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ENVIRONMENTAL

New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-4500
Attn: Stephen Tomasik

United States Army Corps of Engineers
New York District
26 Federal Plaza
New York, NY 10278-0090
Attn: Steve Ryba, Regulatory Branch, Room 1937

Subject:
Cricket Valley Energy Project, Dover, New York (Army Corps #2009-1043)

Date:
April 7, 2011

Contact:
Frederick M. Sellars

Phone:
978-937-9999

Email:
frederick.sellars@arcadis-us.com

Our ref:
CO001447

Dear Mr. Tomasik and Mr. Ryba:

On January 22, 2010, ARCADIS submitted a Joint Application Form and supporting information requesting authorization of wetland alteration associated with the Cricket Valley Energy (CVE) project in Dover, Dutchess County, New York. Since that time, CVE has continued to refine project elements in response to NYSDEC and USACE comments to further mitigate wetland impacts resulting from the CVE project.

This letter provides an update to the previously submitted information and highlights those elements that have been changed since the January 22, 2010 submittal. The following includes a brief project description, a summary of wetland jurisdiction status, a review of alternatives considered to avoid and minimize wetland impacts (with revised graphics to better highlight the wetland areas avoided), and a discussion of proposed project activities, including a proposed wetland restoration/creation and adjacent area restoration plan.

CVE previously submitted a copy of the Wetland Delineation report, which includes representative photographs and background, as well as a copy of the Environmental Assessment Form that was submitted on November 4, 2009. CVE has prepared the Draft Environmental Impact Statement (DEIS) which we understand the NYSDEC will notice for public review shortly.

Project Description

The project is proposed within an approximately 57-acre portion (the project development area) of a 131-acre site; Figure 1 illustrates the boundaries of the site

and of the project development area on the Dover Plains, New York USGS quadrangle. The approximate center point of the project development area is latitude 41.677027, longitude -73.580508. The site is bounded to the north by an existing 345 kilovolt (kV) Consolidated Edison (ConEd) electric transmission corridor (an existing Iroquois natural gas pipeline also extends along the ConEd corridor); to the east by State Route 22; and to the south by existing industrial buildings and open, industrially zoned land. To the west, the project development area is bounded by an active Metro North rail line. The property continues west from the rail line, bounded by the Swamp River on the northern portions and extending across the river in westerly and southerly portions. No project work is proposed west of the rail line. The site has been in industrial use since approximately 1932; the project development area's primary building was largely destroyed by fire in 1996.

The Cricket Valley Energy project is a proposed nominal 1,000 megawatt (MW) natural gas-fired combined-cycle energy facility, which will be constructed on the project development area that currently contains several abandoned industrial buildings. The project will utilize air cooling and a zero liquid discharge system; therefore, operational impact to water resources will be limited to use of an on-site bedrock well system, discharge of stormwater (for storm events in excess of the 100-year storm) to an existing drainage swale, and domestic sewage to an onsite septic system. The project will utilize the existing driveway onto Route 22, and will interconnect with the ConEd 345 kV transmission line on-site. A short (approximately 500-foot) natural gas lateral will be required to interconnect to the existing Iroquois natural gas pipeline.

Wetland Jurisdictional Summary

Mapping indicated that New York State Department of Environmental Conservation (NYSDEC)-jurisdictional wetlands are located west of the railroad track, adjacent to the Swamp River (identified in project delineation reports as Wetlands 4 and 5). NYSDEC has determined that an additional on-site wetland (identified as Wetland 2) is state-jurisdictional. The two remaining on-site wetland resources (Wetlands 1 and 3) were determined not to be state-jurisdictional due to their isolated status.

The United States Army Corps of Engineers (USACE) utilizes different jurisdictional criteria in reviewing wetland resources within the project development area (Wetlands 4 and 5 have not been reviewed by the USACE, as no project work will occur west of the railroad track). Federal wetland jurisdiction was confirmed for Wetland 2 and a portion of Wetland 3. In addition, the onsite drainage swale was

determined to be a federally jurisdictional intermittent stream. Wetland 1 and a portion of Wetland 3 were determined not to be federally jurisdictional.

Figures 2, 2A and 2B present the surveyed wetland boundaries. The following table summarizes the jurisdictional resources within the approximately 57-acre project development area.

Wetland Resource	State Jurisdictional?	Federally Jurisdictional?	Wetland Jurisdictional Area (Acres)
1	No	No	--
2	Yes	Yes	8.68
3A	No	No	--
3B	No	Yes	0.41
Drainage Swale	No	Yes	0.04

Wetlands 4 and 5 are located west of the railroad track that is within the site but not within the project development area. Note that state jurisdictional Adjacent Area (100 feet from the wetland boundary) does extend onto the project development area, although no project activities are proposed in that area.

Alternatives Considered

Avoidance of impact to wetlands has been an important focus of the project site selection and design. The following narrative reviews alternatives considered to achieve that goal.

The purpose of this project is to provide 1,000 MW of electricity to respond to regional energy needs using only clean-burning natural gas technology. The Cricket Valley Energy site was selected based on detailed criteria that included proximity to energy infrastructure, appropriate zoning, and sufficient land to create a buffer and minimize aesthetic impacts to the surrounding community. The 131-acre site meets all of these criteria:

- Adjacent to a 345 kV electric transmission line owned by ConEd. No new off-site power lines will be built for interconnection.

- Adjacent to a high-pressure natural gas pipeline owned by Iroquois Gas Transmission Company. An approximately 500-foot gas pipeline lateral will be constructed to the project site to interconnect with the existing 24-inch gas line.

- Industrially zoned. The site is one of two areas in Dover zoned for Manufacturing/Industrial purposes. It is specifically designated in the Dover Master Plan (referred to as the "Mica Plant") to be utilized for industrial purposes.

- Natural buffer. A 300 to 400 foot buffer of vegetation will be maintained between the project development site and New York State Route 22 to mitigate visual impacts. In addition, existing topography will be maintained as buffer.

Alternative sites were identified throughout the southeast region of New York State in addition to several local alternatives in the town of Dover. However, these sites did not adequately meet the criteria outlined above. Sites identified adjacent to the electric transmission lines and gas pipeline did not offer the appropriate zoning or buffer. Sites identified with appropriate zoning were located further away from energy infrastructure and would require the construction of new off-site electric power lines and a longer natural gas pipeline. The impact to the surrounding community resulting from the need for potentially significant off-site construction eliminated these sites from consideration.

