Sunrise Wind Farm Project

Appendix L
Onshore Ecological Assessment and Field Survey Report

Prepared for:

Sunrise Wind | Powered by Ørsted & Eversource

August 23, 2021

Revision 1 – October 28, 2021

Revision 2 – August 19, 2022

Sunrise Wind: Onshore Ecological Assessment and Field Survey Report

Town of Brookhaven, New York

August 2022

Prepared for:

Sunrise Wind LLC

Prepared by:

Stantec Consulting Services Inc.

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Acronyms and Abbreviations

CEA	Critical Environmental Area
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
ft	feet
GIS	Geographic Information Systems
GPS	Global Positioning System
HDD	Horizontal Directional Drill
ha	hectare
ICW	Intracoastal Waterway
in	inch
IPaC	Information for Planning and Conservation
km	kilometer
LIE	Long Island Expressway
m	meter
mi	mile
NWI	National Wetland Inventory

NYECL	New York Environment Conservation Law
NYNHP	New York Natural Heritage Program
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
OnCS-DC	Onshore Converter Station
ROW	right-of-way
RTE	rare, threatened, and endangered
SCFWH	Significant Coastal Fish and Wildlife Habitats
USFWS	U.S. Fish and Wildlife Service

1.0 INTRODUCTION

Sunrise Wind LLC (Sunrise Wind, or the Applicant), a 50/50 joint venture between Orsted North America Inc. and Eversource Investment LLC, proposes to construct, own, and operate the Sunrise Wind Farm Project. The Sunrise Wind Farm Project and its transmission components will be located in federal waters on the Outer Continental Shelf, in state waters of New York, and onshore in the Town of Brookhaven, Suffolk County, New York. Stantec Consulting Services Inc. (Stantec) was retained by Sunrise Wind to evaluate the onshore components (Onshore Facilities) for the potential presence of regulated natural resources, such as rare, threatened, and endangered (RTE) species,[1] significant natural communities or habitats, wetland and waterbody resources, and invasive plant species. This included an initial desktop assessment, followed by field surveys conducted by Stantec in June and October 2020, March, July, and September 2021, and April and May 2022. Field surveys focused on the delineation of wetlands and other waterbodies, the classification of natural communities, evaluation of potential habitat suitability for RTE species, and evaluation of presence and relative abundance of non-native, invasive species associated with the Onshore Facilities (Appendix A, Figure 1). For this report, RTE plant species include those with state and/or federal listing status or inclusion on New York's Rare Plant Status List (Young 2019). Fish and wildlife species include those identified by the U.S. Fish and Wildlife Service (USFWS) or New York State Department of Environmental Conservation (NYSDEC) during consultation. This report has been prepared in support of the Sunrise Wind federal Construction and Operations Plan as well as the Sunrise Wind application for a Certificate of Environmental Compatibility and Public Need under Article VII of the New York State Public Service Law for the portions of the Sunrise Wind Farm Project within New York State (NYS; the Sunrise Wind New York Cable Project).

The Onshore Facilities evaluated included:

1. Landfall Work Area, where the connection of the Sunrise Wind Export Cable and the Onshore Facilities will occur via Horizontal Directional Drill (HDD) at Smith Point County Park on Fire Island. HDD will require temporary use of a Landfall Work Area located onshore within which the transition joint bays will be installed and construction activities to support HDD will occur, including cable pull-in activities. HDD cable duct stringing activities may also occur adjacent to the Landfall Work Area;

2. Intracoastal Waterway (ICW) Work Area, which includes the ICW HDD at both Smith Point County Park on Fire Island and Smith Point Marina on Long Island;

3. Onshore Transmission Cable from the Landfall Work Area to the Union Avenue Site, where the cable will then interconnect with the existing electrical grid at the existing Holbrook Substation;

[1] Presence of avian and bat species, marine mammals, marine fisheries, and benthic species are addressed in separate reports.

4. The Union Avenue Site, an approximately 7-acre (2.8-hectare [ha]) area that includes two parcels south of Union Avenue between Claremont Avenue and Middle Avenue, where the Onshore Converter Station (OnCS-DC) will be located; and

5. Onshore Interconnection Cable route from the OnCS-DC to the existing Holbrook Substation.

1.1 STUDY AREA EXTENT AND TERMINOLOGY

Three routes for the Onshore Transmission Cable were surveyed in the field, including a primary route and two alternative routes that are no longer under consideration. These are described below and shown on Appendix A, Figure 1:

- The Long Island Expressway (LIE) Service Road Route, the primary route, is approximately 17.5 miles (mi; 28.2 kilometer [km]) from the Landfall Work Area to the Union Avenue Site. It runs north along William Floyd Parkway and Surrey Circle, west along Mastic Boulevard, north along Francine Place and Revilo Avenue, west along Victory Avenue, crosses the Carmans River, northwest along Horseblock Road, along Manor Road to Long Island Avenue, west along the LIE South Service Road, south along Waverly Avenue, west to Long Island Avenue and west to Union Avenue to reach the OnCS-DC.

- The Montauk Highway Route Alternative initially follows the same route as LIE Service Road Route but continues north along William Floyd Parkway, west along Mastic Boulevard, north along Ashley Place, west along Montauk Highway across Carmans River and Yaphank Creek, onto Yaphank Avenue, and northwest on Horseblock Road where it converges with the LIE Service Road Route. Field surveys were conducted for this route and results are presented in this report; however, this route is no longer under consideration.

- Peconic Avenue Route Alternative, which initially follows the same route as LIE Service Road Route but diverts off Horseblock Road at Peconic Avenue and continues west along Peconic Avenue to North Ocean Avenue, north along North Ocean Avenue, west to Long Island Avenue, and west along Long Island Avenue to Union Avenue to reach the OnCS-DC. Field surveys were conducted for this route and results are presented in this report; however, this route is no longer under consideration.

In this report, the term Landfall/ICW Study Area is used to describe an area encompassing the Landfall Work Area (at Smith Point County Park), the adjacent cable duct stringing area, and the ICW Work Area (at Smith Point County Park and at Smith Point Marina), as well as the adjacent lands around these areas to allow for the possibility of future design adjustments. The term ‘Landfall/ICW Study Area on Fire Island’ is used to specifically describe the assessed areas on Fire Island, while the term ‘Landfall/ICW Study Area on the Mainland’ is used to specifically describe the assessed areas within Smith Point Marina.

The term ‘Onshore Transmission Cable Study Area’ is used to specifically describe the assessed area where the potential Onshore Transmission Cable route will travel along existing roads to the Union

Avenue Site. As described above, the Onshore Transmission Cable Study Area includes the LIE Service Road Route as well as the Montauk Highway Route Alternative and Peconic Avenue Route Alternative.[2]

The term 'Onshore Interconnection Cable Study Area' is used to specifically describe the area where the potential Onshore Interconnection Cable route will travel from the Union Avenue Site to the existing Holbrook substation.

2.0 METHODOLOGY AND DATA SOURCES

2.1 DESKTOP REVIEW

The desktop review included consultations with natural resource agencies as well as a review of publicly available Geographic Information Systems (GIS) data:

- Aerial imagery
- National Wetlands Inventory data
- National Hydrography Dataset
- Critical Environmental Areas (CEAs) as designated by the NYSDEC and RTE-occupied habitat databases maintained by the New York Natural Heritage Program (NYNHP)
- NYSDEC-regulated tidal and freshwater wetlands as available through the NYSDEC Environmental Resource Mapper (NYSDEC 2020)
- Soil data available from the U.S. Department of Agriculture Natural Resources Conservation Service
- Flood Insurance Rate Maps from the Federal Emergency Management Agency (FEMA)
- Significant Coastal Fish and Wildlife Habitats (SCFWH) as designated by the NYSDEC
- Significant Natural Communities as designated by the NYSDEC and contained within the NYSDEC Environmental Resource Mapper (NYSDEC 2020)
- A list of RTE species for the Town of Brookhaven as well as Suffolk County, as available through the New York Nature Explorer (Appendix B)
- The results of a USFWS Information for Planning and Conservation (IPaC) query on March 11, 2020, and April 19, 2021 (Appendix C)
- Information on the presence of RTE species proximal to the Onshore Facilities provided in a letter from the NYNHP on March 27, 2020, and April 15, 2021 (Appendix C)
- Details regarding invasive species available from the New York iMapInvasives database and mapping tool
- Published local references, including the Fire Island National Seashore Draft General Management Plan/Environmental Impact Statement (NPS 2015), the Central Pine Barrens Comprehensive Land Use Plan (Central Pine Barrens Joint Planning and Policy Commission 2012), and the Final Design Report / Environmental Assessment for the bridge

[2] Results indicate where resources intersect or are proximal to the primary LIE Service Road Route or to one of the two Route Alternatives that are no longer under consideration.

replacement/highway reconstruction project of the William Floyd Parkway, Route CR 46 over Narrow Bay (NYSDOT 2019)

Where available, digital data were compiled into a GIS data viewer along with aerial imagery and Onshore Facilities components to aid in the analyses. The results of the desktop assessment were used to inform the field surveys.

2.2 FIELD SURVEYS

Wetland/Waterbodies Delineation

Stantec wetland scientists conducted wetland and waterbody delineations during June and October 2020, March and July 2021, and April and May 2022. Wetland boundaries potentially regulated by state and/or federal jurisdiction were determined using the technical criteria described in the *Corps Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Regional Supplement* (USACE 2012). In addition, boundaries of freshwater wetlands regulated under Article 24 of the New York Environmental Conservation Law were delineated according to methods described in the *New York State Freshwater Wetlands Delineation Manual* (Browne et al. 1995). Data collected for each wetland included the dominant vegetation, hydric soil indicators, and wetland hydrology indicators. Details on each delineated wetland are summarized in Section 3.2.1. Streams and other potential waters of the United States were delineated based on NYSDEC technical criteria and the Clean Water Rule: Definition of ‘‘Waters of the United States’’; Final Rule (June 29, 2015). Data collected on streams included flow type, channel width (Ordinary High-Water Mark), and channel substrate. Details of each delineated waterbody are described in Section 3.2.2. The approximate Mean High Water mark was delineated along tidal waterbodies based on physical evidence including presence of wrack, drift, shelving, changes in slope, changes in vegetation, and other observable features. Wetland and watercourse/waterbody boundaries were located using a Global Positioning System (GPS) receiver capable of submeter accuracy.

Principal and secondary functions and values of wetlands were identified during the delineation. The functional assessment largely followed *The Highway Methodology Workbook Supplement: Wetland Function and Value, A Descriptive Approach* (USACE 1999). This method bases function and value determinations on the presence or absence of specific criteria for each of the 13 wetland functions and values: groundwater recharge/discharge; floodflow alteration; fish and shellfish habitat; sediment/toxicant retention; nutrient removal; production export; sediment/shoreline stabilization; wildlife habitat; recreation; educational/scientific value; uniqueness/heritage; visual quality/aesthetics; and endangered species habitat. In addition to the presence or absence of specific functions and values, the probability functional capacity was based on wetland and buffer characteristics (e.g., the presence of associated watercourse or waterbodies, invasive species presence, and adjacent land uses).

Natural Communities and RTE Species Assessment

During the 2020, 2021 and 2022 field visits, Stantec wetland scientists characterized the general natural community types and evaluated their potential to provide habitat potentially suitable for RTE species. Natural communities were classified using Edinger et al. (2014). Any incidental observations of RTE species encountered during field visits were documented.

Additionally, in September 2021, a targeted survey for a state-listed RTE plant species was conducted at a proposed work area along the Onshore Transmission Cable associated with Revilo Avenue (Revilo Avenue work area). The survey was prompted based on observations of the existing habitat conditions made by Stantec during previous site investigations in March 2021, which indicated that the area had potential to support certain RTE plant species noted by the NYNHP in their March 27, 2020, and April 15, 2021 letters. Meander surveys were conducted within the undeveloped portions of the Revilo Avenue work area to observe RTE species. Surveys were conducted during the appropriate time of year to observe the RTE plant species potentially present during their identified flowering period. For observed RTE species, data were recorded on population size, condition, vigor, and the associated habitat conditions. RTE plant populations observed were located with a GPS receiver capable of submeter accuracy and photographs were taken of diagnostic features and the associated habitat area.

Invasive Species Assessment

Invasive species are non-native species that can cause harm to the environment, the economy, or human health. Stantec wetland scientists documented the presence of and evaluated the approximate relative density (low, medium, or high) of invasive plant species during the June and October 2020, March and July 2021, and April and May 2022 field visits. Preliminary invasive species surveys were based on the NYSDEC Invasive Species Management Plan Specifications Template provided by NYSDEC on May 5, 2020. General locations and approximate relative density were recorded on field datasheets and located with GPS.

3.0 RESULTS

3.1 LANDSCAPE OVERVIEW

Long Island Region

Central Long Island's coastal and terrestrial environment varies widely and consists of a diversity of habitats. These range from exposed rocky shores and exposed bedrock, sandy coastal beaches, dunes, freshwater and brackish bays and ponds, and salt marshes fringing the shore of sheltered embayments to intertidal mudflats and sandflats (BOEM 2013). The sandy, coastal beaches along the southeastern coastline of Long Island are characterized by four zones: nearshore bottom (submerged areas below mean low water to 29.5 feet [ft; 9.0 meters {m}]); foreshore (intertidal areas between mean low water to the high tide zone); backshore (exposed sandflats above high tide line to dunes, but occasionally submerged during storms or exceptionally high tides); and dunes (areas of wind-blown sand ridges or mounds above the highest tide line and exposed to wind action) (USFWS 1997). These coastal habitats are constantly changing as a result of wave action and tidal currents that remove, transport, and deposit sediment (DOI-MMS 2007). The primary sources of deposited material, which maintain the sand beaches, is from erosional areas along existing beaches and sand shoals on the inner continental shelf (BOEM 2013). In 2012, Hurricane Sandy's wave energy and storm surge produced extensive coastal erosion along the entirety of Fire Island. Beaches and dunes across the island lost an average of 54% of their pre-storm volume with greater than 75% volume loss estimated near the Landfall/ICW Study Area on Fire Island (USGS 2013).

