TOWN OF CARMEL

ENVIRONMENTAL CONSERVATION BOARD

60 McAlpin Avenue
Mahopac, New York 10541
Tel. (845) 628-1500 - Ext. 190
www.ci.carmel.ny.us

ENVIRONMENTAL CONSERVATION BOARD AGENDA

JANUARY 18, 2024 – 7:30 P.M.

ELIGIBLE FOR A PERMIT

APPLICANT	ADDRESS	TAX MAP #	COMMENTS
1. Shilling, William	37 Kirk Lake Drive	64.11-1-16	Pergola & Shed
2. Brown, Alison & Daniel	18 Frederick Street	64.19-1-62	Add 2nd floor and Build New Deck

SUBMISSION OF APPLICATION OR LETTER OF PERMISSION

3. Union Energy Center, LLC	24 Miller Road	86.11-1-14	Planning Board Referral (Proposed Battery Energy Storage System)

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

January 16, 2024

Town of Carmel Environmental Conservation Board
60 McAlpin Avenue
Mahopac, New York 10541

RE: Union Energy Center
Town of Carmel
TM#'s: 86.11-1-14

Dear Chairman Laga and Members of the Board:

Please find enclosed the following plans and documents in support of the application for a wetland permit for the above referenced project:

- Twelve (12) sheet Site Plan Set, last revised December 4, 2023. (4 Copies)
- Wetlands Permit Application, dated January 16, 2024 (4 Copies)
- Wetland Function-Value and Impact Report by VHB, Inc, dated December 1, 2023. (4 copies)
- Full EAF, dated August 28, 2023. (4 Copies)
- Title Report (4 copies)

Please note that a check for the application fee is being delivered under separate cover.

The applicant is seeking a wetland permit associated with a site plan application currently before the Planning Board. The site plan is for the development of a Battery Energy Storage System (BESS). The wetland permit is being sought for the construction of a wetland crossing near the property frontage along Miller Road and work being done inside the 100' Town of Carmel wetland buffer / NYSDEC adjacent area. A small piece of New York State DEC Wetland F-26 is proposed to be disturbed on the western edge of the subject property near Miller Road. The proposed work within the buffer area includes two substations adjacent to the existing transmission lines on the site, two battery storage areas, and a gravel driveway. The total proposed disturbance within the wetland is 3,038 SF. And the total disturbance within the Town of Carmel Wetland Buffer / NYSDEC Adjacent Area is 233,045 SF.

BESS is a tool for stabilizing and backing up the electrical grid. By storing electricity during periods of low demand, the system can feed the grid during times of peak demand and during outages. BESS projects also increase the efficiency and viability of renewable energy sources, such as wind and solar. The project would connect to the adjacent transmission lines that currently run through the site, and would have a storage capacity of 116 megawatts, bringing New York State closer to its stated goal of 6-gigawatts of energy storage by 2030. To offset the impacts of the proposed disturbances, the applicant has developed the enclosed Wetland Function-Value and Impact Report. The applicant will also be seeking Freshwater Wetlands Permit from NYSDEC and a fill permit from Army Corps of Engineers.

We respectfully request the project be placed on the January 18, 2024 Environmental Conservation Board agenda. Should you have any questions or comments regarding this information, please feel free to contact our office.

Very truly yours,
INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

By: _____
Richard D. Williams, PE
Senior Principal Engineer

RDW/adt

Enclosures
cc: (All via email only) Scott Connuck, Compton Donohue, Jeffrey Shamas

Insite Project #: 21120.100

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APPLICATION FOR WETLAND PERMIT OR LETTER OF PERMISSION

Name of Applicant: Union Energy Center, LLC

Address of Applicant: 310 4th Street NE, 3rd Floor
Charlottesville, VA 22902
Email: sconnuck@eastpointenergy.com

Telephone# 434-465-6211 Name and Address of Owner if different from Applicant:

Miller Road LLC, 888 Route 6, Mahopac, NY 10541

Property Address: 24 Miller Road, Town of Carmel Tax Map # 86.11-1-14

Agency Submitting Application if Applicable: N/A

Location of Wetland: Various locations on site.

Size of Work Section & Specific Location: The total proposed disturbance within the wetland is 3,038 SF. And the total disturbance within the Town of Carmel Wetland Buffer / NYSDEC Adjacent Area is 233,045 SF.

Will Project Utilize State Owned Lands? If Yes, Specify: No

Type and extent of work (feet of new channel, yards of material to be removed, draining, dredging, filling, etc). A brief description of the regulated activity (attach supporting details).

The applicant is proposing a Battery Energy Storage System (BESS). The wetland permit is being sought for the construction of a wetland crossing near the property frontage along Miller Road and work being done inside the 100' Town of Carmel wetland buffer / NYSDEC adjacent area. A small piece of New York State DEC Wetland F-26 is proposed to be disturbed on the western edge of the subject property near Miller Road. The proposed work within the buffer area includes stormwater practices, two substations adjacent to the existing transmission lines on the site, two battery storage areas, and a gravel driveway.

Proposed Start Date: 2/25 Anticipated Completion Date: 2/27 Fee Paid $ 1000.00

****

CERTIFICATION

I hereby affirm under penalty of perjury that information provided on this form is true to the best of my knowledge and belief, false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law. As a condition to the issuance of a permit, the applicant accepts full legal responsibility for all damage, direct or indirect, or whatever nature, and by whomever suffered, arising out of the project described here-in and agrees to indemnify and save harmless the Town of Carmel from suits, actions, damages and costs of every name and description resulting from the said project.

SIGNATURE

January 15, 2024
DATE

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: Union Energy Center, LLC		
Project Location (describe, and attach a general location map): Union Valley Road and Miller Road		
Brief Description of Proposed Action (include purpose or need): The applicant is seeking to construct a 116-megawatt battery energy storage system. The project includes the construction of a system of gravel driveways, two pads for battery storage, two substations, and the associated landscaping and stormwater management practices. The batteries would be stored in above ground enclosures similar to shipping containers and the project would connect to NYSEG transmission lines that currently traverse an easement on the site. The 93.5 acre site, where the proposed development would occur is currently undeveloped. The applicant is also seeking to modify existing property lines between the proposed development site, and two neighboring sites. One is to the north which contains a New York State Electric and Gas (NYSEG) substation. Of the two proposed substations, one would be owned and controlled by NYSEG. The proposed lot line adjustment would allow NYSEG ownership of this substation. Additionally, the adjacent lot known as now or formerly The Teal Door, LLC, would be enlarged into the project site. In the proposed configuration, the proposed development lot would contain 78.9 acres, the NYSEG lot would be 12.3 acres, and the Teal Door lot would be 4.3 acres. The proposed subdivision would add 10.7 acres to the NYSEG lot, 3.9 acres to the Teal Door lot, and deduct the sum of the two from the development lot. There are no water or wastewater improvements proposed.		
Name of Applicant/Sponsor: East Point Energy c/o Scott Connuck	Telephone: E-Mail: sconnuck@eastpointenergy.com	
Address: 310 4th Street NE, 3rd Floor		
City/PO: Charlottesville	State: VA	Zip Code: 22902
Project Contact (if not same as sponsor; give name and title/role): Jeffrey J. Contelmo, P.E., Insite Engineering, Surveying & Landscape Architecture, P.C.	Telephone: 845-225-9690 E-Mail: jcontelmo@insite-eng.com	
Address: 3 Garrett Place		
City/PO: Carmel	State: NY	Zip Code: 10512
Property Owner (if not same as sponsor): Miller Road, LLC c/o Nicole Stern	Telephone: E-Mail:	
Address: 888 Route 6		
City/PO: Mahopac	State: NY	Zip Code: 10541

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 Counsel, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Planning Board - Site Plan Approval, Subdivision approval	
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☑Yes ☐No	Building Permit Town Wetland Permit Permit	
e. County agencies ☐Yes ☑No		
f. Regional agencies ☑Yes ☐No	NYCDEP SWPPP Acceptance	
g. State agencies ☑Yes ☐No	NYSDEC GP-0-20-001 Coverage NYSDEC Freshwater Wetlands Permit	
h. Federal agencies ☑Yes ☐No	ACOE Permitting Wetland Fill Permit	

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):

NYC Watershed Boundary

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):

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?
Commercial / Business Park

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? Carmel Central School District

b. What police or other public protection forces serve the project site?
Carmel Police Department

c. Which fire protection and emergency medical services serve the project site?
Mahopac Fire District

d. What parks serve the project site?
Empire State Trail, Donald J. Trump State Park, Baldwin Meadows Park

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)? Industrial / Utility

b. a. Total acreage of the site of the proposed action? 1.6±, 0.4 & 93.5± acres
b. Total acreage to be physically disturbed? 18.0± acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 95.5± acres

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)
Lot line adjustments for industrial / utility & commercial use.
ii. Is a cluster/conservation layout proposed? ☐ Yes ☑ No
iii. Number of lots proposed? 3
iv. Minimum and maximum proposed lot sizes? Minimum 4.3 Maximum 12.3

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 12-18 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 180

ii. Dimensions (in feet) of largest proposed structure: 10.7' height; 10' width; and 60' length

iii. Approximate extent of building space to be heated or cooled: 108,000 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.

_____

_____

iv. 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): Crossing over NYSDEC Wetland F-26 and associated watercourse for access to the site.

_____

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:
A culvert and headwall would be constructed to allow for access to the site from Miller Road. The action would result in disturbance of about 3,000 sf of the wetland. ACOE permitting will be sought for this part of the project. Other portions of the site would create some disturbance within the 100 adjacent area, but these disturbances would primarily be for the construction of stormwater management practices. A NYSDEC Freshwater Wetlands Permit will be sought for these disturbances.

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☑ Yes ☐ No
If Yes, describe: Culvert and headwalls to be constructed.

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: 3,000 sf±
- expected acreage of aquatic vegetation remaining after project completion: 42.8±ac
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): Crossing for access to the site.
- proposed method of plant removal: Mechanical
- if chemical/herbicide treatment will be used, specify product(s): N/A

v. Describe any proposed reclamation/mitigation following disturbance: Wetland Mitigation will be provided per ACOE.

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?

56,120 Square feet or 1.3 acres (impervious surface)

4,142,137 Square feet or 95.1 acres (parcel size)

ii. Describe types of new point sources. Battery enclosure structures.

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)?

Proposed stormwater management practices

- If to surface waters, identify receiving water bodies or wetlands: _____
- 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: 8:00 am - 6:00 pm
- Saturday: 8:00 am - 5:00 pm
- Sunday: None
- Holidays: None

ii. During Operations:

- Monday - Friday: Occasional
- Saturday: Onsite Employee (1-3) present through the week
- Sunday: _____
- Holidays: _____

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:

During construction: Typical construction and earthwork noise.
During Operation: Sound from HVAC system.

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

Describe: Tree removal as needed. Developed area to receive evergreen plantings to mitigate sound.

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:

Downward facing site lighting, provided for security and safety. Lighting will be limited, motion sensor operated, and dark sky compliant.

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

Describe: Tree removal as needed. Developed area to receive evergreen plantings to mitigate light.

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): Public Trail

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	0.4 ac	9.2 ac±	+8.8 ac
• Forested	52.8 ac±	34.8 ac±	-18 ac
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0 ac	0 ac	No Change
• Agricultural (includes active orchards, field, greenhouse etc.)	0 ac	0 ac	No Change
• Surface water features (lakes, ponds, streams, rivers, etc.)	0 ac	0 ac	No Change
• Wetlands (freshwater or tidal)	42.3± ac	42.3± ac	Less than 0.1ac change
• Non-vegetated (bare rock, earth or fill)	0 ac	0 ac	No Change
• Other Describe: Stormwater Management Practices Lawn/meadow/landscape-buffers	0 AC 0 AC	2.2 ± ac 7 ± ac	+2.2 ± ac +7 ± ac

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:

Creative Kids Childcare Center

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): 360023

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? 6.5 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:

Paxton Fine Sandy Loam, 3-8% slopes	33 %
Ridgebury Complex, 0-8% slopes	35 %
Woodbridge Loam, 3-8% slopes	11 %

d. What is the average depth to the water table on the project site? Average: 2 feet

e. Drainage status of project site soils:
☑ Well Drained: 35 % of site
☑ Moderately Well Drained: 11 % of site
☑ Poorly Drained 54 % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 73 % of site
☑ 10-15%: 15 % of site
☑ 15% or greater: 12 % 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 _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters, NYS Wetland, Federal Waters Approximate Size NYS Wetland (in a...
- Wetland No. (if regulated by DEC) F-26

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: _____

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:
Fauna typical to northeast forest and wetlands.

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):

Northern Long-eared Bat

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:

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:

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

i. If Yes: acreage(s) on project site?

ii. Source(s) of soil rating(s):

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: Baldwin Place Area

ii. Basis for designation: Difficulties w/ portable water source

iii. Designating agency and date: Agency:Somers, Town of, Date:9-26-90

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: Empire Trail

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

iii. Distance between project and resource: 0 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 Jeffrey J. Contelmo, P.E. Date 8/28/23

Insite Engineering, Surveying & Landscape Architecture, P.C. Last revised 10/30/23

Signature  Title Senior Principal Engineer

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EAF Mapper Summary Report

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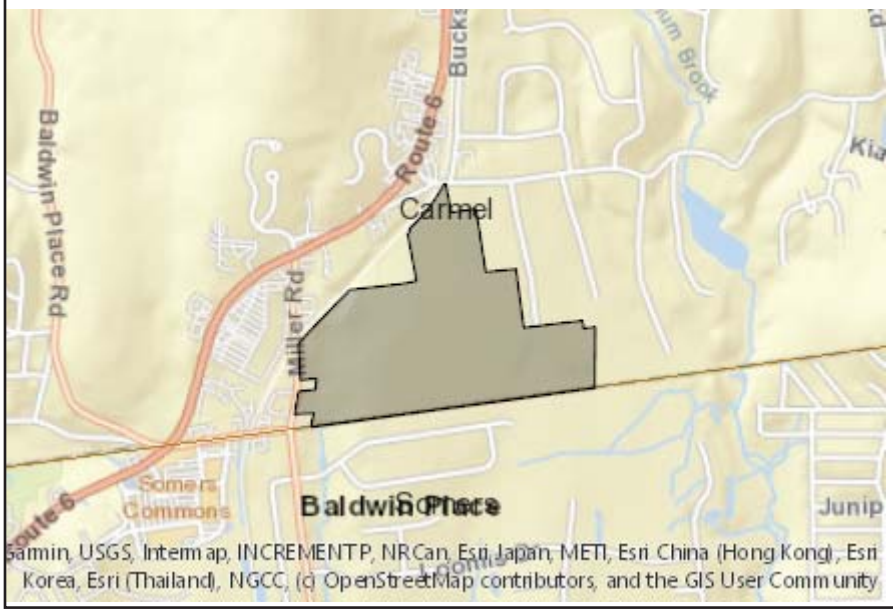


Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the 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]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYC Watershed Boundary
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]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	360023
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, NYS Wetland
E.2.h.iv [Surface Water Features - Wetlands Size]	NYS Wetland (in acres):322.1, NYS Wetland (in acres):42.8
E.2.h.iv [Surface Water Features - DEC Wetlands Number]	F-26
E.2.h.v [Impaired Water Bodies]	No

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]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Northern Long-eared Bat
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	Yes
E.3.d [Critical Environmental Area - Name]	Baldwin Place Area
E.3.d.ii [Critical Environmental Area - Reason]	Difficulties w/ portable water source
E.3.d.iii [Critical Environmental Area – Date and Agency]	Agency:Somers, Town of, Date:9-26-90
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]	Yes
E.3.i. [Designated River Corridor]	No

Union Energy Center Project

24 Miller Road, Parcel No. 86.11-1-14
Town of Carmel, Putnam County New York

PREPARED FOR

Union Energy Center, LLC
200 Garrett Street, Suite J
Charlottesville, VA 22902

PREPARED BY

100 Great Meadow Road
Suite 200
Wethersfield, Connecticut 06109-2377

December 1, 2023

Table of Contents

1

Introduction

This Wetland Function-Value Impact Report was prepared in support of a Town of Carmel Planning Board submittal for the proposed battery storage and electrical utility development Project (herein referred to as the 'Project') located at 24 Miller Road (Parcel No. 86.11-1-14) in the Town of Carmel, Putnam County New York (Figure 1). The proposed Project consists of the construction of two battery storage enclosures, two electrical substations, one bridge crossing, stormwater management measures, utilities, and associated parking lots and driveways.

A formal wetland and watercourse delineation was completed by VHB on May 14, 17, and 18, 2021, which resulted in the verification of wetlands onsite as documented in a Wetland and Watercourse Delineation Report, dated July 12, 2021 (Appendix A). Additionally, the NYSDEC validated the delineation on November 21, 2023, as shown in Appendix B. As shown in the accompanying Planning Board submittal, the Project proposes to disturb ±3,000[1] square feet (±0.06) acres of regulated wetlands and ±27,200[2] acres of the regulated 100-ft Adjacent Area for the construction of the bridge crossing off Miller Road.

Therefore, the purpose of this report is to assess the current conditions of wetland and Adjacent Area resources onsite, their function and values, and the effects of the proposed Project on these resources.

[1] These impact areas were derived from an Environmental Assessment Form completed by Insite Engineering, Surveying and Landscape Architecture, signed August 28, 2023, and the Planning Board plan set submission dated October 30, 2023, also prepared by Insite.

2

Site Description and Setting

The ±93-acre Project site is located at 24 Miller Road (Parcel No. 86.11-1-14) in the Town of Carmel, Putnam County, New York. The Project site is bound to the north by the Putnam Trailway Empire State Trail and commercial properties, to the east by residential properties, Silver Gate Road and forested, undeveloped land, to the south by residential properties and Lounsbury Drive, and to the west by Miller Road (Figure 2). Topography onsite ranges from 680ft to 605ft (NAVD88). A ridge is located in the center of the site which slopes downgradient steeply to the west, and gradually to the southeast. A stream channel is located in the western portion of the site parallel to Miller Road and flows from north to south, and multiple stone walls are present throughout the site. While the site is primarily undeveloped, an electrical transmission Right-of-Way (ROW) easement is located along the eastern boundary of the site, where multiple transmission structures are present. Based on a review of historic aerial imagery, the site has remained undeveloped since at least the 1950s.

2.1 - Current Landscape Ecological Setting

The Project site is located in the Hudson Highlands of New York, in the Hudson Valley, ±90 miles to the west of the Hudson River. The surrounding ecological neighborhood is suburban, with residential, commercial, and light industrial development interspersed within contiguous forested areas.

As shown in Table 1 below, based on a review of current aerial imagery ±93% of the site is covered by a mature forest that continues offsite. Herbaceous and shrub vegetation is limited to wetland areas onsite with surface water present, where mature canopy trees aren't dominant, and sunlight can penetrate down to the forest floor. There are no cultivation or pasture uses on site, and all aquatic vegetation is limited to wetlands onsite. There is no asphalt or impervious cover currently onsite.

Table 1: Project Site Flora Percent Cover

Forest Canopy Trees	Shrubs and Herbaceous	Cultivated or Pasture	Aquatic	Other
93%	7%	N/A	N/A	<1%

3

Wetland Function and Values Assessment

Wetland classifications used to identify the type of wetland(s) occurring on the Project site are based on guidance from the U.S. Fish and Wildlife Service (USFWS) (Cowardin et.al. 1979).

Biophysical elements such as a wetland's landscape position, geology, hydrology, substrate, and vegetation determine the wetland functions and to what capacity they are performed. Due to the differing biophysical characteristics between on-site wetlands, the functions the wetlands provide and the capacity to perform those functions vary. To better understand these differences, a description of the assessed wetland functional values was completed based on the United States Army Corps of Engineers (USACE) Highway Methodology Workbook (1993) and its supplement workbook. This method requires a description of each of the wetland communities as well as indicating the functions they provide. The thirteen (13) functions and values that have been recognized include:

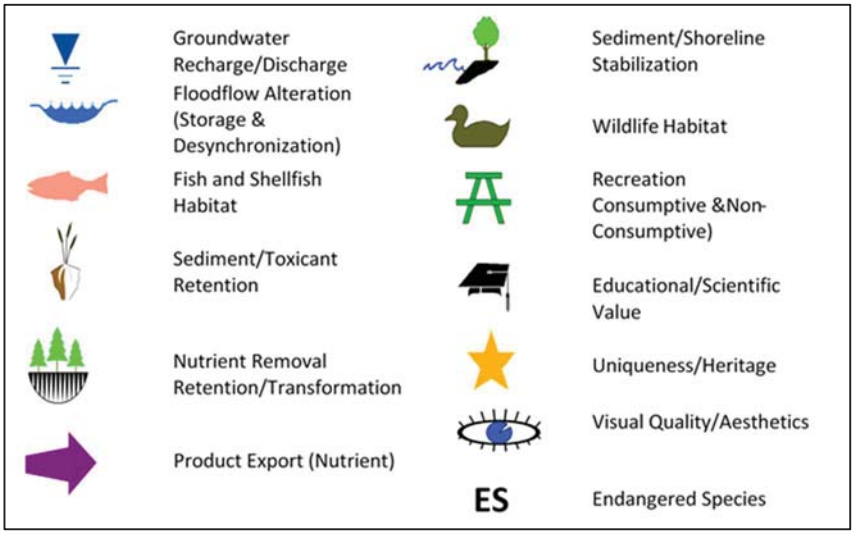


Image 1 - Wetland Function and Values Categories

Wetland resource areas on the Project site, further discussed and documented in the attached Wetland and Watercourse Delineation Report, consist of ±43 acres of palustrine forested (Cowardin, 1979: PFO), scrub-shrub (Cowardin, 1979: PSS) and emergent wetlands (Cowardin, 1979: PEM). There is an established 100-ft Adjacent Area buffer regulated by the New York State Department of Environmental Conservation (NYSDEC) and the Town of Carmel, which is depicted on the attached Wetland Validation Map (Drawing WV-1), dated November 11, 2023 (Appendix B). Three watercourse systems were identified within wetlands on the Project site.

3.2 - Wetlands 1, 2, 3 and 4

Wetlands 1, 2 3, and 4 are naturally occurring sloped wetlands that are located within sloped forested areas of the Project site. These wetlands are not proposed to be impacted by the proposed Project design, however, a basic function-value assessment for these wetlands is included below.

Based on the USACE's 13 functions and values provided above:

1. Groundwater Recharge/Discharge – Wetlands 1, 2, 3, and 4 are gently sloped wetlands that drain downgradient to the southeast corner of the site. Gradual infiltration to support groundwater recharge is anticipated within Wetlands 1, 2, 3, and 4 and in the southeastern portions of Wetlands 1 and 2 where topographic grade begins to flatten, groundwater discharge is anticipated along the delineated Streams 1 and 3.

2. Floodflow Alteration – There are no Federal Emergency Management Agency (FEMA) identified floodplains present within the Project site, and due to the sloped nature of these wetlands, surface runoff is anticipated to flow through these wetlands to downgradient areas on and offsite. It is anticipated that these wetlands provide minimal flood storage functions for the surrounding vicinity.

3. Fish and Shellfish Habitat – Wetlands 4 and 3 do not have stream channels associated with them, so it is anticipated suitable fish or shellfish are not found here due to their stagnant nature. Wetlands 1 and 2 do have streams present, but the onsite wetlands are at their associated stream's headwaters, and it is not anticipated fish or shellfish are using these channels as migratory pathways due to their hydrologic isolation. Therefore, this category of function and value does not apply to these wetlands.

4. Sediment/Toxicant Retention; Nutrient Removal; Product Transport – As these wetlands are located within mature forested, scrub-shrub, and herbaceous vegetated portions of the Project site and are located on sloped topography, it is anticipated that the wetlands have the capacity to trap and remove pollutants, transport nutrients, and improve the overall water quality to downgradient environments.

5. Sediment/Shoreline Stabilization – As no shoreline or major stream channel is located within these wetlands, this function does not apply to these wetlands.

6. Wildlife Habitat – The wildlife habitat function of these wetlands is suitable for many terrestrial, avian, and aquatic species due to the diversity of vegetation present, isolated nature from heavily trafficked roadways, and lack of recreational activity within or adjacent to them. Short and long-term use of these wetlands and their directly adjacent uplands as breeding, foraging, and shelter habitats likely occurs. Larger mammals including deer, bears, or coyotes are anticipated to traverse through the site using the onsite ROW, which extends offsite to Cronton Falls Reservoir to the east, which could serve as ideal foraging habitat for many large mammals and raptor bird species.

7. Recreation Consumption – There are no authorized public recreational uses onsite, but unauthorized local ATV trails are present. Fishing is not anticipated within any of these wetlands, as fish/shellfish support is not anticipated, and any streams present would be too small for any boating activities. There is no fence prohibiting hikers from accessing the site from the Putnam Trailway Empire State Trail, but all hiking use would be unauthorized.

8. Educational/Scientific Value; Uniqueness/Heritage – Based on a review of historic aerial imagery, as these wetlands are anticipated to have been onsite long-term, they could be

used as quality "outdoor classrooms. A Phase 1B Archaeological Field Reconnaissance Survey Report was prepared by Hudson Cultural Services in August 2023 documenting that low uniqueness/heritage value was provided onsite.

9. Endangered Species – Based on a 2021 Natural Heritage Review, no rare or state-listed animals/plants or significant natural communities are within the Project site (Appendix C). Based on a July 20, 2023, U.S Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) review, habitat for the endangered Northern Long-eared Bat (*Myotis septentrionalis*), Indiana Bat (*Myotis sodalist*), and the threatened Bog turtle (*Glyptemys muhlenbergii*) are anticipated to be onsite. Based on the USFWS's Fact Sheets for these species:

   Northern Long-eared Bat

   "*…northern long-eared bats roost singly or in colonies underneath bark, in cavities or crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. This bat has also been found rarely roosting in structures, like barns and sheds*."

   Indiana Bat

   "*The Indiana bat is a small, insectivorous, migratory bat that hibernates colonially in caves and mines in the winter…and require forests for foraging and roosting… Maternity habitat ranges from areas that are completely forested to highly fragmented forest… In summer, most reproductive females occupy roost sites in forested areas under the exfoliating bark of dead or dying trees that retain large, thick slabs of peeling bark. Primary roosts usually receive direct sunlight for more than half the day. Roost trees are often within canopy gaps in a forest, in a fenceline, or along a wooded edge. Habitats in which maternity roosts occur include riparian zones, bottomland and floodplain habitats, wooded wetlands and upland communities. Indiana bats typically forage in semi-open to closed forested habitats with open understory, forest edges, and riparian areas*."

   Due to the presence of a mature forest with a dense canopy, bat roosting habitat is not anticipated within these wetlands as light struggles to penetrate the canopy. Within the utility ROW in Wetland 2, the lack of canopy cover could provide roosting and foraging habitat, but it would be limited to the ROW. No structures, caves or mines are located within any of these wetlands, so hibernation habitat is not anticipated.

   Bog Turtle

   "*Bog turtles are one of the smallest turtle species in the world, and the smallest in North America. Adults are no more than 4.5 inch long… Bog turtles occupy shallow wetland habitats. They are semi-aquatic, meaning sometimes they like to spend time in the water and sometimes they like to be on land or on top of hummocky vegetation above the water. The wetlands they occupy tend to be open-canopy herbaceous sedge bogs, fens or wet meadows, meaning there aren't a lot of trees present that shade out plants that bog turtles like, such as the tussock sedges that form hummocks used for basking and nesting, shrubby cinquefoil, poison sumac, grass-of-parnassus, and cattail, among many other plant species… Bog turtles generally retreat into more densely vegetated areas (different areas than what they typically use during spring and summer months), under*

the roots of trees or shrubs, rock walls, or even muskrat burrows to hibernate from mid-September through mid-April (depending on latitude)."

Due to the presence of a mature forest with a dense canopy, bat roosting habitat is not anticipated within these wetlands as light struggles to penetrate the canopy. Within the utility ROW, the lack of canopy cover could provide roosting and foraging habitat.

Based on this brief assessment, Wetlands 1, 2, 3, and 4 are considered to be Medium-quality wetlands.

3.3 – Wetland 5

Wetland No. 5 is naturally occurring and located in the western portion of the Project site. This wetland is associated with multiple stream channels that flow through the site from north to south. These streams are conveyed from offsite to the north through culvert piping, converge on site, and continue to flow offsite as a single natural channel to the south. This wetland complex is also located at the toe-of-slope associated with the onsite ridge. This wetland is also located at the onsite ridge's toe-of-slope and is primarily a scrub-shrub herbaceous within and adjacent to the stream channels and forested along the channel fringes.

As these wetlands are proposed to be impacted by the proposed Project design, a function-value assessment has been prepared below. Based on the USACE's 13 functions and values provided above:

10. Groundwater Recharge/Discharge – It is anticipated that groundwater discharge occurs within Wetland 5, but due to its toe-of-slope location and the presence of several stream channels within the wetland, groundwater recharge is likely minimal.

    Based on a review of aerial imagery and site visits during various seasons, the streams within Wetland 5 are perennial, and the surrounding wetland displays standing water throughout the year as well. During the 2021 delineation effort, a high water table was observed within Wetland 5, and soils included saturated sandy loams. Groundwater discharge (e.g., seeps) is anticipated to be a source of saturation to Wetland 5, in addition to stormwater runoff from the surrounding impervious developed areas along Miller Road.

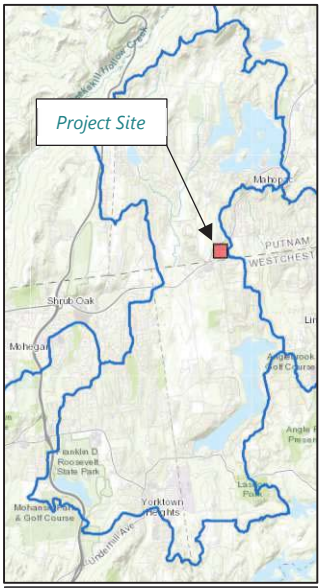


Image 2 – HUC 12 Watersheds

11. Floodflow Alteration – No FEMA-identified floodplain is present within the Project site, but Wetland 5 is located within a concave environment bound by the upgradient Miller Road to the west and the onsite ridge's toe-of-slope to the east. Since water is conveyed onsite via culverted pipes and stormwater runoff from the surrounding developed area, and is conveyed offsite as a single constricted stream, it is anticipated that Wetland 5 provides flood water desynchronization (collection, storage, gradual release) during flooding events for its surrounding neighborhood. However, as identified by the NYSDEC Hudson Valley Natural Resource Mapper (See Image 1), the Project site's HUC12 watershed is primarily vegetated with minimal

impervious cover[3] present, and therefore the Project site's function for flood desynchronization is not isolated and rare but is common and widespread throughout this watershed. Additionally, the site is located in the northern portion of the watershed and does not provide flood desynchronization functions for the surrounding region like the southern portion of the watershed would.

12. Fish and Shellfish Habitat – Wetland 5 is associated with multiple stream channels that flow from the north via culverted pipes and road crossings. These perennial stream channels range from three to six feet in width, flow is retained through the winter season, and shade cover is provided by canopy trees and scrub-shrub vegetation. To the west and north of Wetland 5 are various commercial and industrial properties and Miller Road and Route 6. It is anticipated that Wetland 5 collects stormwater runoff from these areas. Based on a review of the NYSDEC Hudson Valley Natural Resource Mapper, the Project site steam is not identified as a trout-supporting (stock, migration) watercourse, a Known Important Area for Migratory Fish, a Known Important Coldwater Stream Habitat, or a Fishing Access location. No fish or shellfish were observed within Wetland 5 during past site visits.

    Therefore, while fair water quality is anticipated onsite, the stream channels are less than 50ft in width and are not identified as fish or shellfish-supporting water features. Suitability for the presence of fish and shellfish on site is low.

13. Sediment/Toxicant Retention; Nutrient Removal; Product Transport – Wetland 5 is located within a groundwater discharge area and has multiple stream channels that converge into a single, well-defined, meandering channel onsite. Sediment/toxicants that are brought onsite may be trapped within the scrub-shrub and forested vegetation within and adjacent to Wetland 5, but due to the continuous flow of water to the south, long-term retention is limited. Therefore, toxicant/nutrient removal functions within Wetland 5 are anticipated to be poor, but product transport is anticipated to be high. It is anticipated that any product transported offsite is retained and cleaned through infiltration processes ±0.5 miles to the south of the Project site, where the stream channel disperses into a larger wetland complex.

14. Sediment/Shoreline Stabilization – Wetland 5 provides stream channel stabilization to the various channels present. Dense forest and scrub-shrub vegetation throughout the wetland and stream channels protect against erosion scouring, and the well-defined stream channels divide the channels from the adjacent wetlands that vary in width. This varying width further provides erosion protection, reducing velocities of runoff before flowing into the streams.

15. Wildlife Habitat – Wetland 5 is located between the developed Miller Road and the undeveloped remainder of the Project site. Upstream wildlife connectivity is relatively poor due to the presence of Route 6, developed commercial, residential, and industrial properties, culverted pipes, and impervious riparian buffers. Downstream connectivity is anticipated to be fair as the onsite streams converge and flow offsite as a single stream channel, which has a forested riparian buffer. However, based on a review of aerial imagery, the offsite riparian buffer is limited by developed residential neighborhoods, limiting the ease of access for wildlife to traverse north to the Project site. Wildlife access from the east is unprohibited and ideal for traversing.

[3] The NYSDEC Hudson Valley Natural Resource Mapper was used on November 20, 2023, and identified the HUC12 watershed (No. 02030101030, Muscoot River) to be 52.7 acres of canopy cover and 8.4 acres of impervious cover as of 2016.

Dense vegetation within Wetland 5 provides shade relief, foraging, and shelter habitat for avian and small mammal species. Songbirds and small mammals including squirrels, rodents, raccoons, and skunks could utilize this wetland for shelter and foraging habitat, but larger mammals including deer, bears, or coyotes are not anticipated to utilize this wetland for long-term habitat due to its proximity to developed residential, commercial and industrial properties. The adjacent forested upland may provide a suitable habitat for large mammals, however.

16. Recreation Consumption – Fishing and hunting are not permitted within the Project site and the onsite streams are too small for boating activities. Due to the dense vegetation present within Wetland 5, it is not anticipated that local hikers will traverse the wetland as part of their use of the Putnam Trailway Empire State Trail, but there is no fence prohibiting foot access. Additionally, a small parking area is located at the northernmost point of the site, where the public could hike through the Project site to Wetland 5, although it would be unauthorized use of the property.

17. Educational/Scientific Value; Uniqueness/Heritage - A Phase 1B Archeological Report was prepared for the Project site in August 2023 by Hudson Cultural Services, which resulted in no archaeological deposits from 277 shovel test pits. No additional cultural resources investigations were recommended. Additionally, no authorized recreational activities occur on site, however, locals do use the site for ATVing and hunting activities, which are not authorized by the property owner. There are no significant educational features on site that are not found in adjacent forested areas (i.e., stone structures, foundations, etc.). While no school is located within ±0.5 miles of the Project site, the Project site and Wetland 5 could provide an educational "outdoor classroom" function if authorized by the property owner.