Once the site was selected, alternative project configurations were considered. In early May 2009, the wetland field delineation was completed, and field sketches were immediately provided to project engineers for use in developing preliminary layout alternatives. The primary design goals were to:

- Avoid wetland impact wherever possible;

- Avoid NYSDEC wetland adjacent area impact wherever possible;

- Utilize the existing developed footprint to the greatest extent possible;

- Minimize clearing of forested areas to the greatest extent possible;

- Avoid substantial earth movement where possible; and

- Maintain practical technical equipment orientation to facilitate construction and operations in an efficient, safe and least-impact manner.

The current orientation of facility components was selected in order to use the existing driveway; minimize wetland intrusion; keep equipment aligned to ensure safe, efficient operation and to facilitate maintenance; and position louder equipment

(for example, the air-cooled condensers that include numerous fans) to the south and west of the site, away from residences. Figures 3 through 6 highlight the amount of wetland impact reduction as a result of the various design alternatives and on-going effort by CVE to reduce natural resource impacts.

A significant ancillary project element is the project substation. Figure 3 (Drawing M200, Rev. B) illustrates the size of a conventional substation that would serve the project, as compared to the size of a gas insulated switchgear (GIS) style substation. Although a GIS switchyard is $10-20 million more than the cost of the conventional design, wetland impact considerations resulted in selection of a GIS switchyard for the project.

The surveyed wetland boundaries were overlain on the proposed site plan and other ancillary elements (e.g., the detention basin, gas pipeline interconnection, and ConEd substation, also selected as a GIS design at significant cost in order to reduce footprint) were added (see Figure 4, Drawing M200, Rev. F). Additional work continued towards minimizing the footprint needed for features such as the GIS substation and the detention basin.

NYSDEC review of the flagged wetland increased the Wetland 2 boundary to encompass an area where historical uses of the site had eliminated natural soils. With this narrow finger-like area included in the wetland designation, impact to this area by the project footprint could not be avoided. Consideration for shifting the footprint or moving project elements to avoid impact to the tip of Wetland 2 continued, as follows:

- The footprint was shifted south to the extent possible given southern property line constraints;
- The administration/warehouse buildings were relocated to the east;
- Further reductions were made in the size of the combined project/ConEd switchyard and substation;
- Slopes were reduced in areas near wetlands to minimize grading effects; and
- Various configurations with the potential to reduce the size of the stormwater detention basin were considered but rejected due to project layout constraints and design needs.

Figure 5 illustrates a revised layout with its associated grading (Drawing C201, Rev. A). Constraints associated with the southern property line, as well as functional and safety needs for access and keeping various pieces of equipment co-located resulted in unavoidable impact to the fingerlike projection of Wetland 2 and its state-jurisdictional adjacent area.

Figure 6 (M200 Rev S) illustrates the currently proposed layout, which demonstrates some additional wetland impact reduction as a result of project layout modifications.

Summary of Impacts to Wetland Resource Areas and Regulated Adjacent Areas

Although the project design minimizes impacts to wetland resources as much as possible, a small amount of impacts to wetland resource areas is unavoidable. A summary of impacts to wetland resource areas (both jurisdictional and non-jurisdictional) is provided below. A summary of impacts to jurisdictional Adjacent Area (Area within 100 feet of a NYSDEC-jurisdictional wetland) is provided in a separate table below. A discussion of the proposed project actions within the jurisdictional areas is provided below.

Total Wetlands Impacts

(a) Wetland Number and Jurisdictional Status	(b) Jurisdictional Status	(c) Total Wetland Area (acres)	(d) Wetland Area Temporarily Disturbed and Restored (acres)	(e) Wetland Area Permanently Altered (acres)	(f) Wetland Area Permanently Lost (acres)	(g) New Wetland Area Created (acres)	(h) Total Wetland Net Loss (f) + (g)
Wetland 1	Non-jurisdictional	1.7	0.0	1.5	-0.20	0.0	-0.20[1]
Wetland 2	Federal and State	8.7	0.6	0.0	-0.05	0.05	0.0
Wetland 3A	Non-jurisdictional	0.6	0.0	0.0	0.0	0.0	0.0
Wetland 3B	Federal	.41	0.0	0.0	0.0	0.0	0.0
Drainage Swale (Intermittent Stream)	Federal	.04	.001	.003 (rip rap within stream)[2]	0.0	0.0	0.0

Total Adjacent Area Impacts (see Wetland Restoration/Creation Plan Sheets 1 through 3)

(a) NYSDEC-Regulated Resource	(b) Adjacent Area Temporarily Disturbed/Restored Due to Facility Construction and Bioretention Areas[3]	(c) Adjacent Area Temporarily Disturbed /Restored due to Waste Excavation[4]	(d) Total Adjacent Area Temporary Disturbance/ Restoration (b)+(c)	(e) Adjacent Area Permanently Lost (due to facility construction)[5]	(f) Adjacent Area selectively replanted outside of proposed limits of construction[6]
Adjacent Area to Wetland 2	0.6	0.4	1.0	0.8	1.8

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[1] Earthen areas surrounding non-jurisdictional Wetland 1 adjacent to permanent development will be planted with native species similar to that proposed for Wetland 2.

[2] See Detail Drawing SP2 – Conceptual Subsurface Sewage Disposal System and Stormwater Management Plan.

[3] See Wetland Restoration/Creation Plans Sheet 3 of 3, Note 4.

[4] See Wetland Restoration Creation Plan Sheet 3 of 3, Note 5.

[5] Area within existing Adjacent Area that will be filled due to plant construction.

[6] See Wetland Restoration Creation Plan Sheet 3 of 3, Note 3.

Proposed Project Actions in Jurisdictional Areas

All state and federal jurisdictional wetland resource impact has been avoided by the project with the exception of limited impact to Wetland 2 and its associated state-jurisdictional 100-foot adjacent area and some limited work within the intermittent stream channel.