On Fire Island, American beach grass (*Ammophila breviligulata*) is the dominant plant species on foredunes. Beach plum (*Prunus maritima*), northern bayberry (*Morella pensylvanica*), seaside goldenrod (*Solidago sempervirens*), and eastern poison ivy (*Toxicodendron radicans*) commonly occur on the leeward side (NPS 2015). Interdunal swales, found mostly in the Fire Island Wilderness area located west of the Landfall/ICW Study Area on Fire Island, are wetlands that form when blowouts in the dunes intersect the water table and typical wetland plants such as grasses, forbs and woody shrubs become established. Characteristic species of these swale wetlands include purple gerardia (*Agalinis purpurea*), sundews (*Drosera spp.*), large cranberry (*Vaccinium macrocarpon*), highbush blueberry (*Vaccinium corymbosum*), and northern bayberry. Tidal marshes occupy the backside of Fire Island in broad areas where historic storms have overwashed adjacent upland materials. Common species of Fire Island's tidal marshes are saltwater cord grass (*Spartina alterniflora*), salt-meadow cord grass (*Spartina patens*) and coastal salt grass (*Distichlis spicata*) depending on the level of tidal inundation.

On Long Island's mainland, residential and industrial development has removed or degraded much of the historical natural communities. One exception is the Central Pine Barrens, a 105,000-acre (42,492-ha) area of unique forested and wetland habitats created by The Long Island Pine Barrens Protection Act in 1993. In addition, the headwaters for the Carmans River, which intersects with the Onshore Transmission Route and is one of the four major rivers on Long Island, is located in the Central Pine Barrens. The river is freshwater where the LIE Service Road Route as well as the Montauk Highway Route Alternative

crossings are located. Yaphank Creek begins south of the LIE Service Road Route and flows through Wertheim National Wildlife Refuge in a southeastern direction before meeting Carmans River. The 2,550-acre (1,032-ha) refuge is bisected by Carmans River (approximately 350 ft downstream from the LIE Service Road Route) and provides habitat for resident wildlife species in addition to numerous migratory songbirds, raptors, and waterfowl.

Onshore Facilities

The Onshore Facilities begin at the Landfall Work Area on Fire Island at Smith Point County Park in Suffolk County. The Landfall Work Area occupies a portion of the parking lot at Smith Point County Park on Fire Island, an approximately 425-acre (172-ha) public beach and recreation area owned and managed by Suffolk County. In addition to these paved and disturbed areas, the Landfall/ICW Study Area on Fire Island includes portions of beach along the Atlantic Ocean to the south of William Floyd Parkway and the vegetated backshore areas along the bay side. Coastal habitats associated with the Landfall/ICW Study Area on Fire Island include foreshore, backshore, dune, and interdunal areas. The Landfall/ICW Study Area here also intersects with Maritime Beach, a significant NYSDEC natural community as discussed further below.

From the Landfall Work Area, the Onshore Transmission Cable transits approximately 2,900 ft west-northwest parallel to the Fire Island Beach Road within the paved Smith Point County Park parking lot, crossing under the William Floyd Parkway to a recreational area located to the west of William Floyd Parkway where the ICW Work Area will be located. The Onshore Transmission Cable will then be routed across the ICW via HDD to the ICW Work Area at Smith Point Marina on Long Island's mainland. For the purposes of this analysis, discussion of Great South Bay and Narrow Bay was also included where applicable, as habitats within Great South Bay and Narrow Bay are representative of the hydrologically connected and immediately adjacent ICW. The ICW Work Area largely consists of developed, paved parking lots on both sides of the ICW. Coastal habitats associated with the Landfall/ICW Study Area in the vicinity of the ICW Work Area include beach and dune communities located along the sound side of the mainland and associated interdunal areas.

After reaching the mainland, the Onshore Transmission Cable generally will be confined to established road right-of-way (ROWs) and travel along East Concourse Drive and north along William Floyd Parkway. From William Floyd Parkway, the LIE Service Road Route will then turn west onto Surrey Circle, west along Mastic Boulevard, north along Francine Place and Revilo Avenue, and then west along Victory Avenue. The LIE Service Road Route crosses Carmans River, continues west along Victory Avenue, and turns northwest along Horseblock Road. The LIE Service Road Route crosses the Long Island Rail Road at Manor Road to Long Island Avenue, turns west along the LIE South Service Road, continues to Waverly Avenue, then turns south on Waverly Avenue to Long Island Avenue. The LIE Service Road Route turns west to Long Island Avenue and continues west to Union Avenue to reach the Union Avenue Site. From the Union Avenue Site, the Onshore Interconnection Cable will connect to the existing Holbrook Substation, via one of the potential Onshore Interconnection Cable routes as depicted in Appendix A, Figure 1, all of which are located along existing roadway and utility ROWs.

Terrestrial habitat adjacent to the Onshore Transmission Cable and Union Avenue Site largely consists of developed residential or industrial land uses, with the exception of forested wetlands, open waterbodies, and watercourses at the Carmans River crossing. The Union Avenue Site is primarily a developed industrial/commercial site with small narrow forested areas along parcel boundaries. The majority of the Onshore Transmission Cable has been sited within the paved portions of existing roadway ROW. The majority of the Onshore Interconnection Cable has been sited within the existing roadway and utility-owned or controlled property.

3.2 WETLAND AND WATERBODY RESOURCES

3.2.1 Wetlands

3.2.1.1 NWI-Mapped Wetlands

The National Wetland Inventory (NWI) provides information on the general characteristics and distribution of different types of wetlands. Descriptions are all adapted from Cowardin et al. (1979) and as described in Federal Geographic Data Committee (2013). Based on a desktop review of NWI data, the Onshore Transmission Cable Study Area intersects NWI-mapped wetlands in the following locations, as depicted in Appendix A, Figure 2a:

- Landfall Work Area and ICW HDD
  - Estuarine wetlands (E1AB3L, E1UBL, and E2U5N) in Narrow Bay
- LIE Service Road Route
  - Inundated deepwater aquatic habitats and aquatic wetlands including riverine wetlands (R2UBHh), lacustrine wetlands (L1UBHh), and palustrine scrub-shrub (PSS3/1Ba) wetlands associated with the crossing of the Carmans River and associated work area in Southaven County Park
- Montauk Highway Route Alternative or Peconic Avenue Route Alternative
  - Palustrine forested (PFO1E) and unconsolidated bottom (PUBHh) wetlands associated with the crossing of the Carmans River and Palustrine forested (PFO1E) and riverine wetlands (R2UBH) associated with crossing of Yaphank Creek

Estuarine wetlands are deepwater tidal habitats and adjacent tidal habitats that are usually semi-enclosed by land but have open, partly obstructed, or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff. Palustrine wetlands are nontidal wetlands dominated by trees, shrubs, persistent emergent vegetation, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 parts per thousand. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5 m (8.2 ft) at low water; and (4) salinity due to ocean-derived salts less than 0.5 parts per thousand (FGDC 2013). Unconsolidated bottom wetlands have at least 25% cover of particles smaller than stones and a vegetative cover less than 30%.

Based on a desktop review of NWI data, the Study Area is proximal to NWI-mapped wetlands in several locations, as depicted in Appendix A, Figure 2:

- Two small unconsolidated bottom (PUBHx) excavated NWI wetlands are mapped along the LIE Service Road Route: one west of the intersection of Blue Point Road and Expressway Drive S and a second near the intersection between Horseblock Road and Zorn Boulevard.
- One NWI-mapped seasonally flooded, palustrine emergent persistent wetland (PEM1A) is located approximately 170 ft (52 m) east of the Interconnection Cable Route.

There are no NWI wetland resources mapped proximal to the portion of the Peconic Avenue Route Alternative that differs from the LIE Service Road Route. There are no NWI wetlands mapped proximal to the Union Avenue Site.

3.2.1.2 NYSDEC-Regulated Wetlands

Freshwater wetlands in New York, under Article 24 of the New York Environment Conservation Law (NYECL), must be at least 12.4 acres (5 ha) or provide local importance if smaller in area. An adjacent area of 100 ft (30.5 m) around a mapped NYSDEC freshwater wetland is regulated to provide further protection. Coastal tidal wetlands, under Article 25 of the NYECL, are those areas that border on or lie beneath tidal waters, such as, but not limited to, banks, bogs, salt marsh, swamps, meadows, flats or other low lands subject to tidal action, including those areas now or formerly connected to tidal waters. An adjacent area of up to 300 ft (91.4 m) inland from the tidal wetland boundary are regulated to provide further protection.

The Landfall/ICW Study Area on Fire Island will be located within 300 ft (91.4 m) of tidal wetlands mapped by the NYSDEC, including Littoral Zone and Coastal Shoals, Bars, and Mudflats wetland categories. However, since the parking lot at Smith Point County Park has been in existence since prior to August 20, 1977, the adjacent area for the northern edge of the Landfall/ICW Study Area includes the area up to the seaward edge of this parking lot[3]. The ICW HDD will be located underneath tidal wetlands as mapped by the NYSDEC including Littoral Zone and Coastal Shoals, Bars, and Mudflats wetland categories. The Landfall/ICW Study Area on the Mainland will be located within the 300 ft (91.4 m) adjacent area of mapped Littoral Zone, Intertidal Marsh, and High Marsh tidal wetlands to the west of the site (Appendix A, Figure 2b). Adjacent areas are depicted in Appendix A, Figure 3.

[3] 6 CRR-NY 66.4(b)(1)(ii): to the seaward edge of the closest lawfully and presently existing (i.e., as of August 20, 1977), functional and substantial fabricated structure (including, but not limited to, paved streets and highways, railroads, bulkheads and sea walls, and rip-rap walls) which lies generally parallel to said most tidal wetland landward boundary and which is a minimum of 100 feet in length as measured generally parallel to such most landward boundary, but not including individual buildings.

The LIE Service Road Route will traverse one area of mapped NYSDEC-regulated freshwater wetlands based on a review of spatial data available from the NYSDEC:

- Wetlands (Class I) associated with the crossing of the Carmans River and HDD area in Southaven County Park

The Montauk Highway Route Alternative and the Peconic Avenue Route Alternative would traverse two areas of mapped NYSDEC-regulated freshwater wetlands based on a review of spatial data available from the NYSDEC:

- Wetlands (Class I), including Formerly Connected tidal wetlands, associated with an alternative crossing of the Carmans River
- Wetlands (Class I) associated with an alternative crossing of Yaphank Creek

Per 6 CRR-NY 664.5, Class I wetlands have any of the following seven characteristics:

- classic kettlehole bog
- provides resident habitat of an endangered or threatened animal species
- contains an endangered or threatened plant species
- supports an animal species in abundance or diversity unusual for the State
- is a tributary to a body of water which could subject a sustainably developed area to significant damage from flooding or from additional flooding should the wetland be modified, filled or drained
- is adjacent or contiguous to a reservoir or other body of water that is used primarily for public water supply, or it is hydraulically connected to an aquifer which is used for public water supply
- contains four or more of the Class II wetland characteristics

Class II wetlands per 6 CRR-NY 664.5 have any of the following 17 characteristics;

- emergent marsh in which purple loosestrife and/or reed (phragmites) constitutes less than two thirds of the cover type
- contains two or more wetland structural groups
- is contiguous to a tidal wetland
- is associated with permanent open water outside the wetland
- is adjacent or contiguous to streams classified C(t)[4] or higher under Article 15 of the NYECL
- is traditional migration habitat of an endangered or threatened animal species
- is resident habitat of an animal species vulnerable in the State
- contains a plant species vulnerable in the State
- supports an animal species in abundance or diversity unusual for the county in which it is found
- has demonstrable archaeological or paleontological significance as a wetland

[4] Under 6 CRR-NY 608.1, the “C” classification is for waters supporting fisheries and a “t” standard is for waters that may support a trout population. A “ts” standard is for waters that may support trout spawning. Waters with a “B” classification have a best usage for swimming and other contact recreation, but not for drinking water. An “A” classification is assigned to waters that can be used as sources for drinking water.

- contains, is part of, owes its existence to, or is ecologically associated with, an unusual geological feature which is an excellent representation of its type
- is tributary to a body of water which could subject a lightly developed area, an area used for growing crops for harvest, or an area planned for development by a local planning authority, to significant damage from flooding or from additional flooding should the wetland be modified, filled or drained
- is hydraulically connected to an aquifer which has been identified by a government agency as a potentially useful water supply
- acts in a tertiary treatment capacity for a sewage disposal system
- is within an urbanized area
- is one of the three largest wetlands within a city, town, or New York City borough
- is within a publicly owned recreation area

Based on a review of available spatial data, there are no additional mapped NYSDEC-regulated freshwater wetlands along other areas of the Onshore Transmission Cable, at the Union Avenue Site, or along the Onshore Interconnection Cable. Appendix A, Figures 2a and 2b depict wetland resources from desktop review in the vicinity of the Onshore Facilities.

3.2.2 Waterbodies

The National Hydrogeography Dataset is managed by the U.S. Geological Survey and provides spatial data on the nation's drainage networks and related features, including rivers, streams, canals, lakes, ponds, glaciers, coastlines, dams, and stream gages. Under Article 15 of the NYECL, certain waters of NYS are protected on the basis of their classification. Streams and small water bodies located in the course of a stream that are designated as C(t) or higher (i.e., C(ts), B, or A)[4] are collectively referred to as "protected streams". Additionally, small ponds and lakes with a surface area of 10 acres (4 ha) or less, located within the course of a stream, are considered to be part of a stream and are also subject to regulation under the stream protection category of Protection of Waters.