18. Endangered Species – Based on a 2021 NYSDEC Natural Heritage Review, no rare or state-listed animals or plants, or significant natural communities are within the Project site (Appendix C). Based on a July 20, 2023, U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) review (Appendix C), habitat for the endangered Northern Long-eared Bat (*Myotis septentrionalis*), Indiana Bat (*Myotis sodalist*), and the threatened Bog turtle (*Glyptemys muhlenbergii*) are anticipated to be onsite. Based on the USFWS's Fact Sheets for these species:

    Northern Long-eared Bat

    "…northern long-eared bats roost singly or in colonies underneath bark, in cavities or crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. This bat has also been found rarely roosting in structures, like barns and sheds."

    Indiana Bat

    "The Indiana bat is a small, insectivorous, migratory bat that hibernates colonially in caves and mines in the winter…and require forests for foraging and roosting… Maternity habitat ranges from areas that are completely forested to highly fragmented forest… In summer, most reproductive females occupy roost sites in forested areas under the

exfoliating bark of dead or dying trees that retain large, thick slabs of peeling bark. Primary roosts usually receive direct sunlight for more than half the day. Roost trees are often within canopy gaps in a forest, in a fenceline, or along a wooded edge. Habitats in which maternity roosts occur include riparian zones, bottomland and floodplain habitats, wooded wetlands and upland communities. Indiana bats typically forage in semi-open to closed forested habitats with open understory, forest edges, and riparian areas."

No structures are located within or directly adjacent to Wetland 5, and the forested canopy cover provides shade throughout the day. The shrub-shrub portions of Wetland 5 could provide rooting habitat in dead or dying trees in the area, but these scrub-shrub areas are limited and narrow, with dense forested canopy trees being the primary cover within this wetland. While no caves or mines are located within or adjacent to Wetland 5, the stream channels within Wetland 5 could provide suitable foraging swooping corridors for bats. However, as the stream flows naturally offsite to the south, this swooping corridor habitat is available within the surrounding vicinity as well as onsite.

As stated by the NYSDEC (See Appendix C), to avoid any potential impacts to bat species habitat, any tree clearing must be completed between November 1 and March 31st. Any proposed tree-clearing activities would adhere to local, state, and federal species regulations to reduce and avoid any impact on threatened and endangered species.

Bog Turtle

"Bog turtles are one of the smallest turtle species in the world, and the smallest in North America. Adults are no more than 4.5 inch long… Bog turtles occupy shallow wetland habitats. They are semi-aquatic, meaning sometimes they like to spend time in the water and sometimes they like to be on land or on top of hummocky vegetation above the water. The wetlands they occupy tend to be open-canopy herbaceous sedge bogs, fens or wet meadows, meaning there aren't a lot of trees present that shade out plants that bog turtles like, such as the tussock sedges that form hummocks used for basking and nesting, shrubby cinquefoil, poison sumac, grass-of-parnassus, and cattail, among many other plant species… Bog turtles generally retreat into more densely vegetated areas (different areas than what they typically use during spring and summer months), under the roots of trees or shrubs, rock walls, or even muskrat burrows to hibernate from mid-September through mid-April (depending on latitude)."

Wetland 5 is comprised mostly of scrub-shrub wetlands with various mature trees interspersed throughout. The southern portion of Wetland 5 could potentially serve as a bog turtle habitat, due to a mix of scrub-shrub and herbaceous wetland cover. However, the proximity of the road and various business/residential developments along the west and south property boundaries could preclude the presence of bog turtles in Wetland 5.

The proposed bridge from Miller Road would include crossing through Wetland 5 and the associated stream. During construction activities, Best Management Practices (BMPs) and erosion and sediment controls will be utilized. The bridge design will include a culvert to maintain streamflow; that culvert is not anticipated to negatively impact wildlife species, including potential bog turtles.

Based on this functions and values assessment, Wetland 5 is considered to be a Medium-Quality wetland that provides specific environmental functions and/or values, but low community value.

Table 2: Wetland Function/Values Classification Chart

Function Value Category	Groundwater Recharge/ Discharge	Floodflow Alteration	Fish and Shellfish Habitat	Sediment/ Toxicant Retention; Nutrient Removal; Product Transport	Sediment/ Shoreline Stabilization	Wildlife Habitat	Recreation Consumption	Educational/ Scientific Value; Uniqueness/ Heritage	Endangered Species
Wetland 1	Medium	N/A	N/A	Medium	N/A	Medium	Low	Low	Medium
Wetland 2	Medium	N/A	N/A	Medium	N/A	Medium	Low	Low	Medium
Wetland 3	Medium	N/A	N/A	Medium	N/A	Medium	Low	Low	Medium
Wetland 4	Medium	N/A	N/A	Medium	N/A	Medium	Low	Low	Medium
Wetland 5	Medium	Low	Low	Low	Medium	Medium	Low	Low	Medium

4

Proposed Activities and Potential Impacts

This development Project proposes to construct the Union Energy Center, which will provide a battery energy storage system (BESS) for up to 116 megawatts (MW) of Alternating Current (AC). The BESS will consist of:

- Gravel driveways and one bridge crossing.
- Two pads for battery storage.
- Lithium-ion battery containers.
- Heating, ventilation and air conditioning (HVAC) cooling systems.
- Control instrumentation.
- A stormwater management system; and
- Electric grid interconnection switchgear for the 115-kilovolt interconnection.

The Project will also include a substation to collect the energy from the BESS and a subdivided substation for New York State Electric & Gas (NYSEG) to own and operate. The entire development will have motion-sensor safety lighting, perimeter security fencing, and sufficient maintenance of vegetation to screen from neighboring properties.

4.1 – Proposed Activity Within Wetlands

The proposed development will require ±3,000sf (±0.06 acres) of permanent impacts to the ±165,850sf (±3.81 acre) Wetland 5 for the proposed bridge crossing, which is ±2% of the total area of Wetland 5. No additional impacts to any other regulated wetlands onsite are proposed at this time. The proposed bridge crossing will be the only site access entry point, coming from Miller Road towards the east across Wetland 5. The crossing will be ±20ft in width and ±95ft in length and will include a culvert/headwall system for water conveyance, two retaining walls, and a guardrail.

Based on VHB's functions and values assessment above, and the July 2021 Wetland and Watercourse Delineation Report prepared by VHB, Wetland 5 is a Medium Quality wetland. Permits from local, state, and federal agencies for these disturbances will be procured prior to the start of construction.

4.2 – Potential Effects of Proposed Activity on Flora

At the location of the proposed bridge crossing, Wetland 5 is dominated by scrub-shrub and herbaceous vegetation, with individual canopy trees present (See Image 2). Due to the absence of a thick canopy, light reaches ground surface year-round at this location, but emergent vegetation

and exposed roots were not observed at this location. Species present include Multiflora rose (Rosa multiflora), American beech (*Fagus grandifolia*), Black cherry (*Prunus serotina*), Japanese honeysuckle (*Lonicera japonica*), Jewelweed (*Impatiens capensis*) and Common rush (*Juncus effusus*).

Although vegetation will be removed for the installation of the crossing, it is anticipated that the remaining disturbed areas will naturally revegetate. Any temporarily lost habitat is anticipated to return within the following one to two growing seasons, and no adverse long-term impacts to vegetation at the proposed crossing location are anticipated.

Nevertheless, the Project proposes mitigation for all wetland impacts to compensate for lost vegetation. Please see Section 5 below for details.

4.3 – Potential Effects of Proposed Activity on Fauna

The proposed crossing impact area is about ±2% of Wetland 5, the remainder of which will remain undisturbed, and impacts to wildlife habitat are anticipated to be minimal. The proposed culverts are not anticipated to hinder streamflow, and the crossing will not hinder wildlife access within and around Wetland 5. The portion of the stream channel not disturbed by the crossing structure will be protected using Best Management Practices (BMPs) and soil erosion and sediment control (SESC) measures such as silt fences, wattles, and haybales. Wildlife access to Wetland 5 and the stream channel is also anticipated to remain suitable for small and large mammals. Post-construction continued use of the wetland and stream for foraging and shelter habitat for avian and small mammal species is also anticipated.

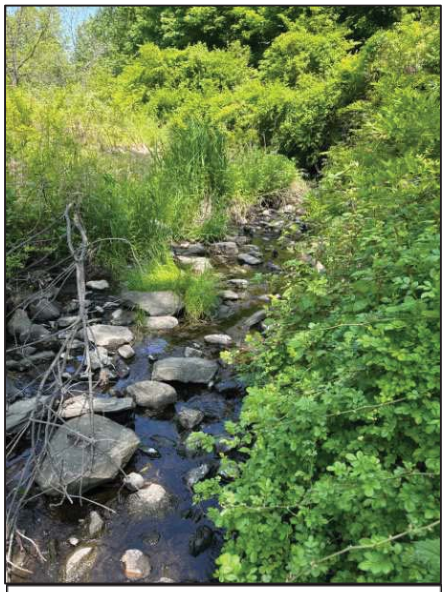


Image 3 - Existing Conditions of Proposed Bridge Crossing Area

As required by the USFWS, any tree-clearing activities will occur between November 1 and March 31 to avoid impacting potential Northern Long-eared Bat and Indiana Bat habitat. Additionally, BMPs and SESC measures will also be used to protect potential Bog turtle habitat onsite, including exclusion area fences around the Project's Limit of Disturbance during construction, and daily construction site sweeps to identify and relocate any potential species that may be traversing the site. Any species identified would be relocated onsite, outside of the construction work area.

5

Conceptual Compensatory Mitigation Approach

Compensatory wetland mitigation is provided for impacts to the freshwater wetlands. As the proposed Project will involve a permanent impact of ±3,000sf (±0.06 acres) of Wetland 5 and ±27,200sf ±(0.62 acres) of the NYDEC Adjacent Area associated with Wetland 5, a preliminary conceptual mitigation approach has been prepared to offset impacts. Note that this approach is subject to change based on the Project's continued planning and design phase, but the approach will compensate for all regulated impacts as required by the USACE. Additionally, a USACE permit authorization will be required for the proposed impacts, and therefore, the final compensatory mitigation plan will be reviewed and approved by the USACE prior to the start of construction within Wetland 5.

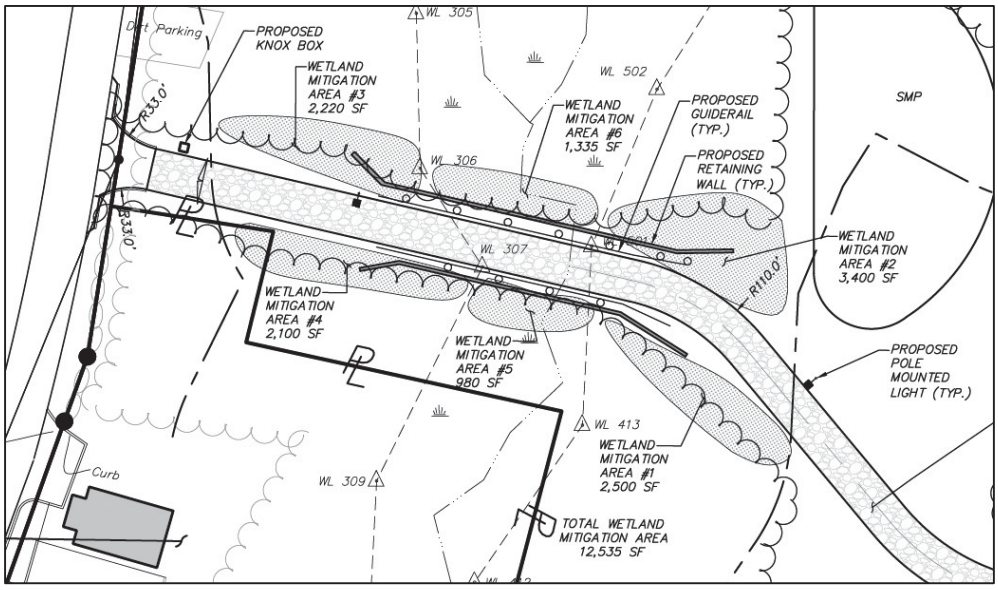


Image 4 - Preliminary Conceptual Compensatory Mitigation Approach

Currently, the Project proposes to enhance the existing Wetland 5 by an approximate 12:1 mitigation/impact ratio. Therefore, the Project proposes to support and enhance the following functions of Wetland 5:

- Groundwater Recharge/Discharge.
- Floodflow Alteration.
- Sediment/Toxicant Retention, Nutrient Removal, Product Transport; and
- Wildlife Habitat.

Upon completion of compensatory mitigation activities, a five-year post-construction monitoring period is proposed to monitor the success of the enhancements and the survival of planted species.

At the end of each growing year, an annual report will be submitted to the USACE to document the status and progress of the restored and enhanced wetlands, and any mitigative tasks that may be required during the following five growing seasons to continue a successful enhancement progression. Upon the completion of the fifth year, a final mitigation report would be submitted documenting the completion of all mitigation requirements required for this proposed Project.

6

References

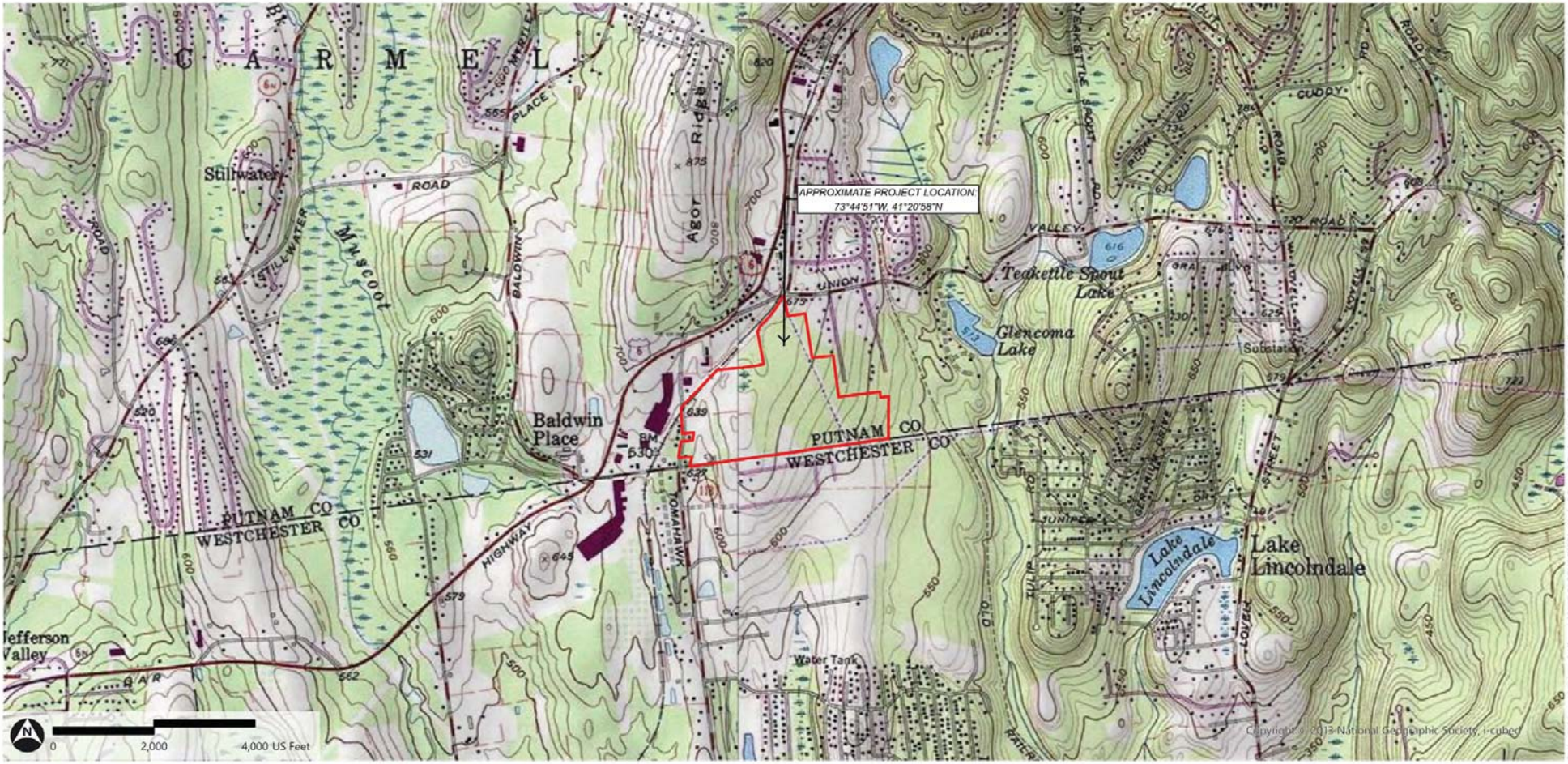
1. Cowardin, L.M., V. Carter, F.C. Golet, E.T. LaRoe (1979). Classification of Wetlands and Deepwater Habitats of the United States. US Government Printing Office. Washington D.C. GPO 024-010-00524-6.103 pp.
2. USACOE (1993). The Highway Methodology Workbook Supplement. US Army Corps of Engineers New England Division. NEDEP. 32 pp.
3. United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil descriptions. Website:

   http://soils.usda.gov/technical/classification/osd/index.html).

FIGURES

Figure 1: USGS Site Location Map

Union Energy Center | 24 Miller Road, Carmel, New York - Parcel No. 86.11-1-14

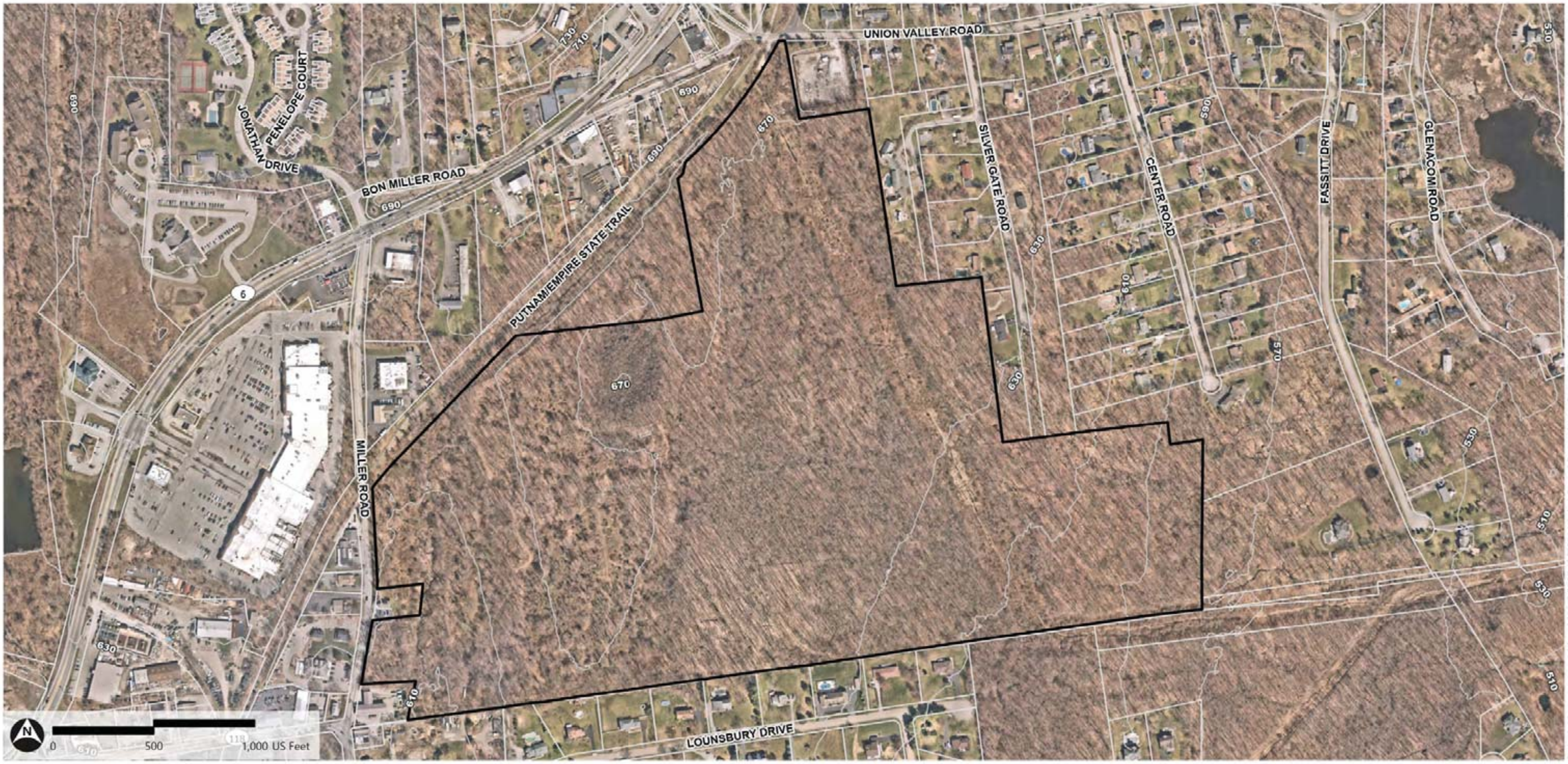


Project Area

Source: USGS, VHB

Figure 2: Aerial Imagery Map

Union Energy Center | 24 Miller Road, Carmel, New York - Parcel No. 86.11-1-14



Project Area

Parcel Boundary

10-foot Contours

Source: NYS GIS Clearinghouse, NearMap, VHB

APPENDIX A

WETLAND DELINEATION REPORT

WETLAND AND WATERCOURSE DELINEATION REPORT

24 Miller Road

Mahopac, New York

PREPARED FOR

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July 12, 2021

Table of Contents

Appendices

1 Introduction

1.1 Proposed Project

BPUS Generation Development, LLC ("the Client) proposes to develop an approximate 93.60-acre parcel located on Miller Road and Union Valley Road in the Town of Carmel, Putnam County, New York (the Project Site). A Site Location Map has been prepared (Appendix A, Figure A.1).

Proposed structure configurations and/or site design details are not currently available. BPUS Generation Development, LLC is a battery energy storage system (BESS) project intended to improve the resiliency, reliability, and affordability of New York's electrical grid. The project area will consist of battery enclosures, inverters, transformers, a security fence, and vegetative screening. The batteries themselves are housed in enclosures, that will be supported by concrete pads or piers. Similarly, the inverters and transformers will also be supported by concrete pads or piers. The rest of the site's ground cover will most likely be gravel or a similar substance. The project will interconnect to the existing NYSEG transmission system near the property. There will exist space between the enclosures and the security fence to allow access to vehicles for routine maintenance.

1.2. Existing Conditions

VHB conducted a desktop review prior to visiting the Project Site. This review included the National Resource Conservation Service (NRCS) Web Soil Survey (NRCS, 2019), United States Geological Survey (USGS) National Hydrologic Database (NHD), United

States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI), New York State Department of Conservation (NYSDEC) Environmental Resource Mapper (NYSDEC, 2021), New York State Historic Preservation Office (NYSHPO), as well as orthoimagery and topography of the proposed Project Site (see Appendix A, Figures A.1-A.8).

1.3 Land Cover

Based on desktop review of the USFWS NWI maps (USFWS, 2021) and NYSDEC ERM (NYSDEC, 2021), both NYSDEC-regulated wetlands and federally mapped wetlands are present within the Project Site. A map of federal and state wetland and surface water boundaries are provided in Appendix A, Figure A.2.

Through desktop review and field survey, VHB identified five (5) land cover types present within the Project Site, including: palustrine forested wetland, composed of green ash (*Fraxinus nigra*), American beech (*Fagus grandifolia*), and Red maple (*Acer rubrum*), palustrine emergent and forested wetland, composed of American elm (*Ulnus americana*) and green ash, unpaved roads and paths, upland forest, and intermittent stream (Edinger, G. J. et al, 2014). A map illustrating the land cover areas has been provided (Appendix A, Figure A.3). As shown in Figure 3, upland forest dominated the Site, with a total of approximately 69.70 acres; followed by 11.15 acres of sucessional shrubland. The areas proposed for development are primarily located within upland forested and forested/scrub shrub wetlands.

The Project Site is bounded by residential properties and sporadic areas of undeveloped mixed deciduous-coniferous forest to the south, west, east, and north. A transmission line right-of-way (ROW) transects the center of the property. According to the Town of Carmel Zoning Map (dated 08/29/19), the Project Site lies entirely within the Commercial/Business Park District.

The topography of the Project Site is generally undulating, with elevation ranging between approximately 560 feet and 680 feet above mean sea level (AMSL). The highest point, 679 feet AMSL, is located toward the north western portion of the parcel while the lowest point, 566 feet AMSL, is located along the southeastern boundary (Appendix A, Figure A.4).

The Project Site is not located within any Federal Emergency Management Agency (FEMA) designated flood zones according to the National Flood Hazard Layer (NFHL)

panel numbers 36079C0226E and 36079C0207E (effective dates 03/04/2013) (Appendix A, Figure A.5).

According to the NRCS, Project Site falls within the Lower Hudson HUC 12 Watershed and both the Muscoot River and Plum River-Croton River HUC 8 Watershed (Appendix A, Figure A.6). The closest traditional navigable water (TNW) is approximately 1.57 river miles and 0.84 aerial miles from the Project Site (see Appendix A, Figure A.7).

Additionally, the Project Site is located within an archaeological sensitive area. Consultation with SHPO will be performed at a later date in compliance with the State Environmental Quality Review Act (SEQRA).

1.4 Soils

According to the NRCS, the Project Site is comprised of 13 soil types, six (6) of which are hydric soils. Hydric soils present include: Fluvaquents-Udifluvents complex, frequently flooded (Ff), Natchaug muck, 0 yo 2 percent slopes (NcA), Ridgebury complex, 0 to 3 percent slopes, very stony (RdA), Ridegebury complex, 3 to 8 percent slopes (RdB), Ridegebury complex, 0 to 8 pecent slopes, very stony (RgB), and Sun Loam (Sh). A map depicting the soil units has been provided (Appendix A, Figure A.8).

2

Wetland & Water Assessment

VHB has performed desktop analyses, field inspections, and wetland/waterbody delineations on behalf of the Client for the 93.60-acre parcel, as illustrated by the "Project Site" within the Site Location Map (Appendix A, Figure A.1). Delineations occurred at the Project Site on May 14, 17 and 18 of 2021, identifying fie (5) palustrine wetlands and six (6) stream features.

Wetland boundaries have not been reviewed with NYSDEC or the United States Army Corp of Engineers (USACE). A Site Visit will be scheduled at a later date to confirm the delineation boundaries.

2.1 Wetlands and Waters

2.1.1 Background

Waters of the United States (WOTUS) are defined as: "*waters traditionally (currently or in the past) used for interstate or foreign commerce; as well as, a tributary of, or a feature*

containing a "significant nexus" or connection to a traditional navigable waterway (TNW)" (USACE, 2012).

Wetlands are a subset of the WOTUS that may be subject to regulation under Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344). Wetlands are defined by key indicators, that under normal circumstances, support a "*prevalence of vegetation typically adapted for life in saturated soil conditions*." Wetland impacts are regulated by the CWA of 1972 (USACE, 2012). For most land uses and activities, including development, in New York State (NYS), the USACE and NYSDEC are both responsible for protecting wetlands from pollutants or activities that may result in the discharge of dredged or fill material into WOTUS. Not all regulated wetlands are mapped, and any mapped wetlands are subject to field verification.

Generally, a stream with at least intermittent flow is considered jurisdictional under the CWA. Similar to wetlands, WOTUS are regulated under CWA Section 404; navigable waterways are also regulated under Section 10 of the Rivers and Harbors act of 1899.

2.1.2 Methods

VHB Wetland Scientists conducted delineations for the Project Site on May 14, 18 and 19, 2021. Wetland delineations were conducted in accordance with the methodologies detailed in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)* ("Regional Supplement") (USACE, 2012) and the *New York State Freshwater Wetlands Delineation Manual* (Browne, S. et al, 1995). These methodologies require the evidence of three (3) criteria: a dominance of hydrophytic vegetation, the existence of hydric soils, and the presence of wetland hydrology.

Vegetation present was identified to species level using several regional references, with nomenclature following the 2016 USACE National Wetland Plant List (Lichvar, R.W. et. al., 2016). Observations were also recorded during the delineation to describe general wetland characteristics, determine potential functions and values, and classify wetlands in accordance with the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, L.M. et. al., 1979). Wetlands are demarcated in the field with pink "Wetland Delineation" flagging, labeled with unique flag identification (ID) codes, which include the wetland number and flag number (i.e., W1-1).

Once boundaries were located, soil profiles were documented in both wetlands and uplands using a hand-held, 2-inch Dutch soil auger to extract soil samples to a depth of approximately 20 inches unless a restrictive layer was encountered. Soils were examined for color using the Munsell Soil Color Chart, texture, and depth of any

redoximorphic features to determine if any hydric soil indicators were present. Redoximorphic features were recorded by color and type (concentrations, depletions, oxidized root channels, etc.).

USACE Wetland Determination Forms were completed for each wetland and upland area delineated (Appendix C).

Waters were field-delineated in accordance with guidance provided in the "*Regulatory Guidance Letter: Subject – Ordinary High Water ("OHW") Identification*" (USACE, 2005). During field work, flow regimes are preliminarily classified as perennial, seasonal, intermittent, or ephemeral based on qualitative observations of in-stream hydrology and existing geomorphic characteristics. Additional observations made during the delineation include channel substrate, surrounding land use, and OHW measurements, to complete an overall assessment of physical and habitat characteristics (Appendix C.2).

Narrow streams (generally defined as ephemeral or small intermittent streams with channel widths of less than 4 feet) were delineated along the centerline. Larger streams (large intermittent to perennial streams) were surveyed with two lines, each at the top of bank (TOB). Streams were demarcated in the field using blue survey tape, labeled with unique flag ID codes which includes the stream number and flag number (i.e., "S1-1"). Tributaries to streams are designated by adding a letter to the parent stream (i.e., A tributary to Stream S1 would be designated "S1A").

Wetland and stream flags were located in the field using the Collector and global navigation satellite systems (GNSS) status applications on Trimble R1 units capable of sub-meter accuracy. Weather data was compiled for the days of delineation to determine if the soil and vegetation were inspected under normal circumstances for that time of the year (National Oceanic Atmospheric Administration (NOAA), 2021).

2.1.3 Results

Please find a summary of wetlands identified onsite in Appendix B. Two (2) palustrine forested wetlands, one (1) palustrine forested/scrub-shrub wetland, one (1) palustrine emergent/forested wetland, and one (1) palustrine scrub-shrub/forested wetland cover types were delineated within the Project Site, encompassing a total of approximately 43.33 acres. Five (5) water features were also delineated within the Project Site. A Natural Resource Map (Appendix A, A.4) has been prepared to illustrate flagging details of each wetland area and stream identified.

Wetlands W1 and W3 are palustrine forested wetlands. W1 is anticipated to be sourced by surface runoff waters, and W3 is sourced by tributaries to Muscoot River onsite. Wetlands W2 and W5 are both palustrine forested and scrub-shrub; however, W2 is primarily forested with scrub-shrub fringe wetlands, and W5 is primarily scrub-shrub within minor forested areas dispersed throughout. W2 is sourced by surface runoff waters, and both W2 and W5 are sourced by delineated tributaries to Muscoot River onsite.

Wetland W4 is primarily emergent, with at least 8-11in of standing water at the time of delineation. The wetland is also partially forested with multiple mature canopy trees present. This wetland is anticipated to be sourced by surface runoff waters and a high-water table. Wetland W4, W1, W2 and W3 are all anticipated to by hydrologically connected either by surface water connectivity or groundwater connection.

Please find a summary of waters delineated onsite in Appendix B. Streams S1, S3, S4, S5 and S6 are all unnamed tributaries to Muscoot River and flow to either the south or southwest. Each stream is under four feet in width, and S1 and S3 are under two feet in width. S4, S5 and S6 are all culverted from adjacent tributaries, and converge into a single stream channel which flows offsite via another culvert along the southern border.

Throughout the wetlands within the Project Site, the forest stratum was primarily composed of black ash, green ash, and American elm. When shrub stratum was present, Spicebush (*Lindera benzoin*) was most common. The herbaceous stratum was generally composed of siltgrass, sensitive fern and fringed loosestrife.

Hydric soil indicators were predominately histosols (A1), depleted below the dark surface (A11), dark surface (S7) and depleted matrix (F3) within the Project Site wetlands. The A horizon was very dark within the wetland areas, with a lighter depleted matrix horizon below as documented by the wetland data forms (Appendix C.1). Upland soils were characterized by a dark surface layer but without a depleted matrix, with distinct A and B horizons as documented in the upland data forms (Appendix C.1).

Complete USACE wetland determination data forms were provided for wetlands and uplands; and VHB stream data was collected (Appendix C.2). Photographs of the individual plots are included with the data forms; additional photos of general wetland and upland views are provided in the Photograph Log (Appendix D).

2.1.4 Conclusions

As described in Section 2.1.3, VHB identified and delineated five (5) wetlands and six (6) streams at the Project Site. Based on field observations, Wetlands W1, W2, W3 and

W4 are hydrologically connected wetlands. W5 is anticipated to be solely under the jurisdiction of the USACE, as it remains outside of the NYDEC's 100ft review area buffer and is smaller in size. However, it is anticipated that NYSEDC may include their wetland under their jurisdiction as well for site conformity. Therefore, jurisdictional under both the NYSDEC and USACE is anticipated for the entire site. Additionally, these wetlands have a 100-foot upland adjacent area regulated by NYSDEC. None of the wetlands identified onsite are isolated. A jurisdictional determination from both the NYSDEC and the USACE would be required to confirm jurisdiction of wetlands onsite.

Based on preliminary field observations, all streams onsite appear to be jurisdictional under the CWA. A preliminary jurisdictional determination from the USACE would be necessary to determine the jurisdictional status of this stream.

3

Project Summary

On behalf of the Client, VHB conducted delineations of wetland and water features during spring of 2021.

The likely jurisdictional status of each feature is summarized, along with the approximate feature size, in the table below.

Jurisdiction Determination of Wetland and Stream Features

Feature ID	Type	Acres	Potential Jurisdiction
Wetland W1	PFO	3.46	Jurisdiction determination necessary with NYSDEC/USACE
Wetland W2	PFO/SS	30.29	Jurisdiction determination necessary with NYSDEC/USACE
Wetland W3	PFO	3.48	Jurisdiction determination necessary with NYSDEC/USACE
Wetland W4	PEM/FO	2.28	Jurisdiction determination necessary with NYSDEC/USACE
Wetland W5	PSS/FO	3.81	Jurisdiction determination necessary with USACE
Feature ID	**Type**	**Linear Feet**	**Potential Jurisdiction**
Stream S1	Perennial	504	Hydrologically Connected to Muscoot River – USACE
Stream S3	Perennial	203	Hydrologically Connected to Muscoot River – USACE
Stream S4	Intermittent	1,313	Hydrologically Connected to Muscoot River – USACE

Stream S5	Perennial	206	Hydrologically Connected to Muscoot River – USACE
Stream S6	Perennial	350	Hydrologically Connected to Muscoot River – USACE

Direct impacts to jurisdictional wetland or water features within the Project Site would require federal approvals from USACE. A jurisdictional determination with USACE is necessary if any direct impacts are anticipated.

