS OF THE INSTALLATION OF SOLAR MODULES PER THE SYSTEM DESCRIPTION, BELOW. THE MODULES WILL BE INSTALLED ON A TRACKER MOUNTED RACKING SYSTEM. THE MODULES WILL BE WIRED IN SERIES STRINGS AND CONNECTED IN PARALLEL TO THE INVERTER(S), WHICH CONVERT THE PHOTOVOLTAIC OUTPUT POWER FROM DC TO AC. THE SOLAR ELECTRIC SYSTEM WILL BE INTERCONNECTED WITH THE EXISTING SITE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE APPLICABLE ELECTRICAL CODE AND NATIONALGRID REQUIREMENTS.

SYSTEM DESCRIPTION

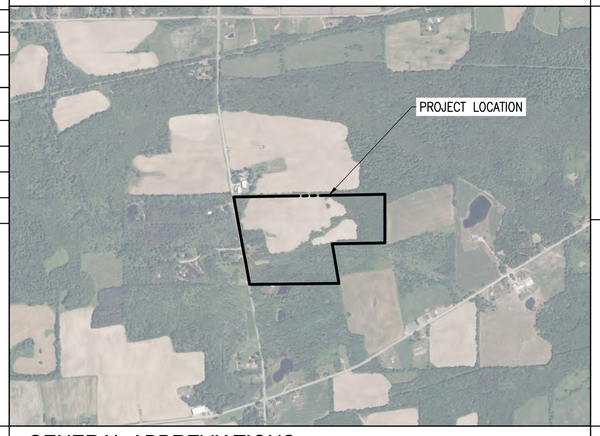
SYSTEM SIZE (DC STC)	5,350.02 kWDC	SYSTEM SIZE (AC)	5,000 KWAC
MODULES	(9386) HYPERION HY-DH144N8	INVERTER(S)	(2) SMA SC 2660-UP-US
STC RATING (W)	570 WDC	CEC EFFICIENCY	98.5 %
MODULES PER STRING	26	AZIMUTH	180
# OF STRINGS	361	TILT ANGLE	+,- 52
RACKING	NEXTRACKER HORIZON	ESTIMATED FOUNDATIONS	1300

SPECIAL INSPECTIONS

GENERAL CONSTRUCTION SPECIAL INSPECTIONS	CODE/SECTION
1. FIRE RESISTANT PENETRATIONS AND JOINTS	BC 1704.27
2. ENERGY CODE COMPLIANCE INSPECTIONS	BC 110.3.5
FINAL	

LOCATION MAP

AERIAL VIEW



DRAWING LIST

Sheet Number	Sheet Title
T-1.0	TITLE PAGE
	CIVIL
C-1.0	EXISTING CONDITIONS PLAN
C-2.0	TREE CLEARING PLAN
C-3.0	LAYOUT AND MATERIALS PLAN
C-4.0	GRADING AND EROSION CONTROL PLAN
C-4.1	GRADING AND EROSION CONTROL PLAN
C-5.0	CIVIL DETAILS

LOCAL APPROVALS:

TOWN OF BATAVIA:

PLANNING BOARD CHAIR — DATE

TOWN ENGINEER — DATE

APPLICABLE CODES AND STANDARDS

2017 NATIONAL ELECTRICAL CODE
2018 INTERNATIONAL BUILDING CODE WITH NJ AMENDMENTS
UL-1703 – SOLAR MODULES
UL-1741 – INVERTERS, COMBINER BOXES
UL-2703 – RACKING MOUNTING SYSTEMS AND CLAMPING DEVICES FOR PV MODULES

PROJECT DIRECTORY

SYSTEM / PROJECT OWNER
WORTENDYKE ROAD SOLAR 1, LLC.
C/O NEW LEAF ENERGY, INC.
55 TECHNOLOGY DRIVE, SUITE 102
LOWELL, MA 01851

LAND OWNER / HOST
JUDY GREEN
9327 WORTENDYKE RD.
BATAVIA, NY 14020
(678) 617-8225

AUTHORITY HAVING JURISDICTION
TOWN OF BATAVIA
3833 WEST MAIN STREET RD.
BATAVIA, NY 14020
(585) 343-1729

UTILITY
NATIONALGRID

CIVIL ENGINEER
FIRM: ERDMAN ANTHONY & ASSOCIATES
CONTACT: MARC D. KENWARD, P.E.
PHONE: (585) 427-8888

DESIGN ENGINEER
FIRM: NEW LEAF ENERGY, INC.
CONTACT: DAO LIN, P.E.
PHONE: (347) 242-8598

GENERAL ABBREVIATIONS

(E)	EXISTING
AHJ	AUTHORITY HAVING JURISDICTION
AL	ALUMINUM
APPROX	APPROXIMATE
ARY	ARRAY
BLDG	BUILDING
NLE	NEW LEAF ENERGY
CL	CENTERLINE
DAS	DATA ACQUISITION SYSTEM
DIA	DIAMETER
DO	DITTO
EW	EAST-WEST
ESS	ENERGY STORAGE SYSTEM
ESU	ENERGY STORAGE UNIT
FBO	FURNISHED BY OTHERS
FF	FORWARD FACING
GALV	GALVANIZED
HDG	HOT DIP GALVANIZED
HVAC	HEATING VENTILATION AND AIR CONDITIONING
ID	INSIDE DIAMETER
MFR	MANUFACTURER
MOD	SOLAR MODULE
NS	NORTH-SOUTH
NTS	NOT TO SCALE
OAE	OR APPROVED EQUAL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PCS	POWER CONVERSION SYSTEM
PV	PHOTOVOLTAIC
PVC	POLY VINYL CHLORIDE
SCH	SCHEDULE
SS	STAINLESS STEEL
SSS	SOLAR SUPPORT STRUCTURE
STC	STANDARD TEST CONDITIONS
TBD	TO BE DETERMINED
TP	TAMPER PROOF
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VIF	VERIFY IN FIELD
WP	WEATHER PROOF

REV 1.0

BASIS OF DESIGN

BOUNDARY & TOPOGRAPHIC SURVEY:
LAWSON SURVEYING & MAPPING
JANUARY 2024

WETLAND STREAM AND DELINEATION REPORT:
LABELLA ASSOCIATES, D.P.C.
DECEMBER 2023

new leaf energy
55 TECHNOLOGY DRIVE, SUITE 102
LOWELL, MA 01851
PHONE: (800) 818-5249
FAX: (888) 678-8991
WWW.NEWLEAFENERGY.COM

ERDMAN ANTHONY
145 Culver Road, Suite 200
Rochester, NY 14620
Telephone: 585.427.8888
www.erdmananthony.com

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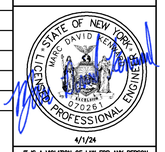