Impact associated with Wetland 2 falls into three general categories: proposed wetland fill; proposed activities to address remediation and restoration of wetland quality; and proposed work within the state wetland adjacent area, including restoration and potential mitigation activities. Each is discussed below.

Intermittent Stream Impacts

The project's stormwater management system has been designed with three plunge pool/bioretention facilities in the northern portion of the project development area, and a stormwater management basin – wet extended detention pond in the southern portion of the project development area that will hold most stormwater rainfall (see Attachment 2, Plate 3). For storm events in excess of the 100-year frequency storm event, discharge from the stormwater management basin will occur into the intermittent stream (which is currently used for site stormwater discharge). No plans currently exist to modify the existing stormwater channel (a USACE-jurisdictional intermittent stream). However, in order to prevent erosion, it will be necessary to install rip-rap within the intermittent stream in the location of the proposed detention pond outlet (see Plate 3 inset). This small area of rip-rap (approximately 135 square feet, or 0.003 acre) is not anticipated to alter the flow of water or function of the intermittent stream. No other improvements are proposed within the federally jurisdictional intermittent stream channel.

Proposed Wetland Fill – Wetland 2

A total of 1,990 square feet (0.05 acre) of wetland fill is unavoidable for Wetland 2. Although numerous site configurations were explored, the footprint has been shifted as far south as possible. The tip of the southerly fingerlike projection associated with Wetland 2 cannot be avoided.

It should be noted that the quality of this portion of Wetland 2 is poor. Although wetland hydrology and vegetation is present, natural soils do not exist in this portion (and further north) of Wetland 2. Rather, soil material is comprised of a yellowish, non-toxic sediment that is not naturally occurring. Debris associated with various

historical industrial uses of the site has been deposited in the wetland and on the wetland banks as well, including a white slag material from previous magnesium extraction and processing activities that occurred on the site. As a part of project development, CVE intends to remove trash and debris from the wetland area (and throughout the site), remove the "yellow material" from the impacted portion of the wetland, create additional wetland and restore wetland adjacent area with selective plantings. The cleanup and restoration of this wetland to improve wetland function and quality, while constituting work in a wetland area requiring approval, will also result in the creation of additional wetland area, as addressed below.

Wetland 2 Restoration and Creation and Adjacent Area Restoration

A wetland restoration/creation plan has been developed to compensate for both the permanent loss of the 0.05 acres of jointly regulated NYSDEC and USACE freshwater wetland described above and 0.8 acre of regulated Adjacent Area, as well as the temporary disturbance of approximately 1.0 acres of regulated Adjacent Area proximal to Wetland 2. A complete narrative and plan drawings have been provided in Attachment 1 to this letter.

The Restoration/Creation Plan involves the following activities:

- The creation of an Open Water area within the southernmost portion of Wetland 2 by excavation of non-native sediment, approximately 0.6 acres in size. The Open Water area will be allowed to revegetate.

- The creation of 0.05 acres of new wetland by extending the existing wetland limits to the east and west of the Open Water area. This area will be seeded and allowed to revegetate.

As a result of the newly created 0.05 wetland area, there will be no net loss of jurisdictional wetland.

In addition to the wetland restoration and creation, restoration activities within the Adjacent Area include the following:

- Restoration and replacement of 0.4 acres of Adjacent Area due to the excavation of waste material.

- Restoration and replanting of approximately 0.6 acres of Adjacent Area that may be temporarily disturbed due to facility construction as well as around the bioretention basins. These areas will be planted with native tree/shrub species.

- Selective replanting of Adjacent Area between the proposed limits of construction ground disturbance and Wetland 2 (approximately 1.8 acres). Areas that are not currently densely vegetated will be selectively planted with appropriate tree/shrub species.

Plantings Adjacent to Wetland 1

In addition to the restoration of, and creation at the USACE- and NYSDEC-jurisdictional Wetland 2, CVE will replant areas between the project footprint and non-jurisdictional Wetland 1 with the same species and planting density proposed for the Wetland 2 Adjacent Area replanting to further protect this non-jurisdictional wetland.

Post-Construction Monitoring Plan

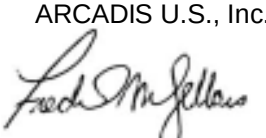
A post-construction monitoring and maintenance plan has been developed (See Attachment 1). The monitoring and maintenance plan includes monitoring for three calendar years (covering three growing seasons) to ensure that the creation and restoration plan has achieved its regulatory and contractual commitments and goals. The plan includes both a qualitative and quantitative assessment to ensure the physical health and establishment of new vegetation at the site as well as the integrity of installed erosion matting, revetments, and herbivory fencing in the restoration area. The program includes annual reports and photo documentation as well as the recommendation and performance of corrective action, if necessary.

A revised Project Description and Purpose has been prepared to address these project refinements that have been made since the original submission of the Joint Application Form. This revision is provided as Attachment 2.

We appreciate your continued review of this wetland application, and hope that the information contained herein addresses all outstanding comments on the application. Please do not hesitate to contact me if you have any questions or require additional information.

Sincerely,

ARCADIS U.S., Inc.