4

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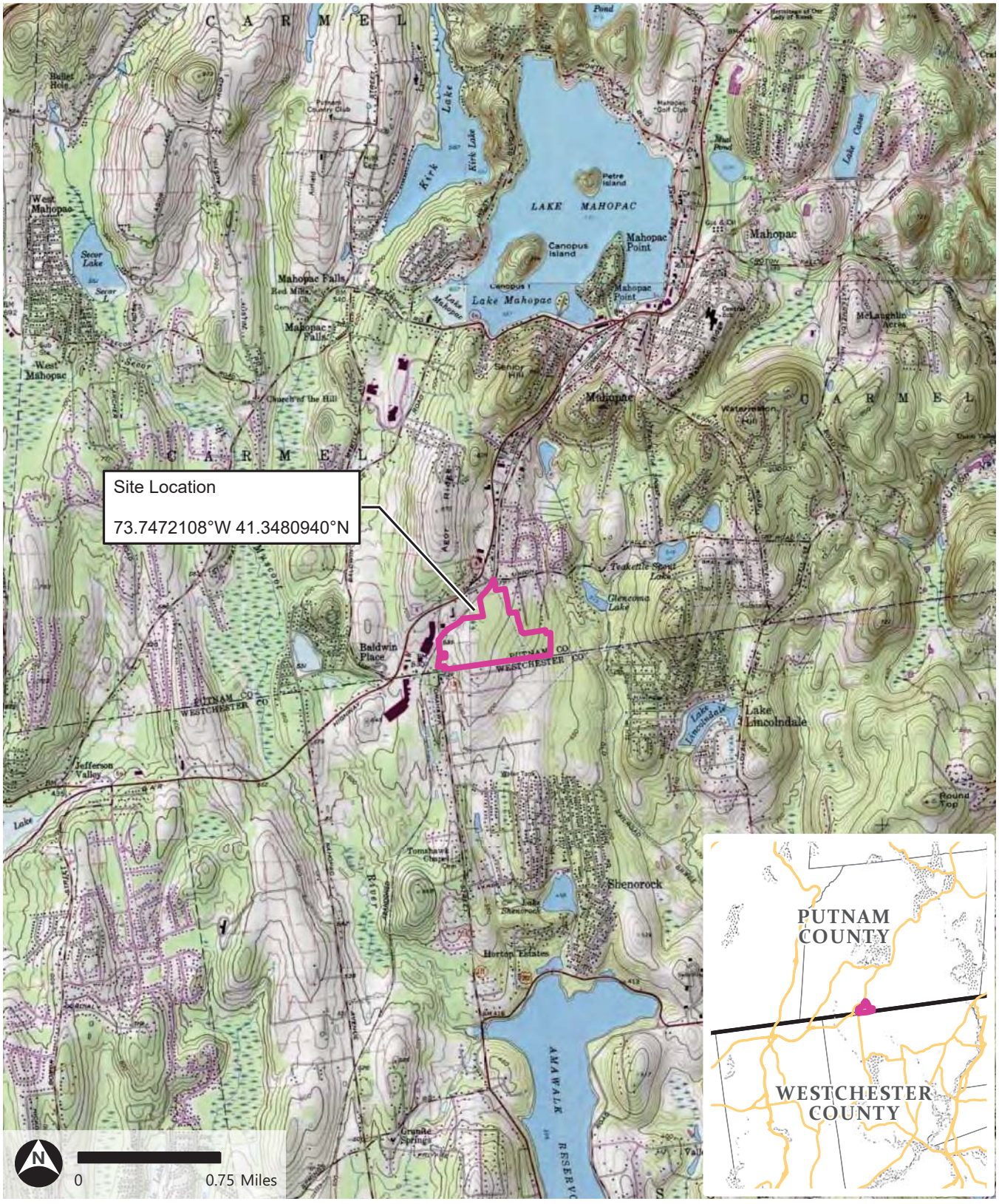
Appendix A

Figures

Figure A.1: Site Location

BPUS Generation Development, LLC | Town of Carmel, Putnam County, New York *July 01, 2021*



Study Area

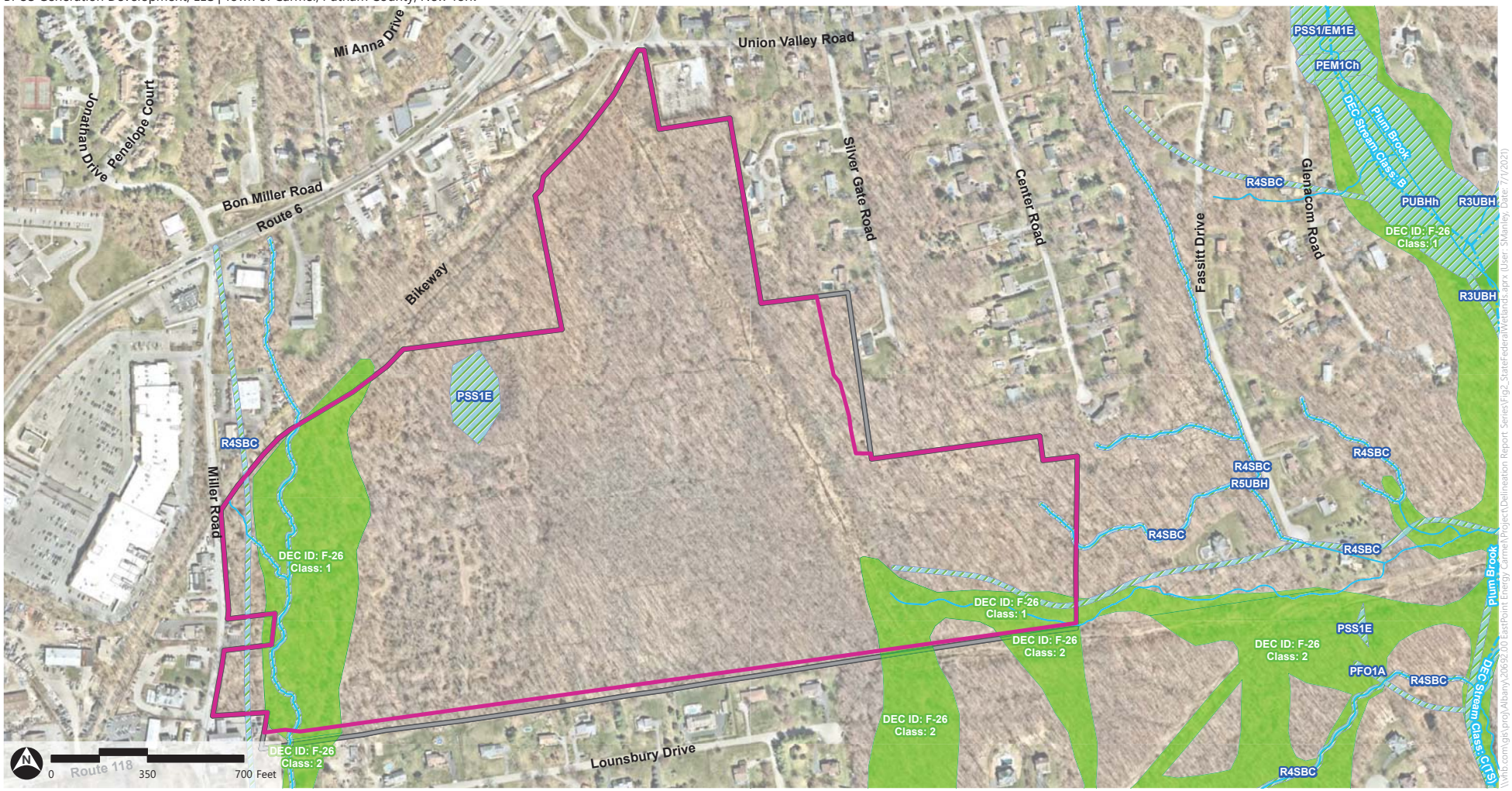
Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed.

Path: \\vhb.com\gis\proj\Albany\20692.00 EastPoint Energy Carmel\Project\Delineation Report Series\Fig1_SiteLocation.aprx (SManley, 7/1/2021)

Figure A.2: Federal and State Mapped Wetlands

BPUS Generation Development, LLC | Town of Carmel, Putnam County, New York

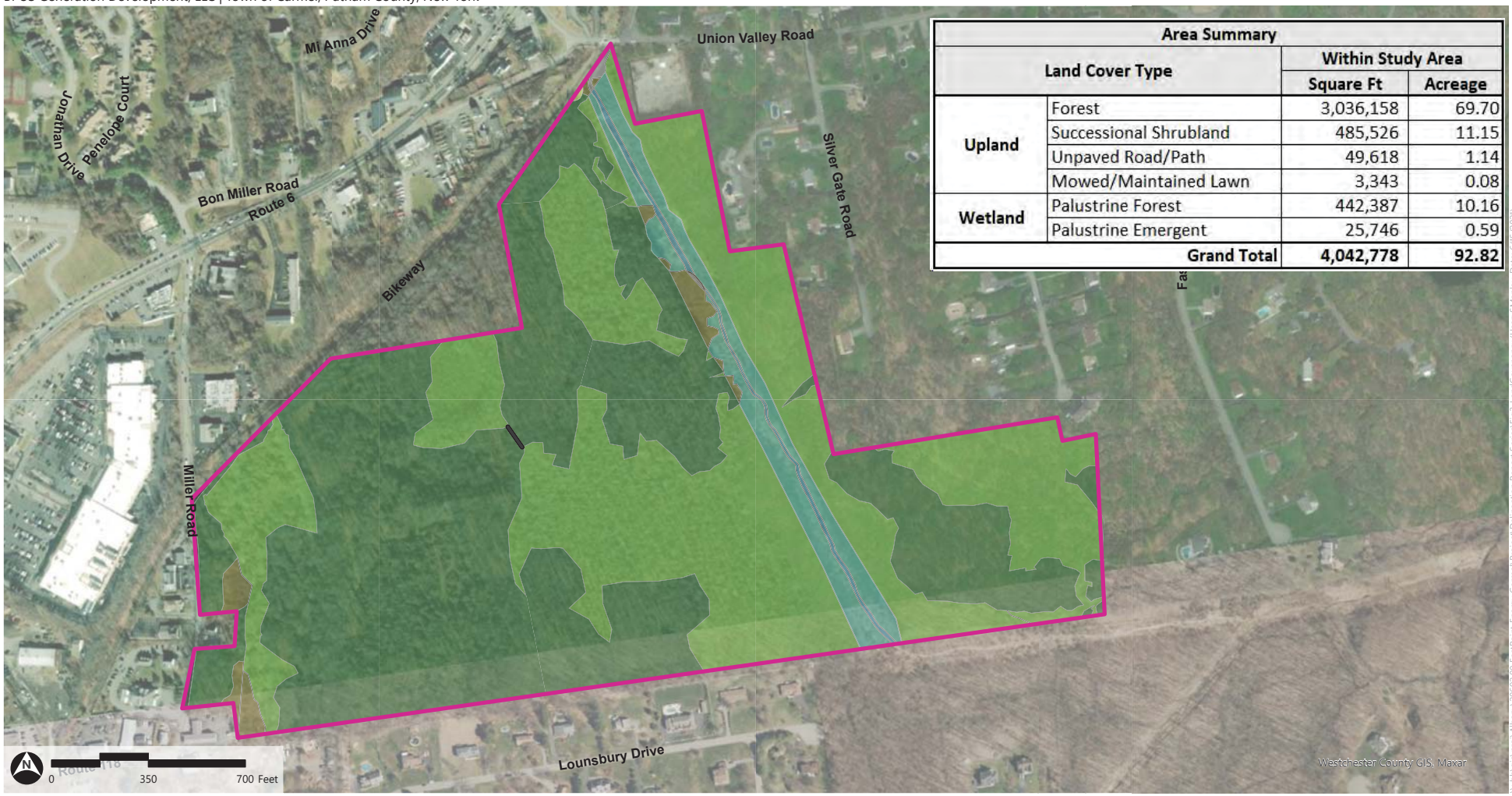
DRAFT: July 01, 2021



Sources: Background imagery from NearMap (2021); Wetlands (NYSDEC) from NYSDEC (2021); Wetlands (NWI) from US Wildlife Service (2021); Streams (NHD) from USGS (2019); Streams (NYSDEC) from NYSDEC (2019).

Figure A.3: Land Cover
BPUS Generation Development, LLC | Town of Carmel, Putnam County, New York

DRAFT: June 15, 2021



Area Summary			
Land Cover Type		Within Study Area	
		Square Ft	Acreage
Upland	Forest	3,036,158	69.70
	Successional Shrubland	485,526	11.15
	Unpaved Road/Path	49,618	1.14
	Mowed/Maintained Lawn	3,343	0.08
Wetland	Palustrine Forest	442,387	10.16
	Palustrine Emergent	25,746	0.59
Grand Total		4,042,778	92.82

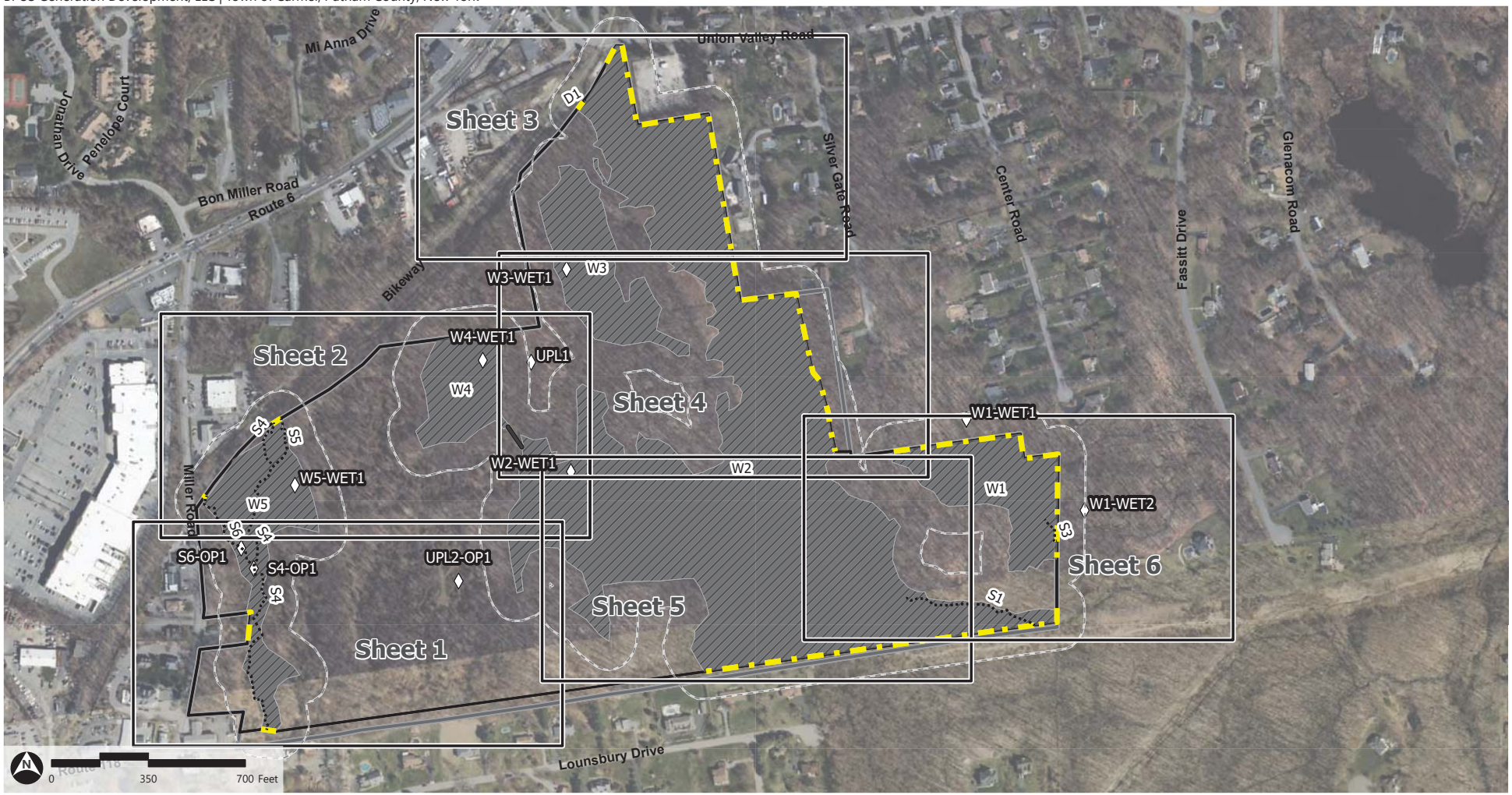
Study Area
Culvert

Land Cover
Upland Forest
Successional Shrubland
Mowed/Maintained Lawn
Unpaved Road/Path
Paved road/path
Palustrine Forested Wetland
Palustrine Scrub-Shrub Wetland
Palustrine Emergent Wetland

Sources: Background imagery from NYS GIS Program (2018/2016); Land cover by VHB (2021) determined during field assessment and Edinger's Ecological Communities of New York State.

Figure A.4: Natural Resources Index Map
BPUS Generation Development, LLC | Town of Carmel, Putnam County, New York

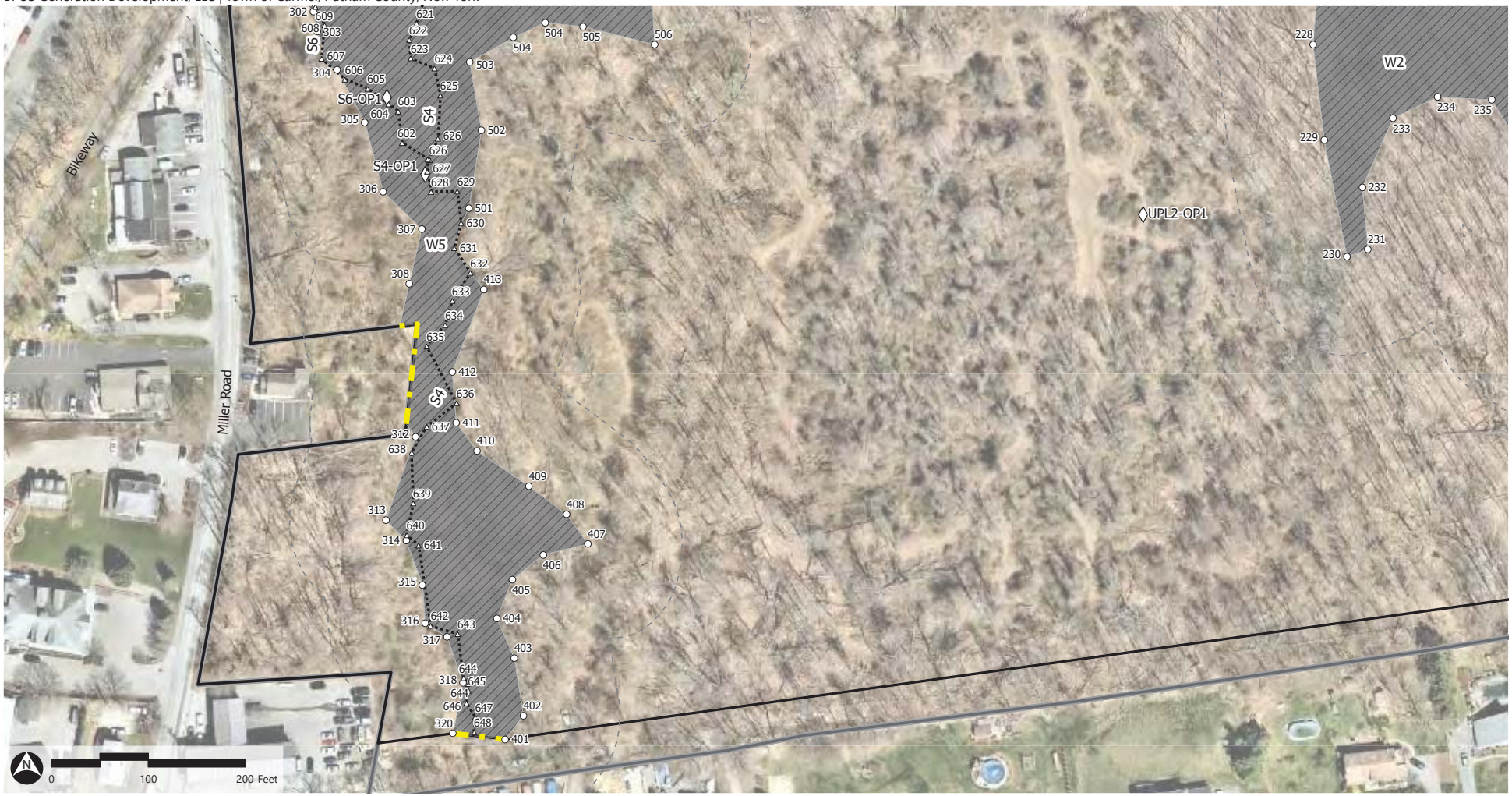
DRAFT: July 01, 2021



Sources: Background imagery from NYS GIS Program (2018/2016).

Figure A.4: Natural Resources Map Series [Sheet 1 of 6]
BPUS Generation Development, LLC | Town of Carmel, Putnam County, New York

DRAFT: June 26, 2021



Sources: Background imagery from NearMap (April 2021).

Figure A.4: Natural Resources Map Series [Sheet 2 of 6]
BPUS Generation Development, LLC | Town of Carmel, Putnam County, New York

DRAFT: June 26, 2021

Sources: Background imagery from NearMap (April 2021).

Figure A.4: Natural Resources Map Series [Sheet 3 of 6]
BPUS Generation Development, LLC | Town of Carmel, Putnam County, New York

DRAFT: June 26, 2021

Sources: Background imagery from NearMap (April 2021).

Figure A.4: Natural Resources Map Series [Sheet 4 of 6]
BPUS Generation Development, LLC | Town of Carmel, Putnam County, New York

DRAFT: June 26, 2021

Sources: Background imagery from NearMap (April 2021).

Figure A.4: Natural Resources Map Series [Sheet 5 of 6]

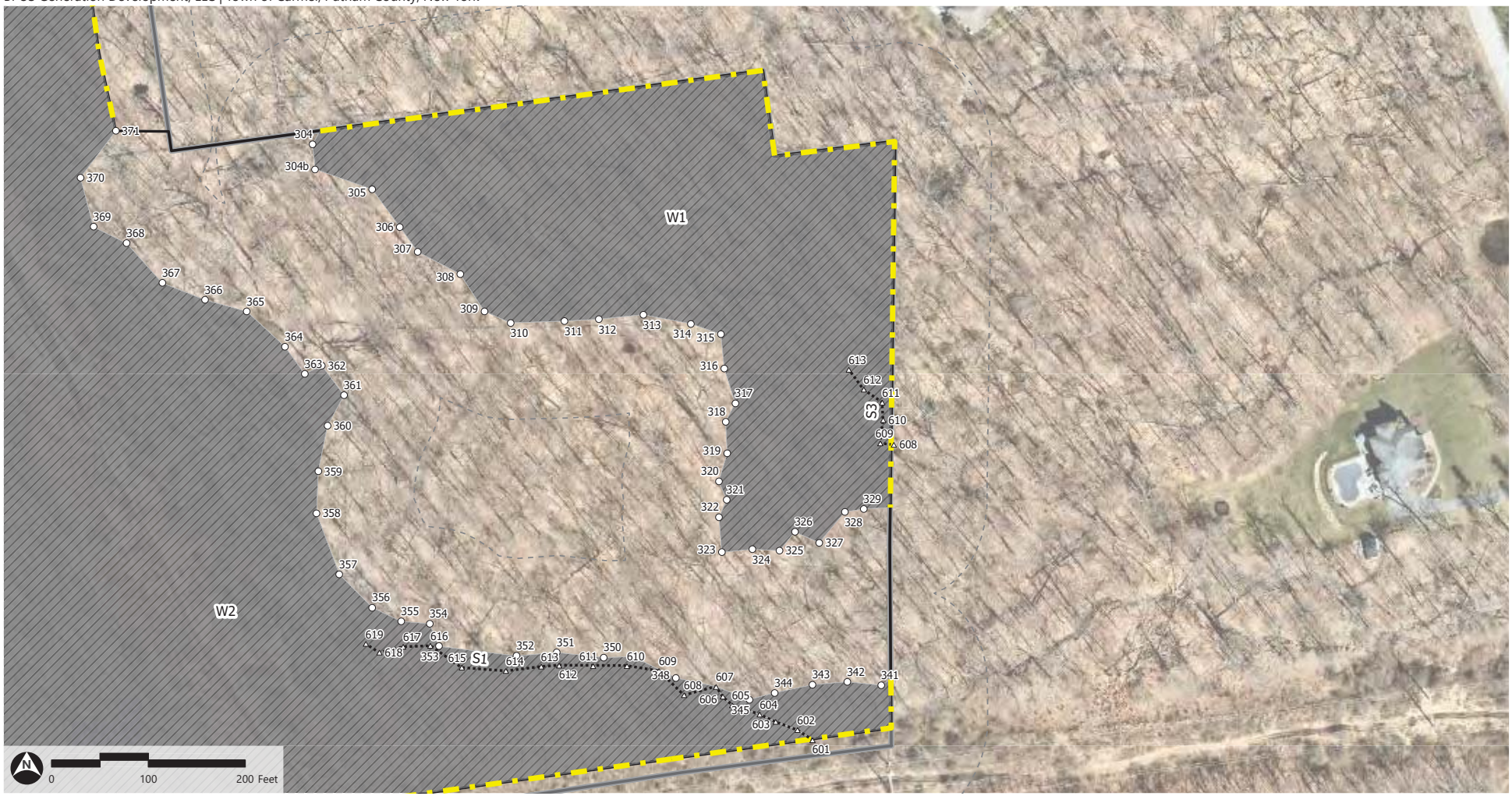
BPUS Generation Development, LLC | Town of Carmel, Putnam County, New York

DRAFT: June 26, 2021

Sources: Background imagery from NearMap (April 2021).

Figure A.4: Natural Resources Map Series [Sheet 6 of 6]
BPUS Generation Development, LLC | Town of Carmel, Putnam County, New York

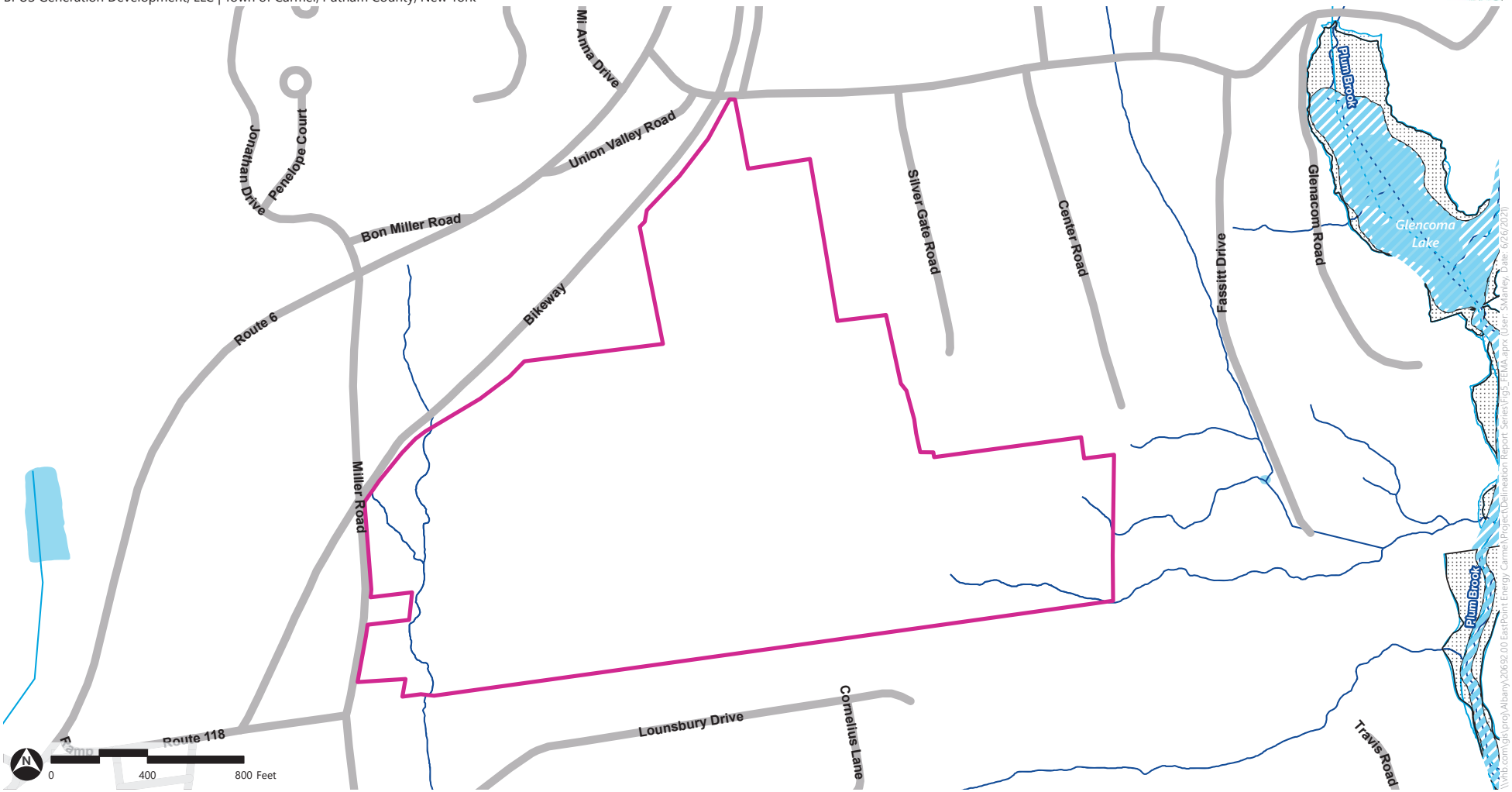
DRAFT: June 26, 2021



Sources: Background imagery from NearMap (April 2021).

Figure A.5: FEMA Flood Map
BPUS Generation Development, LLC | Town of Carmel, Putnam County, New York

DRAFT: June 26, 2021

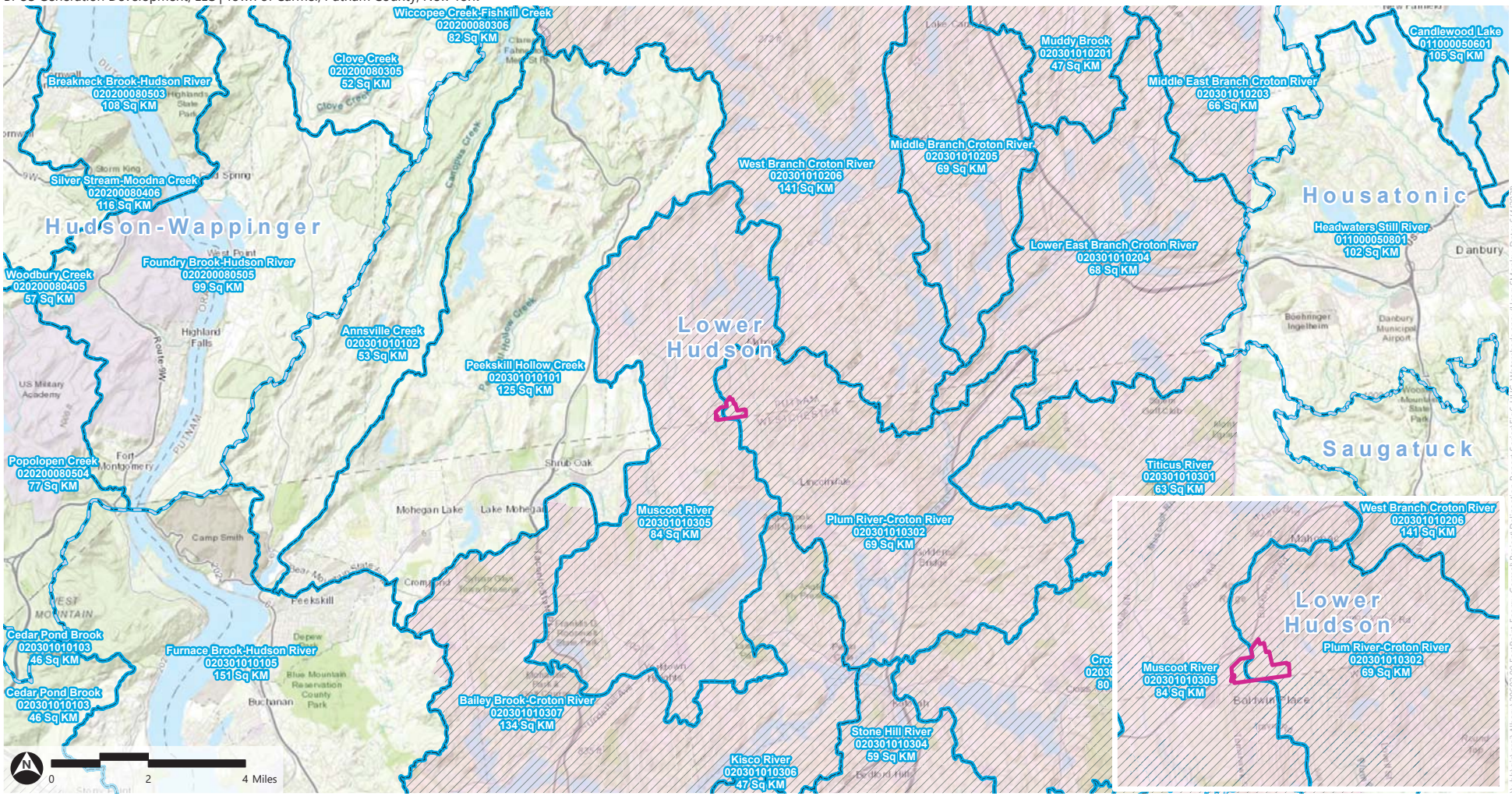


Sources: Stream (NHD) from USGS (2019); Streams (NYSDEC) from NYSDEC (2019); Flood Zones from FEMA Flood Map Service Center online portal (DFIRM 36079C0207E and 36079C0226E).