4/1/24

SITE USE PERMIT SET
SITE: 9327 WORTENDYKE RD
BATAVIA, NY 14020

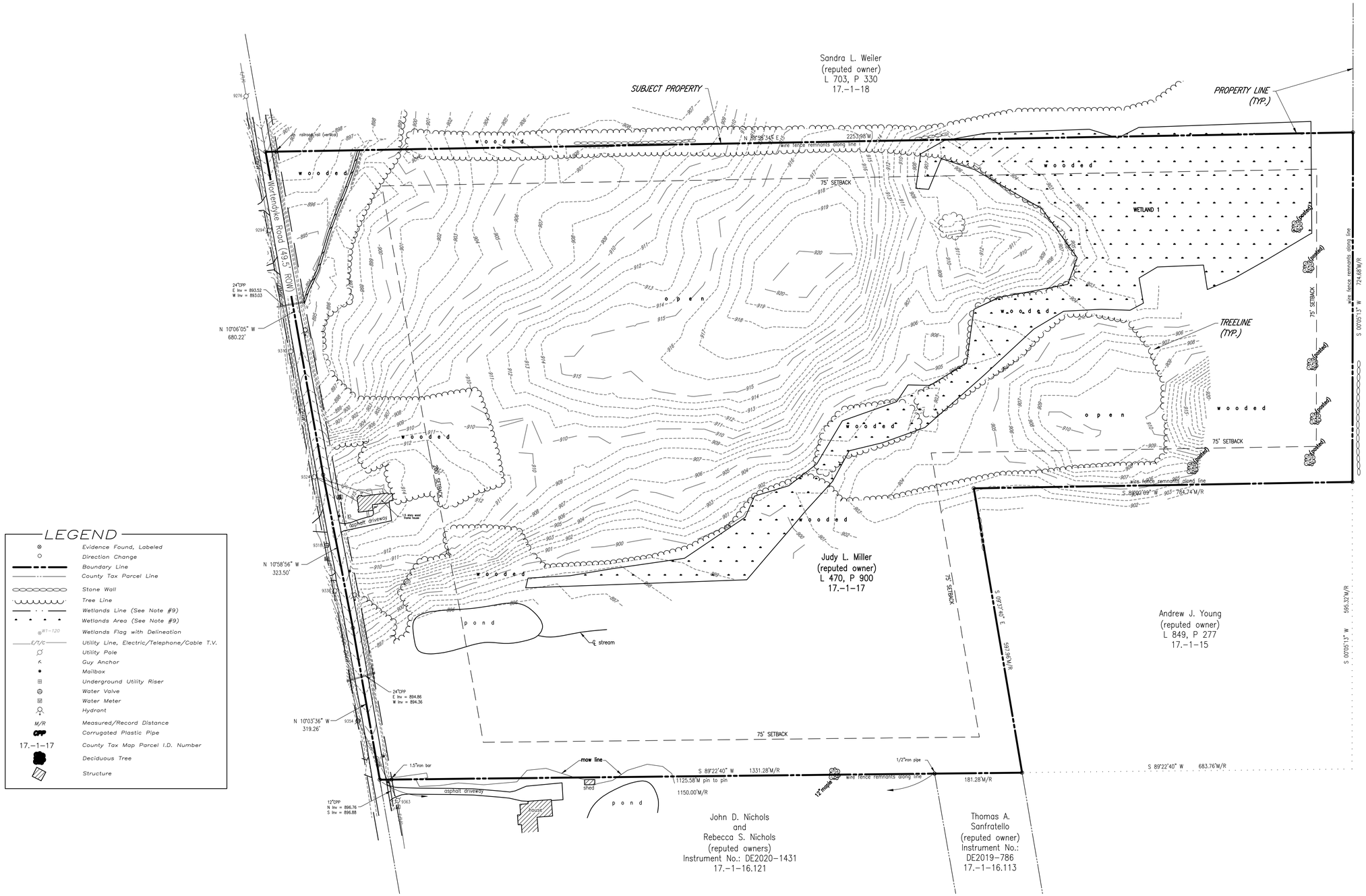
PROJECT NUMBER:
120-1542

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
0	04/1/24	DL/KJR	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

T-1.0

TITLE PAGE



LEGEND

- Evidence Found, Labeled
- Direction Change
- Boundary Line
- County Tax Parcel Line
- Stone Wall
- Tree Line
- Wetlands Line (See Note #9)
- Wetlands Area (See Note #9)
- #1-120 — Wetlands Flag with Delineation
- E/T/C — Utility Line, Electric/Telephone/Cable T.V.
- Utility Pole
- Guy Anchor
- Mailbox
- Underground Utility Riser
- Water Valve
- Water Meter
- Hydrant
- M/R — Measured/Record Distance
- CPP — Corrugated Plastic Pipe
- 17.-1-17 — County Tax Map Parcel I.D. Number
- Deciduous Tree
- Structure

EXISTING CONDITIONS PLAN

SCALE: 1" = 100'

0 100' 200'

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE

new leaf energy
55 TECHNOLOGY DRIVE, SUITE 102
LOWELL, MA 01851
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WWW.NEWLEAFENERGY.COM

ERDMAN ANTHONY
145 Culver Road, Suite 200
Rochester, NY 14620
Telephone 585.427.8888
www.erdmananthony.com

NOT FOR CONSTRUCTION

STATE OF NEW YORK
MARC DAVID KENNEDY
Resident
027026
PROFESSIONAL ENGINEER

4/1/24

SITE USE PERMIT SET
SITE: 9327 WORTENDYKE RD
BATAVIA, NY 14020

PROJECT NUMBER:
120-1542

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
0	04/1/24	DL/KJR	MDK	SUP SET

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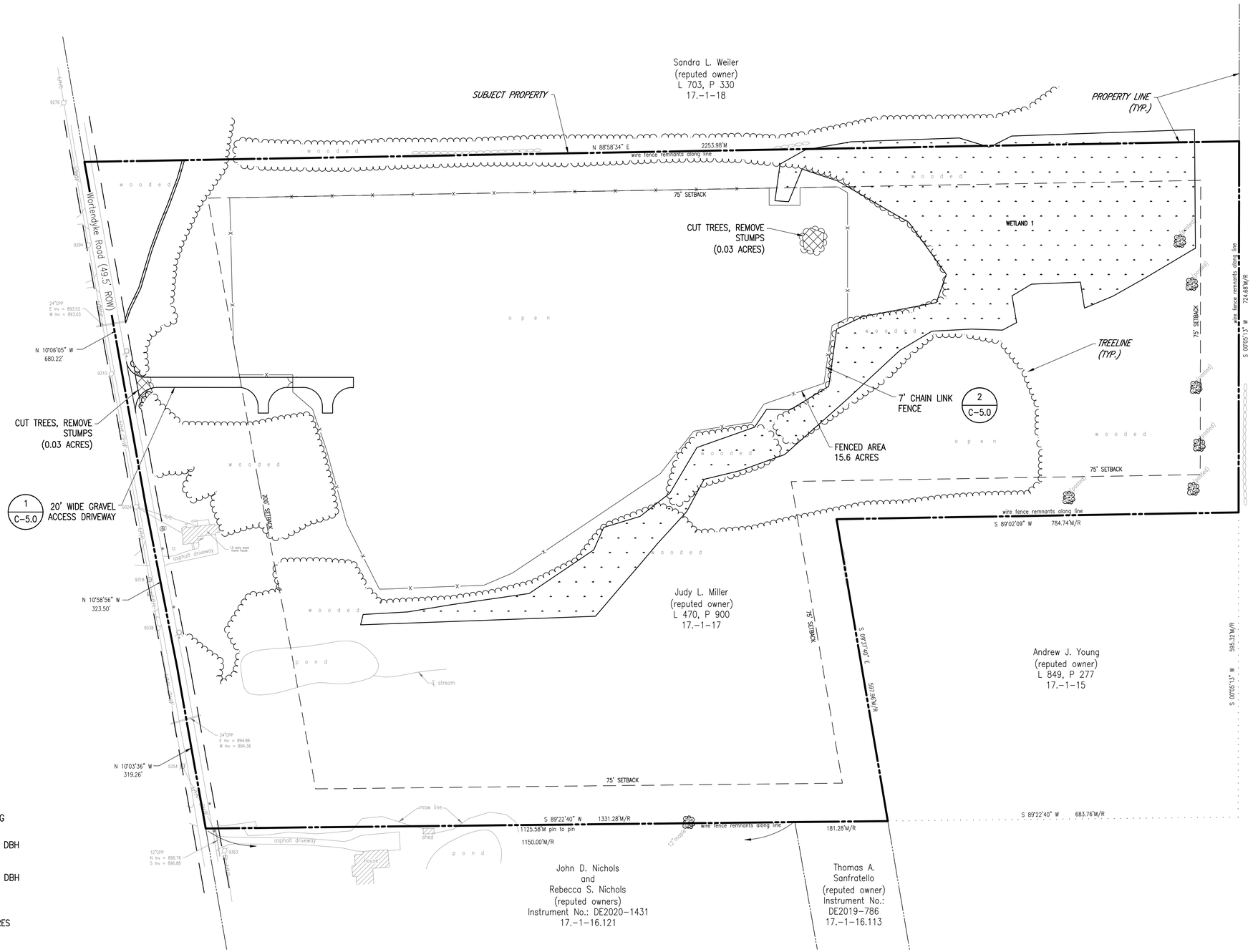
C-1.0
EXISTING CONDITIONS PLAN