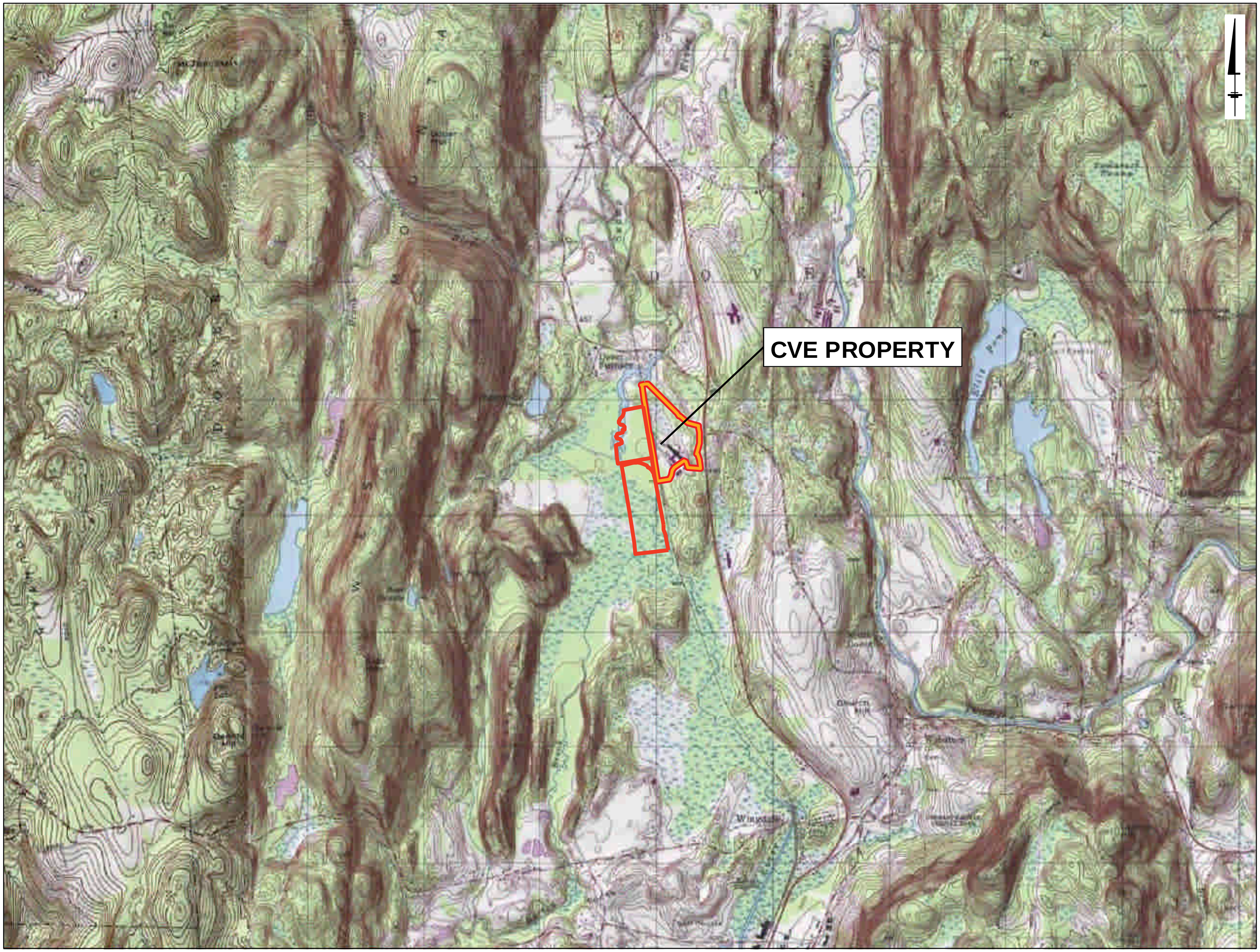


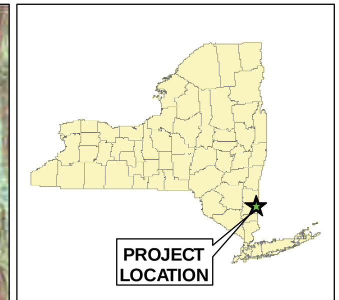
Frederick M. Sellars
Vice President

Copies:
R. De Meyere, J. Ahrens, CVE
J. Schachter, Howlands Lake Partners
R. Courtien, Town of Dover
H. Gierloff, NYSDEC Region 3

ARCADIS

Figures





Legend

- Property
- Project Development Area

SOURCE:
U.S. Geological Survey, 7.5 x 15 Minute Quadrangle, Dover Plains, NY/CT, Verbank, NY

0 2,000 4,000
Feet
GRAPHIC SCALE

ARCADIS

CRICKET VALLEY ENERGY

FIGURE 1
PROJECT LOCATION

Town of Dover, Dutchess County, New York

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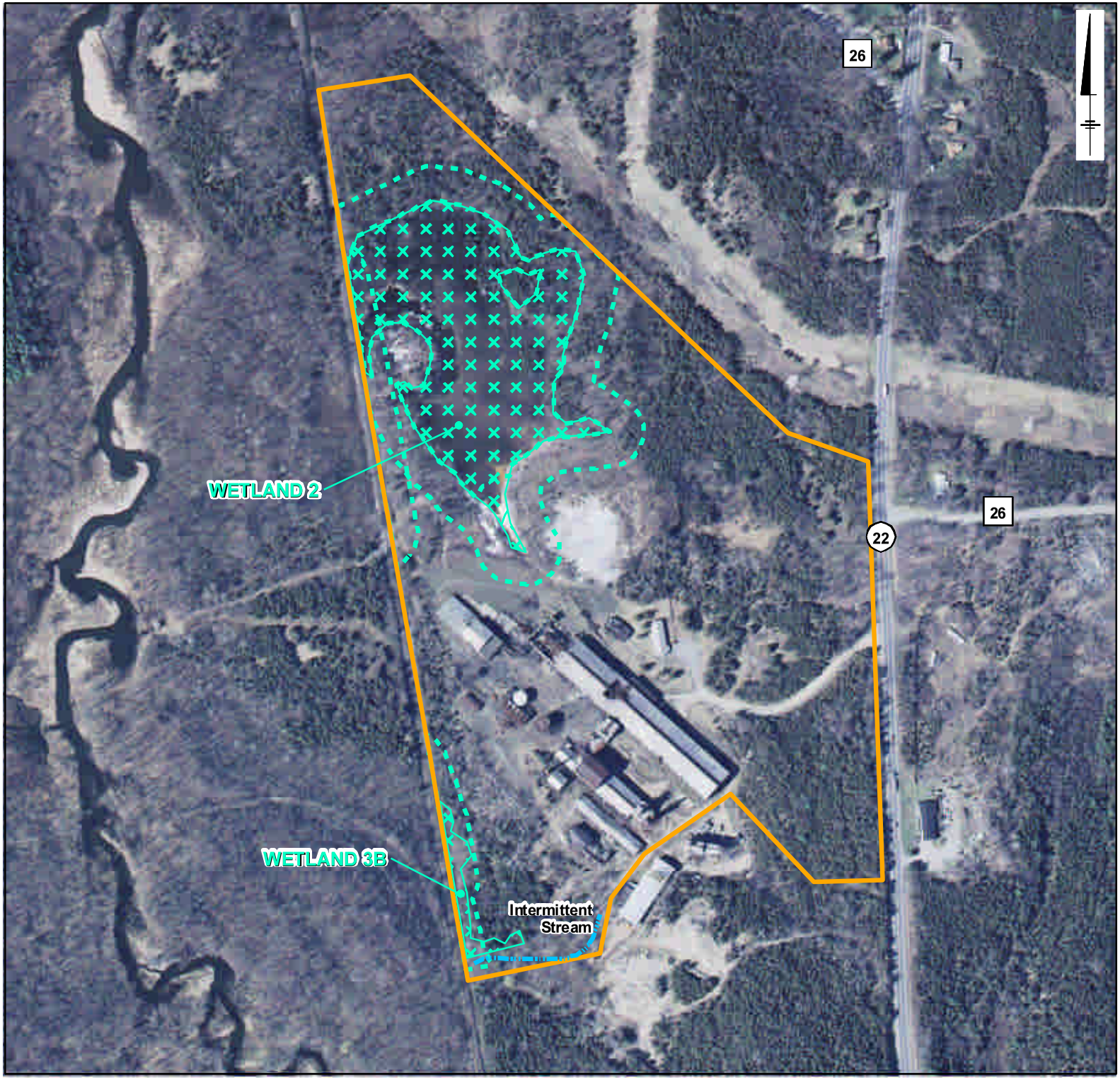