Figure A.6: USGS 8 & 12 Digit HUC Map

BPUS Generation Development, LLC | Town of Carmel, Putnam County, New York

DRAFT: June 04, 2021



Study Area

HUC 8 Watershed Boundary

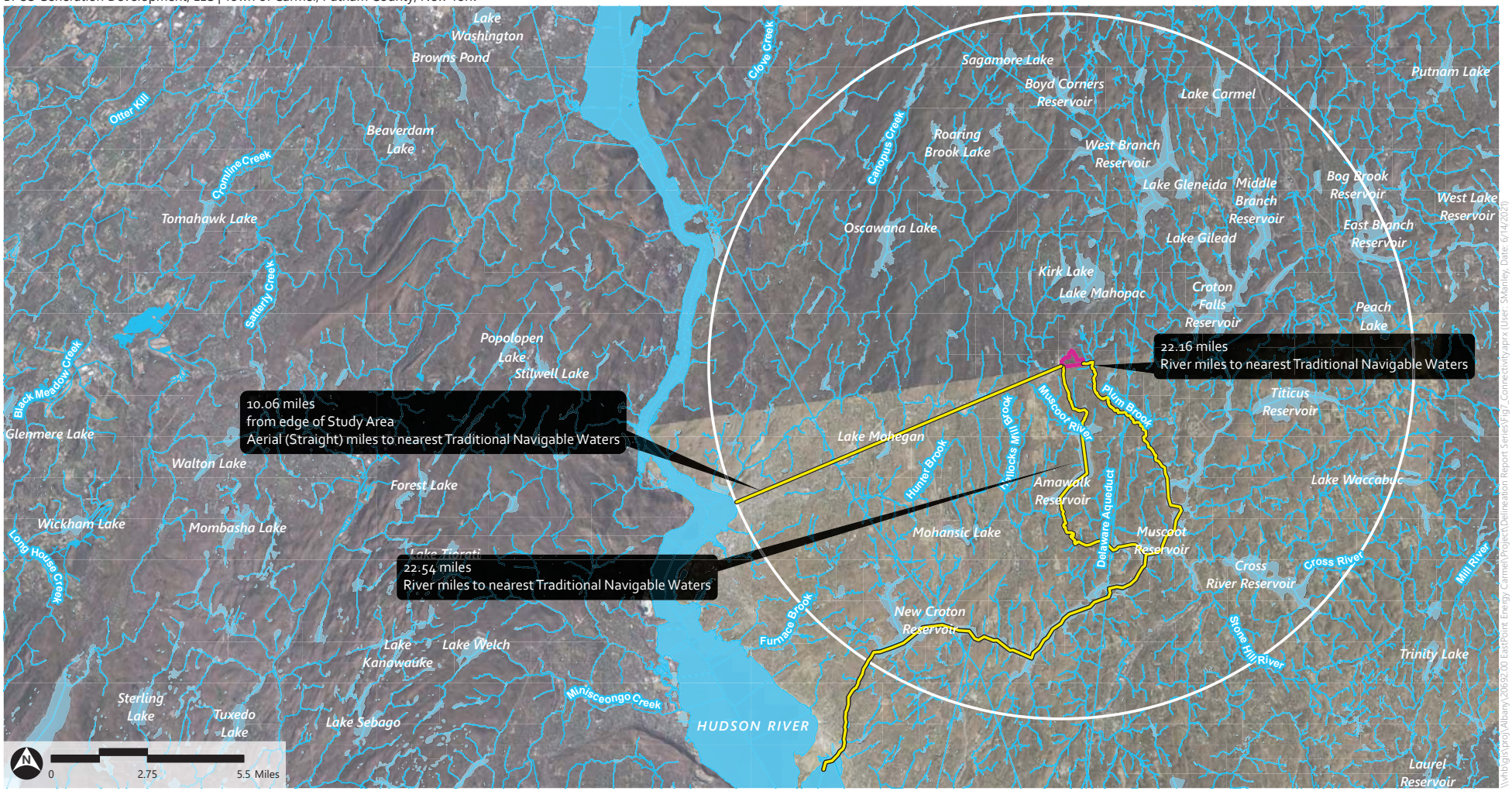
HUC 12 Watershed Boundary

AA and AAs Watersheds

Sources: Watershed boundaries from USDA NRCS; AA and AAs Watersheds from NYSDEC (2008).

Figure A.7: Stream Flow Connectivity Map
BPUS Generation Development, LLC | Town of Carmel, Putnam County, New York

DRAFT: June 14, 2021



Sources: Background imagery from NYS GIS Program (2018/2016); Streams and Waterbodies (NHD) from USGS (2019).

Figure A.8: NRCS Soils

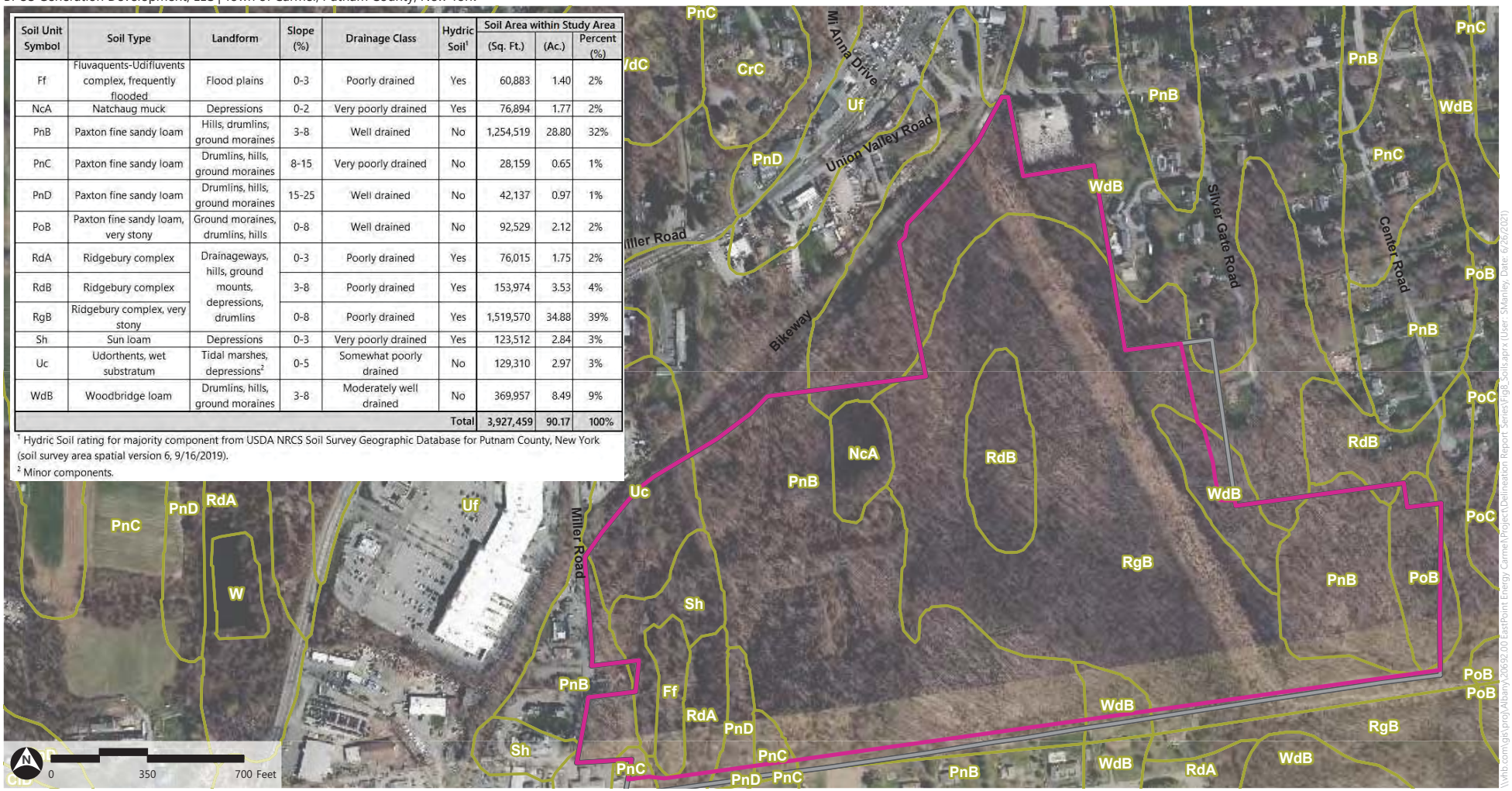
BPUS Generation Development, LLC | Town of Carmel, Putnam County, New York

DRAFT: June 26, 2021

Soil Unit Symbol	Soil Type	Landform	Slope (%)	Drainage Class	Hydric Soil[1]	Soil Area within Study Area (Sq. Ft.)	(Ac.)	Percent (%)
Ff	Fluvaquents-Udifluvents complex, frequently flooded	Flood plains	0-3	Poorly drained	Yes	60,883	1.40	2%
NcA	Natchaug muck	Depressions	0-2	Very poorly drained	Yes	76,894	1.77	2%
PnB	Paxton fine sandy loam	Hills, drumlins, ground moraines	3-8	Well drained	No	1,254,519	28.80	32%
PnC	Paxton fine sandy loam	Drumlins, hills, ground moraines	8-15	Very poorly drained	No	28,159	0.65	1%
PnD	Paxton fine sandy loam	Drumlins, hills, ground moraines	15-25	Well drained	No	42,137	0.97	1%
PoB	Paxton fine sandy loam, very stony	Ground moraines, drumlins, hills	0-8	Well drained	No	92,529	2.12	2%
RdA	Ridgebury complex	Drainageways, hills, ground mounts, depressions, drumlins	0-3	Poorly drained	Yes	76,015	1.75	2%
RdB	Ridgebury complex		3-8	Poorly drained	Yes	153,974	3.53	4%
RgB	Ridgebury complex, very stony		0-8	Poorly drained	Yes	1,519,570	34.88	39%
Sh	Sun loam	Depressions	0-3	Very poorly drained	Yes	123,512	2.84	3%
Uc	Udorthents, wet substratum	Tidal marshes, depressions[2]	0-5	Somewhat poorly drained	No	129,310	2.97	3%
WdB	Woodbridge loam	Drumlins, hills, ground moraines	3-8	Moderately well drained	No	369,957	8.49	9%
					Total	3,927,459	90.17	100%

[1] Hydric Soil rating for majority component from USDA NRCS Soil Survey Geographic Database for Putnam County, New York (soil survey area spatial version 6, 9/16/2019).

[2] Minor components.



Study Area

Parcel Boundary

NRCS Soil Boundary (MYSYM)

Sources: Background imagery from NYS GIS Program (2018/2016); Soils from NRCS (2019).

Appendix B

Supplemental Tables

BPUS Generation Development, LLC
Town of Carmel, Putnam County, New York
Table 1: Summary of Delineated Wetlands
Prepared by VHB
July 9, 2021

VHB Wetland ID	Delineated Area[1]		Field Designated Cowardin Classification[2]	NWI Classification	NYSDEC Classification	Potential Jurisdictional Status	Buffer/Setback Requirements	General Description
	(Sq. Ft.)	(Ac.)						
W1	**150,659**	**3.46**	PFO6	-	1	NYSDEC and USACE	100 ft.	Connected to Muscoot River via tributaries flowing to the southeast
W2	**1,319,479**	**30.29**	PFO6/PSS6	-	1	NYSDEC and USACE	100 ft.	Primarily forested, portion of wetland within utility right-of-way is maintained and has become scrub-shrub.
W3	151,415	3.48	PFO6	-	-	NYSDEC and USACE	100 ft.	Forested wetland within the northern portion of the Site.
W4	99,265	2.28	PEM1/PFO6	PSS1E	-	NYSDEC and USACE	100 ft.	Connected to W2 via HDPE culvert
W5	**165,817**	**3.81**	PSS6/PFO6	R4SBC	1	USACE	100 ft.	Sourced by a culverted tributary to Muscoot River, wetland is forested with scrub-shrub fringe.
Total Area of Wetlands within Jurisdictional Determination Area	**1,886,635**	**43.33**						

NOTES:

[1] VHB Study Area is located entirely within property boundary. Wetland and parcel bounaries surveyed by Insite June 2021. Individual wetland areas displayed in **bold** continue outside of the Study Area.

[2] Classification follows Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitat of the United States. U.S. Fish and Wildlife Service. FWS/OBD-79/31. 103pp.

BPUS Generation Development, LLC
Town of Carmel, Putnam County, New York
Table 2: Summary of Delineated Waters
Prepared by VHB
July 9, 2021

VHB Stream ID [1]	USGS Stream/ Water Name	Average Ordinary High Water (OHW-width)[2]	Length of Delineated Stream Channel Within Jurisdictional Determination Area	Approximate Area of Delineated Stream Within Jurisdictional Determination Area [3]		Flow Regime (Perennial, Intermittent, Ephemeral and Ditch)[4]	Potential Jurisdictional Status[5]	NYSDEC Surface Water Classification[6]	Buffer/Setback Requirements	General Description
		(Feet)	(Linear Feet)	(Square Feet)	(Acres)					
S1	Unnamed Tributary to Plum Brook	2	504	1,008	0.02	Perennial	NYSDEC/USACE Jurisdiction	B	100ft	Minor stream sourcing Wetland Area 1 onsite
S3	Unnamed Tributary to Plum Brook	2	103	206	0.00	Perennial	NYSDEC/USACE Jurisdiction	B	100ft	Minor stream sourcing Wetland Areas 1 and 2 onsite
S4	Unnamed Tributary to Muscoot River	4	1,313	5,252	0.12	Intermittent	NYSDEC/USACE Jurisdiction	B	100ft	Part of a culverted stream that flows through the site, sourcing Wetland Area 5
S5	Unnamed Tributary to Muscoot River	5	206	1,030	0.02	Perennial	NYSDEC/USACE Jurisdiction	B	100ft	Part of a culverted stream that flows through the site, sourcing Wetland Area 5
S6	Unnamed Tributary to Muscoot River	5	350	1,750	0.04	Perennial	NYSDEC/USACE Jurisdiction	B	100ft	Part of a culverted stream that flows through the site, sourcing Wetland Area 5
D1	Unnamed	1	12	12	0.00	Ephemeral	Non-Jurisdictional	-	-	Minor ditch that very breifly intersects the Site boundary
Total Length and Area of Stream Channel or Other Waters within Jurisdictional Determination Area			**2,488**	**9,258**	**0.213**					

NOTES:

[1] VHB's Stream ID refers to unique ID designated in the field.

[2] U.S. Army Corps of Engineers (USACE). 2005. "Regulatory Guidance Letter. Subject: Ordinary High Water Mark Identification." No. 05-05.

[3] Approximate area of delineated streams within the study area is calculated from the average OHW times the length of delineated stream channel within the study area.

[4] Stream flow regime determined based on qualitative observations of in stream hydrology indicators and geomorphic characteristic and are subject to professional judgment and confirmation by USACE and/or NYSDEC.

[5] Jurisdictional status as determined by VHB; subject to confirmation or field verification by NYSDEC and USACE.

[6] Surface waters classifications were made pursuant to 6NYCRR, Chapter X, Article 2, Parts 701 (classification and standards definitions).

Appendix C

Resource Data Forms

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

UPL1-OP1

Project Site: East Point | City/County: Carmel / Putnam | Samp. Date: 5/18/2021

Applicant/Owner: BPUS Generation Development, LLC | State: NY | Sampling Point: UPL1-OP1

Investigator(s): Jimmy Monfils and Anna Loss | Section, Township, Range:

Landform (hillslope, terrace, etc.): Undulating | Local relief (concave, convex, none): Convex | Slope (%): 1-2%

Subregion (LRR or MLRA): | Lat: 41.34978 | Long: -73.74760 | Datum:

Soil Map Unit: | NWI Class:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes | Remarks:

Are Normal Circumstances present? Yes | If needed, explain any answers in Remarks:

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Remarks:

Are Vegetation No, Soil No, or Hydrology No naturally problematic? Remarks:

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	Is This Sample Area Within a Wetland? No
Hydric Soil Present?	No	
Wetland Hydrology Present?	No	

Remarks: One or more parameters lacking. Area is not a jurisdictional wetland.

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 (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 (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	N/A
Water Table Present?		Depth (inches):	N/A
Saturation Present?		Depth (inches):	N/A

Wetland Hydrology Present? No

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

Remarks:
No primary or secondary indicators of wetland hydrology present; parameter is not met.

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR_3/3	100		N/A	N/A	N/A	FINE_SANDY_LOAM	
10-21	10YR_4/6	100		N/A	N/A	N/A	SANDY_CLAY_LOAM	
4-10	10YR_4/4	100		N/A	N/A	N/A	FINE_SANDY_LOAM	

[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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ 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)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

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)
- ___ Dark Surface (S7) (LRR K, L, M)
- ___ 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 (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? No

Remarks:

No hydric soil indicators present and soil does not meet NTCHS definition of hydric soil; parameter is not met.

VEGETATION - Use scientific names of plants.

Sampling Point: UPL1-OP1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dom. Sp?	Indicator Status
1. *Fagus grandifolia*	20.5	X	FACU
2. *Quercus alba*	10.5	X	FACU
3. *Quercus rubra*	3		FACU
4. *Liriodendron tulipifera*	3		FACU
5.			
6.			
7.			
8.			
	37.0	= Total Cover	

Sapling Stratum (Plot size: 30 ft)			
1. Carpinus caroliniana	10.5	X	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10.0	= Total Cover	

Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0.0	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. *Carya ovata*	3	X	FACU
2. *Maianthemum canadense*	10.5	X	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	14.0	= Total Cover	

Woody Vines (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
	0.0	= Total Cover	

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: 2 (A)

Dominants across all strata: 5 (B)

% Dominants OBL, FACW, FAC: 40.00% (A/B)

Prevalence Index Worksheet:

Total % Cover of:			Multiply By:
OBL	0.0	x 1 =	0.0
FACW	0.0	x 2 =	0.0
FAC	21.0	x 3 =	63.0
FACU	40.0	x 4 =	160.0
UPL	0.0	x 5 =	0.0
Sum:	61.0 (A)		223.0 (B)

Prevalence Index = B/A = 3.66

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is > 50%
- X Prevalence Index is <= 3.0
- ___ Problematic Hydrophytic Vegetation[1] (explain)
- ___ Rapid Test for Hydrophytic Vegetation
- ___ Morphological Adaptations

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and 3in (7.6cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and less than 3in (7.6cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20ft (1 to 6m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3ft (1m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes

Remarks: (If observed, list morphological adaptations below).
No hydrophytic vegetation indicators present; parameter is not met.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

UPL2-OP1

Project Site: East Point | City/County: Carmel / Putnam | Samp. Date: 5/18/2021

Applicant/Owner: BPUS Generation Development, LLC | State: NY | Sampling Point: UPL2-OP1

Investigator(s): Jimmy Monfils and Anna Loss | Section, Township, Range:

Landform (hillslope, terrace, etc.): Flat | Local relief (concave, convex, none): Flat | Slope (%): <1%

Subregion (LRR or MLRA): | Lat: 41.34675 | Long: -73.75113 | Datum:

Soil Map Unit: | NWI Class: PFO

Are climatic/hydrologic conditions on the site typical for this time of year? Yes | Remarks:

Are Normal Circumstances present? Yes | If needed, explain any answers in Remarks:

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Remarks:

Are Vegetation No, Soil No, or Hydrology No naturally problematic? Remarks:

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	Is This Sample Area Within a Wetland? No
Hydric Soil Present?	No	
Wetland Hydrology Present?	-	

Remarks:

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 (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 (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	N/A
Water Table Present?		Depth (inches):	N/A
Saturation Present?		Depth (inches):	N/A

Wetland Hydrology Present? -

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

Remarks:
No primary or secondary indicators of wetland hydrology present; parameter is not met.

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR_3/4	100		N/A	N/A	N/A	SANDY_LOAM	
14-19	10YR_4/6	100		N/A	N/A	N/A	COARSE_SANDY_LOAM	
7-14	10YR_4/3	100		N/A	N/A	N/A	SANDY_LOAM	

[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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ 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)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

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)
- ___ Dark Surface (S7) (LRR K, L, M)
- ___ 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 (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? No

Remarks:

No hydric soil indicators present and soil does not meet NTCHS definition of hydric soil; parameter is not met.

VEGETATION - Use scientific names of plants.

Sampling Point: UPL2-OP1

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum	(Plot size: 30 ft)			
1.	*Acer saccharum*	10.5	X	FACU
2.	*Carya ovata*	3		FACU
3.	*Prunus serotina*	3		FACU
4.				
5.				
6.				
7.				
8.				
		16.0	= Total Cover	
Sapling Stratum	(Plot size: 30 ft)			
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
		0.0	= Total Cover	
Shrub Stratum	(Plot size: 15 ft)			
1.	*Lonicera japonica*	20.5	X	FACU
2.	*Berberis thunbergii*	38	X	UPL
3.	*Rosa multiflora*	10.5		FACU
4.				
5.				
6.				
7.				
8.				
		69.0	= Total Cover	
Herb Stratum	(Plot size: 5 ft)			
1.	*Artemisia vulgaris*	38	X	UPL
2.	*Ranunculus repens*	3		FAC
3.	*Alliaria petiolata*	3		FACU
4.	*Asclepias syriaca*	3		UPL
5.	*Phalaris arundinacea*	3		OBL
6.	*Solidago rugosa*	3		FAC
7.				
8.				
9.				
10.				
11.				
12.				
		53.0	= Total Cover	
Woody Vines	(Plot size: 30 ft)			
1.	*Vitis aestivalis*	20.5		FACU
2.	*Celastrus orbiculatus*	10.5		FACU
3.				
4.				
5.				
		31.0	= Total Cover	

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: 0 (A)

Dominants across all strata: 7 (B)

% Dominants OBL, FACW, FAC: 0.00% (A/B)

Prevalence Index Worksheet:

Total % Cover of:			Multiply By:
OBL	3.0	x 1 =	3.0
FACW	0.0	x 2 =	0.0
FAC	6.0	x 3 =	18.0
FACU	81.5	x 4 =	326.0
UPL	79.0	x 5 =	395.0
Sum:	169.5 (A)		742.0 (B)

Prevalence Index = B/A = 4.38

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is > 50%
- X Prevalence Index is <= 3.0
- ___ Problematic Hydrophytic Vegetation[1] (explain)
- ___ Rapid Test for Hydrophytic Vegetation
- ___ Morphological Adaptations

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and 3in (7.6cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and less than 3in (7.6cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20ft (1 to 6m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3ft (1m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes

Remarks: (If observed, list morphological adaptations below).
No hydrophytic vegetation indicators present; parameter is not met.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

W1-WET1

Project Site: East Point | City/County: Carmel / Putnam | Samp. Date: 5/14/2021
Applicant/Owner: BPUS Generation Development, LLC | State: NY | Sampling Point: W1-WET1
Investigator(s): Jimmy Monfils and Anna Loss | Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave | Slope (%): 1-2%
Subregion (LRR or MLRA): | Lat: 41.34866 | Long: -73.74253 | Datum:
Soil Map Unit: | NWI Class: PFO
Are climatic/hydrologic conditions on the site typical for this time of year? - | Remarks:
Are Normal Circumstances present? - | If needed, explain any answers in Remarks:
Are Vegetation -, Soil -, or Hydrology - significantly disturbed? | Remarks:
Are Vegetation -, Soil -, or Hydrology - naturally problematic? | Remarks:

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	Is This Sample Area Within a Wetland? No
Hydric Soil Present?	-	
Wetland Hydrology Present?	-	

Remarks: All parameters are met. Area is classified as a palustrine forested (PFO) wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X	Surface Water (A1)		Water-Stained Leaves (B9)
X	High Water Table (A2)		Aquatic Fauna (B13)
X	Saturation (A3)		Marl Deposits (B15)
X	Water Marks (B1)		Hydrogen Sulfide Odor (C1)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial (B7)		Other (Explain in Remarks)
	Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
X	Drainage Patterns (B10)
	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial (C9)
	Stunted or Stressed Plants (D1)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
X	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	X	Depth (inches):	1
Water Table Present?	X	Depth (inches):	Surface
Saturation Present?	X	Depth (inches):	Surface

Wetland Hydrology Present? -

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

Remarks:

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR_2/2	100		N/A	N/A	N/A	SILTY_CLAY_LOAM	
5-14	10YR_2/2	80	7.5YR_3/4	12	C	M	SILTY_CLAY_LOAM	
			7.5YR_5/8	8	C	M		
2-5	10YR_2/2	95	7.5YR_3/4	5	C	M	SILTY_CLAY_LOAM	
14-18	10YR_3/3	75	7.5YR_4/6	25	C	M	GRAVELLY_CLAY_LOAM	

[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)		Polyvalue Below Surface (S8) (LRR R, MLRA 149B)		2 cm Muck (A10) (LRR K, L, MLRA 149B)
	Histic Epipedon (A2)		Thin Dark Surface (S9) (LRR R, MLRA 149B)		Coast Prairie Redox (A16) (LRR K, L, R)
	Black Histic (A3)		Loamy Mucky Mineral (F1) (LRR K, L)		5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)		Dark Surface (S7) (LRR K, L, M)
	Stratified Layers (A5)	X	Depleted Matrix (F3)		Polyvalue Below Surface (S8) (LRR K, L)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)		Thin Dark Surface (S9) (LRR K, L)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)		Iron-Manganese Masses (F12) (LRR K, L, R)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)		Piedmont Floodplain Soils (F19) (MLRA 149B)
	Sandy Gleyed Matrix (S4)				Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
	Sandy Redox (S5)				Red Parent Material (F21)
	Stripped Matrix (S6)				Very Shallow Dark Surface (TF12)
X	Dark Surface (S7) (LRR R, MLRA 149B)				Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if observed):
Type:
Depth (inches):

Hydric Soil Present? -

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W1-WET1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dom. Sp?	Indicator Status
1. *Fraxinus pennsylvanica*	10.5	X	FACW
2. *Fagus grandifolia*	10.5	X	FACU
3. *Acer rubrum*	10.5	X	FAC
4. *Ulmus americana*	3		FAC
5. *Tilia americana*	3		FACU
6.			
7.			
8.			
	38.0	= Total Cover	
Sapling Stratum (Plot size: 30 ft)			
1. Tilia americana	3	X	FACU
2. Fraxinus pennsylvanica	38	X	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	41.0	= Total Cover	
Shrub Stratum (Plot size: 15 ft)			
1. *Nyssa sylvatica*	10.5	X	FAC
2. *Rosa multiflora*	3	X	FACU
3.			
4.			
5.			
6.			
7.			
8.			
	14.0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Onoclea sensibilis*	10.5	X	FACW
2. *Fraxinus pennsylvanica*	3	X	FACW
3. *Solidago rugosa*	3	X	FAC
4. *Microstegium vimineum*	63	X	FAC
5. *Osmunda claytoniana*	10.5		FAC
6. *Phalaris arundinacea*	3		OBL
7.			
8.			
9.			
10.			
11.			
12.			
	93.0	= Total Cover	
Woody Vines (Plot size: 30 ft)			
1. *Toxicodendron radicans*	10.5		FAC
2.			
3.			
4.			
5.			
	10.0	= Total Cover	

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: 9 (A)

Dominants across all strata: 12 (B)

% Dominants OBL, FACW, FAC: 75.00% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	3.0	x 1 = 3.0
FACW	62.0	x 2 = 124.0
FAC	111.0	x 3 = 333.0
FACU	19.5	x 4 = 78.0
UPL	0.0	x 5 = 0.0
Sum:	195.5 (A)	538.0 (B)

Prevalence Index = B/A = 2.75

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is > 50%
- X Prevalence Index is <= 3.0
- ___ Problematic Hydrophytic Vegetation[1] (explain)
- ___ Rapid Test for Hydrophytic Vegetation
- ___ Morphological Adaptations

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and 3in (7.6cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and less than 3in (7.6cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20ft (1 to 6m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3ft (1m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

W1-WET2

Project Site: East Point | City/County: Carmel / Putnam | Samp. Date: 5/14/2021
Applicant/Owner: BPUS Generation Development, LLC | State: NY | Sampling Point: W1-WET2
Investigator(s): Jimmy Monfils and Anna Loss | Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave | Slope (%): 3-5%
Subregion (LRR or MLRA): | Lat: 41.34774 | Long: -73.74098 | Datum:
Soil Map Unit: | NWI Class: PFO
Are climatic/hydrologic conditions on the site typical for this time of year? - | Remarks:
Are Normal Circumstances present? - | If needed, explain any answers in Remarks:
Are Vegetation -, Soil -, or Hydrology - significantly disturbed? | Remarks:
Are Vegetation -, Soil -, or Hydrology - naturally problematic? | Remarks:

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	Is This Sample Area Within a Wetland? No
Hydric Soil Present?	-	
Wetland Hydrology Present?	-	

Remarks: All parameters are met. Area is classified as a palustrine forested (PFO) wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X	Surface Water (A1)	X	Water-Stained Leaves (B9)
X	High Water Table (A2)		Aquatic Fauna (B13)
X	Saturation (A3)		Marl Deposits (B15)
X	Water Marks (B1)		Hydrogen Sulfide Odor (C1)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial (B7)		Other (Explain in Remarks)
	Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
X	Drainage Patterns (B10)
	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial (C9)
	Stunted or Stressed Plants (D1)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
X	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	X	Depth (inches):	1
Water Table Present?	X	Depth (inches):	Surface
Saturation Present?	X	Depth (inches):	Surface

Wetland Hydrology Present? -

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

Remarks:

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR_3/1	100		N/A	N/A	N/A	SANDY_CLAY	Saturated
6-12	7.5YR_3/1	100		N/A	N/A	N/A	SANDY_CLAY	

[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)		Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
	Histic Epipedon (A2)		Thin Dark Surface (S9) (LRR R, MLRA 149B)
	Black Histic (A3)		Loamy Mucky Mineral (F1) (LRR K, L)
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Stratified Layers (A5)		Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)
	Sandy Gleyed Matrix (S4)		
	Sandy Redox (S5)		
	Stripped Matrix (S6)		
X	Dark Surface (S7) (LRR R, MLRA 149B)		

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

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)
	Dark Surface (S7) (LRR K, L, M)
	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 (TF12)
	Other (Explain in Remarks)

Restrictive Layer (if observed):
Type: Rock refusal
Depth (inches): 12

Hydric Soil Present? -

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W1-WET2

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dom. Sp?	Indicator Status
1. *Acer rubrum*	38	X	FAC
2. *Carya ovata*	10.5		FACU
3. *Fagus grandifolia*	3		FACU
4. *Acer saccharinum*	3		FAC
5.			
6.			
7.			
8.			
	54.0	= Total Cover	

Sapling Stratum (Plot size: 30 ft)			
1. Acer rubrum	10.5	X	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10.0	= Total Cover	

Shrub Stratum (Plot size: 15 ft)			
1. *Berberis thunbergii*	10.5	X	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10.0	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. *Onoclea sensibilis*	3	X	FACW
2. *Symplocarpus_SP*	10.5	X	
3. *Impatiens capensis*	10.5	X	FACW
4. *Arisaema triphyllum*	3		FACW
5. *Fraxinus pennsylvanica*	3		FACW
6. *Carex aquatilis*	10.5	X	OBL
7. *Alliaria petiolata*	3		FACU
8.			
9.			
10.			
11.			
12.			
	44.0	= Total Cover	

Woody Vines (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
	0.0	= Total Cover	

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: 5 (A)

Dominants across all strata: 6 (B)

% Dominants OBL, FACW, FAC: 83.33% (A/B)

Prevalence Index Worksheet:

Total % Cover of:			Multiply By:
OBL	10.5	x 1 =	10.5
FACW	19.5	x 2 =	39.0
FAC	51.5	x 3 =	154.5
FACU	16.5	x 4 =	66.0
UPL	10.5	x 5 =	52.5
Sum:	108.5 (A)		322.5 (B)

Prevalence Index = B/A = 2.97

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is > 50%
- X Prevalence Index is <= 3.0
- ___ Problematic Hydrophytic Vegetation[1] (explain)
- ___ Rapid Test for Hydrophytic Vegetation
- ___ Morphological Adaptations

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and 3in (7.6cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and less than 3in (7.6cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20ft (1 to 6m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3ft (1m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

W2-WET1

Project Site: East Point | City/County: Carmel / Putnam | Samp. Date: 5/17/2021

Applicant/Owner: BPUS Generation Development, LLC | State: NY | Sampling Point: W2-WET1

Investigator(s): Jimmy Monfils and Anna Loss | Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave | Slope (%): 1-2%

Subregion (LRR or MLRA): | Lat: 41.34754 | Long: -73.74888 | Datum:

Soil Map Unit: | NWI Class: PFO

Are climatic/hydrologic conditions on the site typical for this time of year? - | Remarks:

Are Normal Circumstances present? - | If needed, explain any answers in Remarks:

Are Vegetation -, Soil -, or Hydrology - significantly disturbed? | Remarks:

Are Vegetation -, Soil -, or Hydrology - naturally problematic? | Remarks:

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	Is This Sample Area Within a Wetland? No
Hydric Soil Present?	-	
Wetland Hydrology Present?	-	

Remarks: All parameters are met. Area is classified as a palustrine forested (PFO) wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X	Surface Water (A1)	X	Water-Stained Leaves (B9)
X	High Water Table (A2)		Aquatic Fauna (B13)
X	Saturation (A3)		Marl Deposits (B15)
X	Water Marks (B1)		Hydrogen Sulfide Odor (C1)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial (B7)		Other (Explain in Remarks)
	Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
X	Drainage Patterns (B10)
X	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial (C9)
	Stunted or Stressed Plants (D1)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
X	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	X	Depth (inches):	1
Water Table Present?	X	Depth (inches):	Surface
Saturation Present?	X	Depth (inches):	Surface

Wetland Hydrology Present? -

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

Remarks:

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR_3/2	100		N/A	N/A	N/A	SILTY_CLAY_LOAM	
11-17	10YR_3/1	90	7.5YR_5/3	10	D	M	GRAVELLY_SILTY_CLAY_LOAM	
6-11	10YR_2/2	80	7.5YR_4/4	20	C	M	SILTY_CLAY_LOAM	
17-22	10YR_6/2	95	10YR_3/2	5	D	M	GRAVELLY_SANDY_CLAY_LOAM	

[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)		Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
	Histic Epipedon (A2)		Thin Dark Surface (S9) (LRR R, MLRA 149B)
	Black Histic (A3)		Loamy Mucky Mineral (F1) (LRR K, L)
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Stratified Layers (A5)	X	Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)
	Sandy Gleyed Matrix (S4)		
	Sandy Redox (S5)		
	Stripped Matrix (S6)		
	Dark Surface (S7) (LRR R, MLRA 149B)		

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

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)
	Dark Surface (S7) (LRR K, L, M)
	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 (TF12)
	Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? -

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W2-WET1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dom. Sp?	Indicator Status
1. *Fraxinus pennsylvanica*	38	X	FACW
2. *Acer saccharinum*	20.5	X	FAC
3. *Acer rubrum*	10.5		FAC
4.			
5.			
6.			
7.			
8.			
	69.0	= Total Cover	

Sapling Stratum (Plot size: 30 ft)			
1. Fraxinus pennsylvanica	10.5	X	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10.0	= Total Cover	