Three waterbodies are intersected by the LIE Service Road Route, the Montauk Highway Route Alternative, and/or the Peconic Avenue Route Alternative, based on a review of available data:

- Landfall Work Area and ICW HDD
    - The ICW between the ICW Work Area at Smith Point County Park and ICW Work Area at Smith Point Marina
- LIE Service Road Route
    - Carmans River north of Victory Avenue
- Montauk Highway Route Alternative and Peconic Avenue Route Alternative
    Carmans River north of Montauk Highway and Yaphank Creek on Montauk Highway

No other mapped waterbodies are intersected by the Onshore Facilities. An unnamed freshwater pond (PABHx) is located proximal to the LIE Service Road Route near the intersection of Express Drive South and North Ocean Ave but does not extend into the proposed corridor. There are no waterbody resources mapped proximal to the Union Avenue Site.

Appendix A, Figures 2a and 2b depicts waterbody resources from desktop review in the vicinity of the Landfall Work Area, ICW Work Area, Onshore Transmission Cable, Union Avenue Site, and Onshore Interconnection Cable.

3.2.3 Wetland and Waterbodies Delineation

On June 8–16, 2020, October 19–20, 2020, March 29–30, 2021,July 20, 2021, April 4–6, 2022, and May 5, 2022 Stantec wetland scientists conducted a wetland and waterbody delineation of the Onshore Facilities including the Landfall/ICW Study Area on Fire Island; Landfall/ICW Study Area on the Mainland; and the Onshore Transmission Cable Study Area, including the LIE Service Road Route, as well as the Montauk Highway Route Alternative and Peconic Avenue Route Alternative; the Union Avenue Site, and accessible portions of the Onshore Interconnection Cable Study Area. Surveys at the Wertheim National Wildlife Refuge associated with the Montauk Highway Route Alternative were completed under USFWS Research and Monitoring Special Use Permit #2020-17.

Stantec scientists delineated a total of 14 wetlands, 5 watercourses, and 2 waterbodies within the Onshore Facilities. Of these, three wetlands occur in the Landfall Study Area, two wetlands occur within the ICW Study Area, and five wetlands, two waterbodies, and two watercourses occur within the LIE Service Road Route. No wetlands, watercourses or waterbodies were delineated in the accessible portion of the Interconnection Cable Study Area. Details for the delineated features are organized by project component below and in Appendix A, Figure 3. Photographs and USACE Wetland Determination Forms for each wetland are included in Appendix D. A summary table, Table 2, is provided below in Section 3.2.4.

3.2.3.1 Landfall Work Area:

- **Wetland W-01ASA** is characterized as an estuarine, intertidal wetland system (E1SS/EM) dominated by common reed (*Phragmites australis*), rambler rose (*Rosa multiflora*) and Jesuit's-bark (*Iva frutescens*) and is consistent with the NWI classification. Additional species of vegetation include northern bayberry, and eastern poison ivy. This wetland is located along the northeastern edge of the Smith Point County Park on the backslope of Fire Island abutting Great South Bay. The eastern portion of this feature overlaps with the Smith Point County Park SCFWH unit. See Section 3.3 for further discussion of this SCWFH. A wrack line was observed, with the upland edge of the wetland extending toward the parking lot to the south and east. The wetland contains sandy soils with redoximorphic features. At the time of the delineation, evidence of wetland hydrology included a high-water table (approximately 10 inches [in] below the ground surface), and saturation at the soil surface.

- **Wetland W-01ASB** is characterized as an estuarine, intertidal wetland system (E1SS/EM) dominated by groundsel tree (*Baccharis halimifolia*), common reed, rambler rose, and Jesuit's-bark and is consistent with the NWI classification. Additional species of vegetation include northern bayberry and eastern poison ivy. The wetland is located along the northeastern edge of the Smith Point County Park on the backslope of Fire Island abutting Great South Bay. A wrack line was observed, with the upland edge of the wetland extending toward the parking lot to the

east and upland area of Fire Island National Seashore. The wetland contains sandy soils with redoximorphic features. At the time of the delineation, evidence of wetland hydrology included a high-water table (approximately 10 in below the ground surface), and saturation at the soil surface.

- **Wetland W-01CFA** is an estuarine, intertidal wetland system (E1SS/EM) dominated by Jesuit's-bark, northern bayberry, and common reed. The wetland is located along the north edge of the Smith Point County Park on the backslope of Fire Island abutting Great South Bay. The wetland contains sandy soils with redoximorphic features. At the time of the delineation, evidence of wetland hydrology included soil saturation at the surface.

3.2.3.2 ICW Work Area:

- **Wetland W-01ASC** is a palustrine (freshwater), man-made basin dominated by common reed (PEM). Additional species of vegetation include eastern poison ivy. The wetland is located several hundred feet inland from the northern shore of Great South Bay at the Smith Point Marina on the mainland and consists of two manmade catchment areas surrounded by boat launch parking. The northern and southern basins are bisected by an asphalt travel lane in the parking area that may provide overland surface flow during extreme rain events. This feature occurs within the Town of Brookhaven Coastal Zone Area South CEA unit. See Section 3.3 for further discussion of this CEA. The wetland contains sandy soils with redoximorphic features. At the time of the delineation, evidence of wetland hydrology included soil saturation within 12 in of the surface, geomorphic position, and soil cracks.

- **Wetland W-01CFB** is a palustrine (freshwater), man-made basin dominated by common reed (PEM). The wetland is located on the southeastern shore of Great South Bay at the Smith Point Marina on the mainland, along the edge of the survey area. This feature occurs within the Town of Brookhaven Coastal Zone Area South CEA unit. The wetland contains sandy soils with redoximorphic features. At the time of the delineation, evidence of wetland hydrology included soil saturation within 12 in of the surface, geomorphic position, and soil cracks. A portion of the wetland located outside the survey limits contained standing water and waterfowl were observed.

3.2.3.3 Onshore Transmission Cable:

LIE Service Road Route

- **Waterbody WB-10MAA** is a palustrine (freshwater) unconsolidated bottom (PUB) pond in Southaven County Park. It is an open waterbody. It was unvegetated at the time of the March field survey but likely supports non-persistent submerged and emerged macrophytes. Small, unidentified fish were observed at the time of the delineation.

- **Wetland W-10MAB** is a palustrine (freshwater) scrub-shrub (PSS1E) wetland in a confined basin located to the south of wetland W-10MAA in Southaven County Park. Dominant and characteristic shrubs include clammy azalea (*Rhododendron viscosum*) and highbush blueberry. Herbaceous plants were sparse at the time of the field visit but included scattered emerging

individuals of skunk-cabbage (*Symplocarpus foetidus*). Soils were histosols, consisting of over 20 in of mucky organic material. Evidence of hydrology at the time of the delineation included four in of surface water, soil saturation at the surface, and geomorphic position.

- **Wetland W-10MAC** is a palustrine (freshwater) forested (PFO1E) wetland located to the west of wetland 10MAA in Southaven County Park. It is dominated by trees of black tupelo (*Nyssa sylvatica*) and red maple (*Acer rubrum*) with a shrub stratum dominated by highbush blueberry, clammy azalea, and coastal sweet-pepperbush (*Clethra alnifolia*). Herbaceous plants were sparse at the time of the field survey and included emerging individuals of skunk-cabbage. Soils were sandy and consisted of a stripped matrix. Evidence of hydrology at the time of the delineation included water stained leaves, 4 in of surface water, geomorphic position, and saturation visible on aerial imagery.

- **Waterbody WB-01GPA** consists of a large impounded lacustrine waterbody with an unconsolidated bottom (L2UB2/3) associated with the Carmans River. The southern portion of the waterbody within the delineation area consists of generally shallow water habitats, approximately less than 10 ft deep. Aquatic vegetation observed at the time of the delineation included persistent patches of swamp-loosestrife (*Decodon verticillatus*).

- **Wetland W-01GPA is** a small PFO1E portion is located in the southwest portion of waterbody WB-01GPA. This area is dominated by red maple trees and coastal sweet-pepperbush shrubs. The soils were sandy with redoximorphic features. Evidence of hydrology at the time of the delineation included water marks and geomorphological position.

- **Wetland W-01GPB** is a small floodplain palustrine forested (PFO1E) wetland along the southeastern edge of waterbody WB-01GPA. The wetland includes a canopy dominated by red maple and American elm (*Ulmus americana*) trees. The understory is sparse and consists of small patches of horsebrier (*Smilax rotundifolia*). The soils were sandy with redoximorphic features. Evidence of hydrology at the time of the delineation included water marks and geomorphological position.

- **Wetland W-01GPC** is a palustrine forested (PFO1E) wetland located between Victory Avenue and Route 27. Hydrology is provided primarily by surface water runoff from the neighboring roadway surfaces. The wetland includes a canopy dominated by red maple trees. Understory species include smooth arrow-wood (*Viburnum recognitum*) and maleberry (*Lyonia ligustrina*). Herbaceous species observed at the time of the delineation include lamp rush (*Juncus effusus*), cinnamon fern (*Osmundastrum cinnamomeum*), and tussock sedge (*Carex stricta*). The soils were sandy with redoximorphic features. Evidence of hydrology included presence of standing water approximately 3 in deep, soil saturation at the surface, and water marks.

- **Watercourse S-10MA** is a perennial watercourse (R2UB2) flowing to the southeast from wetland W-10MAA into waterbody WB-01GPA in Southaven County Park. It is approximately 10 ft wide with a sandy substrate. It contained approximately 6 to 8 in of water at the time of the delineation and had bank heights of approximately 1.5 ft.

Watercourse S-01GP is the Carmans River, a perennial freshwater stream (R2UBH). Within the Victory Avenue survey area, the banks of the Carmans River have been channelized as a result of historic roadway construction. The river channel originates at a small dam at the outlet of waterbody 01GPA. The river ranges from approximately 40 to 60 ft wide within the delineation area. A fish ladder is present at the dam location.

Montauk Highway Route Alternative or Peconic Avenue Route Alternative

- **Wetland W-01ASD** is characterized as palustrine (freshwater) scrub/shrub wetland (PSS1E) that is within a riparian area adjacent to Yaphank Creek. It is located along Montauk Highway northeast of the intersection with Old South County Road. Dominant vegetation within the wetland includes rambler rose, Chinaroot (*Smilax hispida*), spotted touch-me-not (*Impatiens capensis*), river-bank grape (*Vitis riparia*), and smooth arrow-wood. At the time of the delineation, evidence of wetland hydrology included a high-water table (approximately 8 in below the ground surface) and saturation at the soil surface.

- **Wetland W-01ASE** is a palustrine (freshwater) scrub/shrub wetland dominated by skunk-cabbage and jewelweed (*Impatiens capensis*) located along Montauk Highway south of the intersection with Old South County Road. This feature occurs within the Town of Brookhaven Coastal Zone Area South CEA unit. Other vegetation within the wetland includes rambler rose and Chinaroot. At the time of the delineation, evidence of wetland hydrology included a high-water table (approximately 8 in below the ground surface) and saturation at the soil surface.

- **Wetlands W-01CFC/01JRB and W-01CFD/01JRA** are characterized as palustrine (freshwater) forested wetlands (PFO1E) along the banks of Carmans River and have been documented as a high-value Red Maple – Blackgum Swamp (a NYNHP Significant Natural Community). Both features are within the Town of Brookhaven Coastal Zone Area South CEA unit and the Carmans River SCFWH. The forested wetlands and Carmans River are part of the USFWS Wertheirm National Wildlife Refuge along Montauk Highway (County Road 80). Dominant vegetation within these wetlands includes red maple, black tupelo trees with coastal sweet-pepperbush, northern spicebush (*Lindera benzoin*), and northern arrow-wood shrubs and skunk-cabbage, cinnamon fern, and sensitive fern (*Onoclea sensibilis*) in the herbaceous layer. Common reed, highbush blueberry, and horsebrier are scattered within the wetlands. The forested wetlands contain deep organic soils near the Carmans River impoundment and sandy soils with a stripped matrix along the wetland edges. At the time of the delineation, evidence of wetland hydrology included a shallow water table, saturation at the soil surface, and water-stained leaves.

- **Watercourse S-01CF** is a freshwater river (Carmans River R2UBH) that crosses the Onshore Transmission Cable Survey Area, is classified as a SCFWH and is within the Town of Brookhaven Coastal Zone Area South CEA unit. The river flows southeast under Montauk Highway along the banks of the forested wetland portions of W-01CFC and W-01CFD. The river adjacent to the highway was flooded up to the forested wetlands on both banks and contained a mucky substrate. At the time of the delineation, approximately 3 to 4 ft of flowing water was

observed within the stream channel. Several people were observed kayaking in the river during the delineation.

- **Watercourse S-01AS** is a small freshwater intermittent stream (Yaphank Creek) where it crosses the Onshore Transmission Cable Survey Area. The stream flows under Montauk Highway through a culvert in a southern direction. The feature was dry in June with an ordinary high-water mark of approximately 3 ft and bank depth of 1 ft.
- **Watercourse S-02MA** is a small freshwater perennial tributary stream (R2UB3) of the Carmans River and originates from a groundwater seep adjacent to the Montauk Highway. It flows westerly for approximately 100 ft before intersecting the Carmans River. This feature is within the Town of Brookhaven Coastal Zone Area South CEA unit and overlaps with high-value Red Maple – Blackgum swamp. The banks of the stream were approximately 7 ft wide, and the stream had a deep mucky substrate. Approximately 6 to 8 in of water were observed within the channel at the time of the delineation.

Functions and values provided by the wetlands located within the Onshore Facilities include groundwater recharge and discharge, floodflow alteration, and water quality protection (i.e., sediment/toxicant retention and nutrient removal). Those wetlands associated with Great South Bay and Carmans River provide fish and shellfish habitat, wildlife habitat, endangered species habitat, significant social values such as recreation, education/scientific value, uniqueness/heritage, and visual quality/aesthetic values. Although these functions and values are not principal for all the delineated wetlands, it is expected that they provide these functions and values by varying degrees depending on characteristics such as size, percent vegetation cover, and landscape position. Larger wetland complexes would have a greater capacity to provide most functions. Similarly, wetlands dominated by dense vegetation would be capable of retaining and slowing surface water flow, thereby reducing potential flooding and protecting water quality by allowing sediment to settle out of the water column. Key functions and values of the delineated features within the Onshore Facilities are summarized in Table 1.