Legend

- Project Development Area
- Intermittent Stream
- Jurisdictional Wetland
- 100' Wetland Adjacent Area

0 200 400 600

Feet

1:4,800

1 inch = 400 feet

ARCADIS

CRICKET VALLEY ENERGY

FIGURE 2
JURIDICTIONAL WETLAND RESOURCES

Dutchess County, New York

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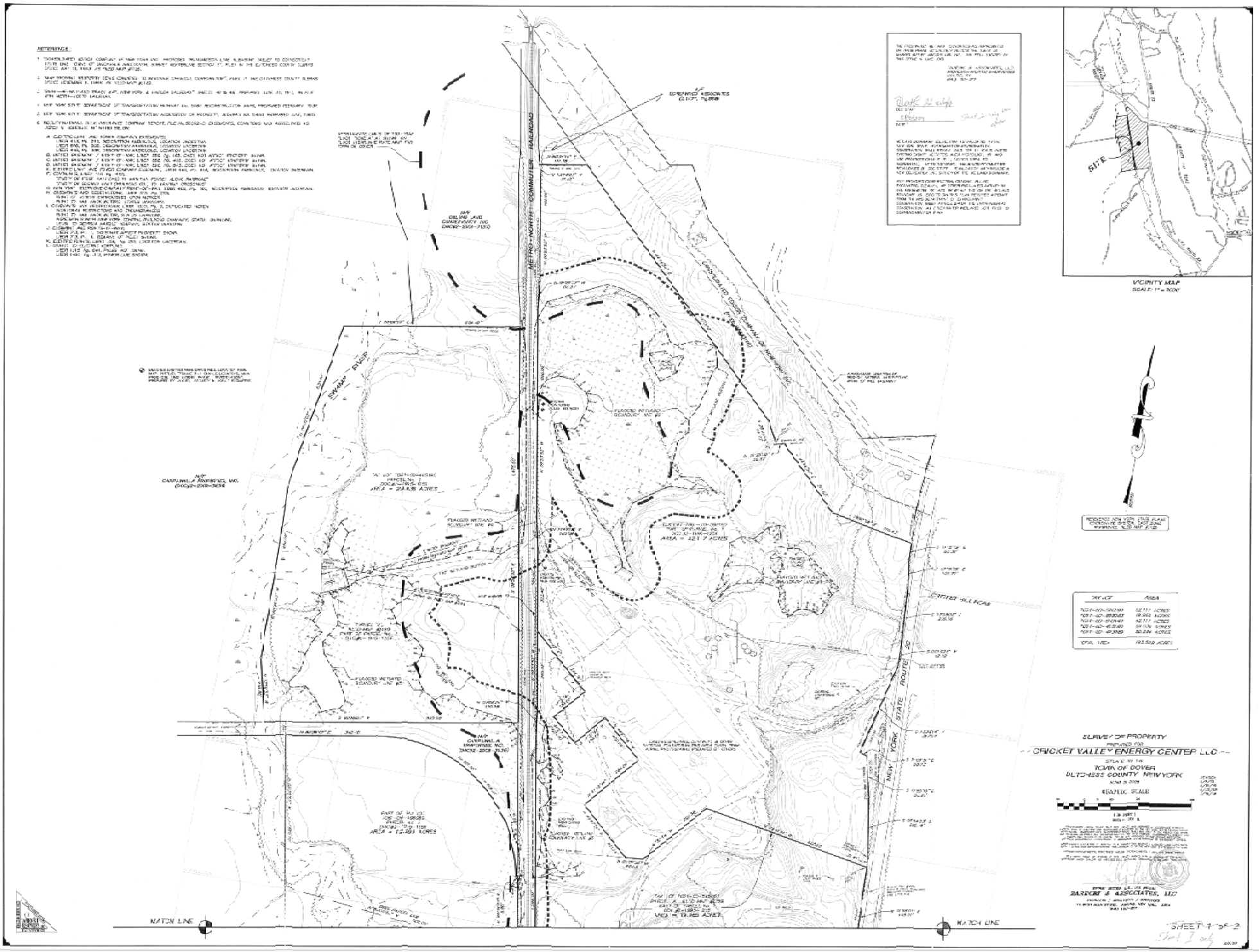

METRO-NORTH COMMUTER RAILROAD
NEW YORK STATE ROUTE 22
SWAMP RIVER
VICINITY MAP
SCALE: 1" = 1000'
SURVEY OF PROPERTY
PREPARED FOR
CRICKET VALLEY ENERGY CENTER LLC
TOWN OF DOVER
DUTCHESS COUNTY NEW YORK
GRAPHIC SCALE
BASICK & ASSOCIATES, LLC
MATCH LINE
MATCH LINE