Shrub Stratum (Plot size: 15 ft)			
1. *Euonymus alatus*	10.5	X	
2. *Rosa multiflora*	10.5	X	FACU
3.			
4.			
5.			
6.			
7.			
8.			
	21.0	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. *Onoclea sensibilis*	10.5	X	FACW
2. *Impatiens capensis*	10.5	X	FACW
3. *Carex aquatilis*	20.5	X	OBL
4. *Viburnum dentatum*	3		FAC
5. *Symplocarpus_SP*	3		
6. *Microstegium vimineum*	10.5		FAC
7. *Phalaris arundinacea*	10.5		OBL
8.			
9.			
10.			
11.			
12.			
	68.0	= Total Cover	

Woody Vines (Plot size: 30 ft)			
1. *Celastrus orbiculatus*	3		FACU
2.			
3.			
4.			
5.			
	3.0	= Total Cover	

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	6	(A)
# Dominants across all strata:	8	(B)
% Dominants OBL, FACW, FAC:	75.00%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:			Multiply By:
OBL	31.0	x 1 =	31.0
FACW	69.5	x 2 =	139.0
FAC	44.5	x 3 =	133.5
FACU	13.5	x 4 =	54.0
UPL	0.0	x 5 =	0.0
Sum:	158.5 (A)		357.5 (B)

Prevalence Index = B/A = 2.26

Hydrophytic Vegetation Indicators:

- X Dominance Test is > 50%
- X Prevalence Index is <= 3.0
- ___ Problematic Hydrophytic Vegetation[1] (explain)
- ___ Rapid Test for Hydrophytic Vegetation
- ___ Morphological Adaptations

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and 3in (7.6cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and less than 3in (7.6cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20ft (1 to 6m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3ft (1m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

W3-WET1

Project Site: East Point | City/County: Carmel / Putnam | Samp. Date: 5/18/2021
Applicant/Owner: BPUS Generation Development, LLC | State: NY | Sampling Point: W3-WET1
Investigator(s): Jimmy Monfils and Anna Loss | Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave | Slope (%): 1-2%
Subregion (LRR or MLRA): | Lat: 41.35103 | Long: -73.74742 | Datum:
Soil Map Unit: | NWI Class: PFO
Are climatic/hydrologic conditions on the site typical for this time of year? Yes | Remarks:
Are Normal Circumstances present? Yes | If needed, explain any answers in Remarks:
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Remarks:
Are Vegetation No, Soil No, or Hydrology No naturally problematic? Remarks:

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	Is This Sample Area Within a Wetland? Yes
Hydric Soil Present?	Yes	
Wetland Hydrology Present?	Yes	

Remarks: All parameters are met. Area is classified as a palustrine forested (PFO) wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

	Surface Water (A1)	X	Water-Stained Leaves (B9)
X	High Water Table (A2)		Aquatic Fauna (B13)
X	Saturation (A3)		Marl Deposits (B15)
X	Water Marks (B1)		Hydrogen Sulfide Odor (C1)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial (B7)		Other (Explain in Remarks)
	Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
X	Drainage Patterns (B10)
	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial (C9)
	Stunted or Stressed Plants (D1)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
X	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	N/A
Water Table Present?	X	Depth (inches):	4
Saturation Present?	X	Depth (inches):	Surface

Wetland Hydrology Present? Yes

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

Remarks:

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
9-14	10YR_3/1	100		N/A	N/A	N/A	SILTY_CLAY	
17-23	10YR_4/3	90	7.5YR_3/3	10	C	M	SANDY_CLAY_LOAM	
0-9	10YR_2/1	100		N/A	N/A	N/A	SILTY_CLAY	Mostly organic matter
14-17	10YR_3/1	85	10YR_4/3	15	C	M	SILTY_CLAY	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X	Histosol (A1)		Polyvalue Below Surface (S8) (LRR R, MLRA 149B)		2 cm Muck (A10) (LRR K, L, MLRA 149B)
	Histic Epipedon (A2)				Coast Prairie Redox (A16) (LRR K, L, R)
	Black Histic (A3)		Thin Dark Surface (S9) (LRR R, MLRA 149B)		5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1) (LRR K, L)		Dark Surface (S7) (LRR K, L, M)
	Stratified Layers (A5)		Loamy Gleyed Matrix (F2)		Polyvalue Below Surface (S8) (LRR K, L)
X	Depleted Below Dark Surface (A11)	X	Depleted Matrix (F3)		Thin Dark Surface (S9) (LRR K, L)
	Thick Dark Surface (A12)		Redox Dark Surface (F6)		Iron-Manganese Masses (F12) (LRR K, L, R)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)		Piedmont Floodplain Soils (F19) (MLRA 149B)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
	Sandy Redox (S5)				Red Parent Material (F21)
	Stripped Matrix (S6)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		Very Shallow Dark Surface (TF12)
X	Dark Surface (S7) (LRR R, MLRA 149B)				Other (Explain in Remarks)

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if observed):
Type:
Depth (inches):

Hydric Soil Present? Yes

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W3-WET1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dom. Sp?	Indicator Status
1. *Ulmus americana*	20.5	X	FAC
2. *Acer saccharinum*	10.5	X	FAC
3. *Acer rubrum*	10.5	X	FAC
4. *Fraxinus pennsylvanica*	3		FACW
5.			
6.			
7.			
8.			
	44.0	= Total Cover	

Sapling Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0.0	= Total Cover	

Shrub Stratum (Plot size: 15 ft)			
1. *Lindera benzoin*	38		FACW
2. *Rosa multiflora*	10.5		FACU
3. *Viburnum dentatum*	3		FAC
4.			
5.			
6.			
7.			
8.			
	52.0	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. *Symplocarpus_SP*	10.5	X	
2. *Onoclea sensibilis*	3	X	FACW
3. *Fraxinus pennsylvanica*	3	X	FACW
4. *Lysimachia ciliata*	3	X	FACW
5. *Geranium maculatum*	3	X	FACU
6. *Arisaema triphyllum*	3	X	FACW
7.			
8.			
9.			
10.			
11.			
12.			
	26.0	= Total Cover	

Woody Vines (Plot size: 30 ft)			
1. *Celastrus orbiculatus*	3		FACU
2.			
3.			
4.			
5.			
	3.0	= Total Cover	

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	9	(A)
# Dominants across all strata:	12	(B)
% Dominants OBL, FACW, FAC:	75.00%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:			Multiply By:
OBL	0.0	x 1 =	0.0
FACW	53.0	x 2 =	106.0
FAC	44.5	x 3 =	133.5
FACU	16.5	x 4 =	66.0
UPL	0.0	x 5 =	0.0
Sum:	114.0 (A)		305.5 (B)

Prevalence Index = B/A = 2.68

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is > 50%
- X Prevalence Index is <= 3.0
- ___ Problematic Hydrophytic Vegetation[1] (explain)
- ___ Rapid Test for Hydrophytic Vegetation
- ___ Morphological Adaptations

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and 3in (7.6cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and less than 3in (7.6cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20ft (1 to 6m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3ft (1m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

W4-WET1

Project Site: East Point | City/County: Carmel / Putnam | Samp. Date: 5/18/2021

Applicant/Owner: BPUS Generation Development, LLC | State: NY | Sampling Point: W4-WET1

Investigator(s): Jimmy Monfils and Anna Loss | Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave | Slope (%): 3-5%

Subregion (LRR or MLRA): | Lat: 41.34836 | Long: -73.74987 | Datum:

Soil Map Unit: | NWI Class: PFO

Are climatic/hydrologic conditions on the site typical for this time of year? - | Remarks:

Are Normal Circumstances present? - | If needed, explain any answers in Remarks:

Are Vegetation -, Soil -, or Hydrology - significantly disturbed? | Remarks:

Are Vegetation -, Soil -, or Hydrology - naturally problematic? | Remarks:

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	Is This Sample Area Within a Wetland? No
Hydric Soil Present?	-	
Wetland Hydrology Present?	-	

Remarks: All parameters are met. Area is classified as a palustrine forested (PFO) wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X	Surface Water (A1)	X	Water-Stained Leaves (B9)
X	High Water Table (A2)		Aquatic Fauna (B13)
X	Saturation (A3)		Marl Deposits (B15)
X	Water Marks (B1)		Hydrogen Sulfide Odor (C1)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial (B7)		Other (Explain in Remarks)
	Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
X	Drainage Patterns (B10)
X	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
X	Saturation Visible on Aerial (C9)
	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
	Shallow Aquitard (D3)
X	Microtopographic Relief (D4)
X	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	X	Depth (inches):	2
Water Table Present?	X	Depth (inches):	Surface
Saturation Present?	X	Depth (inches):	Surface

Wetland Hydrology Present? -

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

Remarks:

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
2-10	7.5YR_2.5/2	100		N/A	N/A	N/A	SILTY_CLAY_LOAM	
16-20	10YR_5/2	75	10YR_5/8	25	C	M	CLAY_LOAM	
0-2	7.5YR_2.5/1	100		N/A	N/A	N/A	SILTY_CLAY_LOAM	Mostly organic material
10-16	10YR_4/1	85	10YR_5/8	15	C	M	SILTY_CLAY	
20-24	10YR_5/1	90	10YR_5/8	10	C	M	CLAY_LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X	Histosol (A1)		Polyvalue Below Surface (S8) (LRR R, MLRA 149B)		2 cm Muck (A10) (LRR K, L, MLRA 149B)
	Histic Epipedon (A2)				Coast Prairie Redox (A16) (LRR K, L, R)
	Black Histic (A3)		Thin Dark Surface (S9) (LRR R, MLRA 149B)		5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1) (LRR K, L)		Dark Surface (S7) (LRR K, L, M)
	Stratified Layers (A5)		Loamy Gleyed Matrix (F2)		Polyvalue Below Surface (S8) (LRR K, L)
X	Depleted Below Dark Surface (A11)	X	Depleted Matrix (F3)		Thin Dark Surface (S9) (LRR K, L)
	Thick Dark Surface (A12)		Redox Dark Surface (F6)		Iron-Manganese Masses (F12) (LRR K, L, R)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)		Piedmont Floodplain Soils (F19) (MLRA 149B)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
	Sandy Redox (S5)				Red Parent Material (F21)
	Stripped Matrix (S6)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		Very Shallow Dark Surface (TF12)
X	Dark Surface (S7) (LRR R, MLRA 149B)				Other (Explain in Remarks)

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? -

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W4-WET1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dom. Sp?	Indicator Status
1. *Ulmus americana*	20.5	X	FAC
2. *Acer rubrum*	10.5	X	FAC
3. *Acer saccharinum*	10.5	X	FAC
4. *Fraxinus pennsylvanica*	3		FACW
5. *Betula alleghaniensis*	3		FACU
6.			
7.			
8.			
	48.0	= Total Cover	

Sapling Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0.0	= Total Cover	

Shrub Stratum (Plot size: 15 ft)			
1. *Clethra_SP*	10.5	X	
2. *Lindera benzoin*	10.5	X	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	21.0	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. *Symplocarpus foetidus*	20.5	X	OBL
2. *Carex aquatilis*	10.5	X	OBL
3. *Osmundastrum cinnamomeum*	10.5	X	FACW
4. *Juncus effusus*	3		OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	44.0	= Total Cover	

Woody Vines (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
	0.0	= Total Cover	

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	7	(A)
# Dominants across all strata:	7	(B)
% Dominants OBL, FACW, FAC:	100.00%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:			Multiply By:
OBL	34.0	x 1 =	34.0
FACW	24.0	x 2 =	48.0
FAC	41.5	x 3 =	124.5
FACU	3.0	x 4 =	12.0
UPL	0.0	x 5 =	0.0
Sum:	102.5 (A)		218.5 (B)

Prevalence Index = B/A = 2.13

Hydrophytic Vegetation Indicators:

- ____ Dominance Test is > 50%
- X Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and 3in (7.6cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and less than 3in (7.6cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20ft (1 to 6m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3ft (1m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

W5-WET1

Project Site: East Point | City/County: Carmel / Putnam | Samp. Date: 5/18/2021

Applicant/Owner: BPUS Generation Development, LLC | State: NY | Sampling Point: W5-WET1

Investigator(s): Jimmy Monfils and Anna Loss | Section, Township, Range:

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

Subregion (LRR or MLRA): | Lat: 41.34715 | Long: -73.75123 | Datum:

Soil Map Unit: | NWI Classification: PFO

Are climatic/hydrologic conditions on the site typical for this time of year? Yes | Remarks:

Are Normal Circumstances present? Yes | If needed, explain any answers in Remarks:

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? | Remarks:

Are Vegetation No, Soil No, or Hydrology No naturally problematic? | Remarks:

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	Is This Sample Area Within a Wetland? Yes
Hydric Soil Present?	Yes	
Wetland Hydrology Present?	Yes	

Remarks: All parameters are met. Area is classified as a palustrine forested (PFO) wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X	Surface Water (A1)	X	Water-Stained Leaves (B9)
X	High Water Table (A2)		Aquatic Fauna (B13)
X	Saturation (A3)		Marl Deposits (B15)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial (B7)		Other (Explain in Remarks)
	Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
X	Drainage Patterns (B10)
	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial (C9)
	Stunted or Stressed Plants (D1)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
X	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	X	Depth (inches):	1
Water Table Present?	X	Depth (inches):	Surface
Saturation Present?	X	Depth (inches):	Surface

Wetland Hydrology Present? Yes

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

Remarks:

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
3-7	7.5YR_2.5/1	90	7.5YR_3/4	10	C	M	SILTY_CLAY_LOAM	
13-17	10YR_4/3	90	7.5YR_4/1	10	D	M	SANDY_CLAY	
0-3	7.5YR_2.5/1	97	7.5YR_3/4	3	C	M	SILTY_CLAY_LOAM	Primarily organic matter
7-13	10YR_4/1	50	10YR_4/6	30	C	N/A	SANDY_CLAY_LOAM	
			5YR_3/4	15	C	M		
			7.5YR_5/8	5	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X	Histosol (A1)		Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
	Histic Epipedon (A2)		Thin Dark Surface (S9) (LRR R, MLRA 149B)
	Black Histic (A3)		Loamy Mucky Mineral (F1) (LRR K, L)
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Stratified Layers (A5)	X	Depleted Matrix (F3)
X	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)
	Sandy Gleyed Matrix (S4)		
	Sandy Redox (S5)		
	Stripped Matrix (S6)		
X	Dark Surface (S7) (LRR R, MLRA 149B)		

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

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)
	Dark Surface (S7) (LRR K, L, M)
	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 (TF12)
	Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: W5-WET1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dom. Sp?	Indicator Status
1. *Acer saccharinum*	10.5	X	FAC
2. *Ulmus americana*	3		FAC
3. *Acer rubrum*	3		FAC
4.			
5.			
6.			
7.			
8.			
	16.0	= Total Cover	

Sapling Stratum (Plot size: 30 ft)			
1. Fraxinus pennsylvanica	10.5	X	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10.0	= Total Cover	

Shrub Stratum (Plot size: 15 ft)			
1. *Rosa multiflora*	10.5	X	FACU
2. *Viburnum dentatum*	10.5	X	FAC
3. *Ligustrum japonicum*	3	X	FAC
4. *Lonicera japonica*	3	X	FACU
5.			
6.			
7.			
8.			
	27.0	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. *Symplocarpus foetidus*	63	X	OBL
2. *Alysicarpus_SP*	10.5		
3. *Equisetum sylvaticum*	3		FACW
4. *Onoclea sensibilis*	20.5		FACW
5. *Lythrum salicaria*	10.5		OBL
6. *Toxicodendron radicans*	3		FAC
7.			
8.			
9.			
10.			
11.			
12.			
	110.0	= Total Cover	

Woody Vines (Plot size: 30 ft)			
1. *Toxicodendron radicans*	3		FAC
2.			
3.			
4.			
5.			
	3.0	= Total Cover	

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: 6 (A)

Dominants across all strata: 8 (B)

% Dominants OBL, FACW, FAC: 75.00% (A/B)

Prevalence Index Worksheet:

Total % Cover of:			Multiply By:
OBL	73.5	x 1 =	73.5
FACW	34.0	x 2 =	68.0
FAC	36.0	x 3 =	108.0
FACU	13.5	x 4 =	54.0
UPL	0.0	x 5 =	0.0
Sum:	157.0 (A)		303.5 (B)

Prevalence Index = B/A = 1.93

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is > 50%
- X Prevalence Index is <= 3.0
- ___ Problematic Hydrophytic Vegetation[1] (explain)
- ___ Rapid Test for Hydrophytic Vegetation
- ___ Morphological Adaptations

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and 3in (7.6cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and less than 3in (7.6cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20ft (1 to 6m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3ft (1m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes

Remarks: (If observed, list morphological adaptations below).

Appendix D

Photograph Log

PHOTOGRAPHIC LOG

Engineers | Scientists | Planners | Designers

Client Name: BPUS Generation Development	Site Location: Carmel. New York	Project No: 20692.00

Photo No. 1	Date: 5/18/2021

Description: Near Data Point Upland No. 1, view of the upland forested area. Forest floor is clear of herbaceous and shrub vegetation cover, and trees ranging from sapling to mature canopy trees dominate.

PHOTOGRAPHIC LOG

Engineers | Scientists | Planners | Designers

Client Name: BPUS Generation Development	Site Location: Carmel. New York	Project No: 20692.00

Photo No. 2	Date: 5/18/2021

Description: Near Data Point Upland No. 1, another view of the upland forested area that represents the eastern portion of the upland areas onsite.

vhb Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name: BPUS Generation Development	Site Location: Carmel. New York	Project No: 20692.00

Photo No. 3 | Date: 5/18/2021

Description: Near Data Point Upland No. 2, view of upland forest area and ATV trails representative of the western portion of the uplands onsite. While mature canopy trees are still dominant, herbaceous and shrub vegetative cover are also prevalent.

vhb Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name: BPUS Generation Development	Site Location: Carmel. New York	Project No: 20692.00

Photo No. 4 | Date: 5/18/2021

Description: Near Data Point Upland No. 2, view of upland forest area and ATV trails representative of the western portion of the uplands onsite.

PHOTOGRAPHIC LOG

Engineers | Scientists | Planners | Designers

Client Name: BPUS Generation Development	Site Location: Carmel. New York	Project No: 20692.00

Photo No. 5 | Date: 5/18/2021

Description: Near Data Point Upland No. 2, view of upland forest area adjacent to ATV trails onsite. Forest floor vegetation is transitioning from clear to herbaceous and shrub dominated.

PHOTOGRAPHIC LOG

Engineers | Scientists | Planners | Designers

Client Name: BPUS Generation Development	Site Location: Carmel. New York	Project No: 20692.00

Photo No. 6 | Date: 5/18/2021

Description: Near Stream 3 in Wetland Area 1, view of wetland area identified onsite. Ferns, Skunk Cabbage, and tree saplings were dominant and water saturation and surface ponding were observed.

vhb Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name: BPUS Generation Development	Site Location: Carmel. New York	Project No: 20692.00

Photo No. 7 | Date: 5/18/2021

Description: Near Wetland Flag No. 303 in Wetland Area 2, view of wetlands in the foreground, and uplands in the background.

vhb Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name: BPUS Generation Development | Site Location: Carmel. New York | Project No: 20692.00

Photo No. 8 | Date: 5/18/2021

Description: Near Wetland Flag No. 369 in Wetland Area 2, view of saturated wetlands observed onsite.

vhb Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name: BPUS Generation Development	Site Location: Carmel. New York	Project No: 20692.00

Photo No. 9 | Date: 5/18/2021

Description: Near Wetland Flag No. 367 in Wetland Area 2, view of the utility right-of-way bisecting the site. Primarily maintained, wetlands do extend across the right-of-way.

vhb Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name: BPUS Generation Development	Site Location: Carmel. New York	Project No: 20692.00

Photo No. 10 | Date: 5/18/2021

Description: Near Wetland Flag No. 154 in Wetland Area 2, view of stained leaves observed. Surface water was minimally present, and herbaceous cover was dominant.

vhb Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name: BPUS Generation Development | Site Location: Carmel. New York | Project No: 20692.00

Photo No. 11 | Date: 5/18/2021

Description: Near Wetland Flag No. 334 in Wetland Area 3, view of forested wetlands and stained leaves. Snags were common in the wetland area, and although minimal shrubs were present, herbaceous cover, saplings and nature canopy trees were dominant.

vhb Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name: BPUS Generation Development | Site Location: Carmel. New York | Project No: 20692.00

Photo No. 12 | Date: 5/18/2021

Description: Near Wetland Flag No. 334 in Wetland Area 3, an alternate view of the forest wetlands in the area.

vhb Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name:	BPUS Generation Development	Site Location:	Carmel. New York	Project No:	20692.00

Photo No. 13	Date: 5/18/2021

Description: Near Wetland Flag No. 217in Wetland Area 2, view of saturated wetlands observed. Herbaceous cover is dominant.

vhb Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name:	BPUS Generation Development	Site Location:	Carmel. New York	Project No:	20692.00

Photo No. 14	Date: 5/18/2021

Description: Near Wetland Flag No. 115 in Wetland Area 4, view of wetland area with varying depths of surface water present. Herbaceous and shrub vegetation are dominant, with minor saplings and small mature trees present.

vhb Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name:	BPUS Generation Development	Site Location:	Carmel. New York	Project No:	20692.00

Photo No. 15	Date: 5/18/2021

Description: Near Wetland Flag No. 108 in Wetland Area 4, view of saturated forested wetlands, dominated by herbaceous cover, shrubs, and mature canopy trees.

vhb Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name:	BPUS Generation Development	Site Location:	Carmel. New York	Project No:	20692.00

Photo No. 16	Date: 5/18/2021

Description: Near Wetland Flag No. 201 in Wetland Area 5, wetlands encompass a minor stream onsite that flows from the north to south.

vhb Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name:	BPUS Generation Development	Site Location:	Carmel. New York	Project No:	20692.00

Photo No. 17	Date: 5/18/2021

Description: Near Wetland Flag No. 501 in Wetland Area 5, view of minor stream channel with adjacent fringe wetlands onsite.

vhb Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

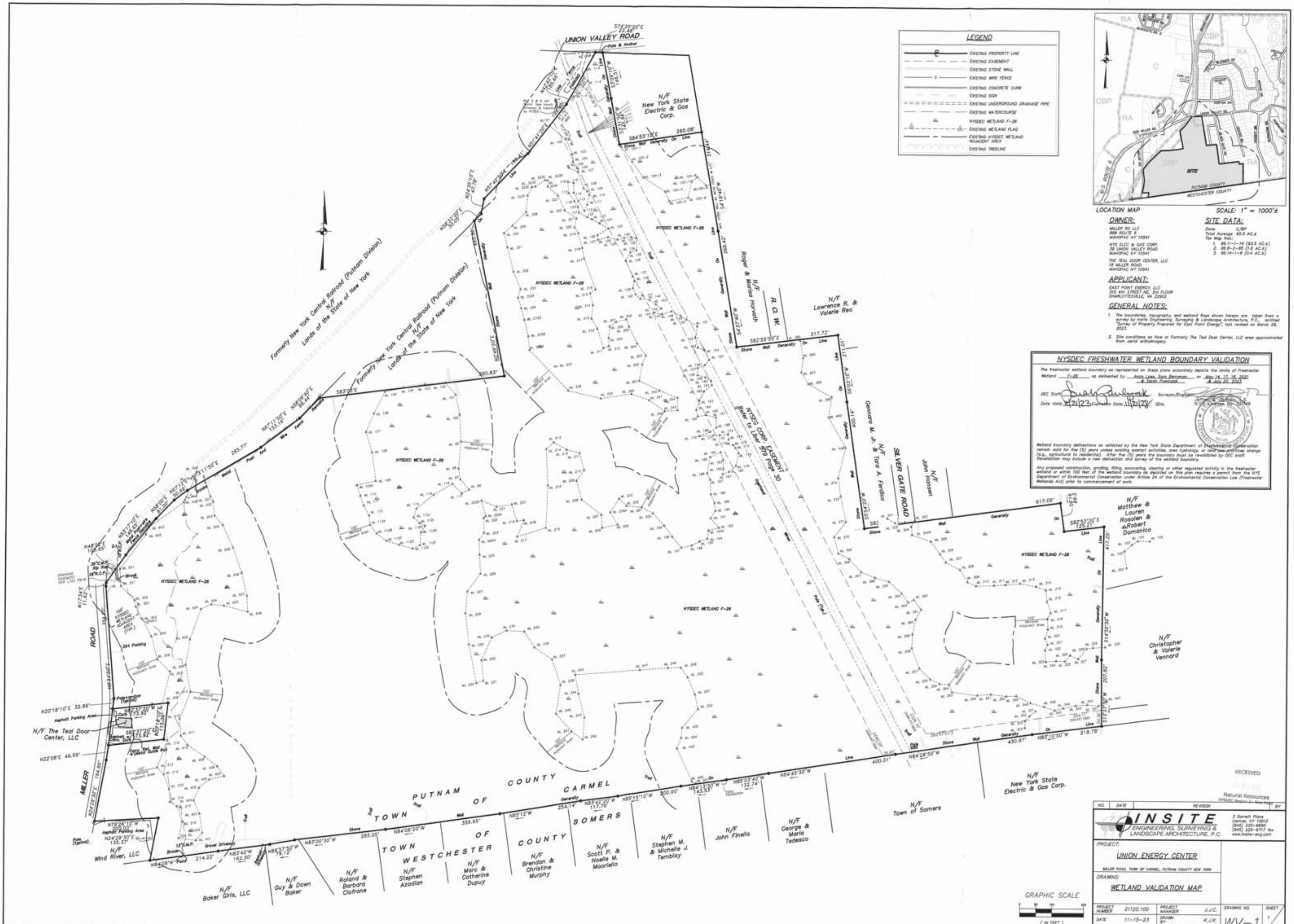
Client Name:	BPUS Generation Development	Site Location:	Carmel. New York	Project No:	20692.00

Photo No. 18	Date: 5/18/2021

Description: Near Wetland Flag No. 306 in Wetland Area 5, view of minor stream channel and adjacent fringe wetlands.

APPENDIX B

NYSDEC WETLAND VALIDATION APPROVAL


UNION VALLEY ROAD
N/F New York State Electric & Gas Corp.
Formerly New York Central Railroad (Putnam Division)
N/F Lands of the State of New York
NYSDEC WETLAND F-26
NYSEG CORP. EASEMENT Refer to Liber 979 Page 30
N/F Roger & Marisa Horvath
R.O.W.
N/F Lawrence R. & Valerie Reo
N/F Gennaro M. Jr. & Tara A. Ferdico
SILVER GATE ROAD
N/F John Hansen
N/F Matthew & Lauren Rosolen & Robert Domanico
N/F Christopher & Valerie Vennard
N/F New York State Electric & Gas Corp.
N/F Town of Somers
MILLER ROAD
N/F The Teal Door Center, LLC
N/F Wind River, LLC
N/F Baker Girls, LLC
N/F Guy & Dawn Baker
N/F Roland & Barbara Ciofrone
N/F Stephen Azadian
N/F Marc & Catherine Dupuy
N/F Brendan & Christine Murphy
N/F Scott P. & Noelle M. Mooriello
N/F Stephen M. & Michelle J. Tremblay
N/F John Finello
N/F George & Maria Tedesco
TOWN OF CARMEL
PUTNAM COUNTY
TOWN OF SOMERS
WESTCHESTER COUNTY
LEGEND
EXISTING PROPERTY LINE
EXISTING EASEMENT
EXISTING STONE WALL
EXISTING WIRE FENCE
EXISTING CONCRETE CURB
EXISTING SIGN
EXISTING UNDERGROUND DRAINAGE PIPE
EXISTING WATERCOURSE
NYSDEC WETLAND F-26
EXISTING WETLAND FLAG
EXISTING NYSDEC WETLAND ADJACENT AREA
EXISTING TREELINE
LOCATION MAP
SCALE: 1" = 1000'±
SITE
PUTNAM COUNTY
WESTCHESTER COUNTY
U.S. ROUTE 6
OWNER:
MILLER RD LLC
888 ROUTE 6
MAHOPAC NY 10541
NYS ELEC & GAS CORP.
39 UNION VALLEY ROAD
MAHOPAC NY 10541
THE TEAL DOOR CENTER, LLC
18 MILLER ROAD
MAHOPAC NY 10541
SITE DATA:
Zone: C/BP
Total Acreage 95.5 AC.±
Tax Map Nos.:
1. 86.11-1-14 (93.5 AC.±)
2. 86.8-2-85 (1.6 AC.±)
3. 86.14-1-8 (0.4 AC.±)
APPLICANT:
EAST POINT ENERGY, LLC
310 4th STREET NE, 3rd FLOOR
CHARLOTTESVILLE, VA 22902
GENERAL NOTES:
1. The boundaries, topography, and wetland flags shown hereon are taken from a survey by Insite Engineering, Surveying & Landscape Architecture, P.C., entitled "Survey of Property Prepared for East Point Energy", last revised on March 29, 2023.
2. Site conditions on Now or Formerly The Teal Door Center, LLC area approximated from aerial orthoimagery.
NYSDEC FRESHWATER WETLAND BOUNDARY VALIDATION
The freshwater wetland boundary as represented on these plans accurately depicts the limits of Freshwater Wetland F-26 as delineated by Anna Loss, Sara Berryman & Sarah Powlicsak on May 14, 17, 18, 2021 & July 20, 2023
DEC Staff
Date Valid: 11/21/23 Expiration Date: 11/21/28
Surveyor/Engineer
SEAL
Wetland boundary delineations as validated by the New York State Department of Environmental Conservation remain valid for five (5) years unless existing exempt activities, area hydrology, or land use practices change (e.g., agricultural to residential). After five (5) years the boundary must be revalidated by DEC staff. Revalidation may include a new delineation and survey of the wetland boundary.
Any proposed construction, grading, filling, excavating, clearing or other regulated activity in the freshwater wetland or within 100 feet of the wetland boundary as depicted on this plan requires a permit from the NYS Department of Environmental Conservation under Article 24 of the Environmental Conservation Law (Freshwater Wetlands Act) prior to commencement of work.
RECEIVED
Natural Resources
GRAPHIC SCALE
(IN FEET)
1 inch = 100 ft.
NO. DATE REVISION BY
INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com
PROJECT:
UNION ENERGY CENTER
MILLER ROAD, TOWN OF CARMEL, PUTNAM COUNTY NEW YORK
DRAWING:
WETLAND VALIDATION MAP
PROJECT NUMBER 21120.100
PROJECT MANAGER J.J.C.
DATE 11-15-23
DRAWN BY K.J.K.
SCALE 1"=100'
CHECKED BY A.D.T.
DRAWING NO. WV-1
SHEET 1/1

APPENDIX C

NYSDEC NATURAL HERITAGE AND USFWS IPAC

DOCUMENTATION

United States Department of the Interior

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

In Reply Refer To: July 20, 2023
Project Code: 2023-0107129
Project Name: East Point Energy - Union NY Solar Farm

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

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

Note: IPaC has provided all available attachments because this project is in multiple field office jurisdictions.

Attachment(s):

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

OFFICIAL SPECIES LIST

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

This species list is provided by:

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

This project's location is within the jurisdiction of multiple offices. However, only one species list document will be provided for all offices. The species and critical habitats in this document reflect the aggregation of those that fall in each of the affiliated office's jurisdiction. Other offices affiliated with the project:

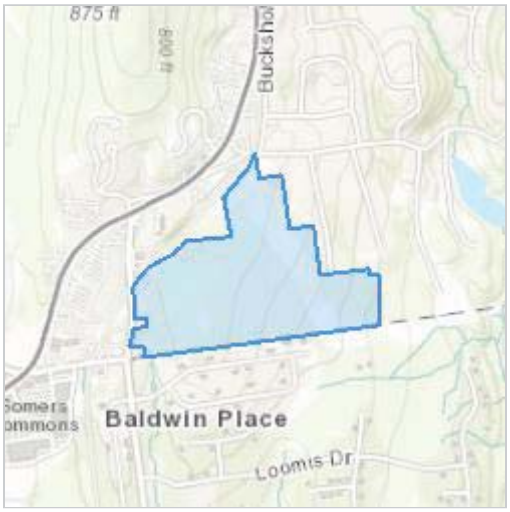
Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
(631) 286-0485

PROJECT SUMMARY

Project Code: 2023-0107129
Project Name: East Point Energy - Union NY Solar Farm
Project Type: Power Gen - Solar
Project Description: Proposed battery energy storage facility - The Project Area will consist of battery enclosures, inverters, transformers, a security fence, and vegetative screening. The batteries themselves are housed in enclosures, that will be supported by concrete pads or piers. Similarly, the inverters and transformers will also be supported by concrete pads or piers. The rest of the site's ground cover will most likely be gravel or a similar substance. The Project will interconnect to the existing NYSEG transmission system near the property. Space between the enclosures and the security fence will be included in the design to allow access for vehicles performing routine maintenance.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.348824,-73.74773514695679,14z



Counties: Putnam and Westchester counties, New York

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

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

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

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

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

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

REPTILES

NAME	STATUS
Bog Turtle *Glyptemys muhlenbergii* Population: Wherever found, except GA, NC, SC, TN, VA No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6962	Threatened

INSECTS

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

CRITICAL HABITATS

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

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

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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

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

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

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

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

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

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

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Aug 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10

NAME	BREEDING SEASON
Black-capped Chickadee *Poecile atricapillus practicus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 10 to Jul 31
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler *Cardellina canadensis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Golden-winged Warbler *Vermivora chrysoptera* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8745	Breeds May 1 to Jul 20
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

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

Probability of Presence (■)

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

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

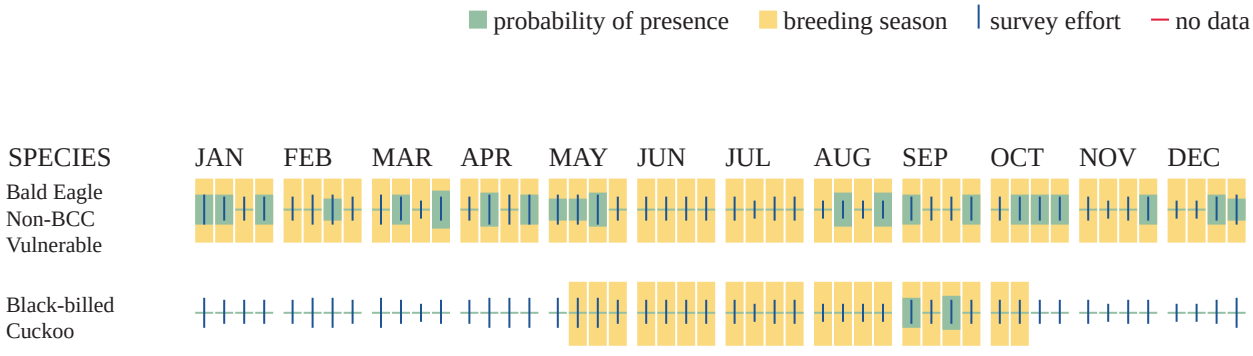
1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability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

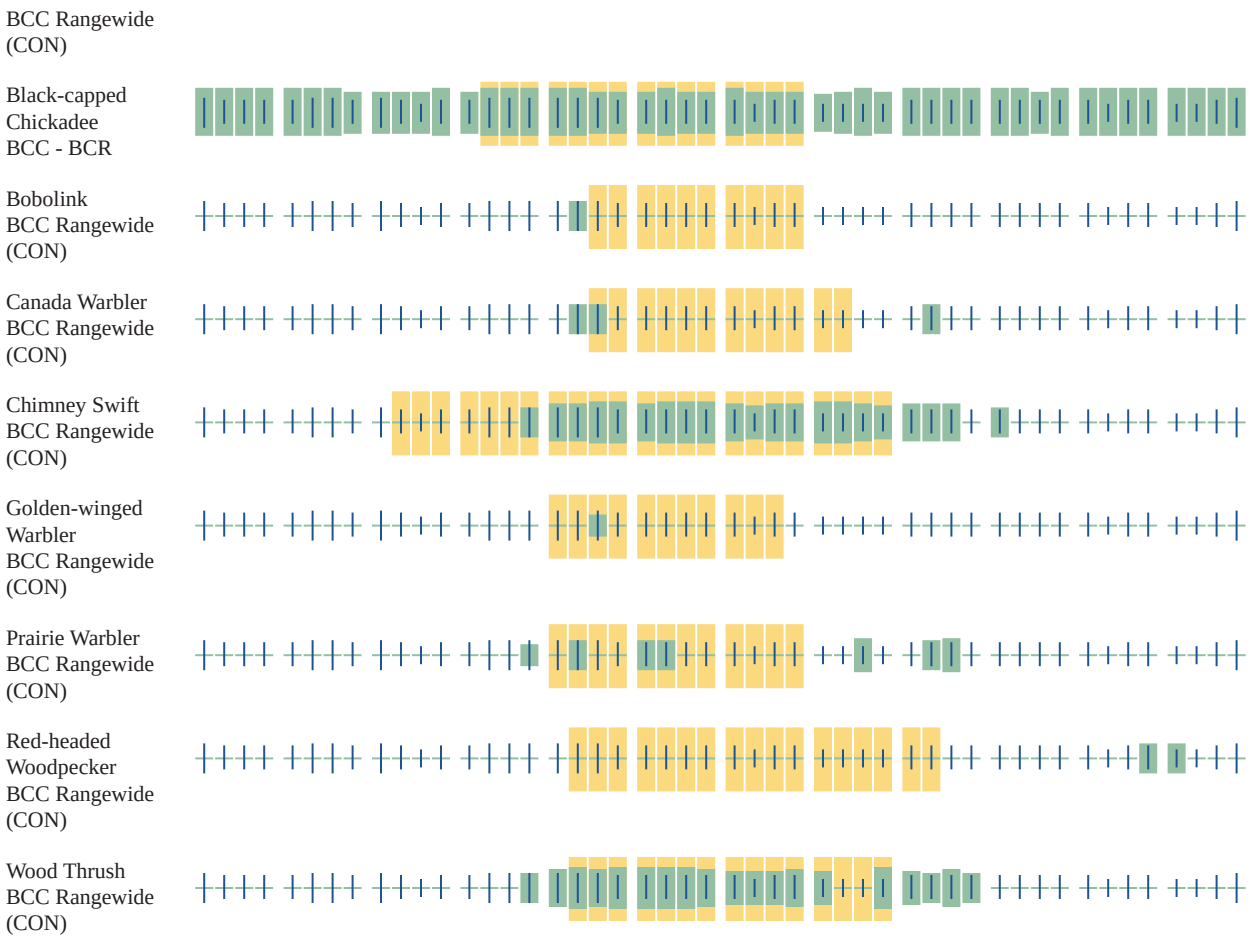
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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

No Data (–)
A week is marked as having no data if there were no survey events for that week.