Table 1. Summary of Functions and Values of Delineated Features

Nearest Project Location	Feature ID	Groundwater Recharge and Discharge	Floodflow Alteration	Sediment Retention and Nutrient Removal	Sediment and Shoreline Stabilization	Fish and Shellfish Habitat	Wildlife Habitat	RTE Species Habitat	Recreation, Educational, Scientific Value, Uniqueness, Visual Quality, Aesthetics
Landfall/ICW Work Area	W-01ASA		×	×	×		×		
	W-01ASB		×	×	×		×		
	W-01CFA		×	×	×		×		
LIE Service Road Route	WB-10MAA	×	×	×	×	×	×	×	×
	W-10MAB			×		×			
	W-10MAC	×	×	×	×	×	×	×	×
	WB-01GPA	×	×	×	×	×	×	×	×
	W-01GPA	×	×	×	×	×	×	×	×
	W-01GPB		×	×	×		×		
	W-01GBC		×	×					
	S-10MA	×	×		×	×	×		×
	S-01GP	×	×	×	×	×	×	×	×
Montauk Highway Route Alternative	W-01ASC		×	×			×		
	W-01CFB		×	×	×		×		
	W-01CFC/01JRB	×	×	×	×		×	×	×
	W-01CFD/01JRA	×	×	×	×		×	×	×
	S-01CF		×			×	×	×	×
	S-02MA	×	×			×	×	×	
Peconic Avenue Route Alternative	W-01ASD	×	×	×	×		×	×	
	W-01ASE	×	×	×	×		×	×	
	S-01AS					×	×		

3.2.4 Summary

Table 2 summarizes the wetland and waterbody resources associated with the Onshore Facilities. The location of the wetland and waterbody resources relative to the Onshore Facilities are provided in Appendix A, Figure 3. Field results supported the results of the desktop assessment and allowed for further refinement of wetland and waterbody locations relative to the Onshore Facilities. As expected, these resources were concentrated in two locations: Landfall/ICW Study Area on Fire Island (Appendix A, Figure 3, Sheets 1–2) as well as the Onshore Transmission Cable, near where the LIE Service Road Route crosses the Carmans River near Victory Avenue (Appendix A, Figure 3, Sheet 8). Additional wetlands were delineated in locations associated with the Montauk or Peconic Route Alternatives, including where the route crosses Carmans River near Montauk Highway (Appendix A, Figure 3, Sheet 8) and Yaphank Creek (Appendix A, Figure 3, Sheet 9). No wetland or waterbodies were delineated along other areas of the Onshore Transmission Cable Study Area, the Union Avenue Site, or the Interconnection Cable Study Area.

Table 2. Summary of Wetland and Waterbody Resources

Onshore Facility		Wetland and Waterbody Resources Documented Via Desktop Review	Wetland and Waterbody Resources Identified Via Field Survey
Landfall/ICW Study Area on Fire Island and Mainland	Landfall Work Area	Wetlands • NYSDEC-mapped tidal wetlands (adjacent) • NYSDEC-mapped estuarine wetlands (adjacent)	Delineated Wetlands • Estuarine (W-01ASA, W-01ASB, and W-01CFA)
		Waterbodies • Atlantic Ocean (adjacent) • Great South Bay (adjacent)	Delineated Waterbodies • None
	ICW Work Area	Wetlands • NYSDEC-mapped tidal wetlands (adjacent) • NYSDEC-mapped estuarine wetlands (adjacent)	Delineated Wetlands • Palustrine (W-01ASC and W-01CFB)
		Waterbodies • Narrow Bay (adjacent)	Delineated Waterbodies • None
Onshore Transmission Cable	LIE Service Road Route	Wetlands • NYSDEC-mapped freshwater wetlands at and adjacent to Carmans River in Southaven County Park • NWI-mapped wetlands at Carmans River Crossing Waterbodies • Carmans River	Delineated Waterbodies • Watercourse S-10MA • Watercourse S-01GP (Carmans River) • Waterbody WB-10MAA and WB-01GPA in Southaven County Park Delineated Wetlands • Palustrine (W-10MAB, W-10MAC, W-01GPB) near Carmans River in Southaven County Park • Palustrine (W-01GPC) near Carmans River
	Montauk Highway Route Alternative or Peconic Avenue Route Alternative	Waterbodies • Carmans River • Yaphank Creek Wetlands • NYSDEC-mapped Formerly Connected tidal wetlands at Carmans River alternative crossing • NYSDEC-mapped freshwater wetlands at and adjacent to Carmans River and Yaphank Creek alternative crossing s • NWI-mapped wetlands at Carmans River and Yaphank Creek alternative crossings	Delineated Waterbodies • Watercourse S-01AS (Yaphank Creek) • Watercourse S-01CF (Carmans River) • Watercourse S-02MA (tributary to Carmans River) Delineated Wetlands • Palustrine (W-01ASD and W-01ASE) near Yaphank Creek alternative crossing • Palustrine (W-01CFC/01JRB and W-01CFD/01JRA) near Carmans River alternative crossing
Union Avenue Site		• None	• None
Onshore Interconnection Cable Route		• NWI-mapped wetland east of route	• None

3.3 SIGNIFICANT AND CRITICAL NATURAL COMMUNITIES AND HABITATS

3.3.1 Critical Environmental Areas

A portion of the Landfall/ICW Study Area intersects with the Coastal Zone Area South CEA on the mainland (Appendix A, Figure 4). In addition, the Onshore Transmission Cable traverses the Coastal Zone Area South CEA in an approximately 1-mi (1.6-km) segment along William Floyd Parkway from ICW Work Area to its intersection with Fawn Place as well as an approximately 0.7-mi (1.1 km) segment at the Carmans River crossing. Coastal Zone Area South CEA has been designated by the Town of Brookhaven to protect public health, open space, and wetlands. The Onshore Facilities within this CEA have been largely located within existing developed areas including parking lots and paved roadways. The Onshore Transmission Cable crossing of the Carmans River and associated wetlands will be constructed through use of HDD to avoid and minimize impacts within undeveloped areas.

3.3.2 Significant Coastal Fish and Wildlife Habitats

There are four SCFWHs associated with the Onshore Facilities:

- Great South Bay–East
- Smith Point County Park
- Moriches Bay
- Carmans River

Great South Bay–East

The Great South Bay–East SCFWH is located in the portion of the ICW between Landfall/ICW Study Area on Fire Island and the Landfall/ICW Study Area on Mainland, west of the Smith Point Bridge. The Great South Bay–East SCFWH is identified as the largest protected, shallow, coastal bay in NYS and provides feeding and nesting habitat for several RTE avian species and supports one of the largest concentrations of wintering waterfowl in NYS (NYSDEC 2008a).

The ICW HDD will traverse this SCFWH but will be installed using HDD to avoid and minimize potential impacts to this area.

Smith Point County Park

The Smith Point County Park SCFWH intersects the Landfall/ICW Study Area on Fire Island. The Smith Point County Park SCFWH is identified as one of the largest segments of an undeveloped barrier beach ecosystem on Long Island and provides feeding and nesting habitat for several RTE avian species and supports populations of RTE plant species such as seabeach amaranth (*Amaranthus pumilus*) and seabeach knotweed (*Polygonum glaucum*). The park receives heavy recreational use during the summer months and is subject to disturbance by pedestrian and off-road vehicle traffic. The dunelands also comprise a significant segment of the fall migration corridor for raptors (NYSDEC 2008b).

The Landfall Work Area on Fire Island overlaps portions of the mapped SCFWH but the Landfall Work Area and ICW Work Area are located in developed parking lots, which will avoid direct impacts. If conducted on the beach, HDD cable duct stringing activities would require laydown of linked conduit sections within this SCFWH prior to installation via HDD. No grading will occur to complete the pipe stringing activity. HDD cable duct stringing work may result in the short-term disturbance to vegetation for approximately 2 to 3 weeks per duct between December and March. The beach area where the HDD conduit stringing is proposed consists of an unvegetated sand beach that is well-used by pedestrians and portions are open to vehicular traffic. Vegetated sand dunes will not be affected by the HDD conduit stringing activities. When the pipe is pulled into the water, rollers will be used as appropriate.

Moriches Bay

The Moriches Bay SCFWH abuts the Landfall/ICW Study Area on Fire Island. It is identified as one of the largest, protected, shallow, coastal bays in NYS and provides feeding and nesting habitat for several RTE avian species and supports significant concentrations of wintering waterfowl in NYS. It is a highly productive bay and supports regionally significant habitat for fish and shellfish, migrating and wintering waterfowl, colonial nesting waterbirds, beach-nesting birds, migratory shorebirds, raptors, and rare plants (NYSDEC 2008c).

The Landfall/ICW Study Area on Fire Island abuts this SCFWH but the Landfall Work Area and ICW Work Area are located in developed parking lots, which will avoid direct impacts.

Some equipment and materials required for the Landfall HDD and ICW HDD will be transported via barge from the Smith Point Marina to Smith Point County Park due to existing weight limit restrictions on the Smith Point Bridge. A temporary landing structure will be installed at Smith Point County Park to aid in the offloading of equipment/materials. The area of the temporary landing structure would be up to approximately 4,800 sq ft (650 sq m) and may consist of a floating module(s), bridge sections and/or a ramp or transition pad connecting the landing structure to shore. The temporary nature of the pier will further minimize potential impacts to the natural resources of Moriches Bay SCFWH.

Carmans River

The Carmans River SCFWH intersects a small section (approximately 70 ft [21 m]) of the LIE Service Road Route where the cable crosses the Carmans River. The Carmans River SCFWH also intersects the alternative crossing for the Carmans River associated with the Montauk Highway Route Alternative (480 ft [146 m]). The Carmans River SCFWH is identified as one of only four major riverine systems on Long Island and it contains undeveloped lands and is used by rare species, including peregrine falcon (*Falcos peregrinus*), eastern tiger salamander (*Ambystoma tigrinum*), eastern box turtle (*Terapene carolina*), osprey (*Pandion haliaetus*), and potentially pied-billed grebe (*Podilymbus podiceps*). The Carmans River SCFWH is also identified as one of the few streams on Long Island that support concentrations of sea-run brown trout (*Salmo trutta*) and wild brook trout (*Salvelinus fontinalis*) (NYSDEC 2008d).

Installation of the Onshore Transmission Cable via HDD under the Carmans River will avoid and minimize potential impacts to this area.

3.3.3 Significant Natural Communities

There are five significant natural community types associated with the proposed Onshore Facilities (Figure 4) as identified by the NYNHP in their March 27, 2020, and April 15, 2021, letters:

- Maritime Beach and Maritime Intertidal Gravel/Sand Beach
- Marine Eelgrass Meadow
- Marine Back-barrier Lagoon
- Red Maple – Blackgum Swamp
- Brackish Tidal Marsh

Maritime Beach and Maritime Intertidal Gravel/Sand Beach

A Maritime Beach and Maritime Intertidal Gravel/Sand Beach is associated with the Landfall/ICW Study Area on Fire Island. It is part of a 32-mi (51.5-km) community partially within the Smith Point County Park SCFWH area on Fire Island. The Maritime Beach is a sparsely vegetated community dominated by beach grass. It occurs on unstable sand, gravel, or cobble shores above the mean high tide line and is continually modified through wave and wind action (NYSDEC 2008b; Edinger at al. 2014).

Locating components within an existing parking lot at the Fire Island landfall location and utilizing HDD construction methods for cable installation will avoid and minimize potential impacts to this natural community.

If conducted on the beach, HDD cable duct stringing activities would require laydown of linked conduit sections within this SCFWH prior to installation via HDD. HDD cable duct stringing work may result in the short-term disturbance to vegetation for approximately 2 to 3 weeks per duct between December and March.

Marine Eelgrass Meadow

Areas of extensive Marine Eelgrass Meadow are located in Narrow Bay between Smith Point County Park and Smith Point Marina. The NYNHP states that the community is in good condition within a fair quality landscape. The community is dominated by eelgrass (*Zostera marina*) along with occurrences of wigeon grass (*Ruppia maritima*). It also supports a diverse array of attached and suspended marine algae. The areas of submerged aquatic vegetation are highly productive and provide spawning and foraging habitat for many species of mollusks, crustaceans, juvenile fish, and diving ducks and they also enhance sediment stability (NYSDEC 2008a; Edinger at al. 2014). Additional information about submerged aquatic vegetation in the vicinity of the Landfall/ICW Study Area is included in the separate Benthic Resources Characterization Report – New York State Waters (INSPIRE 2020).

Installation of the Onshore Transmission Cable via HDD under the ICW will avoid and minimize potential impacts to this community type. Some equipment and materials required for the Landfall HDD and ICW HDD will be transported via barge from the Smith Point Marina to Smith Point County Park due to existing weight limit restrictions on the Smith Point Bridge. A temporary landing structure will be installed at Smith Point County Park to aid in the offloading of equipment/materials. The area of the temporary landing

structure would be up to approximately 7,000 sq ft (650 sq m) and may consist of a floating module(s), bridge sections and/or a ramp or transition pad connecting the landing structure to shore. Submerged aquatic vegetation surveys will be conducted prior to construction (anticipated in summer 2022) and the pier will be positioned to avoid and minimize impacts to this community type.

Marine Back-barrier Lagoon

In its March 27, 2020, and April 15, 2021, letters, the NYNHP notes an occurrence of a Marine Back-barrier Lagoon associated with Great South Bay and Moriches Bay near the Landfall/ICW Study Area. NYNHP indicates that it is a very large system in good condition within a fair but mostly developed landscape.

Installation of the Onshore Transmission Cable via HDD construction under the ICW will avoid and minimize potential impacts to this community type.

Red Maple – Blackgum Swamp

A Red Maple – Blackgum Swamp is located along the eastern shore of the Carmans River, immediately adjacent to the alternative crossing for the Carmans River associated with the Montauk Highway Route Alternative. The community is dominated by red maple, black tupelo, and coastal sweet-pepperbush (NYSDEC 2008d). The NYNHP notes in their March 27, 2020, and April 15, 2021, letters that the swamp is of moderate size with good diversity and some large diameter trees. A second community area is located approximately 300 ft (91.4 m) south of the alternative crossing of Yaphank Creek associated with the Montauk Route Alternative, just east of South Haven School along Montauk Highway.