Figure 2A

SURVEY OF PROPERTY

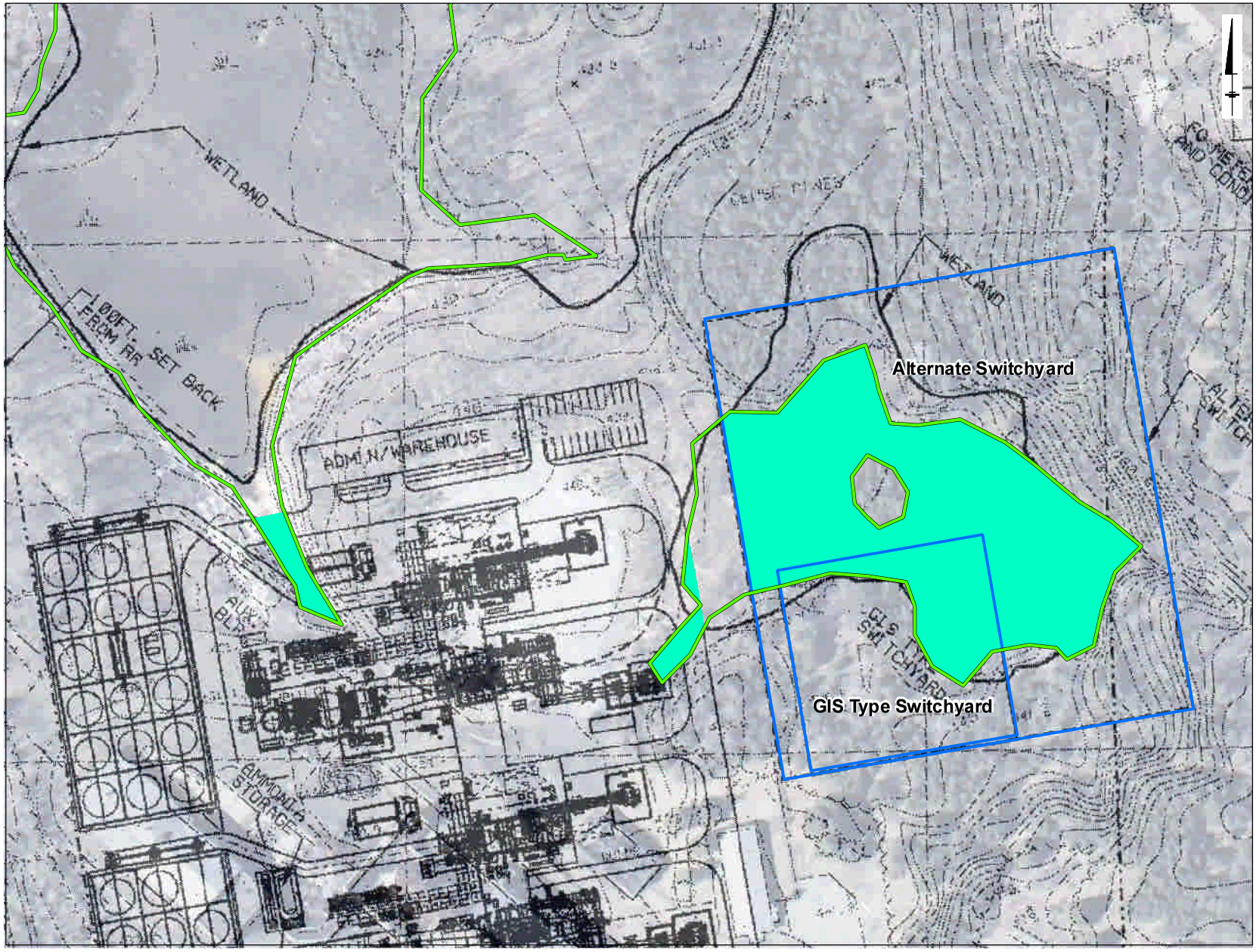
CRICKET VALLEY ENERGY CENTER LLC

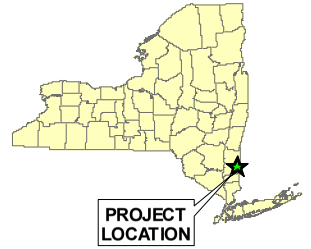
TOWN OF DOVER
DUTCHESS COUNTY, NEW YORK

GRAPHIC SCALE

ZARECKI & ASSOCIATES

SHEET 2 of 2





Legend

- Wetland Area
- Wetland Impact (Jurisdictional and Non-Jurisdictional)
- Switchyard

SOURCE:
1. Aerial - Dutchess County 1-foot Resolution 2004 Natural Color Orthoimagery
NYS Digital Orthoimagery Program
NYS Office of Cyber Security & Critical Infrastructure Coordination