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





Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

MIGRATORY BIRDS FAQ

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

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits

may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

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

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

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

How do I know if a bird is breeding, wintering or migrating in my area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);

2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

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

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

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

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

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

should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

WETLANDS

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

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

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

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1E

RIVERINE

- R4SBC

IPAC USER CONTACT INFORMATION

Agency:	Private Entity
Name:	Sara Berryman
Address:	100 Great Meadow Road
Address Line 2:	Suite 200
City:	Wethersfield
State:	CT
Zip:	06109
Email	sberryman@vhb.com
Phone:	8608074336

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Assistant Regional Director-Ecological Services
300 Westgate Center Drive
Hadley, MA 01035-9589
Phone: (413) 253-8304 Fax: (413) 253-8293

In Reply Refer To: July 20, 2023
Project code: 2023-0107129
Project Name: East Point Energy - Union NY Solar Farm

Federal Nexus: yes
Federal Action Agency (if applicable): Army Corps of Engineers

Subject: Technical assistance for 'East Point Energy - Union NY Solar Farm'

Dear Sara Berryman:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on July 20, 2023, for “East Point Energy - Union NY Solar Farm” (here forward, Project). This project has been assigned Project Code 2023-0107129 and all future correspondence should clearly reference this number.

The Service developed the IPaC system and associated species’ determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into the IPaC must accurately represent the full scope and details of the Project. Failure to accurately represent or implement the Project as detailed in IPaC or the Northeast Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative effect(s)), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17). Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no further consultation with, or concurrence from, the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical

habitat, formal consultation is required (except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect (NLAA)" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13]).

The IPaC results indicated the following species is (are) potentially present in your project area and, based on your responses to the Service's Northeast DKey, you determined the proposed Project will have the following effect determinations:

Species	Listing Status	Determination
Bog Turtle (*Glyptemys muhlenbergii*)	Threatened	May affect
Indiana Bat (*Myotis sodalis*)	Endangered	NLAA

Consultation with the Service is not complete. Further consultation or coordination with the Service is necessary for those species or designated critical habitats with a determination of "May Affect". Please contact our Assistant Regional Director-Ecological Services to discuss methods to avoid or minimize potential adverse effects to those species or designated critical habitats.

In addition to the species listed above, the following species and/or critical habitats may also occur in your project area and are not covered by this conclusion:

- Monarch Butterfly *Danaus plexippus* Candidate
- Northern Long-eared Bat *Myotis septentrionalis* Endangered

Please Note: If the Action may impact bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) by the prospective permittee may be required. Please contact the Migratory Birds Permit Office, (413) 253-8643, or PermitsR5MB@fws.gov, with any questions regarding potential impacts to Eagles.

If you have any questions regarding this letter or need further assistance, please contact the Assistant Regional Director-Ecological Services and reference the Project Code associated with this Project.

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

1. Name

East Point Energy - Union NY Solar Farm

2. Description

The following description was provided for the project 'East Point Energy - Union NY Solar Farm':

> Proposed battery energy storage facility - The Project Area will consist of battery enclosures, inverters, transformers, a security fence, and vegetative screening. The batteries themselves are housed in enclosures, that will be supported by concrete pads or piers. Similarly, the inverters and transformers will also be supported by concrete pads or piers. The rest of the site’s ground cover will most likely be gravel or a similar substance. The Project will interconnect to the existing NYSEG transmission system near the property. Space between the enclosures and the security fence will be included in the design to allow access for vehicles performing routine maintenance.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.348824,-73.74773514695679,14z

QUALIFICATION INTERVIEW

1. As a representative of this project, do you agree that all items submitted represent the complete scope of the project details and you will answer questions truthfully?

   Yes

2. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed species?

   Note: This question could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered, or proposed species.

   No

3. Is the action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

4. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) the lead agency for this project?

   No

5. Are you including in this analysis all impacts to federally listed species that may result from the entirety of the project (not just the activities under federal jurisdiction)?

   Note: If there are project activities that will impact listed species that are considered to be outside of the jurisdiction of the federal action agency submitting this key, contact your local Ecological Services Field Office to determine whether it is appropriate to use this key. If your Ecological Services Field Office agrees that impacts to listed species that are outside the federal action agency's jurisdiction will be addressed through a separate process, you can answer yes to this question and continue through the key.

   Yes

6. Are you the lead federal action agency or designated non-federal representative requesting concurrence on behalf of the lead Federal Action Agency?

   No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)?

   No

8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

9. Will the proposed project involve the use of herbicide where listed species are present?

   No

10. Are there any caves or anthropogenic features suitable for hibernating or roosting bats within the area expected to be impacted by the project?

    No

11. Does any component of the project associated with this action include structures that may pose a collision risk to **birds** (e.g., land-based or offshore wind turbines, communication towers, high voltage transmission lines, any type of towers with or without guy wires)?

    Note: For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

    No

12. Does any component of the project associated with this action include structures that may pose a collision risk to **bats** (e.g., land-based wind turbines)?

    Note: For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

    No

13. Will the proposed project result in permanent changes to water quantity in a stream or temporary changes that would be sufficient to result in impacts to listed species?

    For example, will the proposed project include any activities that would alter stream flow, such as water withdrawal, hydropower energy production, impoundments, intake structures, diversion structures, and/or turbines? Projects that include temporary and limited water reductions that will not displace listed species or appreciably change water availability for listed species (e.g. listed species will experience no changes to feeding, breeding or sheltering) can answer "No". Note: This question refers only to the amount of water present in a stream, other water quality factors, including sedimentation and turbidity, will be addressed in following questions.

    No

14. Will the proposed project affect wetlands where listed species are present?

    This includes, for example, project activities within wetlands, project activities within 300 feet of wetlands that may have impacts on wetlands, water withdrawals and/or discharge of contaminants (even with a NPDES).

    Yes

15. Will the proposed project activities (including upland project activities) occur within 0.125 miles of the water's edge of a stream or tributary of a stream where listed species may be present?

    Yes

16. Will the proposed project directly affect a streambed (below ordinary high water mark (OHWM)) of the stream or tributary where listed species may be present?

    Yes

17. Will the proposed project bore underneath (directional bore or horizontal directional drill) a stream where listed species may be present?

    No

18. Will the proposed project involve a new point source discharge into a stream or change an existing point source discharge (e.g., outfalls; leachate ponds) where listed species may be present?

    No

19. Will the proposed project involve the removal of excess sediment or debris, dredging or in-stream gravel mining where listed species may be present?

    No

20. Will the proposed project involve the creation of a new water-borne contaminant source where listed species may be present?

    Note New water-borne contaminant sources occur through improper storage, usage, or creation of chemicals. For example: leachate ponds and pits containing chemicals that are not NSF/ANSI 60 compliant have contaminated waterways. Sedimentation will be addressed in a separate question.

    No

21. Will the proposed project involve perennial stream loss, in a stream of tributary of a stream where listed species may be present, that would require an individual permit under 404 of the Clean Water Act?

    No

22. Will the proposed project involve blasting where listed species may be present?

    No

23. Will the proposed project include activities that could negatively affect fish movement temporarily or permanently (including fish stocking, harvesting, or creation of barriers to fish passage).

    No

24. Will the proposed project involve earth moving that could cause erosion and sedimentation, and/or contamination along a stream or tributary of a stream where listed species may be present?

    Note: Answer "Yes" to this question if erosion and sediment control measures will be used to protect the stream.

    Yes

25. Will earth moving activities result in sediment being introduced to streams or tributaries of streams where listed species may be present through activities such as, but not limited to, valley fills, large-scale vegetation removal, and/or change in site topography?

    Yes

26. Will the proposed project involve vegetation removal within 200 feet of a perennial stream bank where aquatic listed species may be present?

    No

27. Will erosion and sedimentation control Best Management Practices (BMPs) associated with applicable state and/or Federal permits, be applied to the project? If BMPs have been provided by and/or coordinated with and approved by the appropriate Ecological Services Field Office, answer "Yes" to this question.

    Yes

28. Is the project being funded, lead, or managed in whole or in part by U.S Fish and Wildlife Restoration and Recovery Program (e.g., Partners, Coastal, Fisheries, Wildlife and Sport Fish Restoration, Refuges)?

    No

29. [Semantic] Does the project intersect the Virginia big-eared bat critical habitat?

    Automatically answered
    No

30. [Semantic] Does the project intersect the Indiana bat AOI?

    Automatically answered
    Yes

31. Is the action area within 0.5 mile radius of any known hibernacula (caves or mines) openings or underground features?

    Note: If you are unsure, contact the appropriate Ecological Services Field Office before continuing through the key.

    No

32. Are trees present within the action area?

    Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter), answer "Yes". If you are unsure, answer “Yes.” Or refer to Appendix A of the Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines for definitions and an assessment form that will assist you in determining if suitable habitat is present within your project's action area. Suitable summer habitat for Indiana bat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter) that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat

    Yes

33. Is the action area within known occupied Indiana bat habitat? Known occupied Indiana bat habitat includes established conservation buffers (10-mile buffer around Phase 1 or Phase 2 hibernacula, 5-mile buffer around Phase 3 or Phase 4 hibernacula; 5-mile buffer around Indiana bat captures or detections; 2.5-mile buffer around known roosts).

    No

34. Has a presence/probable absence bat survey following the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines been conducted within the action area?

    No

35. Does the project involve removal or modification of a human-made structure (barn, house, or other building) known or suspected to contain roosting bats?

    Note: Most maintenance and general human disturbance in and around structures will not affect Indiana bats as bats roosting in human structures are adjusted to a certain level of routine noise and are generally expected to roost away from areas with excessive disturbance. Answer 'no' if the proposed action will not include disturbance to human structures known or suspected to contain roosting bats or if the structure does not offer suitable roosting habitat for northern long-eared bats. If unsure, answer 'yes.'

    No

36. Does the project include removal/modification of an existing bridge or culvert?

    No

37. Will the project include tree cutting, other means of knocking down or bringing down trees, or tree trimming?

    Yes

38. Does the project include emergency cutting or trimming of hazard trees in order to remove an imminent threat to human safety or property?

    No

39. Will the proposed project result in the removal of any known or potential Indiana bat roost trees?

    Note: Suitable Indiana bat roost trees are live trees and/or snags ≥5 inches dbh that have exfoliating bark, cracks, crevices, and/or cavities.

    No

40. Will the project result in the use of prescribed fire?

    No

41. Will the proposed project involve blasting within Indiana bat suitable habitat?

    No

42. Does the project include temporary or permanent lighting of roadway(s), facility(ies), and/or parking lot(s)?

    No

43. [Semantic] Does the project intersect the Indiana bat critical habitat?

    Automatically answered

    No

44. [Semantic] Does the project intersect the candy darter critical habitat?

    Automatically answered

    No

45. [Semantic] Does the project intersect the diamond darter critical habitat?

    Automatically answered
    No

46. [Semantic] Does the project intersect the Big Sandy crayfish critical habitat?

    Automatically answered
    No

47. [Hidden Semantic] Does the project intersect the Guyandotte River crayfish critical habitat?

    Automatically answered
    No

48. [Hidden Semantic] Does the project intersect the Bog Turtle AOI?

    Automatically answered
    Yes

49. Are bog turtles known to occur within the action area?

    If unsure, data can be requested from the appropriate state Natural Heritage program.

    Yes

50. Do you have any other documents that you want to include with this submission?

    No

PROJECT QUESTIONNAIRE

1. Approximately how many acres of trees would the proposed project remove?

   45

2. Approximately how many total acres of disturbance are within the disturbance/ construction limits of the proposed project?

   45

3. Briefly describe the habitat within the construction/disturbance limits of the project site.

   Mostly forested with wetlands, utility ROW with some emergent wetlands.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Sara Berryman
Address: 100 Great Meadow Road
Address Line 2: Suite 200
City: Wethersfield
State: CT
Zip: 06109
Email sberryman@vhb.com
Phone: 8608074336

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Assistant Regional Director-Ecological Services
5600 American Blvd. West
Bloomington, MN 55437-1458
Phone: (612) 713-5350 Fax: (612) 713-5292

In Reply Refer To: July 20, 2023
Project code: 2023-0107129
Project Name: East Point Energy - Union NY Solar Farm

Federal Nexus: yes
Federal Action Agency (if applicable): Army Corps of Engineers

Subject: Technical assistance for 'East Point Energy - Union NY Solar Farm'

Dear Sara Berryman:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on July 20, 2023, for 'East Point Energy - Union NY Solar Farm' (here forward, Project). This project has been assigned Project Code 2023-0107129 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.**

Ensuring Accurate Determinations When Using IPaC

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

Determination for the Northern Long-Eared Bat

Based on your IPaC submission and the standing analysis for the Dkey, your project has reached the determination of "May Affect" the northern long-eared bat.

Next Steps

Your action may qualify for the Interim Consultation Framework for the northern long-eared bat. To determine if it qualifies, review the Interim Consultation Framework posted here https://www.fws.gov/library/collections/interim-consultation-framework-northern-long-eared-bat. If you

determine it meets the requirements of the Interim Consultation Framework, follow the procedures outlined there to complete section 7 consultation.

If your project does **not** meet the requirements of the Interim Consultation Framework, please contact the Assistant Regional Director-Ecological Services for further coordination on this project. Further consultation or coordination with the Service is necessary for those species or designated critical habitats with a determination of “May Affect”.

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

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

- Bog Turtle *Glyptemys muhlenbergii* Threatened
- Indiana Bat *Myotis sodalis* Endangered
- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may cause prohibited take of the species listed above.

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

1. Name

East Point Energy - Union NY Solar Farm

2. Description

The following description was provided for the project 'East Point Energy - Union NY Solar Farm':

> Proposed battery energy storage facility - The Project Area will consist of battery enclosures, inverters, transformers, a security fence, and vegetative screening. The batteries themselves are housed in enclosures, that will be supported by concrete pads or piers. Similarly, the inverters and transformers will also be supported by concrete pads or piers. The rest of the site’s ground cover will most likely be gravel or a similar substance. The Project will interconnect to the existing NYSEG transmission system near the property. Space between the enclosures and the security fence will be included in the design to allow access for vehicles performing routine maintenance.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.348824,-73.74773514695679,14z

DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of "may affect" for the Endangered northern long-eared bat (*Myotis septentrionalis*).

QUALIFICATION INTERVIEW

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

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

   No

2. Do you have post-white nose syndrome occurrence data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed acoustic detections. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

3. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   No

6. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

9. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

   If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

   Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

   No

10. Have you contacted the appropriate agency to determine if your action is near any known northern long-eared bat hibernacula?

    Note: A document with links to Natural Heritage Inventory databases and other state-specific sources of information on the locations of northern long-eared bat hibernacula is available here. Location information for northern long-eared bat hibernacula is generally kept in state natural heritage inventory databases – the availability of this data varies by state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited.

    Yes

11. Is any portion of the action area within 0.5-mile radius of any known northern long-eared bat hibernacula? If unsure, contact your local Ecological Services Field Office.

    No

12. Does the action area contain any caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating northern long-eared bats?

    No

13. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?
    (If unsure, answer "Yes.")

    Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥3 inches (12.7 centimeter) dbh), answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat can be found at: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    Yes

14. Will the action cause effects to a bridge?

    No

15. Will the action result in effects to a culvert or tunnel?

    No

16. Does the action include the intentional exclusion of northern long-eared bats from a building or structure?

    Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local U.S. Fish and Wildlife Services Ecological Services Field Office to help assess whether northern long-eared bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures

    No

17. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats?**

    No

18. Will the action cause construction of one or more new roads open to the public?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

19. Will the action include or cause any construction or other activity that is reasonably certain to increase average daily traffic on one or more existing roads?

    Note: For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.). .

    No

20. Will the action include or cause any construction or other activity that is reasonably certain to increase the number of travel lanes on an existing thoroughfare?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

21. Will the proposed action involve the creation of a new water-borne contaminant source (e.g., leachate pond pits containing chemicals that are not NSF/ANSI 60 compliant)?

    No

22. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

    No

23. Will the proposed action involve blasting?

    No

24. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

    No

25. Will the proposed action involve the use of herbicides or pesticides other than herbicides (e.g., fungicides, insecticides, or rodenticides)?

    No

26. Will the action include or cause activities that are reasonably certain to cause chronic nighttime noise in suitable summer habitat for the northern long-eared bat? Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time.

    Note: Additional information defining suitable summer habitat for the northern long-eared bat can be found at: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    No

27. Does the action include, or is it reasonably certain to cause, the use of artificial lighting within 1000 feet of suitable northern long-eared bat roosting habitat?

    Note: Additional information defining suitable roosting habitat for the northern long-eared bat can be found at: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

    No

28. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

    Yes

29. Will the proposed action result in the cutting or other means of knocking down, bringing down, or trimming of any trees suitable for northern long-eared bat roosting?

    Note: Suitable northern long-eared bat roost trees are live trees and/or snags ≥3 inches dbh that have exfoliating bark, cracks, crevices, and/or cavities.

    Yes

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

45

In what extent of the area (in acres) will trees be cut, knocked down, or trimmed during the inactive (hibernation) season for northern long-eared bat? **Note:** Inactive Season dates for spring staging/fall swarming areas can be found here: https://www.fws.gov/media/inactive-season-dates-swarming-and-staging-areas

0

In what extent of the area (in acres) will trees be cut, knocked down, or trimmed during the active (non-hibernation) season for northern long-eared bat? **Note:** Inactive Season dates for spring staging/fall swarming areas can be found here: https://www.fws.gov/media/inactive-season-dates-swarming-and-staging-areas

45

Will all potential northern long-eared bat (NLEB) roost trees (trees ≥3 inches diameter at breast height, dbh) be cut, knocked, or brought down from any portion of the action area greater than or equal to 0.1 acre? If all NLEB roost trees will be removed from multiple areas, select 'Yes' if the cumulative extent of those areas meets or exceeds 0.1 acre.

Yes

Enter the extent of the action area (in acres) from which all potential NLEB roost trees will be removed. If all NLEB roost trees will be removed from multiple areas, entire the total extent of those areas. Round up to the nearest tenth of an acre.

45

For the area from which all potential northern long-eared bat (NLEB) roost trees will be removed, on how many acres (round to the nearest tenth of an acre) will trees be allowed to regrow? Enter '0' if the entire area from which all potential NLEB roost trees are removed will be developed or otherwise converted to non-forest for the foreseeable future.

0

Will any snags (standing dead trees) ≥3 inches dbh be left standing in the area(s) in which all northern long-eared bat roost trees will be cut, knocked down, or otherwise brought down?

No

Will all project activities by completed by April 1, 2024?

No

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Sara Berryman
Address: 100 Great Meadow Road
Address Line 2: Suite 200
City: Wethersfield
State: CT
Zip: 06109
Email sberryman@vhb.com
Phone: 8608074336

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

July 19, 2021

Kristin Carman
VHB
100 Great Oaks Blvd, Suite 118
Albany, NY 12203

Re: BPUS Generation Development, LLC
County: Putnam Town/City: Carmel

Dear Kristin Carman:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at the project site.

Within five miles of the project site is a documented winter hibernaculum of **Northern long-eared bat** (*Myotis septentrionalis*, state and federally listed as Threatened). Within eight miles of the project site is a documented winter hibernaculum of **Indiana bat** (*Myotis sodalis*, state and federally listed as Engangered).For information about any permit considerations for your project, please contact the Permits staff at the NYSDEC Region 3 Office, Division of Environmental Permits, at dep.r3@dec.ny.gov.

For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

For information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the Permits staff at the NYSDEC Region 3 Office as described above.

Sincerely,

Heidi Krahling
Environmental Review Specialist
New York Natural Heritage Program

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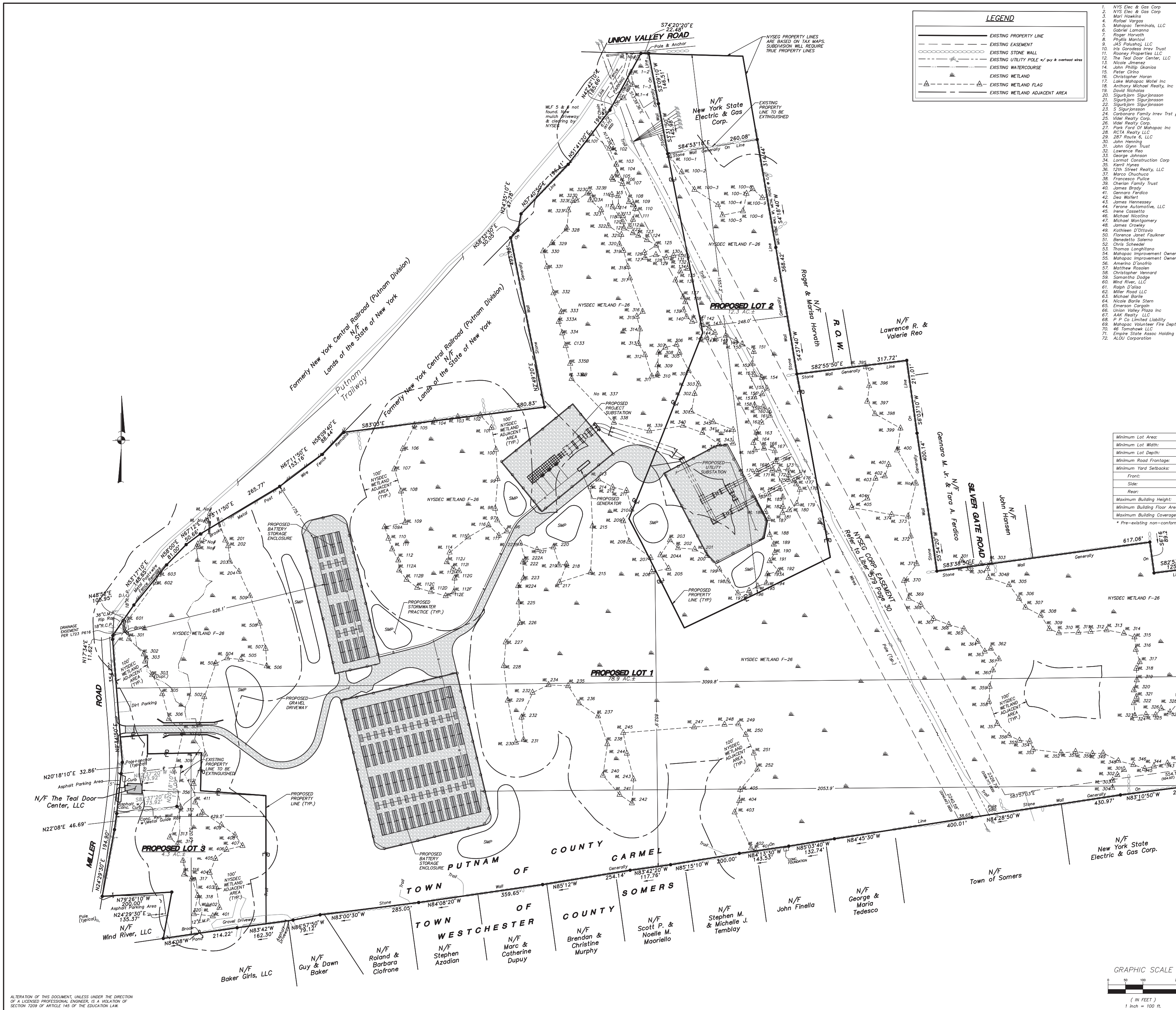
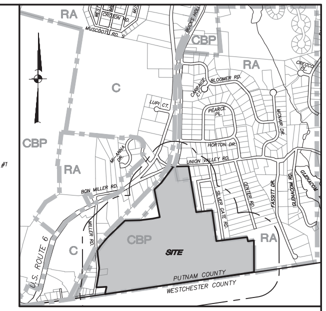


LEGEND

(symbol)	EXISTING PROPERTY LINE
(symbol)	EXISTING EASEMENT
(symbol)	EXISTING STONE WALL
(symbol)	EXISTING UTILITY POLE w/ guy & overhead wires
(symbol)	EXISTING WATERCOURSE
(symbol)	EXISTING WETLAND
(symbol)	EXISTING WETLAND FLAG
(symbol)	EXISTING WETLAND ADJACENT AREA

1. NYS Elec & Gas Corp
2. NYS Elec & Gas Corp
3. Mari Hawkins
4. Rafael Vargas
5. Mahopac Terminals, LLC
6. Gabriel Lamanna
7. Roger Horvath
8. Phyllis Mantovi
9. JAS Palushaj, LLC
10. Iris Gorodess Irrev Trust
11. Rooney Properties LLC
12. The Teal Door Center, LLC
13. Nicole Jimenez
14. John Phillip Gkanios
15. Peter Cirino
16. Christopher Horan
17. Lake Mahopac Motel Inc
18. Anthony Michael Realty, Inc
19. David Nicholas
20. Sigurbjorn Sigurjonsson
21. Sigurbjorn Sigurjonsson
22. Sigurbjorn Sigurjonsson
23. S Sigurjonsson
24. Carbonara Family Irrev Trst #1
25. Videl Realty Corp.
26. Videl Realty Corp.
27. Park Ford Of Mahopac Inc
28. RCTA Realty LLC
29. 287 Route 6, LLC
30. John Henning
31. John Glynn Trust
32. Lawrence Reo
33. George Johnson
34. Lormat Construction Corp
35. Kerril Hynes
36. 12th Street Realty, LLC
37. Marco Chuchuca
38. Francesco Pulice
39. Cherian Family Trust
40. James Brady
41. Gennaro Ferdico
42. Dea Wolfert
43. James Hennessey
44. Ferone Automotive, LLC
45. Irene Cassetta
46. Michael Nicotina
47. Michael Montgomery
48. James Crowley
49. Kathleen D'Ottavio
50. Florence Janet Faulkner
51. Benedetto Salerno
52. Chris Scheedel
53. Thomas Longhitano
54. Mahopac Improvement Owner LLC
55. Mahopac Improvement Owner LLC
56. Amerino D'onofrio
57. Matthew Rosolen
58. Christopher Vennard
59. Samantha Dodge
60. Wind River, LLC
61. Ralph D'alisa
62. Miller Road LLC
63. Michael Barile
64. Nicole Barile Stern
65. Emerson Cargain
66. Union Valley Plaza Inc
67. AAK Realty LLC
68. P P Co Limited Liability
69. Mahopac Volunteer Fire Dept
70. 46 Tomahawk LLC
71. Empire State Assoc Holding Co
72. ALOU Corporation



LOCATION MAP SCALE: 1" = 1000'±

OWNER:

MILLER RD LLC
888 ROUTE 6
MAHOPAC NY 10541

NYS ELEC & GAS CORP.
39 UNION VALLEY ROAD
MAHOPAC NY 10541

THE TEAL DOOR CENTER, LLC
18 MILLER ROAD
MAHOPAC NY 10541

SITE DATA:

Zone: C/BP
Total Acreage 95.5 AC.±
Tax Map Nos.:
1. 86.11-1-14 (93.5 AC.±)
2. 86.8-2-85 (1.6 AC.±)
3. 86.14-1-8 (0.4 AC.±)

APPLICANT:

EAST POINT ENERGY, LLC
310 4th STREET NE, 3rd FLOOR
CHARLOTTESVILLE, VA 22902

GENERAL NOTES:

1. The boundaries, topography, and wetland flags shown hereon are taken from a survey by Insite Engineering, Surveying & Landscape Architecture, P.C., entitled "Survey of Property Prepared for East Point Energy", last revised on March 29, 2023.
2. There will be no full time employees on site. The site will be occasionally visited by 1–2 employees.
3. There are no proposed clubhouses, pools, designated open space, parks or recreation areas.
4. No refuse is to be generated on site. Anything to be removed from the site during operations will be removed by truck. Therefore no refuse enclosure is proposed.
5. Site conditions on Now or Formerly The Teal Door Center, LLC area approximated from aerial orthoimagery.
6. All driveways are to be constructed in accordance with the Town of Carmel Code.

C/BP ZONE REQUIREMENTS:

	Required/Permitted:	Lot 1 Provided:	Lot 2 Provided:	Lot 3 Provided:
Minimum Lot Area:	3 Acres (130,680 SF)	78.9 AC.±	12.3 AC.±	4.3 AC.±
Minimum Lot Width:	200'	853'±	248'±	521'±
Minimum Lot Depth:	200'	3,100'±	1,557'±	430'±
Minimum Road Frontage:	100'	640.27'	267.14'	462'±
Minimum Yard Setbacks:				
Front:	50'	626.1'	N/A	16'± *
Side:	40'	175.1'	N/A	88'±
Rear:	40'	2,053.9'	N/A	356'±
Maximum Building Height:	40'	N/A	N/A	<40'
Minimum Building Floor Area	5,000 SF	0 SF	N/A	<5,000SF *
Maximum Building Coverage:	40%	1.54%	N/A	0.6%

* Pre-existing non-conforming condition.

NO.	DATE	REVISION	BY
2	12-4-23	REVISED PER PLANNING BOARD COMMENTS	KJK
1	10-30-23	RESUBMISSION TO PLANNING BOARD	MEU

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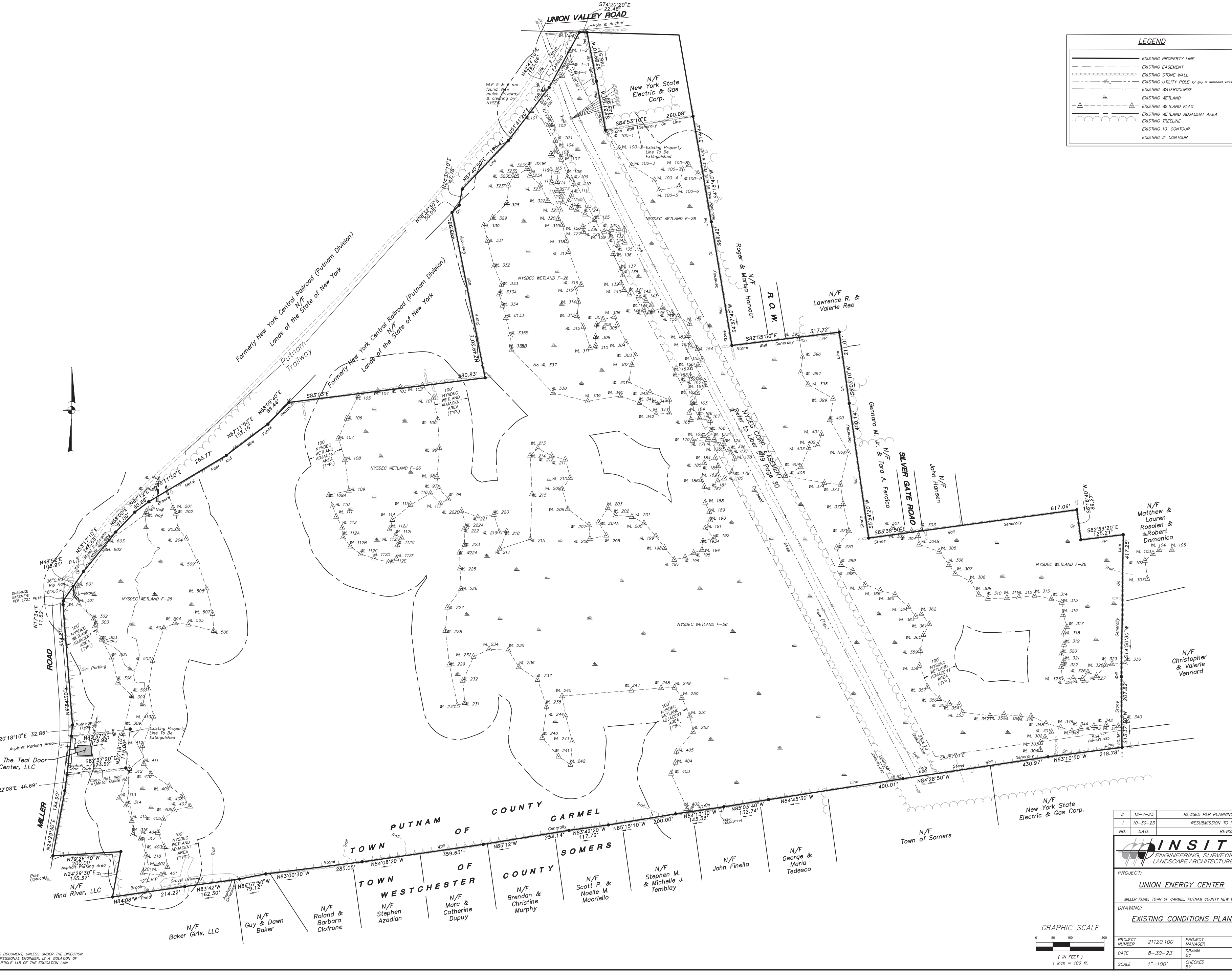
PROJECT:
UNION ENERGY CENTER
MILLER ROAD, TOWN OF CARMEL, PUTNAM COUNTY NEW YORK

DRAWING:
OVERALL PLAN

PROJECT NUMBER	21120.100	PROJECT MANAGER	J.J.C.
DATE	8-30-23	DRAWN BY	I.B.
SCALE	1"=100'	CHECKED BY	A.D.T.