The LIE Service Road Route is approximately 300 ft (91 m) north of this natural community type associated with Wetland W-10MAC. Therefore, no impacts to this community type are anticipated.

Brackish Tidal Marsh

The NYNHP identified an occurrence of a Brackish Tidal Marsh approximately 0.4 mi (0.6 km) south of the Onshore Transmission alternative crossing of the Carmans River associated with the Montauk Highway Route Alternative in their March 27, 2020, letter. The community is approximately 214 acres (87 ha) and dominated by graminoids including salt marsh bulrush (*Bolboschoenus robustus*), Olney three-square (*Schoenoplectus americanus*), and wild rice (*Zizania aquatica*) (NYSDEC 2008d).

The Onshore Transmission Cable location is approximately 0.5 mi (0.8 km) north of this community and, therefore, no impacts to this community type are anticipated.

3.3.4 Central Pine Barrens

The Long Island Pine Barrens Protection Act established an approximately 105,000-acre (42,492-ha) region on Long Island in 1993. The region includes an approximately 52,500-acre (21246-ha) Core Preservation and an approximately 47,500-acre (19,223-ha) Compatible Growth Area. In general, land use of the pine barren region addresses preservation of the pine barren ecosystem and water quality as well as addressing development patterns, land use categories, and agricultural, recreational, and human

uses. Development activities within the region are regulated by the Central Pine Barrens Joint Planning and Policy Commission (Central Pine Barrens Joint Planning and Policy Commission 2012). The Onshore Transmission Cable traverses the Central Pine Barrens Core Preservation Area and Compatible Growth Area at and adjacent to the Carmans River crossing (Appendix A, Figure 4).

Most of the Core Preservation Area at this location is mapped as forested wetland communities including a rare Red Maple – Blackgum Swamp. The adjacent uplands are dominated by oak (*Quercus* spp.) trees based on a review of available imagery. Installation of the Onshore Transmission Cable will not include any in-water activities at the Carmans River crossing and will avoid and/or minimize impacts to sensitive resources within the Core Preservation Area.

The Compatible Growth Area on either side of the Carmans River crossing is located in a developed landscape that consists of residential, commercial, and industrial development and associated transportation infrastructure with interspersed small remnant pine barren communities. The Onshore Transmission Cable has been located to the greatest extent practicable within existing road ROWs within the Compatible Growth Area, with the exception of two areas. The first is the crossing of Sunrise Highway located west of William Floyd Parkway. Adjacent to and south of William Floyd Parkway, the Onshore Transmission Cable and Revilo Avenue work area intersects a small remnant pitch pine community further discussed in Section 3.4.1. The second overland crossing of the Compatible Growth Area is from Surrey Circle to Mastic Boulevard where the Onshore Transmission Cable Route crosses the LIRR (Appendix, Figure 4). Installation of the Onshore Transmission Cable within existing road ROWs to the greatest extent practicable will minimize potential impacts within the Compatible Growth Area.

3.3.5 Field Assessment of Natural Communities

General natural communities were characterized during the wetland delineation efforts. In general, most of the Onshore Facilities are associated with a developed landscape, consisting of existing commercial, industrial, and residential development and associated transportation infrastructure. The Onshore Transmission Cable routes are predominately associated with roadway ROWs and impervious asphalt or paved surfaces. Field efforts focused on characterizations of the Onshore Facilities that intersect or are proximal to significant or high value natural communities identified during the desktop assessment, including the natural communities associated with Landfall/ICW Study Area (including Smith Point County Park and Smith Point Marina) and the Onshore Transmission Cable Study Area (including the proposed and alternative crossings of Carmans River as well as Southaven County Park).

Landfall/ICW Study Area

Beach, dune, and other undeveloped areas at the Landfall/ICW Study Area were evaluated during the field delineations. The most prominent features of the Landfall/ICW Study Area are the presence of a Maritime Beach and Maritime Dunes along the southern edge of the site landward of the Atlantic Ocean. The Maritime Beach community is dominated by sand and is unvegetated. It is extensively utilized by the public and portions of the beach are open to vehicle traffic. It is a dynamic community and subjected to storm surges and other erosional and depositional events. The landward portion of the Maritime Beach transitions into Maritime Dune community. The frontal dune community is dominated by American beach

grass. A small colony of common reed was observed in the eastern end of the survey area. The frontal dune is a dynamic community and migrates based on wind erosion / deposition and storm surges.

The back-dune system is more stabilized and includes small trees and saplings of pitch pine (*Pinus rigida*) as well as American beach grass. At the time of survey, the width of the Maritime Dune system varied between approximately 150 and 250 ft. Several established trails traverse the dunes to allow public access.

The northern portion of the Landfall/ICW Study Area on Fire Island includes a Maritime Shrubland community along the ICW. This is a rather densely vegetated shrubland characterized by shrubs of groundsel tree, Jesuit's-bark, and northern bayberry. Herbaceous species include slender goldentop (*Euthamia caroliniana*), wand panic grass (*Panicum virgatum*), woolly beachheather (*Hudsonia tomentosa*), alkali grass (*Puccinellia* spp.), little false bluestem (*Schizachyrium scoparium*), rosette-panicgrasses (*Dichanthelium* spp.), pitch pine, and needle beak sedge (*Rhynchospora capillacea*). Common reed becomes progressively denser towards the water edge within the community. The remainder of the Landfall/ICW Study Area consists of impervious surfaces and development, including parking lots, roadways, buildings, and a pier.

Smith Point Marina

Smith Point Marina and the associated ICW Work Area is largely developed with an existing boat launch and parking area. The wetland communities, as described above, are largely dominated by common reed and are unexceptional. A narrow, vegetated buffer is provided between the parking lot and the shoreline along the ICW to the south. This area is similarly dominated by invasive species including common reed and common mugwort (*Artemisia vulgaris*). A small dune area is present in the southeastern portion of the ICW Work Area. This is an unexceptional community and has been affected by vehicular and pedestrian activity. Dominant vegetation includes American beach grass, Jesuit's-bark, northern bayberry, seaside goldenrod, wand panic grass, and beach sedge (*Carex silicea*).

Carmans River Crossing

LIE Service Road Route

The LIE Service Road Route is associated with a large lacustrine impoundment associated with the Carmans River and other wetlands associated with the Southaven County Park. Wetland W-10MAC exhibits characteristics of a rare Red Maple – Blackgum Swamp as it is dominated by red maple and blackgum trees and exhibit characteristics consistent with the mapped community to the south along the Carmans River near the Montauk Highway crossing.

The upland forests of Southaven County Park along Victory Avenue consist of a small grove of mature eastern white pine (*Pinus strobus*), sugar maple (*Acer saccharum*), and sweet-gum (*Liquidambar styraciflua*) trees. The understory is open and sparsely vegetated and includes species such as horsebrier and Pennsylvania sedge (*Carex pensylvanica*). Walking and hiking trails associated with the park are present within the upland areas.

Invasive species are abundant along the edge of roadway and along the forested edges. Commonly observed species include Japanese honeysuckle (*Lonicera japonica*), oriental bittersweet (*Celastrus orbiculatus*), rambler rose, common mugwort, and Norway maple (*Acer platanoides*).

Montauk Highway Route Alternative or Peconic Avenue Route Alternative

As identified during the desktop assessment and confirmed during the wetland delineations, the forested wetlands associated with the Carmans River support a rare Red Maple – Blackgum Swamp community. The community structure is well developed with a mature canopy of red maple and black tupelo trees. The understory is densely vegetated with shrubs consisting primarily of coastal sweet-pepperbush. Highbush blueberry and clammy azalea shrubs and horsebrier vines are scattered within the community. Herbaceous species are rather sparse within the community and include cinnamon fern and skunk-cabbage. The portion of the community closest to the Carmans River is regularly inundated and vegetation is restricted to hummocks interspersed amongst inundated areas. The substrate consists of deep organic muck. Further from the edge of the Carmans River, the microtopography is flatter and dominated by firm, sandy soils. These areas are periodically flooded.

Invasive species are abundant along the edge of the community near Montauk Highway and include a suite of common invasive species such as Norway maple, oriental bittersweet, Japanese honeysuckle, common reed, rambler rose, wineberry (*Rubus phoenicolasius*), common buckthorn (*Rhamnus cathartica*), garlic mustard (*Alliaria petiolata*), common mugwort, and Japanese stilt-grass (*Microstegium vimineum*). Although present along the roadway edge, few observations of invasive species were noted in the interior of the wetland.

The upland forests to the east of the Carmans River and west of Smith Road are characterized as a Coastal Oak-Hickory Forest. This upland is dominated by trees of scarlet oak (*Quercus coccinea*) and white oak (*Quercus alba*) with scattered hickories (*Carya* spp.). The understory diversity is low and consists primarily of shrubs such as black huckleberry (*Gaylussacia baccata*) and Blue Ridge blueberry (*Vaccinium pallidum*). Horsebrier vines are scattered within the forest. Herbaceous species are sparse and include Pennsylvania sedge, eastern teaberry (*Gaultheria procumbens*), and bristly dewberry (*Rubus hispidus*).

3.3.6 Summary

Table 3 summarizes the significant and critical natural communities and habitats associated with the Onshore Facilities. The locations of CEAs, SCFWH, NYSHP Significant Natural Communities, and the Central Pine Barrens relative to the Onshore Facilities are provided in Appendix A, Figure 4. Field results support the results of the desktop assessment of the Onshore Facilities.

Table 3. Summary of Significant and Critical Natural Communities and Habitats

Onshore Facility		Significant and Critical Natural Communities and Habitat Resources Present	Significant and Critical Natural Communities and Habitat Resources Identified Via Field Survey
Landfall/ICW Study Area (Fire Island and Mainland)		Critical Environmental Areas None	Critical Environmental Areas None observed
		SCFWH Smith Point County Park Moriches Bay (adjacent) Great South Bay-East (adjacent)	SCFWH Smith Point County Park Moriches Bay Great South Bay
		Significant Natural Communities Maritime Beach and Maritime Intertidal Gravel/Sand Beach Marine Eelgrass Meadow (adjacent) Marine Back-barrier Lagoon (adjacent)	Significant Natural Communities Maritime Beach and Maritime Intertidal Gravel/Sand Beach Great South Bay
		Central Pine Barrens None	Central Pine Barrens None observed
Onshore Transmission Cable	LIE Service Road Route	Critical Environmental Areas Coastal Zone Area South at ICW HDD and associated Work Area; Carmans River crossing	Confirmed by field survey
		SCFWH Moriches Bay (adjacent to ICW HDD) Great South Bay-East (ICW HDD) Carmans River crossing	SCFWH Confirmed by field survey
		Significant Natural Communities Marine Eelgrass Meadow (ICW HDD) Marine Back-barrier Lagoon (ICW HDD) Red Maple – Blackgum Swamp (Carmans River 300 ft downstream)) Brackish Tidal Marsh (Carmans River; ~0.54 mi downstream)	Significant Natural Communities Red Maple – Blackgum Swamp (Carmans River)
		Central Pine Barrens Carmans River crossing	Central Pine Barrens Confirmed by field survey
	Montauk Highway Route Alternative or Peconic Avenue Route Alternative	Red Maple – Blackgum Swamp (at and adjacent to Carmans River and Yaphank Creek alternative crossings) Brackish Tidal Marsh (Carmans River; ~0.4 mi downstream)	Significant Natural Communities Red Maple – Blackgum Swamp (Carmans River)
Union Avenue Site		None	Confirmed by field survey
Onshore Interconnection Cable Route		None	None

3.4 RARE, THREATENED, AND ENDANGERED SPECIES

3.4.1 Plants

In its March 27, 2020, and April 15, 2021, letters, the NYNHP identified known occurrences of several RTE plant species within the vicinity of the Onshore Facilities. The USFWS IPaC query indicated known occurrences of two species of federally listed plant species proximal to the Onshore Facilities. Table 4 summarizes the known RTE plant occurrences and potential habitat for those species associated with the Onshore Facilities components based on desktop review and field surveys.

During field surveys of the Onshore Transmission Cable area in March 2021, Stantec observed a small remnant pitch pine – scrub oak barren community within the Revilo Avenue work area located to the south of the Sunrise Highway exit ramp and east of Revilo Avenue. This area had potential habitat to support sandplain wild flax (*Linum intercursum*), a species listed as Threatened by NYSDEC and noted to occur proximal to the Onshore Transmission Cable based on the NYNHP March 27, 2020, and April 15, 2021, letters (Table 4). The site consists of an open sandy basin that receives periodic stormwater runoff surrounded by a fringe of pitch pine – scrub oak forest. Targeted field surveys were subsequently conducted on September 8, 2021, during the anticipated flowering and fruiting period of sandplain wild flax within areas containing suitable habitat proximal to the proposed Revilo Avenue work area (Rare Plant Survey Area; Figure 4). Surveys were conducted by a Certified Ecologist and professional botanist with extensive previous survey experience throughout the northeastern United States (resume provided in Appendix E). Field surveys targeted habitats potentially suitable for sandplain wild flax associated with the Revilo Avenue work area including open, sandy soils. No sandplain wild flax populations were observed. However, incidental observations were made of two state-listed species and one rare species which are discussed and summarized in Appendix E: Little ladies' tresses (*Spiranthes tuberosa*, State-Threatened), Stuve's bush-clover (*Lespedeza stuevei*, State-Threatened) and Sickle-leaved golden aster (*Pityopsis falcata*, Rare, Watch List).