0 100 200
Feet
GRAPHIC SCALE

ARCADIS

CRICKET VALLEY ENERGY

FIGURE 3
M200 REV B
WETLAND IMPACT
Town of Dover, Dutchess County, New York

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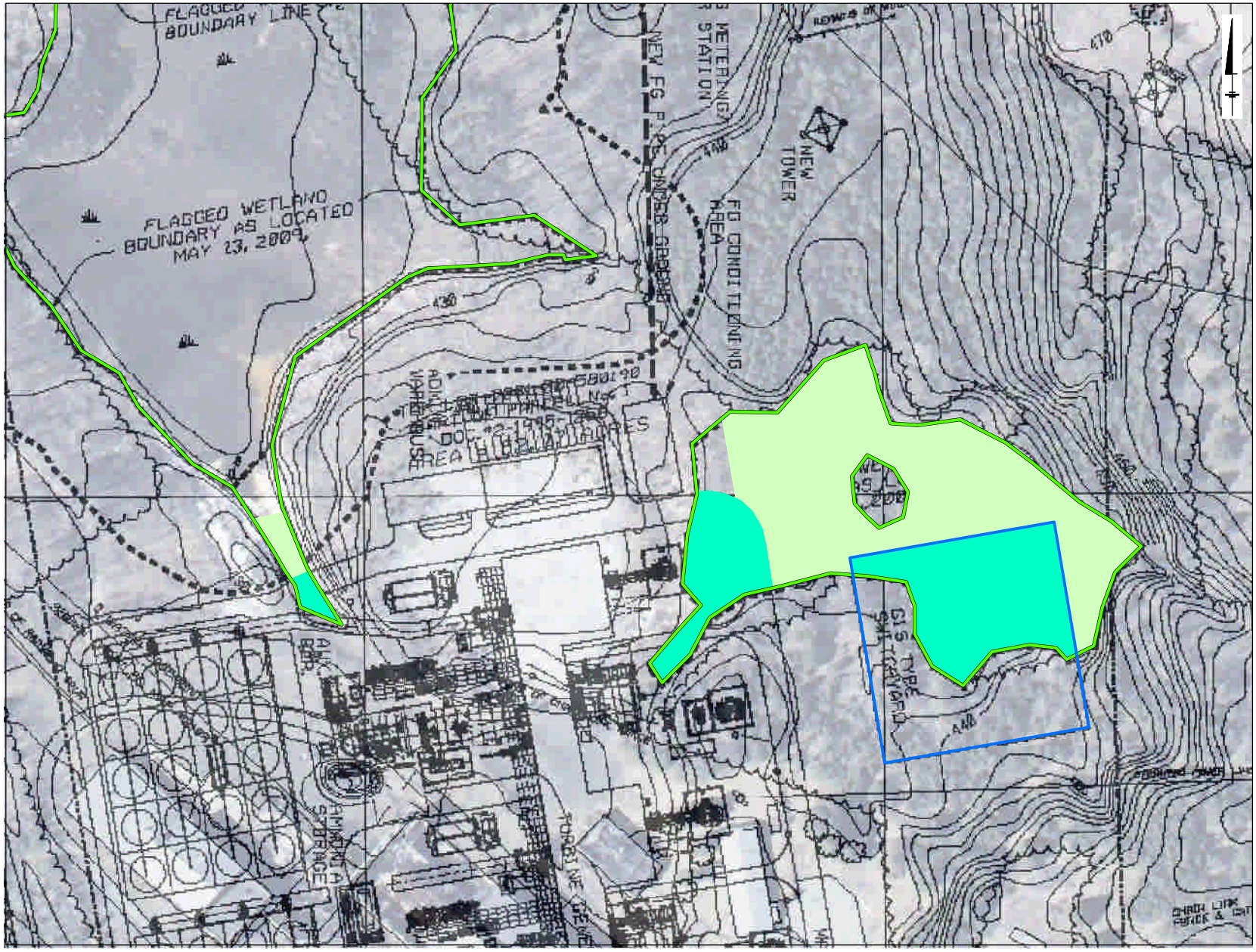

Legend

- Wetland Area
- Wetland Impact (Jurisdictional and Non-Jurisdictional)
- Wetland Impact Avoided
- Switchyard

SOURCE:
1. Aerial - Dutchess County 1-foot Resolution 2004 Natural Color Orthoimagery
NYS Digital Orthoimagery Program
NYS Office of Cyber Security & Critical Infrastructure Coordination

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Feet
GRAPHIC SCALE

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CRICKET VALLEY ENERGY

FIGURE 4

M200 REV F
WETLAND IMPACT

Town of Dover, Dutchess County, New York

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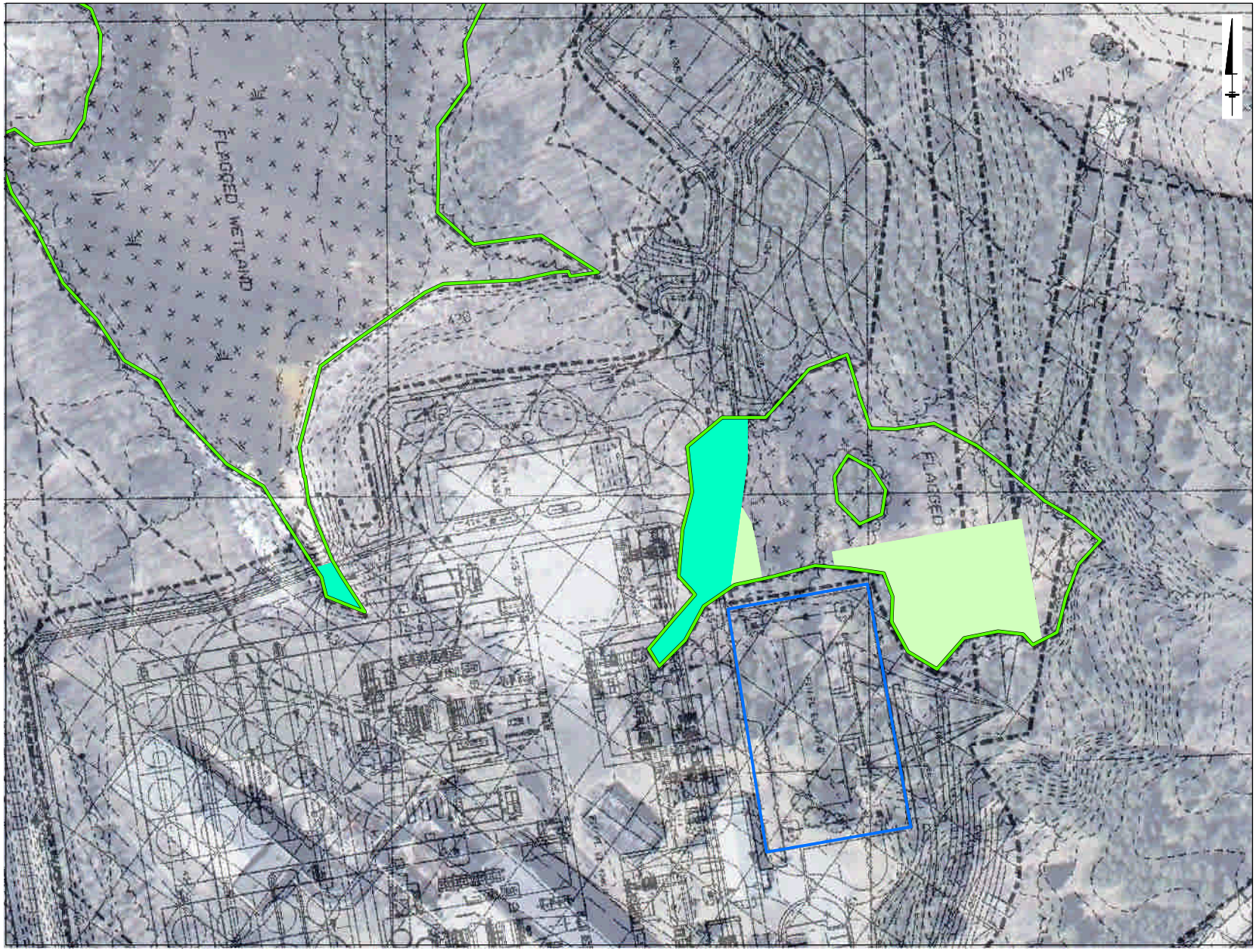