DRAWING NO. OP-1
SHEET 1 / 12



NO.	DATE	REVISION	BY
2	12-4-23	REVISED PER PLANNING BOARD COMMENTS	KJK
1	10-30-23	RESUBMISSION TO PLANNING BOARD	MEU

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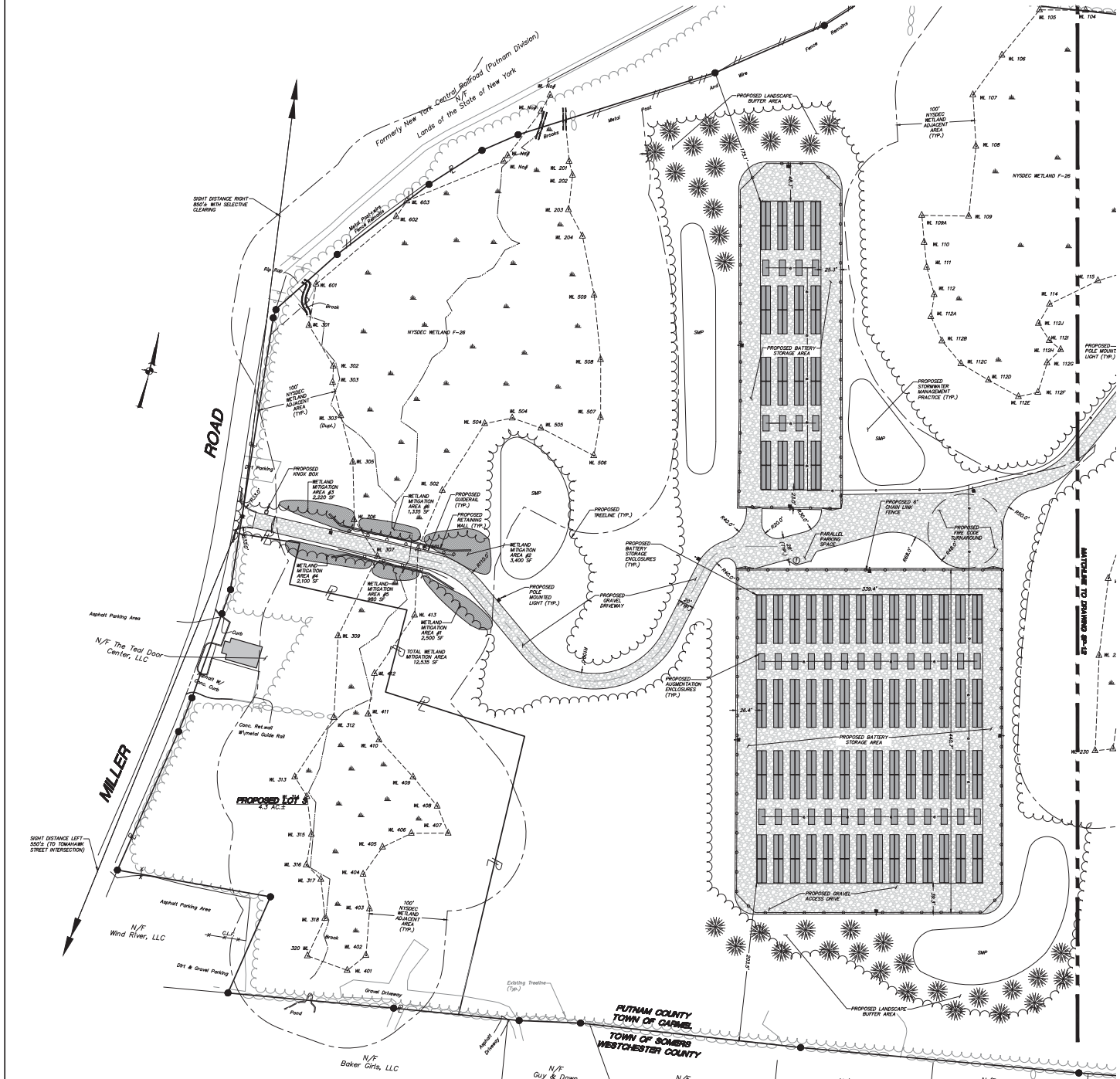
PROJECT:
UNION ENERGY CENTER
MILLER ROAD, TOWN OF CARMEL, PUTNAM COUNTY NEW YORK

DRAWING:
EXISTING CONDITIONS PLAN

PROJECT NUMBER	21120.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	8-30-23	DRAWN BY	I.B.	EX-1	2 / 12
SCALE	1"=100'	CHECKED BY	A.D.T.		



LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING STONE WALL
- EXISTING UTILITY POLE w/ guy & overhead wires
- EXISTING WATERCOURSE
- EXISTING WETLAND
- EXISTING WETLAND FLAG
- EXISTING 100 YR. FLOODPLAIN BOUNDARY
- EXISTING WETLAND BUFFER
- EXISTING TREELINE
- PROPOSED OVERHEAD WIRES
- PROPOSED SINGLE POLE SIGN
- PROPOSED DOUBLE POLE SIGN
- PROPOSED DOUBLE SIDED SIGN
- PROPOSED BOLLARD
- PROPOSED GUIDE RAIL
- PROPOSED POLE MOUNTED LIGHT
- PROPOSED POST MOUNTED LIGHT
- PROPOSED LOADING SPACE
- PROPOSED LANDSCAPING

SCHEMATIC PLANT LIST

KEY	BOTANICAL/COMMON NAME	SIZE	ROOT
	EVERGREEN TREES		
JV	Juniperus virginia / Eastern Redcedar	8'-10' HT.	B&B
PG	Picea glauca / White Spruce	8'-10' HT.	B&B
TO	Relocated Thuja occidentalis / Arborvitae	6'-8' HT.	B&B
	SHRUBS		
JC	Juniperus chinensis "Sea Green" / Sea Green Juniper		#3 CONT./8' O.C.
VD	Viburnum dentatum / Leatherleaf Viburnum		#3 CONT./8' O.C.
	PERENNIALS/GROUND COVERS		
AC	Aquilegia canadensis / Columbine		#1 CONT./18" O.C.
EP	Echinacea purpurea / Purple Coneflower		#1 CONT./18" O.C.
MV	Mertensia virginica / Virginia Bluebells		#1 CONT./18" O.C.

WETLAND MITIGATION PLANT LIST

QTY	BOTANICAL/COMMON NAME	SIZE	SPACING
35	Amelanchier canadensis / Shadblow	2"-3'	10' O.C.
36	Cornus foemina / Gray Dogwood	2"-3'	10' O.C.
37	Lindera benzoin / Spicebush	2"-3'	10' O.C.
35	Sambucus canadensis / Elderberry	2"-3'	10' O.C.
36	Viburnum dentatum / Arrowood viburnum	2"-3'	10' O.C.
35	Viburnum lentago / Nannyberry	2"-3'	10' O.C.

NOTES:

1. All plantings to be verified by the Town of Carmel Wetland Inspector.
2. All plantings shall be installed per size of the Town of Carmel Town Code.
3. Wetland mitigation areas and plant lists provided by VHB, Inc.

GRAPHIC SCALE

0 50 100

(IN FEET)
1 inch = 50 ft.

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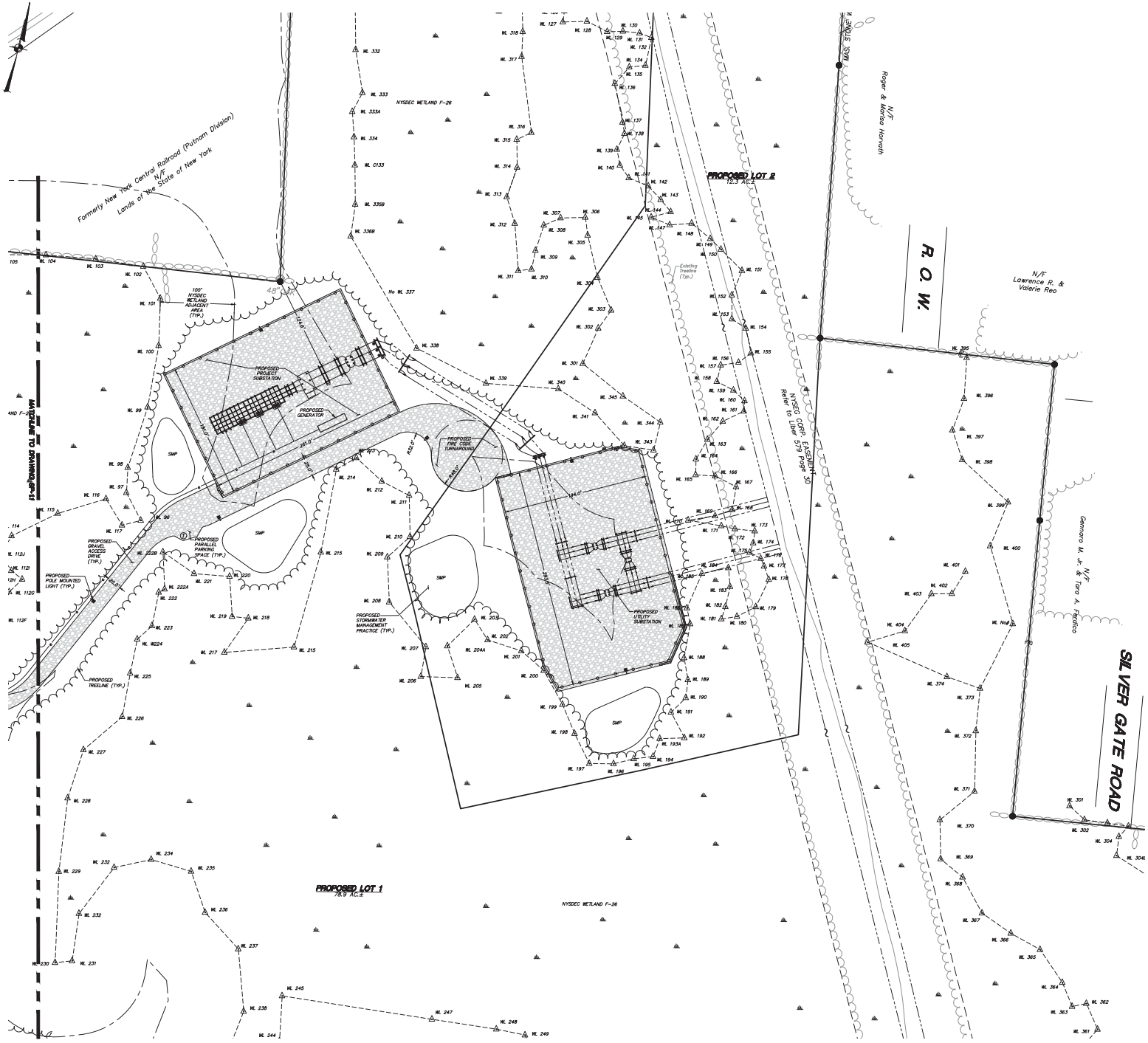
PROJECT:
UNION ENERGY CENTER
MILLER ROAD, TOWN OF CARMEL, PUTNAM COUNTY NEW YORK

DRAWING:
LAYOUT & LANDSCAPE PLAN

PROJECT NUMBER	21120.100	PROJECT MANAGER	J.J.C.
DATE	8-30-23	DRAWN BY	I.B.
SCALE	1"=50'	CHECKED BY	A.D.T.

DRAWING NO. SP-1.1 SHEET 3 / 12



LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING STONE WALL
- EXISTING UTILITY POLE w/ guy & overhead wires
- EXISTING WATERCOURSE
- EXISTING WETLAND
- EXISTING WETLAND FLAG
- EXISTING 100 YR. FLOODPLAIN BOUNDARY
- EXISTING WETLAND BUFFER
- EXISTING TREELINE
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SCHEMATIC PLANT LIST

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GRAPHIC SCALE
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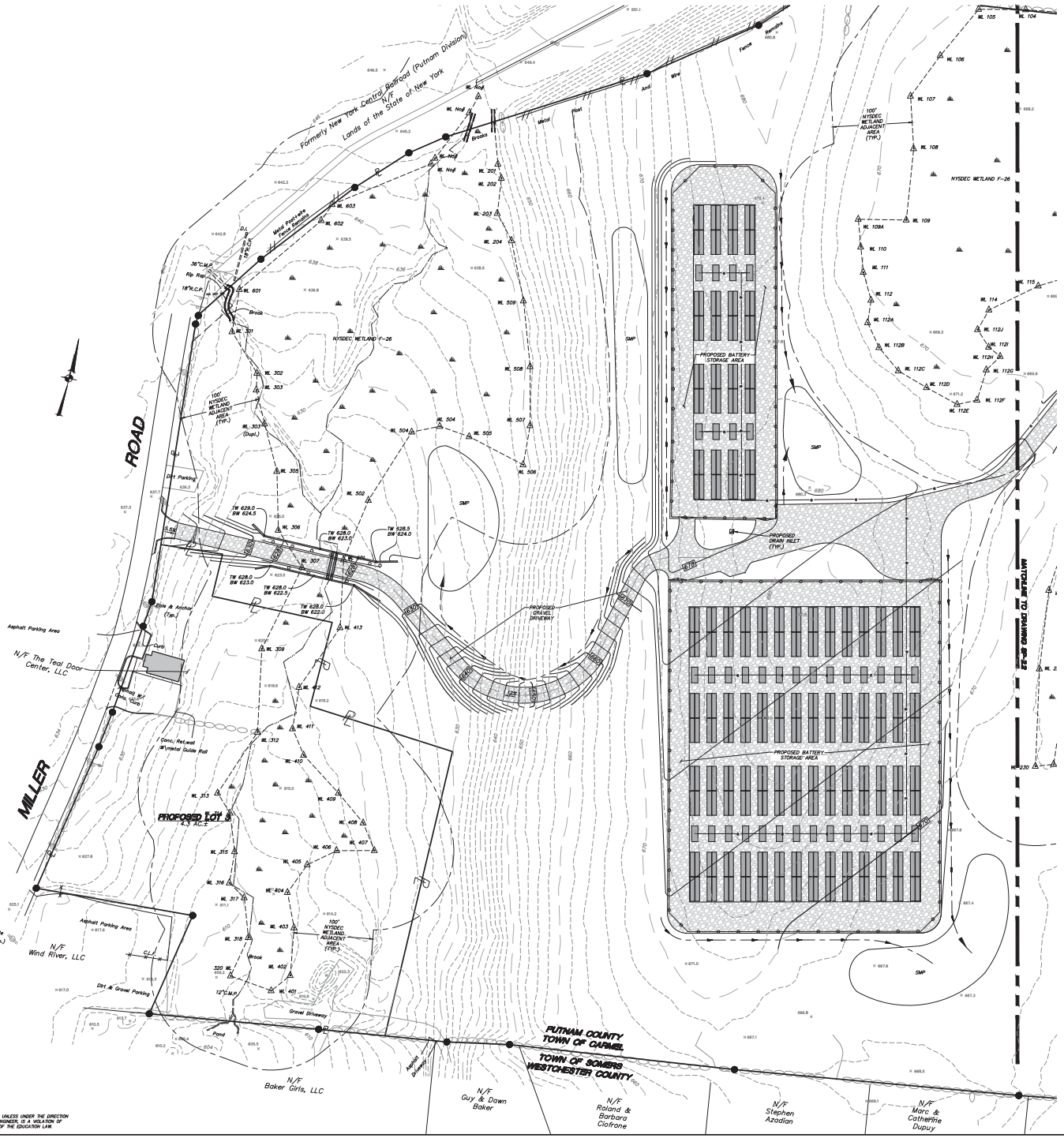
PROJECT:
UNION ENERGY CENTER
MILLER ROAD, TOWN OF CARMEL, PUTNAM COUNTY NEW YORK

DRAWING:
LAYOUT & LANDSCAPE PLAN

PROJECT NUMBER	21120.100	PROJECT MANAGER	J.J.C.
DATE	8-30-23	DRAWN BY	I.B.
SCALE	1"=50'	CHECKED BY	A.D.T.

DRAWING NO. SP-1.2
SHEET 4 / 12



LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING STONE WALL
- EXISTING UTILITY POLE(w/ guy & overhead wire
- EXISTING WATERCOURSE
- EXISTING WETLAND
- EXISTING WETLAND FLAG
- EXISTING WETLAND BUFFER
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED OVERHEAD WIRES
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED OUTLET STRUCTURE
- PROPOSED END SECTION
- PROPOSED FIRE HYDRANT
- PROPOSED WELL
- PROPOSED WATER SHUT OFF VALVE
- PROPOSED WATER VALVE
- PROPOSED DRAINAGE PIPE
- PROPOSED FIRE SERVICE LINE
- PROPOSED DOMESTIC WATER SERVICE LINE
- PROPOSED WATER MAIN
- PROPOSED GRASS SWALE
- PTD — PITCH TO DRAIN
- PROPOSED CLEAN OUT

UTILITIES NOTES:

1. All utilities except for overhead wires associated with the substations and Battery Energy Storage Systems (BESS) will be buried.

GRAPHIC SCALE
0 50 100
(IN FEET)
1 inch = 50 ft.

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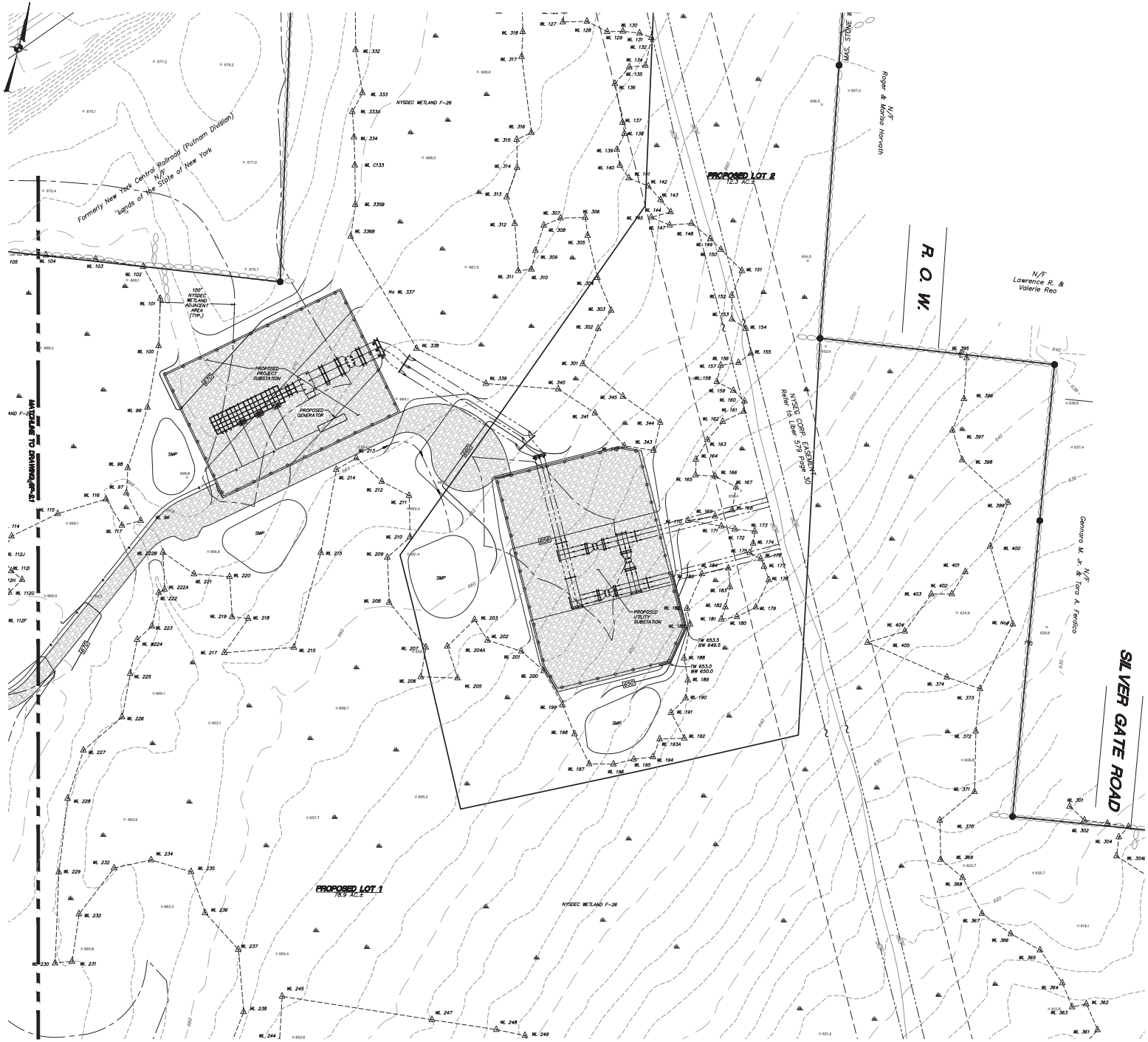
PROJECT:
UNION ENERGY CENTER
MILLER ROAD, TOWN OF CARMEL, PUTNAM COUNTY NEW YORK

DRAWING:
GRADING & UTILITIES PLAN

PROJECT NUMBER	21120.100	PROJECT MANAGER	J.J.C.
DATE	8-30-23	DRAWN BY	I.B.
SCALE	1"=50'	CHECKED BY	A.D.T.

DRAWING NO. SP-2.1 SHEET 5 / 12



LEGEND

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- EXISTING EASEMENT
- EXISTING STONE WALL
- EXISTING UTILITY POLE w/ guy & overhead wires
- EXISTING WATERCOURSE
- EXISTING WETLAND
- EXISTING WETLAND FLAG
- EXISTING WETLAND BUFFER
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED OVERHEAD WIRES
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED OUTLET STRUCTURE
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- PROPOSED FIRE HYDRANT
- PROPOSED WELL
- PROPOSED WATER SHUT OFF VALVE
- PROPOSED WATER VALVE
- PROPOSED DRAINAGE PIPE
- PROPOSED FIRE SERVICE LINE
- PROPOSED DOMESTIC WATER SERVICE LINE
- PROPOSED WATER MAIN
- PROPOSED GRASS SWALE
- PITCH TO DRAIN
- PROPOSED CLEAN OUT

GRAPHIC SCALE

0 25 50 100

(IN FEET)
1 inch = 50 ft.

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1	10-30-23	RESUBMISSION TO PLANNING BOARD	MEU

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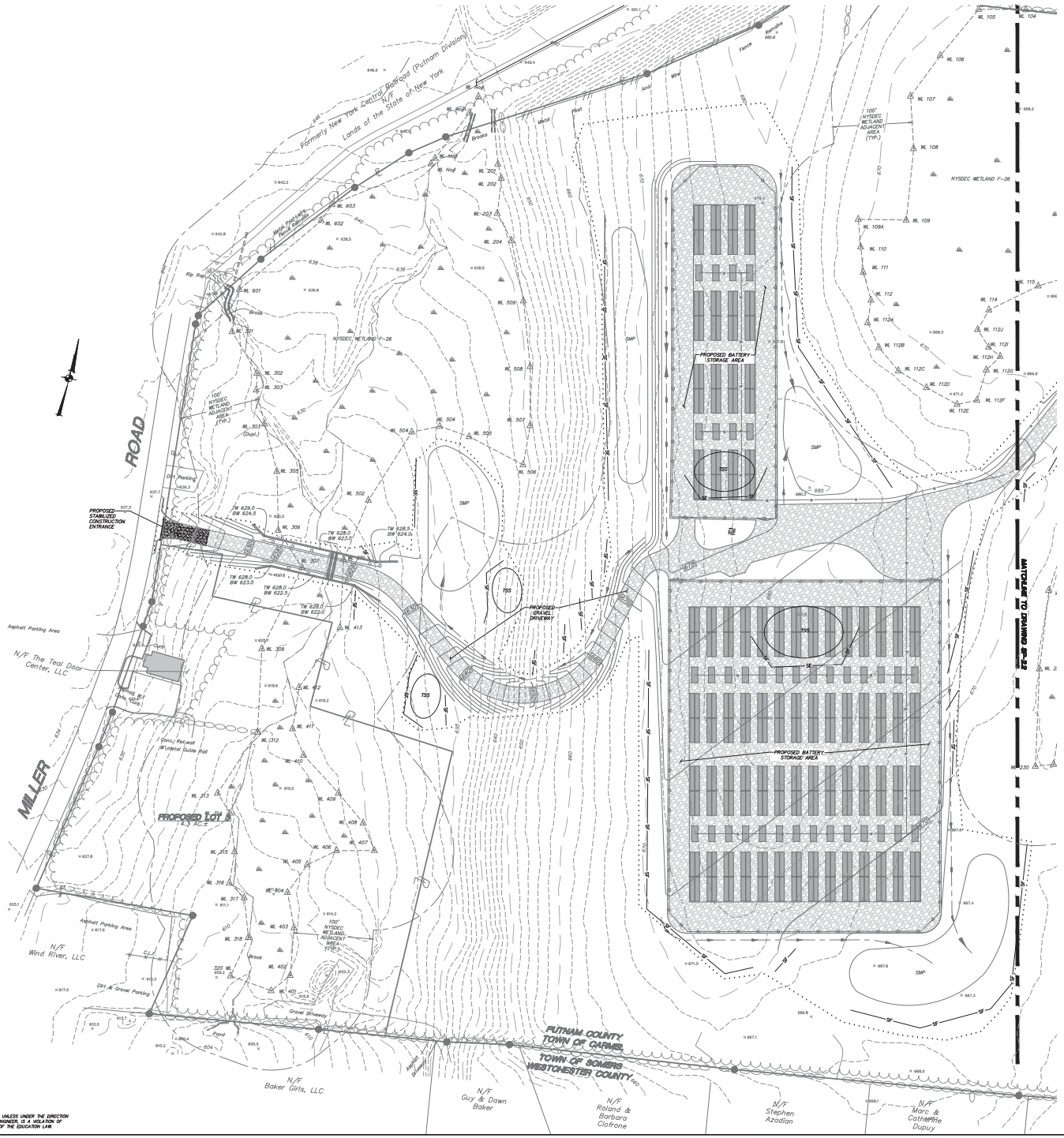
PROJECT:
UNION ENERGY CENTER
MILLER ROAD, TOWN OF CARMEL, PUTNAM COUNTY NEW YORK

DRAWING:
GRADING & UTILITIES PLAN

PROJECT NUMBER	21120.100	PROJECT MANAGER	J.J.C.
DATE	8-30-23	DRAWN BY	I.B.
SCALE	1"=50'	CHECKED BY	A.D.T.

DRAWING NO. SP-2.2 SHEET 6 / 12



LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING STONE WALL
- EXISTING UTILITY POLE w/ guy & overhead wires
- EXISTING WATERCOURSE
- EXISTING WETLAND
- EXISTING WETLAND FLAG
- EXISTING WETLAND BUFFER
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- SF — PROPOSED SILT FENCE
- CF — PROPOSED CONSTRUCTION FENCE
- TB — PROPOSED TURBIDITY CURTAIN
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED STONE CHECK DAM
- PROPOSED TEMPORARY DIVERSION SWALE
- TSS — PROPOSED TEMPORARY SOIL STOCKPILE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED DRAINAGE STRUCTURE W/ INLET PROTECTION
- PROPOSED PHASING LINE

GRAPHIC SCALE

0 50 100

(IN FEET)
1 inch = 50 ft.

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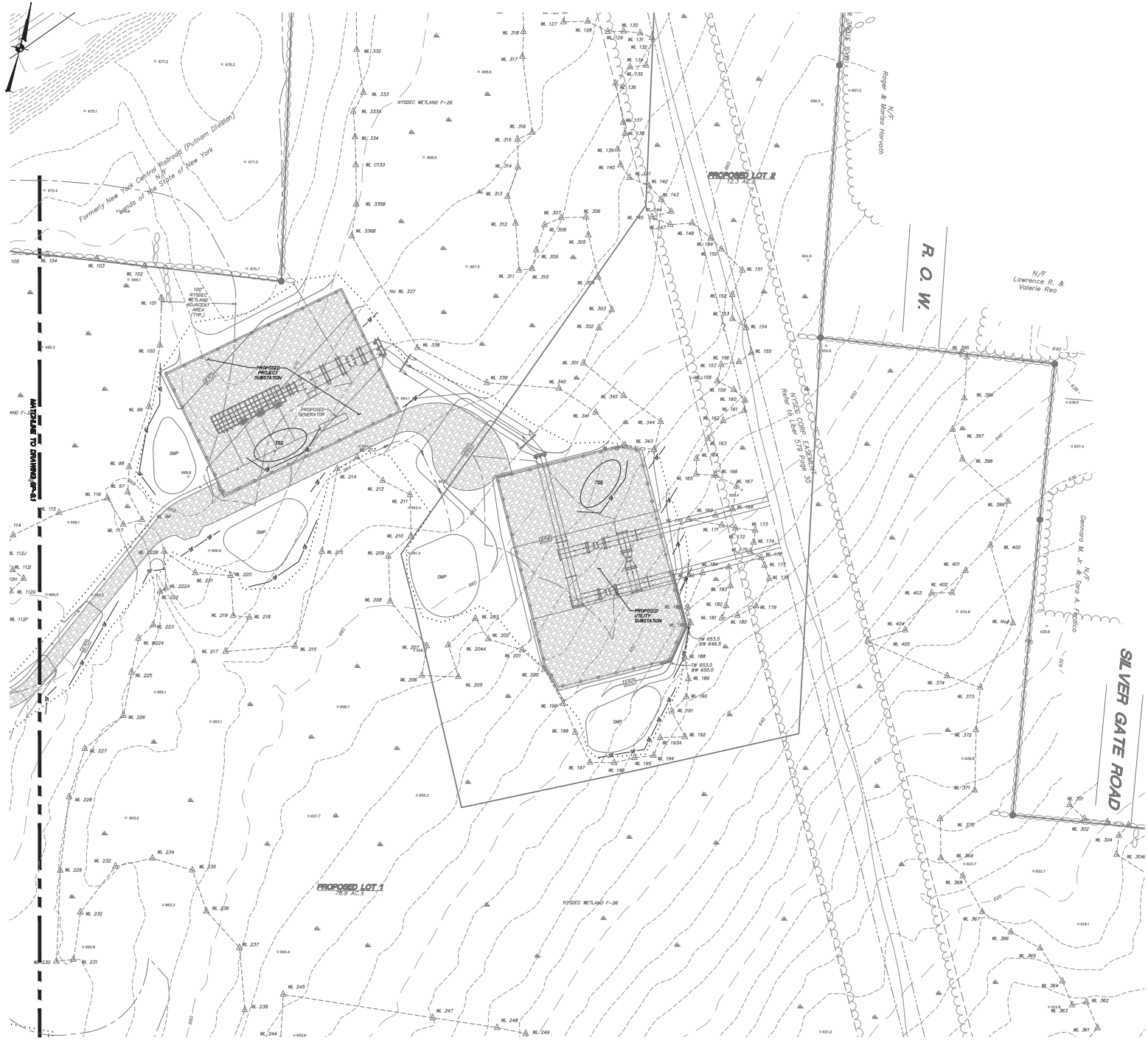
PROJECT:
UNION ENERGY CENTER
MILLER ROAD, TOWN OF CARMEL, PUTNAM COUNTY NEW YORK

DRAWING:
EROSION & SEDIMENT CONTROL PLAN

PROJECT NUMBER	21120.100	PROJECT MANAGER	J.J.C.
DATE	8-30-23	DRAWN BY	I.B.
SCALE	1"=50'	CHECKED BY	A.D.T.

DRAWING NO. SP-3.1
SHEET 7 of 12



GRAPHIC SCALE
0 50 100
(IN FEET)
1 inch = 50 ft.