Table 4. RTE and NYS Watch List Plant Species Documented by NYSDEC, or USFWS or Sunrise Wind within the Vicinity of Onshore Facilities and Occurrence Based on Field Surveys

Project Component	Species	State Listing	Federal Listing	Habitat Association	Approximate Location[2]	Field Results
Landfall/ICW Study Area	Sandplain Gerardia[1] *Agalinis acuta*	Endangered	Endangered	Maritime grassland and shrubland	No location information provided	None observed[3]; potential habitat at Landfall/ICW Study Area but outside of Landfall Work Area and ICW Work Area
	Seabeach Amaranth[1] *Amaranthus pumilus*	Threatened	Threatened	Maritime beach	No location information provided	None observed[3]; potential habitat at Landfall/ICW Study Area but outside of Landfall Work Area and ICW Work Area
Onshore Transmission Cable Study Area: LIE Service Road Route[4]	Blunt-lobed Grape Fern[2] *Botrychium oneidense*	Threatened	--	Floodplain forest, Red Maple – Blackgum Swamp	Southaven County Park, within 0.2 mi (0.3 km) of Onshore Transmission Cable; in wet soil under shrubs and vines in red maple swamp	None observed[3]; potential habitat in wetlands within Onshore Transmission Cable Study Area associated with Carmans River and Southaven County Park but outside of proposed work areas
	Collins' Sedge[2] *Carex collinsii*	Endangered	--	Red Maple – Blackgum Swamp	Southaven County Park, within 0.2 mi (0.3 km) of Onshore Transmission Cable; abandoned fish hatchery (part of Suffolk County Park) in a red maple-tupelo swamp	None observed[3]; potential habitat in wetlands within Onshore Transmission Cable Study Area associated with Carmans River and Southaven County Park but outside of proposed work areas
	Water Pigmyweed[2] *Crassula aquatica*	Endangered	--	Freshwater intertidal mudflat, freshwater intertidal shore, and freshwater tidal marsh	Within 0.2 mi (0.3 km) of Onshore Transmission Cable; Carmans River, west side immediately south of Montauk Highway; bank of an intertidal section of river at a road embankment	None observed[3]; potential habitat in Carmans River but outside of proposed work areas
	Sandplain Wild Flax[2] *Linum intercursum*	Threatened	--	Maritime dunes, maritime grassland, maritime shrubland, and pitch pine-scrub oak barrens	Within 0.6 mi (1.0 km) of Onshore Transmission Cable: Station Avenue roadside; plants are on a pine barrens roadside with very sparse vegetation, dominated by grasses and legumes	None observed; minimal potential habitat; potentially suitable habitat associated with Revilo Avenue work area was surveyed but no sandplain wild flax specimens were observed
	Little Ladies' Tresses[5] *Spiranthes tuberosa*	Threatened	--	Pitch Pine – Scrub Oak Barren	No location information provided	See Appendix E Table 1
	Stuve's Bush-clover[5] *Lespedeza stuevei*	Threatened	--	Pitch Pine – Scrub Oak Barren	No location information provided	See Appendix E Table 1
	Sickle-leaved Golden Aster[5] *Pityopsis falcata*	Rare (Watch List)	--	Pitch Pine – Scrub Oak Barren	No location information provided	See Appendix E Table 1

[1] Source: USFWS Information for Planning and Consultation (IPaC). Accessed March 11, 2020 and April 19, 2021.
[2] Source: New York Natural Heritage Program Letters, March 27, 2020 and April 15, 2021.
[3] Field surveys for RTE plants evaluated the potential for suitable habitat within the Onshore Facilities and were not targeted surveys to determine potential presence / probable absence of species
[4] Species listed for this route also occur proximal to the Montauk Highway Route Alternative and Peconic Avenue Route Alternative.
[5] Source: September 8, 2021 field survey

In addition to the species in Table 4, approximately 100 additional RTE plant recently or historically confirmed occurrences are identified within the Town of Brookhaven based on a query of the New York Nature Explorer database (Appendix C). RTE species known from the Town of Brookhaven are associated with a variety of habitats, including coastal and freshwater wetlands (including open and forested areas), aquatic habitats, early successional communities, open and disturbed upland areas, pine barrens, edge habitats, upland forests, and coastal dunes and shrublands.

Based on desktop and field review, the Onshore Facilities are largely confined to existing developed and impervious areas including road ROWs and parking lots where RTE plants are unlikely to occur. Furthermore, trenchless crossing installation will be utilized to avoid impacts to wetland areas that may provide habitat for wetland-associated RTE plant species such as blunt-lobed grape fern (*Botrychium oneidense*), Collins' sedge (*Carex collinsii*), and water pigmyweed (*Crassula aquatica*). During field surveys in October 2020 and March 2021, blunt-lobed grape fern was not observed in the Red Maple – Blackgum Swamp community at Carmans River associated with the Montauk Highway Route Alternative or in wetlands in associated with Southaven County Park along the LIE Service Road Route. The saturated organic soils of the Red Maple – Blackgum Swamp community at the Carmans River alternative crossing associated with Montauk Highway Route Alternative and the wetlands associated with Southaven County Park along the LIE Service Road Route provide suitable habitat for Collins' sedge. Potential habitat for water pygmyweed is also present in the shallow aquatic habitats of the Carmans River and associated impoundment associated with both the LIE Service Road Route and Montauk Highway Route Alternative. This species' location provided by NYSDEC indicated that it has been previously observed in Carmans River at the downstream bridge abutment at the Montauk Highway crossing. This area was investigated from the shore during the field survey, but no specimens were observed. Small waterwort (*Elatine minima*), a common aquatic species that often occurs with water pygmyweed populations was observed in this location.

The Maritime Beach community at the Landfall/ICW Study area provides potentially suitable habitat for seabeach amaranth. However, field surveys noted that this area is used extensively for recreation and the associated impacts from pedestrian and vehicle traffic substantially limits the likelihood of seabeach amaranth occurrences. Potentially suitable habitat for sandplain gerardia is provided in the northern portion of the Landfall/ICW Study Area on Fire Island within the Maritime Shrubland community north of the parking area. This community supports maritime grassland-associated species interspersed within sandy openings amongst patches of shrubs. Potential habitat for sandplain wild flax is also provided in the Maritime Dune community within the Landfall/ICW Study Area, particularly in the stable back dune areas. Potentially suitable habitat is also available in the Maritime Shrubland community in areas noted above for sandplain gerardia.

3.4.2 Inland Fisheries and Non-Avian Wildlife

In its March 27, 2020, and April 15, 2021, letters, the NYNHP identified an occurrence of hairy-necked tiger beetle (*Cincindela hirticollis*), a rare but unlisted species, near the Landfall/ICW Study Area on Fire Island. The species is associated with a sand beach. A review of aerial imagery indicates that the ICW HDD Work Area also contains exposed sandy areas and field surveys noted the Maritime Dune community provides potentially suitable habitat for hairy-necked tiger beetle. In addition, the NYNHP

identified two unlisted but rare fish occurrences within the Carmans River near the Onshore Transmission Cable: eastern pirate perch (*Aphredoderus sayanus*) and Atlantic silverside (*Menidia menidia*). Eastern pirate perch was also noted as occurring in Yaphank Creek. Field surveys confirmed that aquatic habitats of Carmans River and Yaphank Creek provide potentially suitable habitat for eastern pirate perch and Atlantic silverside as suggested by the NYNHP. The USFWS IPaC database query did not indicate occurrences of federally listed fish or non-avian or bat wildlife species proximal to the Onshore Facilities.

A query of the New York Nature Explorer database indicates that several other species of fish and non-avian wildlife species are known from the Town of Brookhaven (Appendix C). Many of the RTE species are associated with aquatic or wetland habitats, such as odonates (e.g., dragonflies and damselflies), or associated with pitch pine barrens, including species of moths and butterflies.

Trenchless crossing installation will be utilized to avoid sensitive environmental resources at certain crossing locations, which will avoid and minimize impacts to aquatic and wetland habitats that may support sensitive fish or invertebrate species. Similarly, activities at the Landfall Work Area proximal to sand beach habitat on Fire Island will be confined to existing developed areas to avoid and minimize potential impacts to hairy-necked tiger beetle. If conducted on the beach, HDD cable duct stringing, however, may result in the short-term disturbance to vegetation for approximately 2 to 3 weeks per duct between October and March. The Onshore Transmission Cable traverses the Central Pine Barrens proximate to Victory Avenue. The Onshore Transmission Cable will be located within the developed ROW of the highway, except where the corridor crosses the Carmans River, where it will be located within the Core Preservation Area. HDD will be employed along the north side of Victory Avenue to protect the waterbody and its adjoining wetlands that are proximate to the Central Pine Barrens, and to reduce the need for clearing and additional disturbances to pine barren communities.

3.5 INVASIVE SPECIES

Over 100 non-native invasive plant species occurrences have been documented proximal to the Onshore Facilities based on an initial query of the New York iMapInvasives database (NYNHP 2020). The invasive plant species documented include the following:

- Norway maple (*Acer platanoides*)
- Tree-of-heaven (*Ailanthus altissma*)
- Garlic Mustard (*Alliaria petiolata*)
- Japanese barberry (*Berberis thunbergii*)
- Oriental bittersweet (*Celastrus orbiculatus*)
- Black swallow-wort (*Cynanchum louiseae*)
- Winged burning bush (*Euonymus alatus*)
- Chinese lespedeza (*Lespedeza cuneata)*
- European privet (*Ligustrum vulgare*)
- Japanese honeysuckle (*Lonicera japonica*)
- Purple loosestrife (*Lythrum salicaria*)
- Chinese silvergrass (*Miscanthus sinensis*)
- Princess tree (*Paulownia tomentosa*)

- Mile-a-minute weed (*Persicaria perfoliata*)
- Common reed (*Phragmites australis*)
- Japanese knotweed (*Fallopia japonica*)
- Common buckthorn (*Rhamnus cathartica*)
- Black locust (*Robinia pseudoacacia*)
- Rambler rose (*Rosa multiflora*)
- Wineberry (*Rubus phoenicolasius*)
- Climbing nightshade (*Solanum dulcamara*)
- Great mullein (*Verbascum thapsus*)
- Common periwinkle (*Vinca minor*)
- Chinese wisteria (*Wisteria sinensis*)

Most of the occurrences are associated with Southaven County Park along the LIE Service Road Route, the accessible Onshore Interconnection Cable Route, and the Wertheim National Wildlife Refuge in the vicinity of the alternative crossing of the Carmans River associated with the Montauk Highway Route Alternative. Additional locations of invasive plants have been documented proximal to the HDD work areas. In addition, the March 2019 Final Design Report / Environmental Assessment for the replacement of the William Floyd Parkway, Route CR 46 over Narrow Bay (NYSDOT 2019) notes a prevalence of invasive species such as Japanese honeysuckle, common reed, autumn olive (*Elaeagnus umbellata*), oriental bittersweet, and rambler rose near Smith Point Bridge. Widespread occurrences of invasive plant species are likely throughout the proposed Onshore Facilities given the association with developed residential and industrial areas and proliferation of invasive species throughout the greater Long Island region.

Based on the field assessments, invasive species are ubiquitous throughout the Onshore Facilities and results were consistent with species and locations identified in the New York iMapInvasives query (Appendix A, Figure 5). Common mugwort was the most prevalent species observed and commonly occurs along road shoulders throughout the Onshore Facilities. Large concentrations of common reed were observed along the backside of Fire Island and at Smith Point Marina at the Landfall/ICW Study Area. In addition, large concentrations of multiple species were observed along the Montauk Highway Route Alternative and LIE Service Road Route at the Carmans River crossing and the areas immediately to the west and east. Additional commonly observed invasive species across the Onshore Facilities included Norway maple, rambler rose, oriental bittersweet, autumn olive, Japanese honeysuckle, black locust, garlic mustard, Japanese barberry, and common reed.

3.6 FLOODPLAINS

FEMA is responsible for flood hazard mapping to assess flood risk to infrastructure and guide mitigative actions. Based on FEMA's Flood Insurance Rate Maps (FIRM), the entirety of the Landfall/ICW Study Area on Fire Island and the Landfall/ICW Study Area on the Mainland is located within the 100-year floodplain (Zone AE; the area with a 1% annual chance of flooding; FIRM panel 36103C0951H).

Beach and dune portions of the Landfall/ICW Study Area on Fire Island located oceanside of the William Floyd Parkway and the portion of the ICW HDD across Narrow Bay are designated as coastal flood zones

with velocity (i.e., wave action) hazard (Zone VE; FIRM panel 36103C0951H). Flood elevations for the 100-year flood zones within the Landfall/ICW Study Area on Fire Island and at the Landfall/ICW Study Area on Mainland range from 6 to 17 ft (1.8 to 5.2 m) North American Vertical Datum of 1988.

Approximately 1,800 linear ft (548.6 m) of the Onshore Transmission Cable is located within the 100-year floodplain (Zone AE) along William Floyd Parkway as it exits ICW HDD Work Area at Smith Point Marina (FIRM panel 36103C0951H).

Approximately 1,900 linear ft (745 m) of the LIE Service Road Route, as well as 520 linear ft (158.5 m) of the Montauk Highway Route Alternative are within the 100-year floodplain at the Carmans River crossing, although base flood elevation data does not exist at this location (Zone A; FIRM panel 36103C0717H). All other portions of the Onshore Transmission Cable route, Interconnection Cable route and the Union Avenue Site are in areas of minimal flood hazard.

The Onshore Facilities are not expected to result in changes to the base flood elevation as the Onshore Transmission Cable will be installed via HDD or installed below the existing grade via trenching. The floodplain resources are provided in Appendix A, Figure 6, and summarized in Table 5.