LEGEND:

- TREE CUTTING ONLY
- TREE CUTTING AND STUMPING
- BRUSH MOWING, TREES >4" DBH CUTTING ONLY
- BRUSH MOWING, TREES >4" DBH CUTTING AND STUMPING

TREE CUTTING ONLY = 0.06 ACRES
TREE CUTTING AND STUMPING = 0.0 ACRES
TOTAL = 0.06 ACRES

TREE CLEARING PLAN

SCALE: 1" = 100'

0 100' 200'

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE

new leaf energy
55 TECHNOLOGY DRIVE, SUITE 102
LOWELL, MA 01851
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ERDMAN ANTHONY
145 Culver Road, Suite 200
Rochester, NY 14620
Telephone: 585.427.8888
www.erdmananthony.com

NOT FOR CONSTRUCTION

STATE OF NEW YORK
MARC DAVID KENDALL
Notary Public
No. 01KE6270261
PROFESSIONAL ENGINEER
4/1/24

SITE USE PERMIT SET
SITE: 9327 WORTENDYKE RD
BATAVIA, NY 14020

PROJECT NUMBER: 120-1542

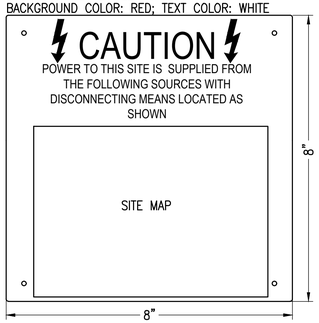
REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
0	04/1/24	DL/KJR	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

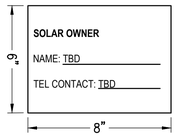
C-2.0

TREE CLEARING PLAN

P1: DIRECTORY MAP
LOCATION: ALL VEHICLE GATES
BACKGROUND COLOR: RED; TEXT COLOR: WHITE



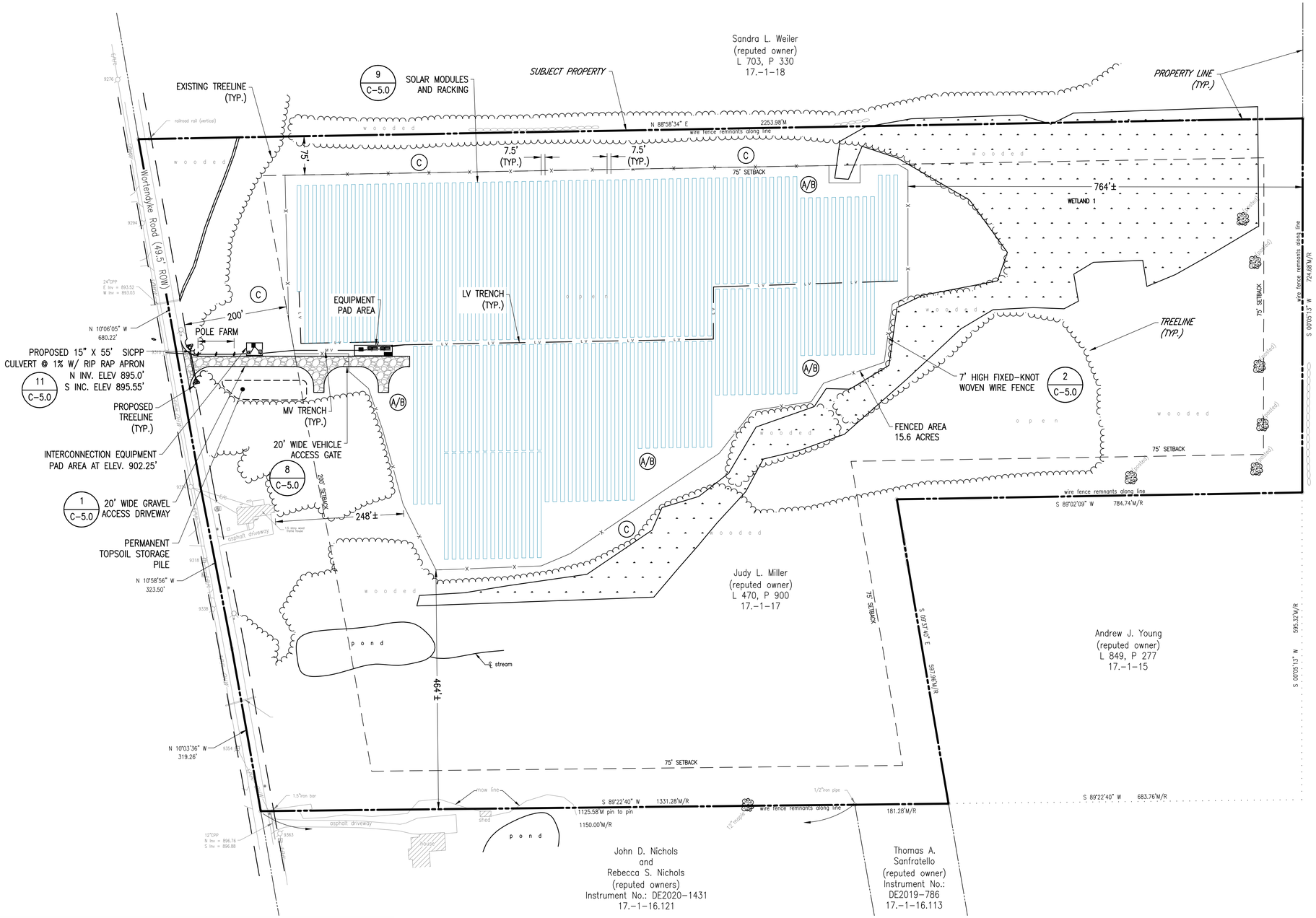
P2: CONTACT INFORMATION
LOCATION: ALL VEHICLE GATES
BACKGROUND COLOR: YELLOW; TEXT COLOR: BLACK



P3: DANGEROUS VOLTAGE
LOCATION: ALL ACCESS POINTS TO THE SITE
NEC: 110.27(C)
BACKGROUND COLOR: ORANGE; TEXT COLOR: BLACK

NOTE:

1. ALL GROUND MOUNTED ELECTRICAL EQUIPMENT TO HAVE WARNING AND ADVISORY SIGNAGE PER NATIONAL ELECTRIC CODE.



SEEDING SPECIFICATIONS:			
AREA	LOCATION	NAME/SPECIES	SUPPLIER
A/B	UNDER SOLAR PANELS	HONEY BEE FORAGE MIX; ERNMX-157 (SEE NOTE 1 BELOW)	ERNST SEEDS
A/B	BETWEEN PANEL ROWS & AREA WITHIN FENCE	HONEY BEE FORAGE MIX; ERNMX-157 (SEE NOTE 1 BELOW)	ERNST SEEDS
C	DISTURBED AREA OUTSIDE FENCE	HONEY BEE FORAGE MIX; ERNMX-157 (SEE NOTE 1 BELOW)	ERNST SEEDS
1. BETWEEN DECEMBER 1ST AND APRIL 1ST, EACH TYPE OF SEED SHALL HAVE AN ADDITIONAL 1#/1,000 SF OF WINTER RYE GRASS OR GRAIN RYE GRASS SEED INCLUDED.			
2. IT SHALL BE THE SUBCONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE PROJECT LIMIT OF WORK IS STABILIZED (IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS/REQUIREMENTS/PERMIT APPROVALS) DURING THE DURATION OF THE PROJECT'S CONSTRUCTION.			

LAYOUT AND MATERIALS PLAN

SCALE: 1" = 100'

0 100' 200'

ZONING SUMMARY			
ASSESSORS PARCEL: 17.-1-17	ZONED: AGRICULTURAL/RESIDENTIAL (NOT IN AN AG PRODUCTION ZONE)		
SETBACKS:	REQUIRED:	PROVIDED:	NOTES:
FRONT	200'	200'	TO THE FENCE
SIDE	75'	75'	TO THE FENCE
REAR	N/A	764'±	TO THE FENCE
MAX. HEIGHT	15'	10'±	TOP OF RACK
MAXIMUM LOT COVERAGE (50%):	< 25.65 AC.	15.743 AC.	30.7% (INCLUDES PROPOSED FENCE, DRIVEWAY & EQUIPMENT PADS)
PROPOSED FENCED ARRAY, DRIVEWAY & EQUIPMENT PADS OUTSIDE OF FENCED ARRAY	N/A	15.743 AC.	15.525 AC. (FENCED ARRAY) 0.091 AC. (DRIVEWAY OUTSIDE FENCED ARRAY) 0.034 AC (EQUIPMENT PADS OUTSIDE FENCED ARRAY)

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE

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55 TECHNOLOGY DRIVE, SUITE 102
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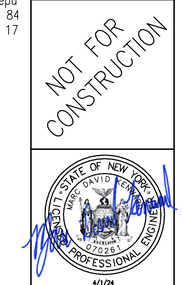


4/1/24

SITE USE PERMIT SET
SITE: 9327 WORTENDYKE RD
BATAVIA, NY 14020

PROJECT NUMBER: 120-1542

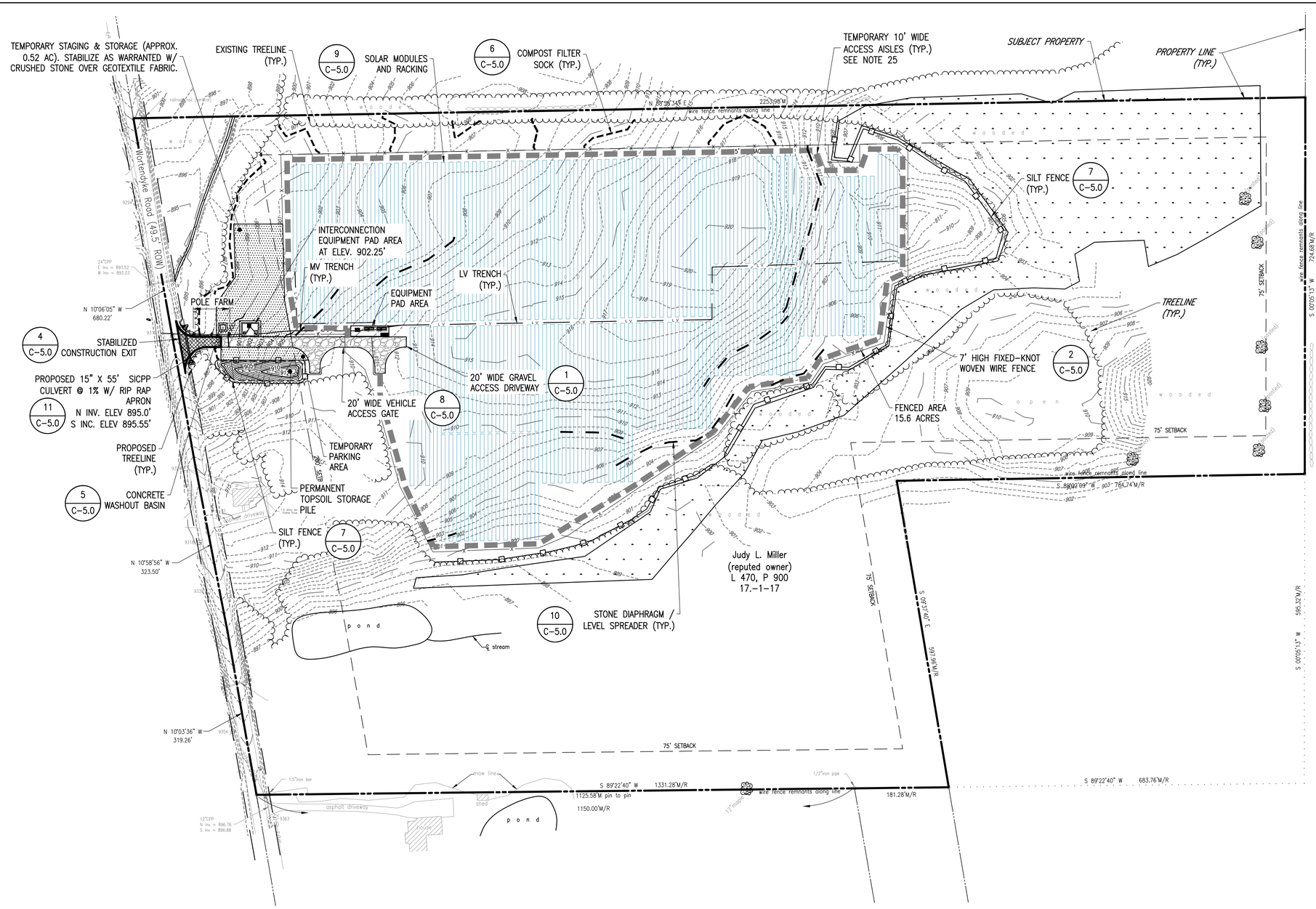
REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
0	04/1/24	DL/KJR	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

C-3.0
LAYOUT AND MATERIALS PLAN

EROSION AND SEDIMENT CONTROL NOTES:

1. A SPDES PERMIT SHALL BE IN PLACE PRIOR TO COMMENCING ANY EARTH DISTURBANCE. THE SPDES PERMIT # IS (TBD), AND WAS ISSUED ON (DD/MM/20YY).
2. EROSION CONTROLS SHALL BE PROVIDED IN ACCORDANCE WITH THE SEQUENCE OF STAGED CONSTRUCTION PROVIDED IN THE SWPPP. A COPY OF THE APPROVED SWPPP SHALL BE MAINTAINED ON THE SITE.
3. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR DISTURBANCE AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.
4. SEDIMENT BARRIERS SHALL BE INSPECTED AND APPROVED BY THE CEOR BEFORE CONSTRUCTION CAN START.
5. STRAW AND MULCH SHALL BE MOWINGS OF ACCEPTABLE HERBACEOUS GROWTH, FREE OF NOXIOUS WEEDS OR WOODY STEMS, AND SHALL BE DRY WHEN INSTALLED.
6. IN AREAS WHERE SOIL DISTURBANCE ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, THE APPLICATION OF SOIL STABILIZATION MEASURES MUST BE INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN FOURTEEN (14) DAYS FROM THE DATE THE CURRENT SOIL DISTURBANCE ACTIVITY CEASED.
7. SEDIMENT BARRIERS SHALL BE CONSTRUCTED AROUND ALL SOIL STOCKPILE AREAS.
8. CLEAN OUT PROJECT DRAINAGE FEATURES AND STRUCTURES (I.E. CULVERTS, BASINS, SWALES, ETC.) AFTER COMPLETION OF CONSTRUCTION AND AS REQUESTED BY THE CEOR.
9. SEDIMENT COLLECTED DURING CONSTRUCTION BY THE VARIOUS EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM EROSION CONTROL SYSTEMS WHEN THE HEIGHT OF THE SEDIMENT EXCEEDS ONE-HALF OF THE HEIGHT OF THE SEDIMENT CONTROL MEASURE OR IN ACCORDANCE WITH SYSTEMS STANDARD SPECIFICATION.
10. THE "TRAINED CONTRACTOR" IS RESPONSIBLE FOR DAILY INSPECTIONS, MAINTENANCE, AND DIRECTING REPAIR ACTIVITIES.
11. DAMAGED OR DETERIORATED ITEMS WILL BE REPAIRED IMMEDIATELY AFTER IDENTIFICATION OR AS DIRECTED BY THE CONTRACTOR/CEOR.
12. PIPE OUTLETS (IF ANY) SHALL BE STABILIZED WITH STONE. REFER TO DETAILS.
13. TEMPORARY SEEDING (perennial RYE gRASS) SHALL BE AT A RATE OF 45 LBS PER ACRE. DISTURBED AREAS OUTSIDE AND DOWN SLOPE FROM THE CONSTRUCTION LIMITS SHALL BE SIMILARLY SEEDED.
14. WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION DEWATERING SHALL BE FILTERED. A DEWATERING PLAN SHALL BE SUBMITTED FOR APPROVAL BY THE CONTRACTOR TO THE CEOR AND ADDED TO THE SWPPP.
15. WHEN TEMPORARY DRAINAGE IS ESTABLISHED, EROSION/SEDIMENTATION CONTROL MEASURES MAY BE REQUIRED BY THE CEOR AND WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
16. A STABILIZED CONSTRUCTION EXIT SHALL BE PROVIDED. A VEHICLE WASH DOWN FACILITIES SHALL BE PROVIDED IF THE STABILIZED CONSTRUCTION ENTRANCE IS INEFFECTIVE IN PREVENTING SOIL FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL REACHING A PUBLIC OR PRIVATE ROADWAY SHALL BE REMOVED IMMEDIATELY.
17. NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR POLLUTION RUNOFF. NO RE-FUELING SHALL OCCUR WITHIN 100 FEET OF ANY WETLAND RESOURCE AREA AND 200 FEET FROM RIVERFRONT. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
18. THE COST OF REPAIRING EROSION CONTROL MEASURES OR REMOVING SEDIMENT FROM EROSION CONTROL SYSTEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE APPLICABLE EROSION CONTROL ITEM.
19. EROSION CONTROL MEASURES SHALL BE KEPT OPERATIONAL AND MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD OF LAND DISTURBANCE UNTIL PERMANENT SEDIMENT AND EROSION CONTROL MEASURES ARE OPERATIONAL.
20. CONTRACTOR SHALL SPRAY WATER FROM A WATER TRUCK ON DRY AND WINDY DAYS TO PREVENT DUST FROM FORMING. OTHER ALLOWED FORMS OF DUST CONTROL INCLUDE: CALCIUM CHLORIDE.



21. FINAL STABILIZATION MEANS THAT ALL SOIL DISTURBANCE ACTIVITIES HAVE CEASED AND A UNIFORM, PERENNIAL VEGETATIVE COVER WITH A DENSITY OF EIGHTY (80) PERCENT OVER THE ENTIRE PERVIOUS SURFACE HAS BEEN ESTABLISHED; OR OTHER EQUIVALENT STABILIZATION MEASURES, SUCH AS PERMANENT LANDSCAPE MULCHES, ROCK RIP-RAP OR WASHED/CRUSHED STONE HAVE BEEN APPLIED ON ALL DISTURBED AREAS THAT ARE NOT COVERED BY PERMANENT STRUCTURES, CONCRETE OR PAVEMENT.
22. AFTER ALL DISTURBED AREAS HAVE REACHED FINAL STABILIZATION, THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AT THE DIRECTION OF THE CEOR.
23. AFTER THE REMOVAL OF TEMPORARY EROSION CONTROL MEASURES, THE CONTRACTOR SHALL HAND RAKE AND SEED THE AREA OF THE TEMPORARY EROSION CONTROL MEASURE.
24. EROSION CONTROL MEASURES AS SHOWN ON THESE DRAWINGS IS INTENDED TO CONVEY MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES AS NECESSARY TO PREVENT SOIL EROSION AND TO ACCOMPLISH THE PROJECT'S STORMWATER POLLUTION PREVENTION PLAN (SWPPP) OBJECTIVES.
25. TEMPORARY ACCESS ROADS/AISLES TO BE USED FOR DELIVERY & DISTRIBUTION OF MATERIALS THROUGH THE SITE. CONTRACTOR SHALL NOT PLACE ACCESS AISLES THROUGH WETLAND AREAS. TEMPORARY ACCESS AISLES AND TEMPORARY STAGING, STORAGE & PARKING AREAS ARE TO BE DE-COMPACTED AND RESTORED PER SWPPP.
26. ALL EXCESS TOPSOIL IS TO REMAIN ON-SITE, STOCKPILED AND PERMANENTLY STABILIZED WITH SEEDING.
27. PARKING AREA SHALL NOT ENCROACH INTO PUBLIC ROAD RIGHT-OF-WAY. NO PARKING VEHICLES, EQUIPMENT, OR MATERIAL WITH ROAD RIGHT-OF-WAY.

GRADING AND EROSION CONTROL PLAN

SCALE: 1" = 100'

0 100' 200'