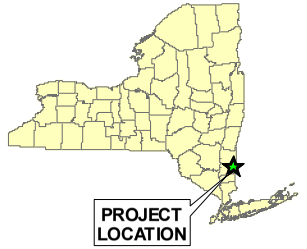

Legend

- Wetland Area
- Wetland Impact (Jurisdictional and Non-Jurisdictional)
- Wetland Impact Avoided
- Switchyard

SOURCE:
1. Aerial - Dutchess County 1-foot Resolution 2004 Natural Color Orthoimagery NYS Digital Orthoimagery Program NYS Office of Cyber Security & Critical Infrastructure Coordination

0 100 200
Feet
GRAPHIC SCALE

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CRICKET VALLEY ENERGY

FIGURE 5

C130 REV A
WETLAND IMPACT

Town of Dover, Dutchess County, New York

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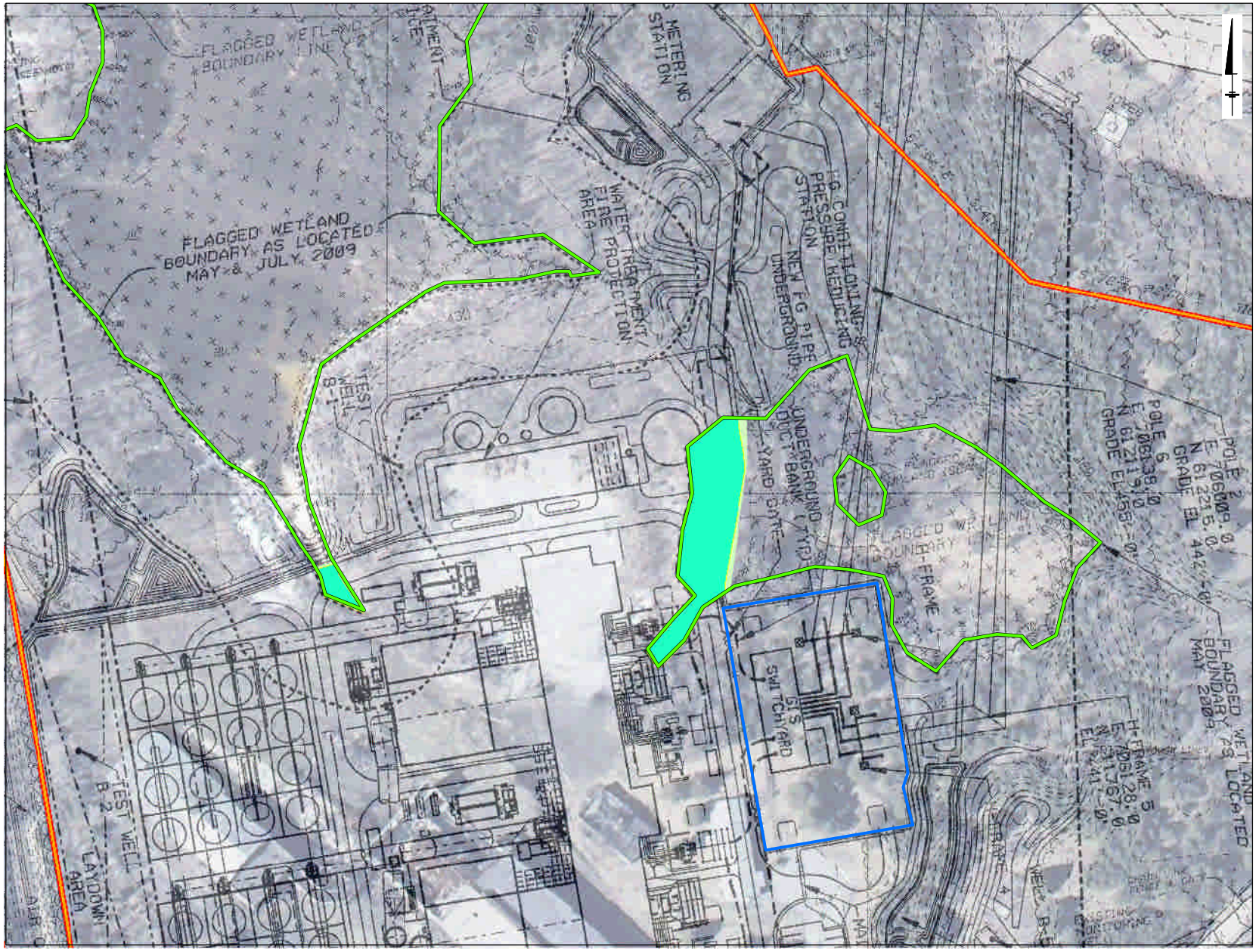

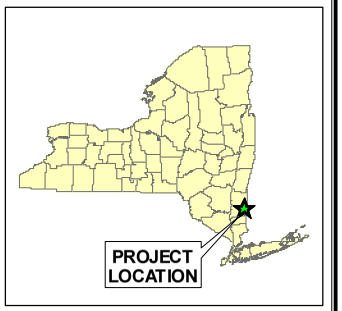

Legend

- Wetland Area
- Wetland Impact (Jurisdictional and Non-Jurisdictional)
- Wetland Impact Avoided
- Switchyard

SOURCE:
1. Aerial - Dutchess County 1-foot Resolution 2004 Natural Color Orthoimagery
NYS Digital Orthoimagery Program
NYS Office of Cyber Security & Critical Infrastructure Coordination

0 100 200
Feet
GRAPHIC SCALE

ARCADIS

CRICKET VALLEY ENERGY

FIGURE 6

M200 REVS
WETLAND IMPACT

Town of Dover, Dutchess County, New York

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