Table 5. Summary of Floodplain Resources

Onshore Facility		Floodplain Resources
Landfall/ICW Study Area		• Zone AE, VE
Onshore Transmission Cable	LIE Service Road Route	• Zone AE (ICW HDD Work Area, William Floyd Parkway) • Zone VE (ICW HDD) • Zone A (Carmans River crossing)
	Peconic Avenue Route Alternative	• None
	Montauk Highway Route Alternative	• Zone A (Carmans River crossing)
Union Avenue Site		• None
Onshore Interconnection Cable		• None

4.0 SUMMARY

The Onshore Facilities intersect a variety of regulated natural resources as discussed above in this report and summarized in Tables 1–5. The highest concentrations of resources are associated with the Landfall/ICW Study Area on Fire Island, the Landfall/ICW Study Area on Mainland, and the LIE Service Road Route crossing of the Carmans River, as well as the crossings of the Carmans River and Yaphank Creek associated with the Montauk Highway Route Alternative or Peconic Avenue Route Alternative. Generally confining activities to existing developed areas, including parking lots, roadway and utility ROWs, will avoid and minimize impacts to sensitive environmental resources. HDD methods will be used to connect the Sunrise Wind Export Cable to Onshore Facilities and for the crossing of the ICW to avoid

impacts to dune and beach communities and mapped habitat. HDD or other trenchless crossing installation will be utilized to avoid sensitive environmental resources, including Carmans River. Work areas along the Onshore Transmission Cable route will be established and the required safety measures will be implemented.

Where appropriate, temporary erosion controls will be installed and maintained until the work areas are restored and stabilized. An Emergency Response Plan and Oil Spill Response Plan have been developed and a Stormwater Pollution Prevention Plan and a Spill Prevention Control and Countermeasures Plan will be implemented to avoid and minimize impacts to sensitive environmental resources. Invasive plants will be assessed and managed through an Invasive Species Management Plan.

Where HDD is utilized, an Inadvertent Return Plan will be prepared and implemented to minimize the potential risks associated with the release of drilling fluids. Sunrise Wind will comply with NYS regulations and standards for treatment and disposal of solid and liquid wastes generated during all phases of construction activities.

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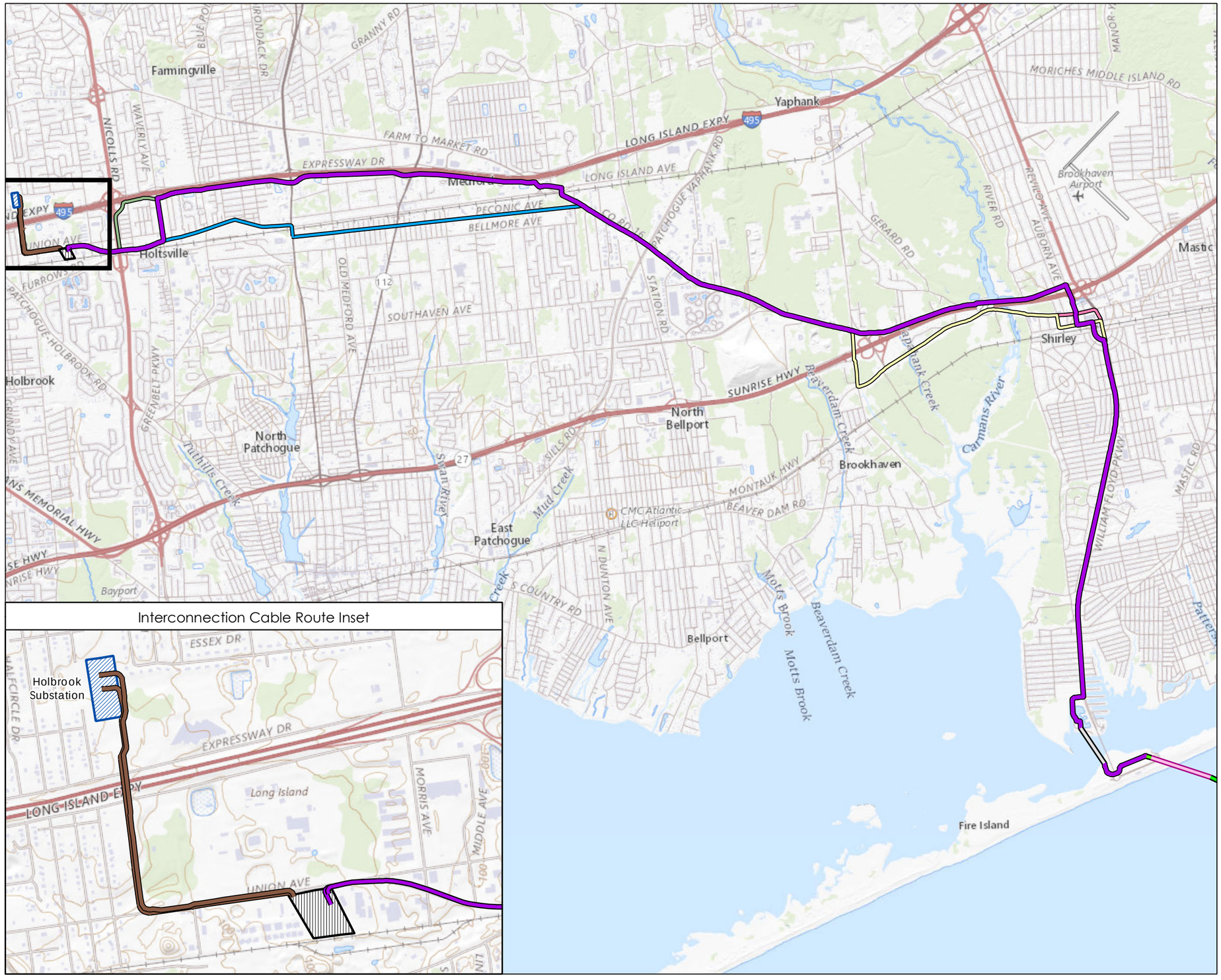
APPENDICES

Appendix A FIGURES

Figure 1
Onshore Transmission Cable Routes

Sunrise Wind | Powered by Ørsted & Eversource



Interconnection Cable Route Inset

Legend

- Sunrise Wind Farm (SRWF)
- Sunrise Wind Export Cable (SRWEC–OCS)
- Sunrise Wind Export Cable (SRWEC–NYS)
- Landfall HDD A
- Intracoastal Waterway HDD (ICW HDD)
- Onshore Transmission Cable LIE Service Road Route
- Onshore Transmission Cable Peconic Avenue Route
- Montauk Highway Route
- William Floyd Parkway to Montauk Highway Variation
- Nicolls Avenue Variation
- Onshore Interconnection Cable Route
- Union Avenue Site
- Holbrook Substation

Notes
1. Routes are indicative and subject to engineering design changes.

Sources
Base map: USGS The National Map

Date	07/11/2022
Project Number	2028113199
Prepared By	GC
Reviewed By	DGN

0 1 mile
0 1.5 km

N

Scale at 11x17: 1:63,360
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

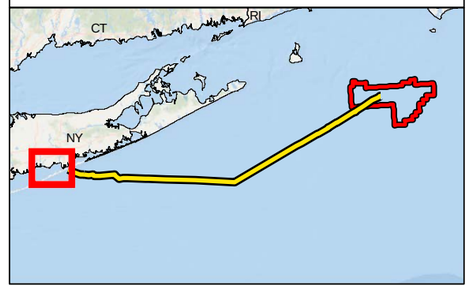
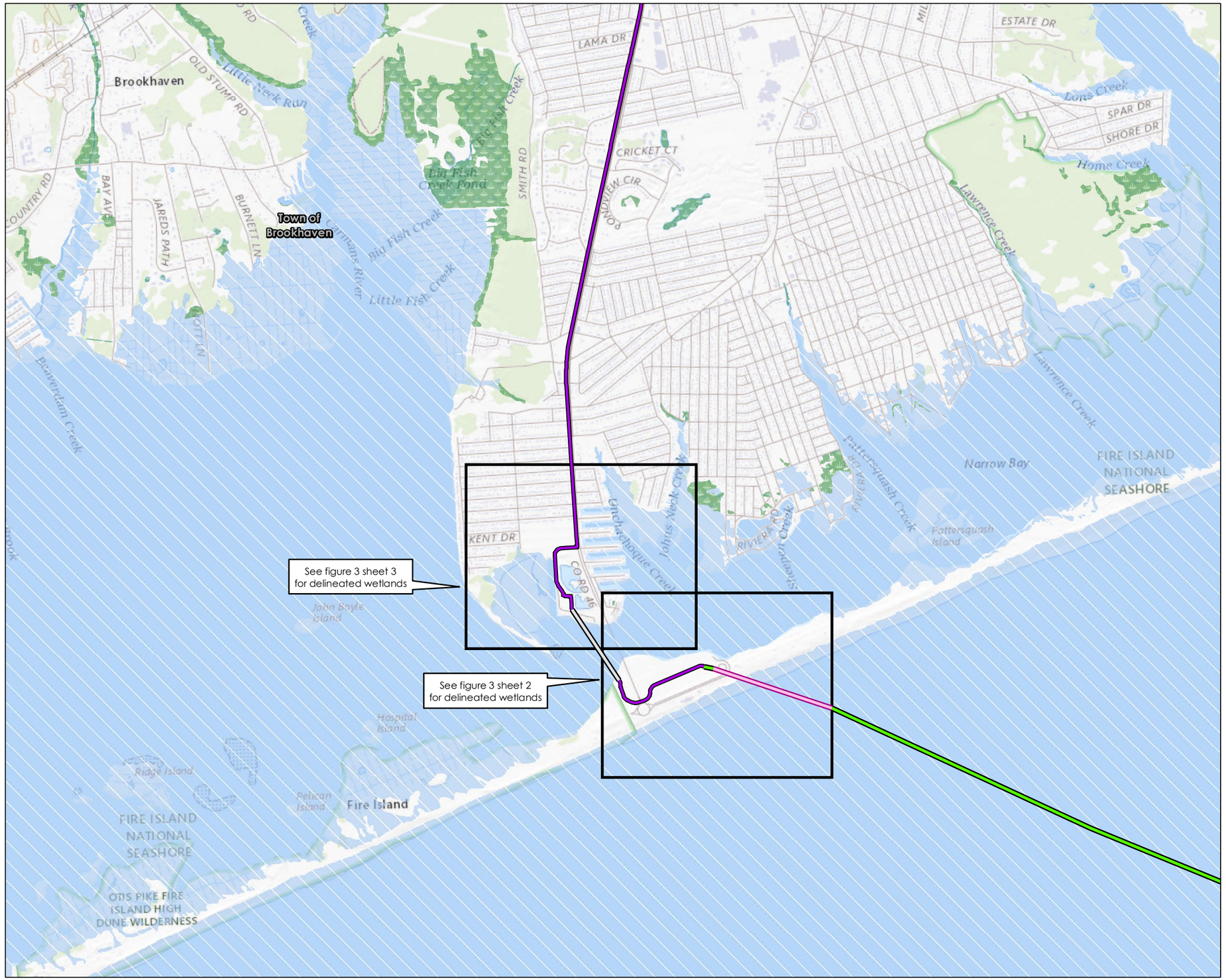


Figure 2a
Wetlands and Waterbodies – NWI
Sheet 1 of 3

Sunrise Wind | Powered by Ørsted & Eversource



Legend

- Sunrise Wind Export Cable (SRWEC–NYS)
- Landfall HDD A
- Intracoastal Waterway HDD (ICW HDD)
- Onshore Transmission Cable LIE Service Road Route
- Onshore Transmission Cable Peconic Avenue Route
- Montauk Highway Route
- William Floyd Parkway to Montauk Highway Variation
- Nicolls Avenue Variation
- Onshore Interconnection Cable Route
- Union Avenue Site
- Holbrook Substation
- Town Boundary

NWI Wetlands

- Estuarine and Marine Wetlands
- Freshwater Wetlands

Sources
U.S. Fish and Wildlife Service, 2021
NYS Office of IT Services GPO, NYS Boundaries, 2018
USGS Topo Map

Note
The cable route centerline and trenchless crossing work areas are indicative and subject to final engineering design.

Date	07/11/2022
Project Number	2028113199
Prepared By	GC
Reviewed By	DGN

0 0.5 mile
0 0.75 km

N

Scale at 11x17: 1:31,680
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

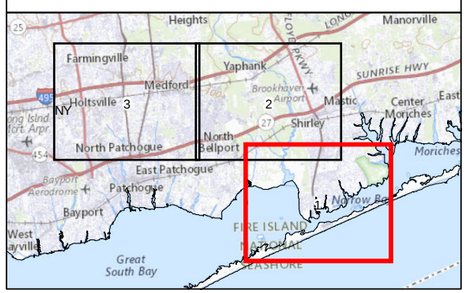
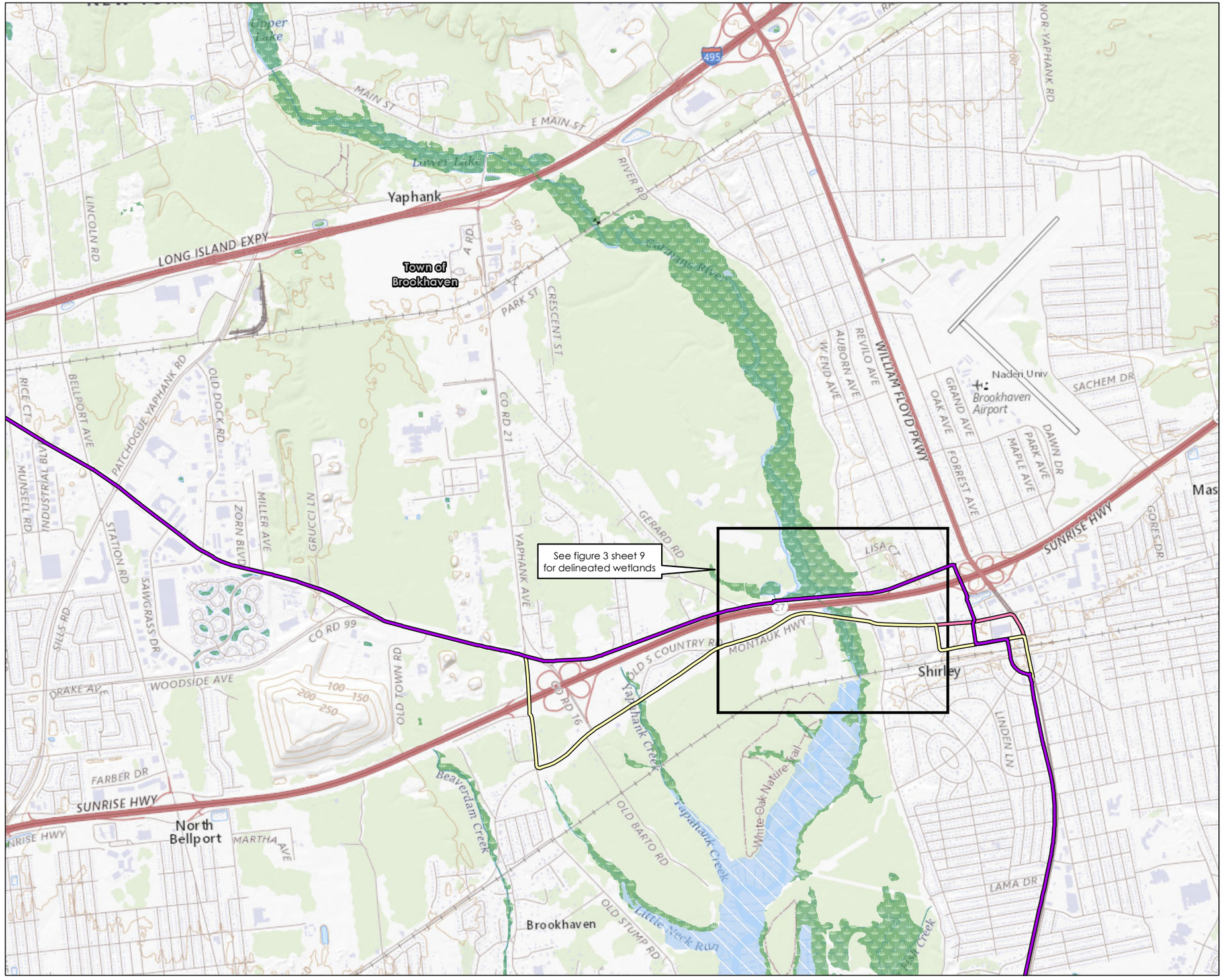