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE

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NOT FOR CONSTRUCTION

4/1/24

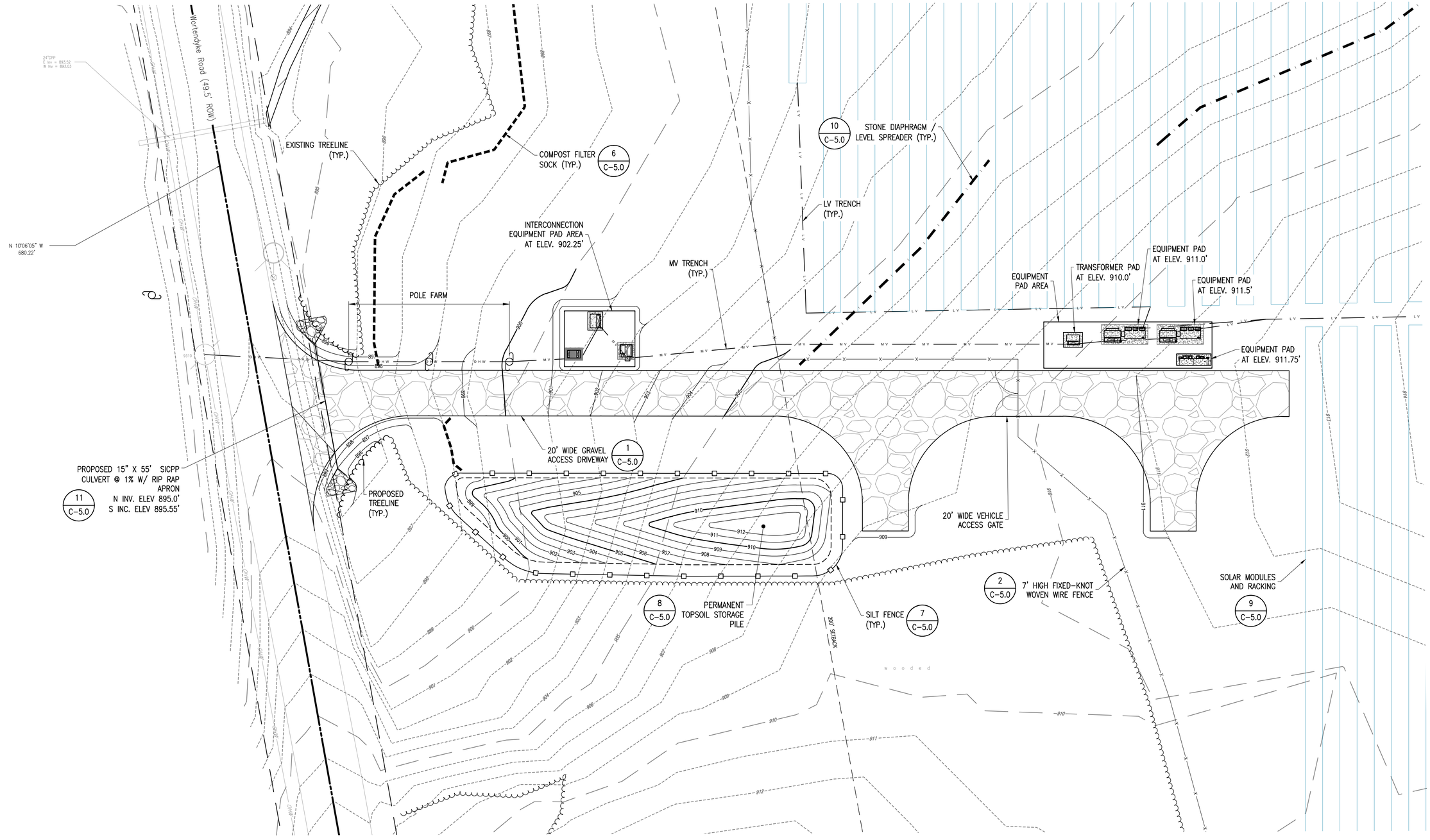
SITE USE PERMIT SET
SITE: 9327 WORTENDYKE RD
BATAVIA, NY 14020

PROJECT NUMBER: 120-1542

REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
0	04/1/24	DL/KJR	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

C-4.0
GRADING AND EROSION CONTROL PLAN



PROPOSED ACCESS DRIVEWAY, CULVERT & EQUIPMENT PADS
SCALE: 1:20

GRADING AND EROSION CONTROL PLAN

SCALE: 1" = 20'

0 100' 200'

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE

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NOT FOR CONSTRUCTION

STATE OF NEW YORK
MARC DAVID KENNEDY
Holder
027026
PROFESSIONAL ENGINEER

4/1/24

SITE USE PERMIT SET
SITE: 9327 WORTENDYKE RD
BATAVIA, NY 14020

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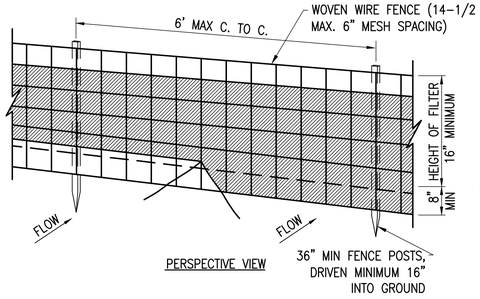
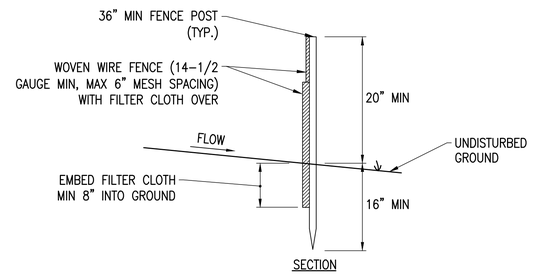
C-4.1
GRADING AND EROSION CONTROL PLAN

APPROVAL SIGNATURE:

STEVEN J. MOUNTAIN, P.E.
TOWN OF BATAVIA – TOWN ENGINEER

DATE





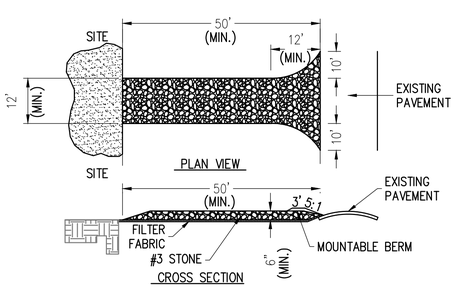
CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE.

POSTS: STEEL, EITHER T OR U TYPE OR 2" HARDWOOD
FENCE: WOVEN WIRE, 14 GAUGE 6" MAX. MESH OPENING
FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

7 SILT FENCE DETAIL

SCALE: NTS



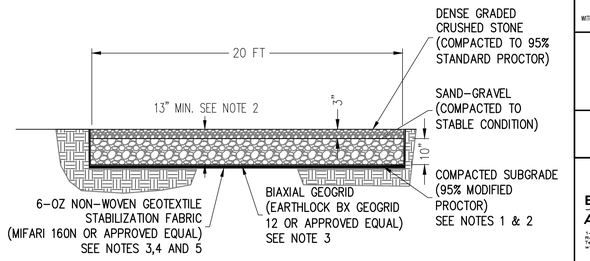
NOTES:

1. STONE SIZE – USE NYSDOT 703-0201 SIZE DESIGNATION #3 STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH– NOT LESS THAN 50 FEET.
3. THICKNESS–NOT LESS THAN 6 INCHES.
4. WIDTH–NOT LESS THAN 12 FEET WHERE MORE THAN ONE (1) ACCESS POINT TO THE SITE. WHERE ONE (1) ACCESS POINT A MINIMUM OF 24 FEET IS REQUIRED.
5. GEOTEXTILE–SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER–SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH 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 TRACKED ONTO PUBLIC RIGHTS–OF–WAY SHALL BE REMOVED IMMEDIATELY.
8. WHEN WHEEL 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.