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

NO.	DATE	REVISION	BY
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1	10-30-23	RESUBMISSION TO PLANNING BOARD	MEU

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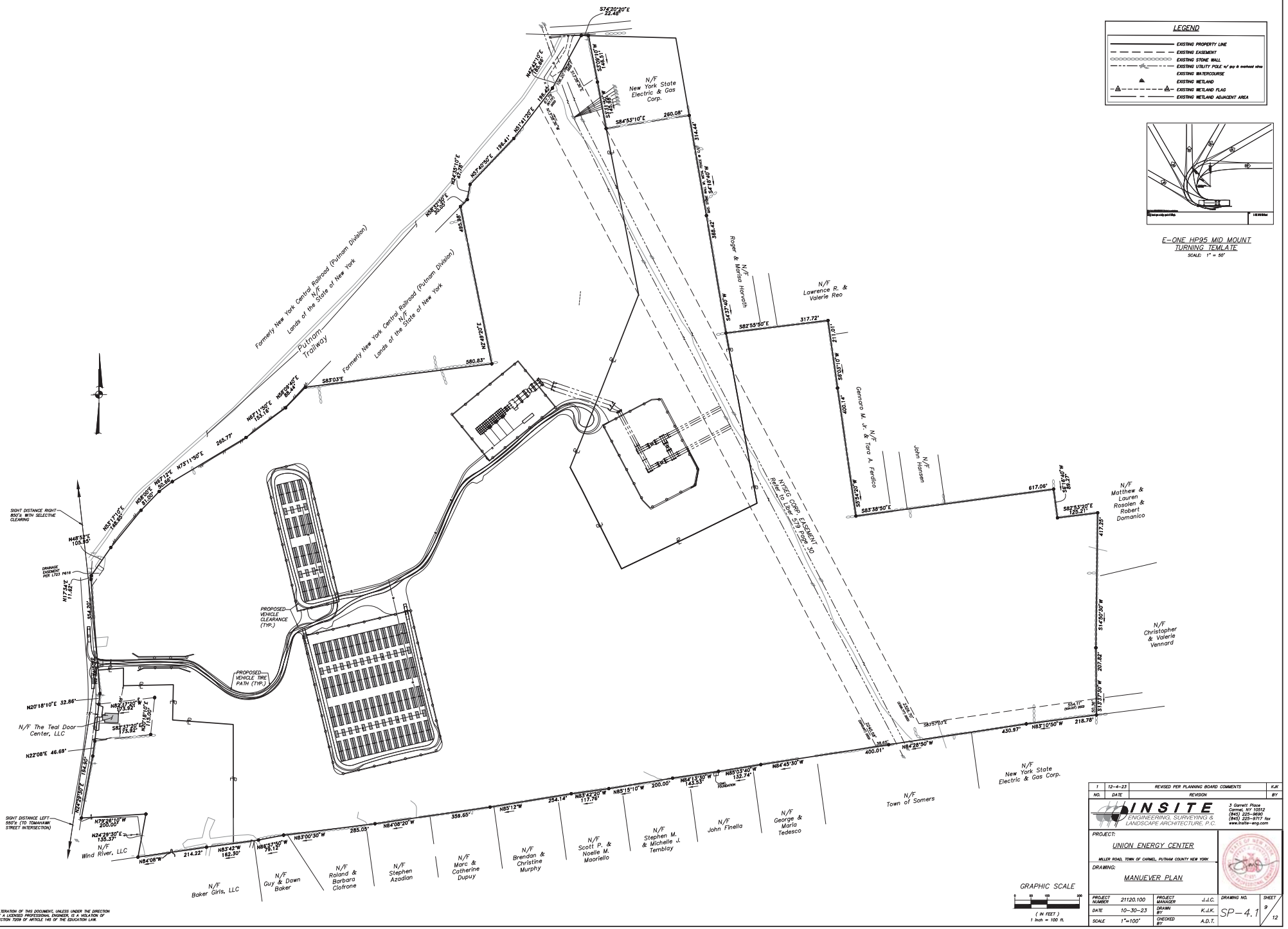
PROJECT:
UNION ENERGY CENTER
MILLER ROAD, TOWN OF CARMEL, PUTNAM COUNTY NEW YORK

DRAWING:
EROSION & SEDIMENT CONTROL PLAN

PROJECT NUMBER	21120.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	8-30-23	DRAWN BY	I.B.	SP-3.2	8 / 12
SCALE	1"=50'	CHECKED BY	A.D.T.		



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PROJECT:
UNION ENERGY CENTER
MILLER ROAD, TOWN OF CARMEL, PUTNAM COUNTY NEW YORK

DRAWING:
MANUEVER PLAN

PROJECT NUMBER	21120.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	10-30-23	DRAWN BY	K.J.K.	SP-4.1	9 / 12
SCALE	1"=100'	CHECKED BY	A.D.T.		

LUMINAIRE SCHEDULE

Sym	Qty	Catalog Number	Description	Lamp	Mounting Height	Watts
	34	RSX2 LED P1 30K R3 EGFV	LITHONIA LIGHTING LED POLE MOUNTED LIGHT TYPE 3M DISTRIBUTION	LED	20'-0"	72.1

LIGHTING NOTES:

1. All lighting shall be as noted on the plan or approved equal.
2. Style and finish of all luminaires to be selected by owner.
3. Proposed lights will run on motion sensors after hours for security only.
4. Type, location, and shading of all proposed lighting shall prevent the spillover of light onto all adjacent residential properties.
5. All light fixtures to be full cutoff to comply with dark sky guidelines.

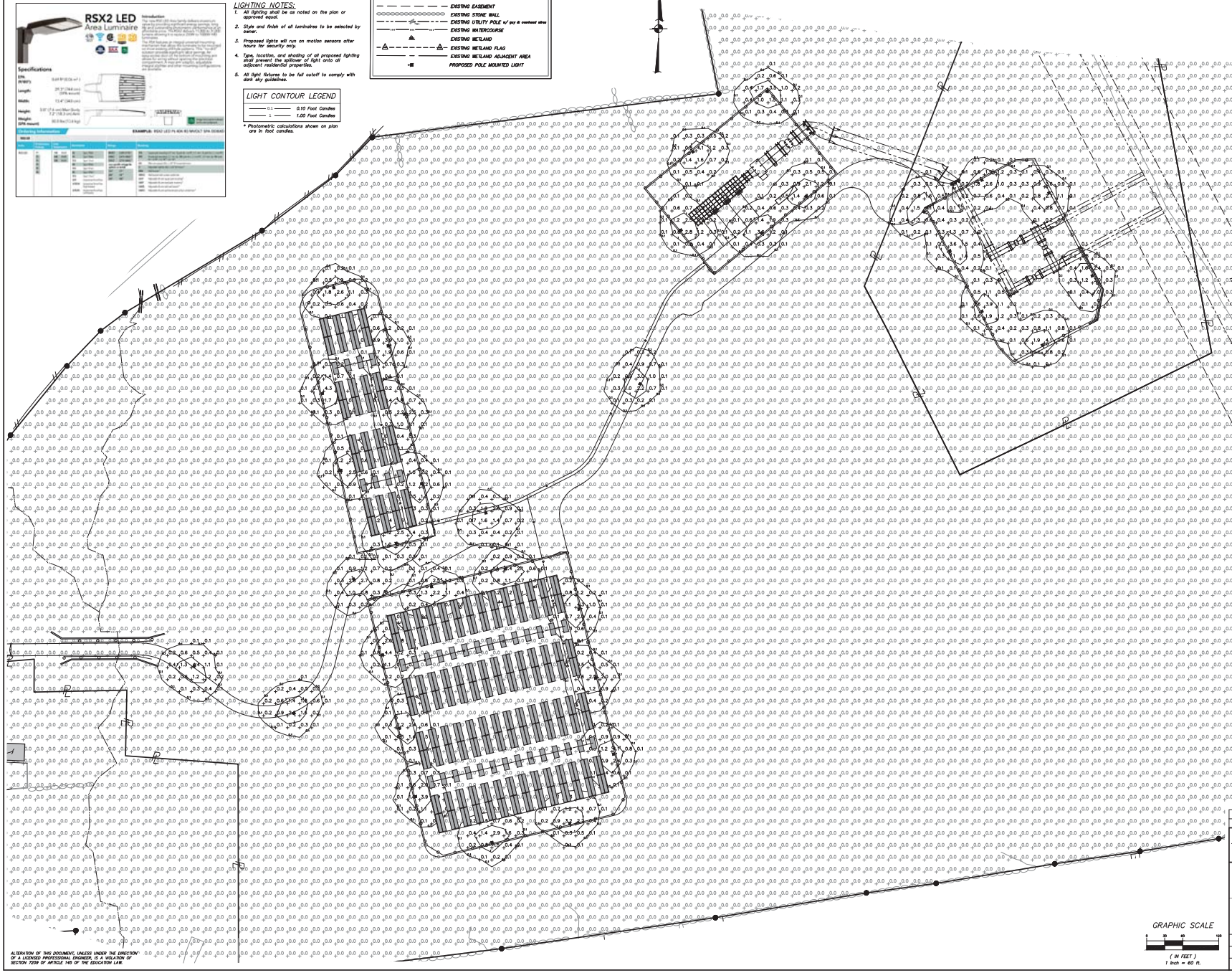
LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING STONE WALL
- EXISTING UTILITY POLE w/ guy & overhead wires
- EXISTING WATERCOURSE
- EXISTING WETLAND
- EXISTING WETLAND FLAG
- EXISTING WETLAND ADJACENT AREA
- PROPOSED POLE MOUNTED LIGHT

LIGHT CONTOUR LEGEND

- 0.1 — 0.10 Foot Candles
- 1 — 1.00 Foot Candles

* Photometric calculations shown on plan are in foot candles.



GRAPHIC SCALE

0 30 60 120

(IN FEET)
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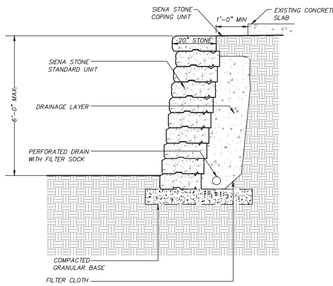
PROJECT:
UNION ENERGY CENTER
MILLER ROAD, TOWN OF CARMEL, PUTNAM COUNTY NEW YORK

DRAWING:
LIGHTING PLAN

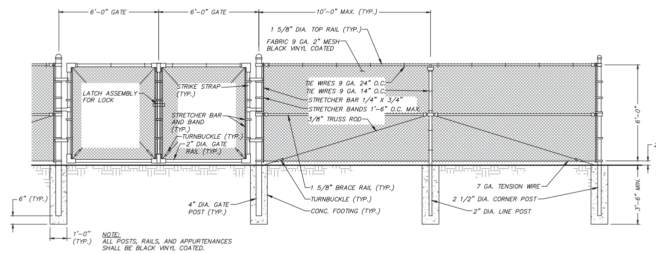
PROJECT NUMBER	21120.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	10-30-23	DRAWN BY	K.J.K.	SP-4.2	10 / 12
SCALE	1"=60'	CHECKED BY	A.D.T.		



NOTES:

1. STRIP VEGETATION AND ORGANIC SOIL FROM WALL AREA.
2. BENCH CUT ALL EXCAVATED SLOPES.
3. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE ENGINEER TO REMOVE UNSUITABLE SOIL.
4. SITE ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
5. LEVELING PAD SHALL CONSIST OF COMPACTED COARSE SAND OR CRUSHED GRAVEL, 6" THICK MIN.
6. CONTRACTOR MAY OPT FOR A LEAN CONCRETE PAD. CONCRETE PAD SHALL BE UNREINFORCED, 3" THICK MAXIMUM.
7. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 6".
8. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME FILL BEHIND UNITS IS COMPACTED.
9. DRAINAGE AGGREGATE SHALL BE INSTALLED DIRECTLY BEHIND THE WALL WITHIN 12" OF THE TOP OF THE WALL. DRAINAGE AGGREGATE SHALL NOT EXTEND BELOW FINAL GRADE IN FRONT OF WALL.
10. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.(ASTM D-698)
11. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE SITE SOILS ENGINEER.
12. COMPACTION WITHIN 3 FT. OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT.
13. CONTRACTOR SHALL DIRECT SURFACE RUNOFF TO AVOID DAMAGING WALL WHILE UNDER CONSTRUCTION.
14. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT, OR TURF SHALL BE INSTALLED IMMEDIATELY AFTER WALL IS COMPLETED.
15. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.

RETAINING WALL DETAIL
(N.T.S.)



NOTE:
ALL POSTS, RAILS, AND APPURTENANCES SHALL BE BLACK VINYL COATED.

CHAIN LINK FENCE DETAIL
(N.T.S.)

GENERAL PLANTING NOTES:

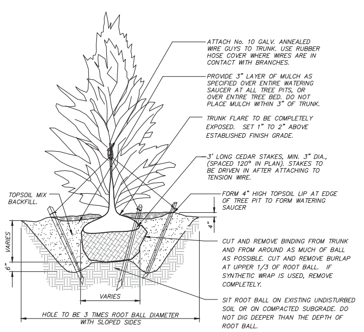
1. All proposed planting beds to receive a 12" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material.
2. Any new soils added will be amended as required by results of soil testing and placed using a method that will not cause compaction.
3. No fertilizer shall be added in stormwater basin plantings. Nutrient requirements to be met by incorporation of acceptable organic matter.
4. All plant material to be nursery grown.
5. Plants shall conform with ANSI Z60.1 American Standard for Nursery Stock in all ways including dimensions.
6. Plant material shall be taken from healthy nursery stock.
7. All plants shall be grown under climate conditions similar to those in the locality of the project.
8. Plants shall be planted in all locations designed on the plan or as staked in the field by the Landscape Architect.
9. The location and layout of landscape plants shown on the site plan shall take precedence in any discrepancies between the quantities of plants shown on the plans and the quantity of plants in the Plant List.
10. Provide a 3" layer of shredded pine bark mulch (or as specified) over entire watering saucer at all tree pits or over entire planting bed. Do not place mulch within 3" of tree or shrub trunks.
11. All landscape plantings shall be maintained in a healthy condition at all times. Any dead or diseased plants shall immediately be replaced "in kind" by the contractor (during warranty period) or project owner.

GENERAL SITE SEEDING NOTES:

1. All proposed seeded areas to receive 4" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material.
2. For temporary stabilization, apply annual ryegrass (Lolium perenne ssp.) at 30 lbs/ acre.
3. Upon final grading and placement of topsoil and any required soil amendments, areas to receive permanent vegetation cover in combination with suitable mulch as follows:
   - select seed mixture per drawings and seeding notes.
   - fertilizer applied at the manufacturer's recommended rate using Lesco 10-0-18 (no phosphorous) fertilizer or equivalent.
   - mulch: salt hay or small grain straw applied at a rate of 90 lbs./1000s.f. or 2 tons/acre, to be applied and anchored according to New York State Standards and Specifications for Erosion and Sediment Control, August 2005.
   - if the season prevents the establishment of a permanent vegetation cover, the disturbed areas will be mulched with straw or equivalent.
4. Seed Mix #1 for areas as shown on the drawings, including tops of berms, backslopes of embankments of stormwater basins, & any area to be seeded within the NYSDEC Wetland Adjacent Area, at a rate of 30 lbs. per acre: 30% annual ryegrass (Lolium perenne ssp.), and 70% New England Conservation/Wildlife Mix from New England Wetland Plants, Inc. of Amherst, MA.
5. Seed Mix #2 for areas as shown on the drawings in stormwater basins with no standing water at a rate of 18 lbs per acre: Erosion Control/ Restoration Mix for Detention Basins and Moist Sites from New England Wetland Plants, Inc. of Amherst MA.
6. Seed Mix #3 for all other disturbed areas not specified as seed mix #1 or #2. Primarily for lawn areas and mow strip along roads at a rate of 100 lbs. per acre:

Kentucky Bluegrass	20%
Creeping Red Fescue	40%
Perennial Ryegrass	20%
Annual Ryegrass	20%

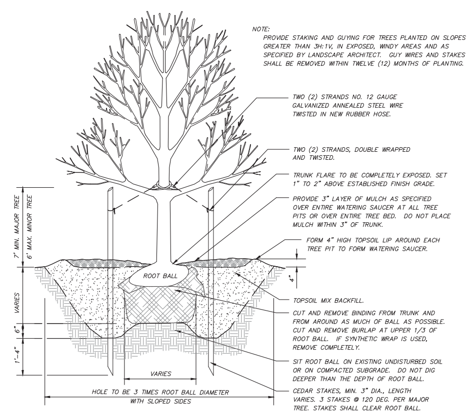
7. Seed mixes to be planted between March 21 and May 20, or between August 15 and October 15 or as directed by project representative.
8. Mulch: Salt hay or small grain straw applied at a rate of 90 lbs./1000 S.F. or 2 tons/acre, to be applied and anchored according to "New York Standards and Specification For Erosion and Sediment Control," latest edition.
9. Grass seed mix may be applied by either mechanical or hydroseeding methods. Seeding shall be performed in accordance with the current edition of the "NYSDOT Standard Specification, Construction and Materials, Section 610-3.02, Method No. 1". Hydroseeding shall be performed using materials and methods as approved by the site engineer.



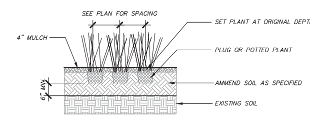
NOTE:
PROVIDE STAKING AND GUYING FOR TREES PLANTED ON SLOPES GREATER THAN 3H:1V, IN EXPOSED, WINDY AREAS AND AS SPECIFIED BY LANDSCAPE ARCHITECT. GUY WIRES AND STAKES SHALL BE REMOVED WITHIN TWELVE MONTHS OF PLANTING.

EVERGREEN TREE PLANTING DETAIL
(N.T.S.)

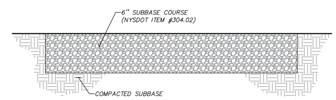
NOTE:
PROVIDE STAKING AND GUYING FOR TREES PLANTED ON SLOPES GREATER THAN 3H:1V, IN EXPOSED, WINDY AREAS AND AS SPECIFIED BY LANDSCAPE ARCHITECT. GUY WIRES AND STAKES SHALL BE REMOVED WITHIN TWELVE (12) MONTHS OF PLANTING.



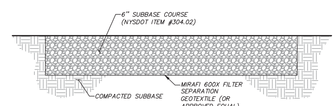
TREE PLANTING DETAIL
(N.T.S.)



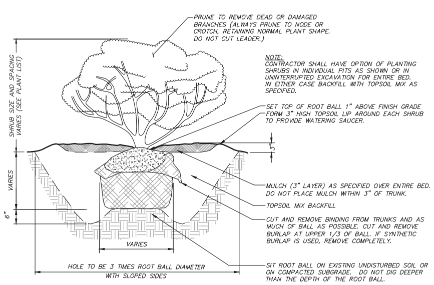
PERENNIAL / ORNAMENTAL GRASS PLANTING DETAIL
(N.T.S.)



GRAVEL PAVEMENT DETAIL FOR ENCLOSURES
(N.T.S.)

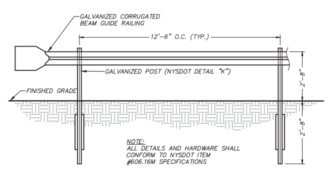


GRAVEL PAVEMENT DETAIL FOR DRIVEWAYS
(N.T.S.)



NOTE:
CONTRACTOR SHALL HAVE OPTION OF PLANTING SHRUBS IN INDIVIDUAL PITS AS SHOWN OR IN UNINTERRUPTED EXCAVATION FOR ENTIRE BED. IN EITHER CASE BACKFILL WITH TOPSOIL MIX AS SPECIFIED.

SHRUB PLANTING DETAIL
(N.T.S.)



NOTE:
ALL DETAILS AND HARDWARE SHALL CONFORM TO NYSDOT ITEM #606.16M SPECIFICATIONS

GUIDERAIL DETAIL
(N.T.S.)

NO.	DATE	REVISION	BY
2	12-4-23	REVISED PER PLANNING BOARD COMMENTS	KJK
1	10-30-23	RESUBMISSION TO PLANNING BOARD	MEU

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ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
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(845) 225-9717 fax
www.insite-eng.com

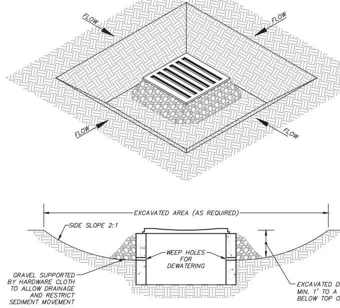
PROJECT:
UNION ENERGY CENTER
MILLER ROAD, TOWN OF CARMEL, PUTNAM COUNTY NEW YORK

DRAWING:
DETAILS & NOTES

PROJECT NUMBER	21120.100	PROJECT MANAGER	J.J.C.
DATE	8-30-23	DRAWN BY	I.B.
SCALE	AS SHOWN	CHECKED BY	A.D.T.

DRAWING NO. D-1

SHEET 11 / 12



1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL EXCAVATION WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY, AND STABILIZE WITH PERMANENT SEEDING
5. MAXIMUM DRAINAGE AREA = 1 ACRE

EXCAVATED DROP INLET PROTECTION DETAIL
(N.T.S.)

EROSION AND SEDIMENT CONTROL MAINTENANCE SCHEDULE

MONITORING REQUIREMENTS				MAINTENANCE REQUIREMENTS	
PRACTICE	DAILY	WEEKLY	AFTER RAINFALL	DURING CONSTRUCTION	AFTER CONSTRUCTION
SILT FENCE BARRIER	–	Inspect	Inspect	Clean/Replace	Remove
STABILIZED CONSTRUCTION ENTRANCE	Inspect	–	Inspect	Clean/Replace Stone and Fabric	Remove
DUST CONTROL	Inspect	–	Inspect	Mulching/ Spraying Water	N/A
*VEGETATIVE ESTABLISHMENT	–	Inspect	Inspect	Water/Reseed/ Remulch	Reseed to 80% Coverage
INLET PROTECTION	–	Inspect	Inspect	Clean/Repair/ Replace	Remove
SOIL STOCKPILES	–	Inspect	Inspect	Mulching/ Silt Fence Repair	Remove
SWALES	–	Inspect	Inspect	Clean/Mulch/ Repair	Mow Permanent Grass/Replace/ Repair Rip Rap
CHECK DAMS	–	Inspect	Inspect	Clean/Replace Stones/Repair	Clean/Replace Stones/Repair
CONCRETE DRAINAGE STRUCTURES	–	Inspect	Inspect	Clean Sumps/ Remove Debris/ Repair/Replace	Clean Sumps/ Remove Debris/ Repair/Replace
DRAINAGE PIPES	–	Inspect	Inspect	Clean/Repair	Clean/Repair
ROAD & PAVEMENT	–	Inspect	Inspect	Clean	Clean
*STORMWATER TRAP/BASIN	–	Inspect	Inspect	Clean/Mulch/ Repair/Reseed	See Permanent Stormwater Facilities Maintenance Schedule on Drawing SP–3.1

* Permanent vegetation is considered stabilized when 80% of the plant density is established. Erosion control measures shall remain in place until all disturbed areas area permanently stabilized.

Note: The party responsible for implementation of the maintenance schedule during and after construction is:

East Point Energy, LLC
310 4th Street NE 3rd Floor
Charlottesville, VA 22902

and/or the current owner(s) of the subject property.

REQUIRED POST–CONSTRUCTION STORMWATER MANAGEMENT PRACTICE COMPONENTS:

1. Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP–0–20–001), all construction projects needing post–construction stormwater management practices shall prepare a SWPPP that also includes practices designed in conformance with the most current version of the technical standard, New York State Stormwater Management Design Manual ("Design Manual"). Where post–construction stormwater management practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of SWPPP components is provided in accordance with Part III.B.2a–f and III.B.3:
   a. Identification of all post–construction stormwater management practices to be constructed as part of the project; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.
   b. A site map/construction drawing(s) showing the specific location and size of each post–construction stormwater management practice; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.
   c. A Stormwater Modeling and Analysis Report including pre–development conditions, post–development conditions, the results of the stormwater modeling, a summary table demonstrating that each practice has been designed in conformance with the sizing criteria, identification of and justification for any deviations from the Design Manual, and identification of any design criteria that are not required. The required analysis is provided in the report titled Amended Stormwater Pollution Prevention Plan for Braemar Living at Carmel.
   d. Soil testing results and locations. This SWPPP requirement is provided in the report titled Amended Stormwater Pollution Prevention Plan for Braemar Living at Carmel.
   e. Infiltration testing results. This SWPPP requirement is provided in the report titled Amended Stormwater Pollution Prevention Plan for Braemar Living at Carmel.
   f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post–construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice. The Permanent Stormwater Facilities Maintenance Schedule provided on these plans serves to satisfy this requirement.
2. Enhanced Phosphorus Removal Standards – Beginning on September 30, 2008, all construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post–construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the most current version of the technical standard, New York Stormwater Management Design Manual. At a minimum, the post–construction stormwater management practice component of the SWPPP shall include items 2.a – 2.f above. The permanent stormwater practices for this project have been sized according to chapter 10 of the Design Manual Enhanced Phosphorus Removal Standards. Please see 2.a – 2.f above.

CONSTRUCTION SEQUENCE:

1. Install stabilized construction entrance/anti–tracking pad at driveway entrance.
2. Install silt fence in general locations indicated on the plan.
3. Begin clearing and grubbing operations associated with the driveway and enclosure area pads..
4. Strip and stockpile topsoil on site for later use in lawn and landscape areas.
5. Begin construction of the driveway and enclosure areas.
6. Begin construction of stormwater management practices and collection system.
7. Begin utility installations.
8. Upon completion of grading operations, install finished driveway surfaces.
9. Topsoil, seed, and mulch all disturbed areas as soon as practical in accordance with the Erosion and Sediment Control Notes contained on this page.

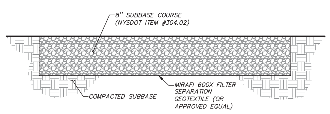
EROSION & SEDIMENT CONTROL NOTES:

1. The owner's field representative (O.F.R.) will be responsible for the implementation and maintenance of erosion and sediment control measures on this site prior to and during construction.
2. All construction activities involving the removal or disposition of soil are to be provided with appropriate protective measures to minimize erosion and contain sediment disposition within. Minimum soil erosion and sediment control measures shall be implemented as shown on the plans and shall be installed in accordance with "New York Standards and Specifications For Erosion and Sediment Control," latest edition.
3. Wherever feasible, natural vegetation should be retained and protected. Disturbance shall be minimized in the areas required to perform construction. No more than 5 acres of unprotected soil shall be exposed at any one time.
4. When land is exposed during development, the exposure shall be kept to the shortest practical period of time. In the 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 seven (7) days from the date the current soil disturbance activity ceased. Disturbance shall be minimized to the areas required to perform construction.
5. Silt fence shall be installed as shown on the plans prior to beginning any clearing, grubbing or earthwork.
6. All topsoil to be stripped from the area being developed shall be stockpiled and immediately seeded for temporary stabilization. Ryegrass (annual or perennial) at a rate of 30 lbs. per acre shall be used for temporary seeding in spring, summer or early fall. 'Aristook' Winter Rye (cereal rye) shall be used for temporary seeding in late fall and winter.
7. Any disturbed areas not subject to further disturbance or construction traffic, permanent or temporary, shall have soil stabilization measures initiated for permanent vegetation cover in combination with a suitable mulch within 1 business day of final grading. All seeded areas to receive a minimum 4" screened topsoil from stockpile area. Seed mixes as noted in General Site Seeding Notes on drawing SP–1 are to be planted between March 21 and May 20, or between August 15 and October 15 or as directed by project representative.
8. Cut or fill slopes 3:1 and steeper shall be stabilized immediately after grading with Curlex I Single Net Erosion Control Blanket, or approved equal.
9. Paved roadways shall be kept clean at all times.
10. The site shall at all times be graded and maintained such that all stormwater runoff is diverted to soil erosion and sediment control facilities.
11. All storm drainage outlets shall be stabilized, as required, before the discharge points become operational.
12. Stormwater from disturbed areas must be passed through erosion control barriers before discharge beyond disturbed areas or discharged into other drainage systems.
13. Erosion and sediment control measures shall be inspected and maintained on a daily basis by the O.F.R. to insure that channels, temporary and permanent ditches and pipes are clear of debris, that embankments and berms have not been breached and that all straw bales and silt fences are intact. Any failure of erosion and sediment control measures shall be immediately repaired by the contractor and inspected for approval by the O.F.R. and/or site engineer.
14. Dust shall be controlled by sprinkling or other approved methods as necessary, or as directed by the O.F.R.
15. Cut and fills shall not endanger adjoining property, nor divert water onto the property of others.
16. All fills shall be placed and compacted in 6" lifts to provide stability of material and to prevent settlement.
17. The O.F.R. shall inspect downstream conditions for evidence of sedimentation on a weekly basis and after rainstorms.
18. As warranted by field conditions, special additional erosion and sediment control measures, as specified by the site engineer and/or the Town Engineer shall be installed by the contractor.
19. Erosion and sediment control measures shall remain in place until all disturbed areas are suitably stabilized.

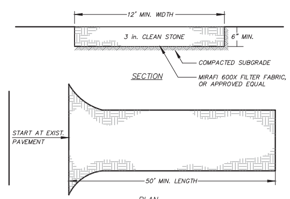
REQUIRED EROSION CONTROL SWPPP CONTENTS:

Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP–0–20–001), all Stormwater Pollution Prevention Plan's (SWPPP) shall include erosion and sediment control practices designed in conformance with the most current version of the technical standard, "New York Standards and Specifications for Erosion and Sediment Control." Where erosion and sediment control practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of required SWPPP components is provided in accordance with Part III.B.1a–l of General Permit GP–0–20–001:

a. Background Information: The subject project consists of the construction of a battery electric storage facility and two electrical substations
b. Site map / construction drawing: These plans serve to satisfy this SWPPP requirement.
c. Description of the soils present at the site: Onsite soils located within the proposed limits of disturbance consist of Ridgebury Complex (RgB), Paxton Fine Sandy Loam (PnD), and Woodbridge Loam (WdB), as identified on the Soil Conservation Service Web Soil Survey. These soil types belong to the Hydrologic Soil Group "B/D" and "C" respectively.
d. Construction phasing plan / sequence of operations: The Construction Sequence and phasing found on these plans provide the required phasing. A Construction Sequence and Erosion and Sediment Control Maintenance Schedule has been provided. The Sedimentation and Erosion Control Notes contained hereon outline a general sequence of operations for the proposed project. In general all erosion and sediment control facilities shall be installed prior to commencement with land disturbing activities, and areas of disturbance shall be limited to the shortest period of time as practicable.
e. Description of erosion and sediment control practices: This plan, and details / notes shown hereon serve to satisfy this SWPPP requirement.
f. Temporary and permanent soil stabilization plan: The Sedimentation and Erosion Control Notes and Details provided heron identify temporary and permanent stabilization measures to be employed with respect to specific elements of the project, and at the various stages of development.
g. Site map / construction drawing: This plan serves to satisfy this SWPPP requirement.
h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices: The details, Erosion and Sediment Control Notes, and Erosion and Sediment Control Maintenance Schedule serve to satisfy this SWPPP requirement.
i. An inspection schedule: Inspections are to be performed twice weekly and by a qualified professional as required by the General Permit GP–0–20–001. In addition the NYSDEC Trained Contractor shall perform additional inspections as cited in the Sedimentation and Erosion Control Notes.
j. A description of pollution prevention measures that will be used to control litter, construction chemicals and construction debris: In general, all construction litter / debris shall be collected and removed from the site. The general contractor shall supply either waste barrels or dumpster for proper waste disposal. Any construction chemicals utilized during construction shall either be removed from site daily by the contractor or stored in a structurally sound and weatherproof building. No hazardous waste shall be disposed of onsite, and shall ultimately be disposed of in accordance with all federal, state and local regulations. Material Safety Data Sheets (MSDS), material inventory, and emergency contact numbers shall be maintained by the general contractor for all construction chemicals utilized onsite. Finally, temporary sanitary facilities (portable toilets) shall be provided onsite during the entire length of construction, and inspected weekly for evidence of leaking holding tanks.
k. A description and location of any stormwater discharges associated with industrial activity other than construction at the site: There are no known industrial stormwater discharges present or proposed at the site.
l. Identification of any elements of the design that are not in conformance with the technical standard, "New York Standards and Specifications for Erosion and Sediment Control." All proposed elements of this SWPPP have been designed in accordance with the "New York Standards and Specifications for Erosion and Sediment Control."

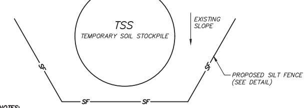


GRAVEL PAVEMENT DETAIL
(N.T.S.)



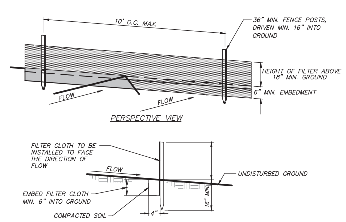
INSTALLATION NOTES
1. STONE SIZE – USE 3" STONE
2. LENGTH – AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLLY
3. THICKNESS – NOT LESS THAN SIX (6) INCHES.
4. WIDTH – 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCUR. TWENTY FOUR (24) FOOT IF SINGLE ACCESS TO SITE.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY . THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ACCESS DETAIL
(N.T.S.)



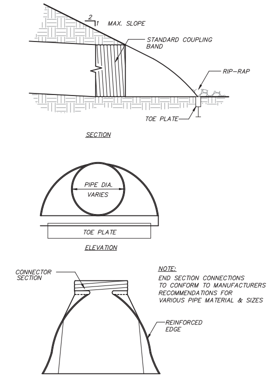
NOTES:
1. AREA CHOSEN FOR STOCKPILE LOCATION SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE IMMEDIATELY SEEDED WITH K31 PERENNIAL TALL FESCUE.
4. ALL STOCKPILES SHALL BE PROTECTED WITH SILT FENCING INSTALLED ON THE DOWNGRADIENT SIDE.

TEMPORARY SOIL STOCKPILE DETAIL
(N.T.S.)



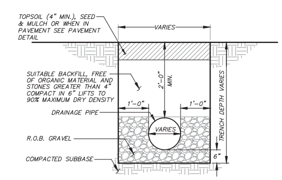
CONSTRUCTION NOTES FOR FABRICATED SILT FENCE
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER–LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

STANDARD SILT FENCE DETAIL
(N.T.S.)

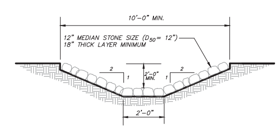


NOTE:
END SECTION CONNECTIONS TO CONFORM TO MANUFACTURERS RECOMMENDATIONS FOR VARIOUS PIPE MATERIAL & SIZES

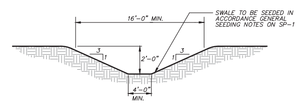
HDPE END SECTION DETAIL
(N.T.S.)



DRAINAGE LINE TRENCH DETAIL
(N.T.S.)

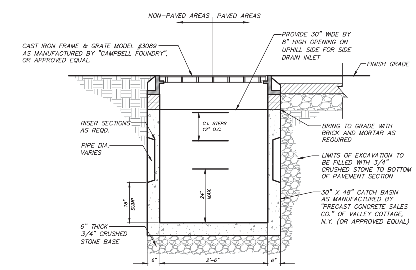


RIP RAP SWALE DETAIL
(N.T.S.)



GRASS SWALE TO BE LINED WITH CHANNEL LINER C–125 AS MANUFACTURED BY "NORTH AMERICAN GREEN" OR APPROVED EQUAL.

GRASS SWALE DETAIL
(N.T.S.)



DRAIN INLET DETAIL
(N.T.S.)
(STRUCTURE AND GRATE TO BE DESIGNED FOR H–20 LOADING)

NO.	DATE	REVISION	BY
2	12–4–23	REVISED PER PLANNING BOARD COMMENTS	KJK
1	10–30–23	RESUBMISSION TO PLANNING BOARD	MEU

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PROJECT:
UNION ENERGY CENTER
MILLER ROAD, TOWN OF CARMEL, PUTNAM COUNTY NEW YORK

DRAWING:
DETAILS AND NOTES

PROJECT NUMBER	21120.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	8–30–23	DRAWN BY	I.B.	D–2	12 / 12
SCALE	NTS	CHECKED BY	A.D.T.		