4 STABILIZED CONSTRUCTION EXIT

SCALE: NTS

XD_CIVIL_TEMPORARY CONSTRUCTION_STABILIZED CONSTRUCTION EXIT_NY 2019-04-02



NOTES:

1. SUBCONTRACTOR SHALL EXCAVATE TO SUITABLE MATERIAL FOR SUBGRADE.
2. SUBCONTRACTOR SHALL COMPACT SUBGRADE TO PROVIDE SUITABLE SURFACE TO PLACE ROAD. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPERATION CRITERIA.
3. SUBCONTRACTOR SHALL FOLLOW MANUFACTURER INSTALLATION PROCEDURES.
4. WHERE OVERLAPPING OF GEOTEXTILE FABRIC IS REQUIRED, SUBCONTRACTOR SHALL OVERLAP A MINIMUM OF 24".
5. SUBCONTRACTOR SHALL REMOVE TEMPORARY CONSTRUCTION ACCESS ROADS, AND RESTORE TO PRE–CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CEOR AND THE GOVERNING AGENCIES.
6. SUBCONTRACTOR SHALL INSTALL CONDUITS FOR ALL ELECTRICAL CONDUIT CROSSINGS PRIOR TO INSTALLATION OF THE GEOGRID MATERIAL. THE GEOGRID SHALL NOT BE HORIZONTALLY CUT ONCE INSTALLED.

1 GRAVEL ACCESS ROAD

SCALE: NTS

XD_CIVIL_GRAVEL_ROAD_IL 04-30-2019

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NOT FOR CONSTRUCTION

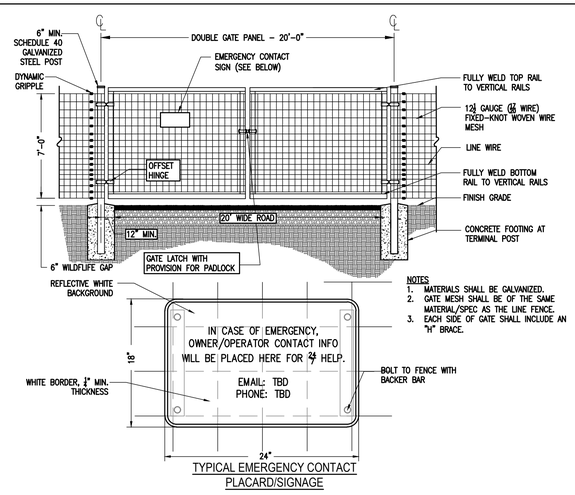
4/1/24

NOTES:
1. STABILIZE ALL AREAS OF SPOIL MATERIAL PLACEMENT WITH SEED AND ROLLED EROSION CONTROL BLANKET NORTH AMERICAN GREEN SC150 OR APPROVED EQUAL.

SLOPE (%)	SPACING (FT.)
< 5	N/A
5–10	100
10–20	75
20–35	50
> 35	25

10 STONE DIAPHRAGM / LEVEL SPREADER

SCALE: N.T.S.

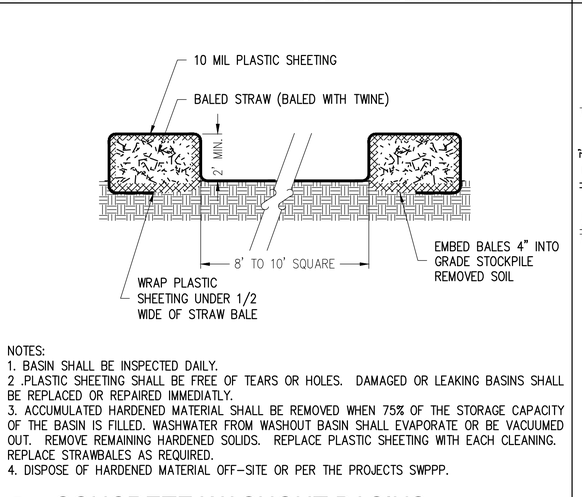


NOTES
1. MATERIALS SHALL BE GALVANIZED.
2. GATE MESH SHALL BE OF THE SAME MATERIAL/SPEC AS THE LINE FENCE.
3. EACH SIDE OF GATE SHALL INCLUDE AN "H" BRACE.

8 7' WOVEN WIRE VEHICLE GATE & PLACARD

SCALE: NTS

XD_CIVIL_FENCE_8'_AC_VEHICLE GATE & PLACARD 01-12-2021

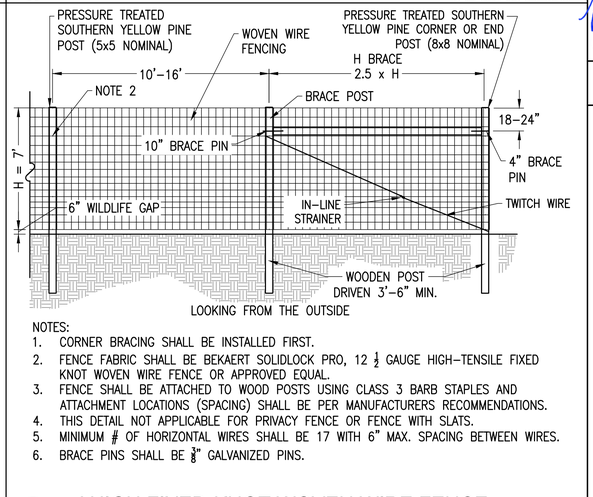


NOTES:
1. BASIN SHALL BE INSPECTED DAILY.
2 .PLASTIC SHEETING SHALL BE FREE OF TEARS OR HOLES. DAMAGED OR LEAKING BASINS SHALL BE REPLACED OR REPAIRED IMMEDIATLY.
3. ACCUMULATED HARDENED MATERIAL SHALL BE REMOVED WHEN 75% OF THE STORAGE CAPACITY OF THE BASIN IS FILLED. WASHWATER FROM WASHOUT BASIN SHALL EVAPORATE OR BE VACUUMED OUT. REMOVE REMAINING HARDENED SOLIDS. REPLACE PLASTIC SHEETING WITH EACH CLEANING. REPLACE STRAWBALES AS REQUIRED.
4. DISPOSE OF HARDENED MATERIAL OFF–SITE OR PER THE PROJECTS SWPPP.

5 CONCRETE WASHOUT BASINS

SCALE: NTS

XD_CIVIL_CONCRETE WASHOUT BASINS 07-26-2017



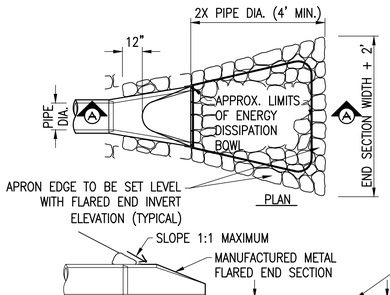
NOTES:

1. CORNER BRACING SHALL BE INSTALLED FIRST.
2. FENCE FABRIC SHALL BE BEKAERT SOLIDLOCK PRO, 12 ½ GAUGE HIGH–TENSILE FIXED KNOT WOVEN WIRE FENCE OR APPROVED EQUAL.
3. FENCE SHALL BE ATTACHED TO WOOD POSTS USING CLASS 3 BARB STAPLES AND ATTACHMENT LOCATIONS (SPACING) SHALL BE PER MANUFACTURERS RECOMMENDATIONS.
4. THIS DETAIL NOT APPLICABLE FOR PRIVACY FENCE OR FENCE WITH SLATS.
5. MINIMUM # OF HORIZONTAL WIRES SHALL BE 17 WITH 6" MAX. SPACING BETWEEN WIRES.
6. BRACE PINS SHALL BE ⅜" GALVANIZED PINS.

2 7' HIGH FIXED-KNOT WOVEN WIRE FENCE

SCALE: NTS

SITE USE PERMIT SET
SITE: 9327 WORTENDYKE RD
BATAVIA, NY 14020

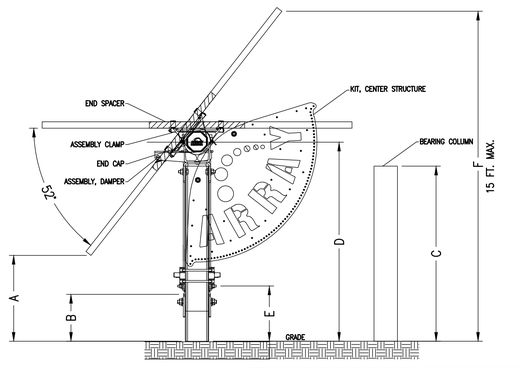


NOTES:

1. CUT OFF WALL TO BE POURED IF INDICATED ON THE PLANS.

11 FLARED END SECTION/RIP-RAP APRON

SCALE: N.T.S.



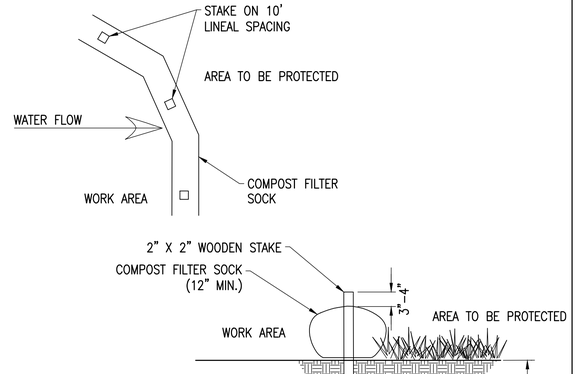
A	B	C	D	E	F
BOTTOM EDGE OF 90° MODULE AT 52° (IN)	GEARBOX COLUMN (IN)	BEARING COLUMN HEIGHT (IN)	CENTER OF ROTATION (IN)	TO BOTTOM OF DRIVELINE (IN)	TOP EDGE OF 90° MODULE AT 52° (IN)
36	22	54	60	24	104

NOTE: CLEARANCES HAVE ± INSTALL TOLERANCES.

9 VERTICAL MOUNT MOTOR CLEARANCES

ATI

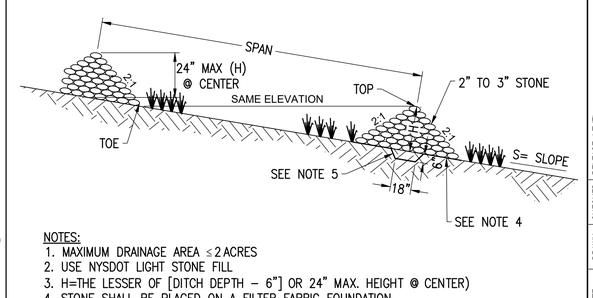
SCALE: N.T.S.



NOTE: MAY BE USED WHEREVER EROSION CONTROL IS SPECIFIED AT THE DISCRETION OF THE CONTRACTOR.

6 COMPOST FILTER SOCK

SCALE: NTS



NOTES:

1. MAXIMUM DRAINAGE AREA ≤ 2 ACRES
2. USE NYSDOT LIGHT STONE FILL
3. H=THE LESSER OF [DITCH DEPTH – 6"] OR 24" MAX. HEIGHT @ CENTER)
4. STONE SHALL BE PLACED ON A FILTER FABRIC FOUNDATION
5. INSTALL 6" DEEP CUT–OFF TRENCH BELOW
6. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM

3 ROCK CHECK DAM

SCALE: N.T.S.

PROJECT NUMBER: 120–1542

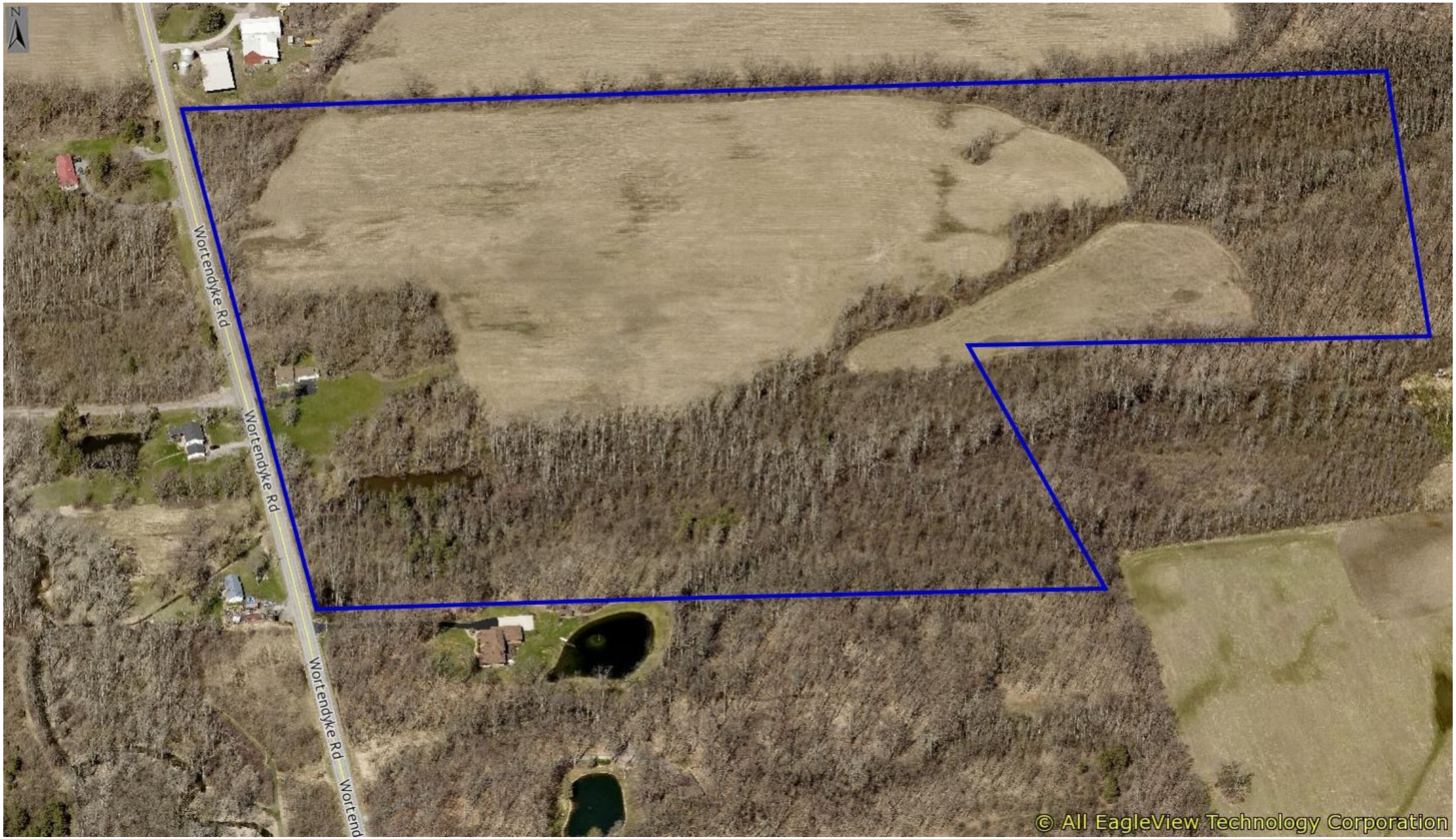
REV	DATE	DRAWN	CHECKED	RELEASE LEVEL
0	04/1/24	DL/KJR	MDK	SUP SET

SCALES STATED ON DRAWINGS ARE VALID ONLY WHEN PLOTTED ARCH D 24" X 36"

C-5.0

CIVIL DETAILS

T-05-BAT-04-24



04/08/2023