Figure 2a
Wetlands and Waterbodies – NWI
Sheet 2 of 3

Sunrise Wind | Powered by Ørsted & Eversource



Legend

- Sunrise Wind Export Cable (SRWEC–NYS)
- Landfall HDD A
- Intracoastal Waterway HDD (ICW HDD)
- Onshore Transmission Cable LIE Service Road Route
- Onshore Transmission Cable Peconic Avenue Route
- Montauk Highway Route
- William Floyd Parkway to Montauk Highway Variation
- Nicolls Avenue Variation
- Onshore Interconnection Cable Route
- Union Avenue Site
- Holbrook Substation
- Town Boundary

NWI Wetlands

- Estuarine and Marine Wetlands
- Freshwater Wetlands

Sources
U.S. Fish and Wildlife Service, 2021
NYS Office of IT Services GPO, NYS Boundaries, 2018
USGS Topo Map

Note
The cable route centerline and trenchless crossing work areas are indicative and subject to final engineering design.

Date	07/11/2022
Project Number	2028113199
Prepared By	GC
Reviewed By	DGN

0 0.5 mile
0 0.75 km

N

Scale at 11x17: 1:31,680
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

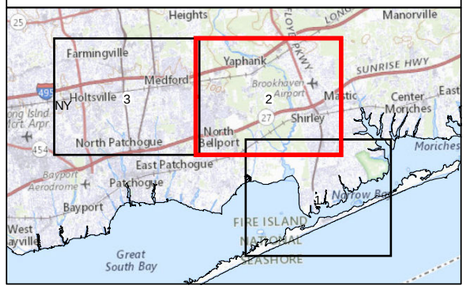


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Figure 2a
Wetlands and Waterbodies – NWI
Sheet 3 of 3

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Sunrise Wind Export Cable (SRWEC–NYS)
- Landfall HDD A
- Intracoastal Waterway HDD (ICW HDD)
- Onshore Transmission Cable LIE Service Road Route
- Onshore Transmission Cable Peconic Avenue Route
- Montauk Highway Route
- William Floyd Parkway to Montauk Highway Variation
- Nicolls Avenue Variation
- Onshore Interconnection Cable Route
- Union Avenue Site
- Holbrook Substation
- Village Boundary
- Town Boundary

NWI Wetlands

- Estuarine and Marine Wetlands
- Freshwater Wetlands

Sources
U.S. Fish and Wildlife Service, 2021
NYS Office of IT Services GPO, NYS Boundaries, 2018
USGS Topo Map

Note
The cable route centerline and trenchless crossing work areas are indicative and subject to final engineering design.

Date	07/11/2022
Project Number	2028113199
Prepared By	GC
Reviewed By	DGN

0 0.5 mile
0 0.75 km

N

Scale at 11x17: 1:31,680
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

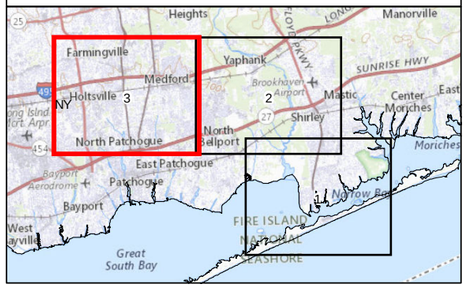


Figure 2b
Wetlands and Waterbodies – NYSDEC
Sheet 1 of 3

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Sunrise Wind Export Cable (SRWEC–NYS)
- Landfall HDD A
- Intracoastal Waterway HDD (ICW HDD)
- Onshore Transmission Cable LIE Service Road Route
- Onshore Transmission Cable Peconic Avenue Route
- Montauk Highway Route
- William Floyd Parkway to Montauk Highway Variation
- Nicolls Avenue Variation
- Onshore Interconnection Cable Route
- Union Avenue Site
- Holbrook Substation
- Village Boundary
- Town Boundary
- NYSDEC Wetlands

NYSDEC Tidal Wetlands NYC and Long Island

- Dredged Spoil
- Formally Connected
- Fresh Marsh
- High Marsh
- Intertidal Marsh
- Littoral Zone
- Coastal Shoals, Bars and Mudflats

Sources
NYSDEC Wetlands, 2018
NYS Office of IT Services GPO, NYS Boundaries, 2018
USGS Topo Map

Note
The cable route centerline and trenchless crossing work areas are indicative and subject to final engineering design.

Date	07/11/2022
Project Number	2028113199
Prepared By	GC
Reviewed By	DGN

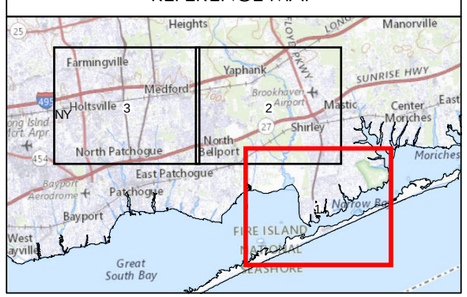
0 0.5 mile

0 0.75 km

N

Scale at 11x17: 1:31,680
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



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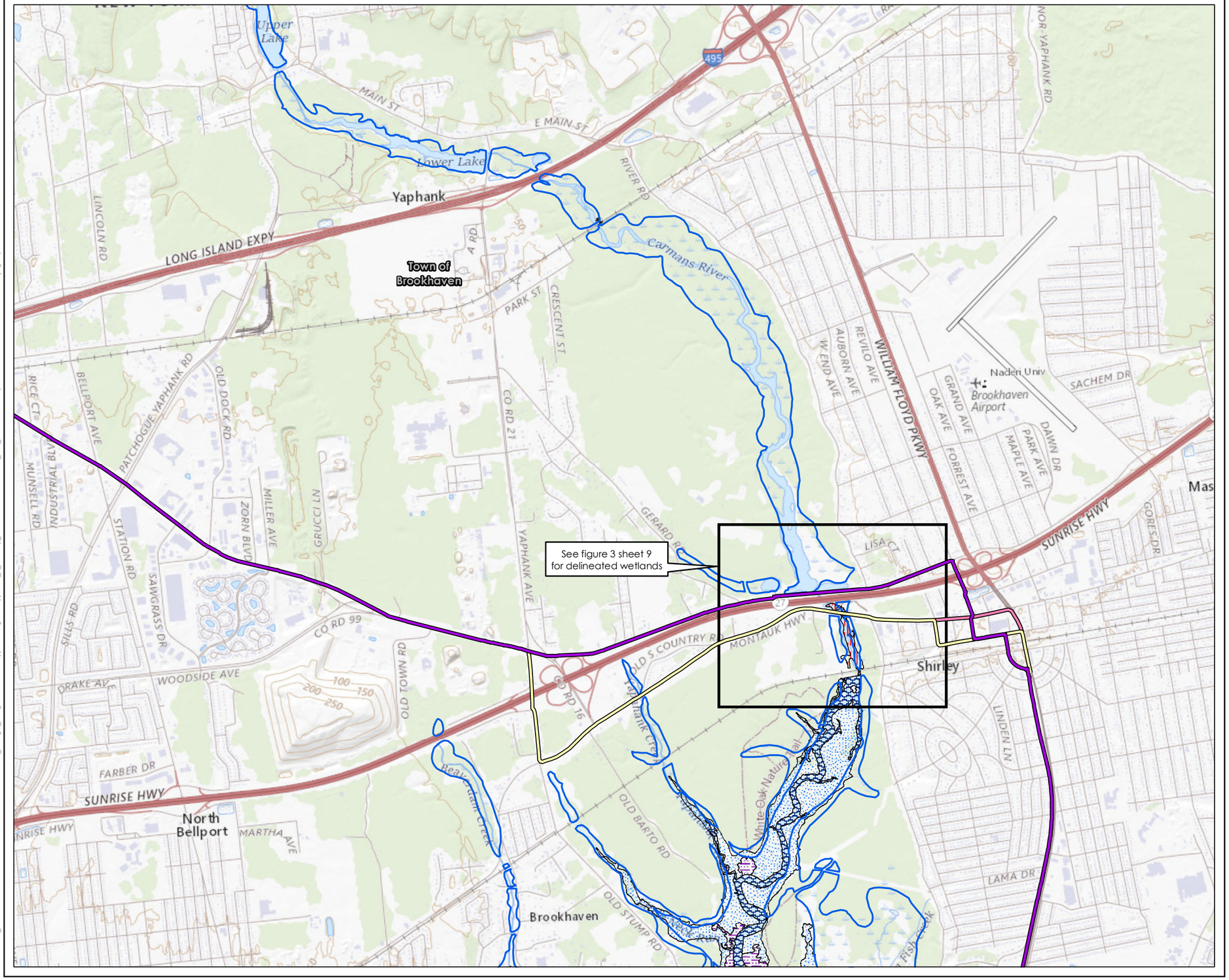

Figure 2b
Wetlands and Waterbodies – NYSDEC
Sheet 2 of 3

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Sunrise Wind Export Cable (SRWEC–NYS)
- Landfall HDD A
- Intracoastal Waterway HDD (ICW HDD)
- Onshore Transmission Cable LIE Service Road Route
- Onshore Transmission Cable Peconic Avenue Route
- Montauk Highway Route
- William Floyd Parkway to Montauk Highway Variation
- Nicolls Avenue Variation
- Onshore Interconnection Cable Route
- Union Avenue Site
- Holbrook Substation
- Village Boundary
- Town Boundary
- NYSDEC Wetlands

NYSDEC Tidal Wetlands
NYC and Long Island

- Dredged Spoil
- Formally Connected
- Fresh Marsh
- High Marsh
- Intertidal Marsh
- Littoral Zone
- Coastal Shoals, Bars and Mudflats

Sources
NYSDEC Wetlands, 2018
NYS Office of IT Services GPO, NYS Boundaries, 2018
USGS Topo Map

Note
The cable route centerline and trenchless crossing work areas are indicative and subject to final engineering design.

Date	07/11/2022
Project Number	2028113199
Prepared By	GC
Reviewed By	DGN

0 0.5 mile
0 0.75 km

N

Scale at 11x17: 1:31,680
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

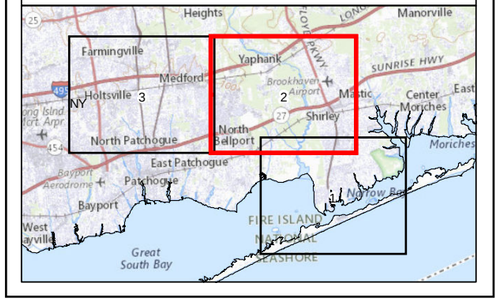

Figure 2b
Wetlands and Waterbodies – NYSDEC
Sheet 3 of 3

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Sunrise Wind Export Cable (SRWEC–NYS)
- Landfall HDD A
- Intracoastal Waterway HDD (ICW HDD)
- Onshore Transmission Cable LIE Service Road Route
- Onshore Transmission Cable Peconic Avenue Route
- Montauk Highway Route
- William Floyd Parkway to Montauk Highway Variation
- Nicolls Avenue Variation
- Onshore Interconnection Cable Route
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NYSDEC Tidal Wetlands NYC and Long Island

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- Fresh Marsh
- High Marsh
- Intertidal Marsh
- Littoral Zone
- Coastal Shoals, Bars and Mudflats

Sources
NYSDEC Wetlands, 2018
NYS Office of IT Services GPO, NYS Boundaries, 2018
USGS Topo Map

Note
The cable route centerline and trenchless crossing work areas are indicative and subject to final engineering design.

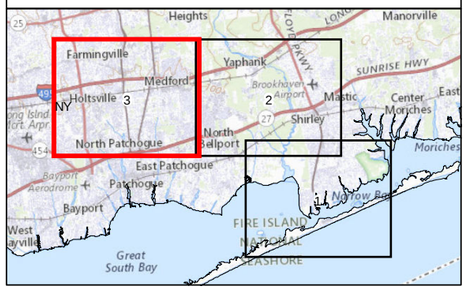
Date	07/11/2022
Project Number	2028113199
Prepared By	GC
Reviewed By	DGN

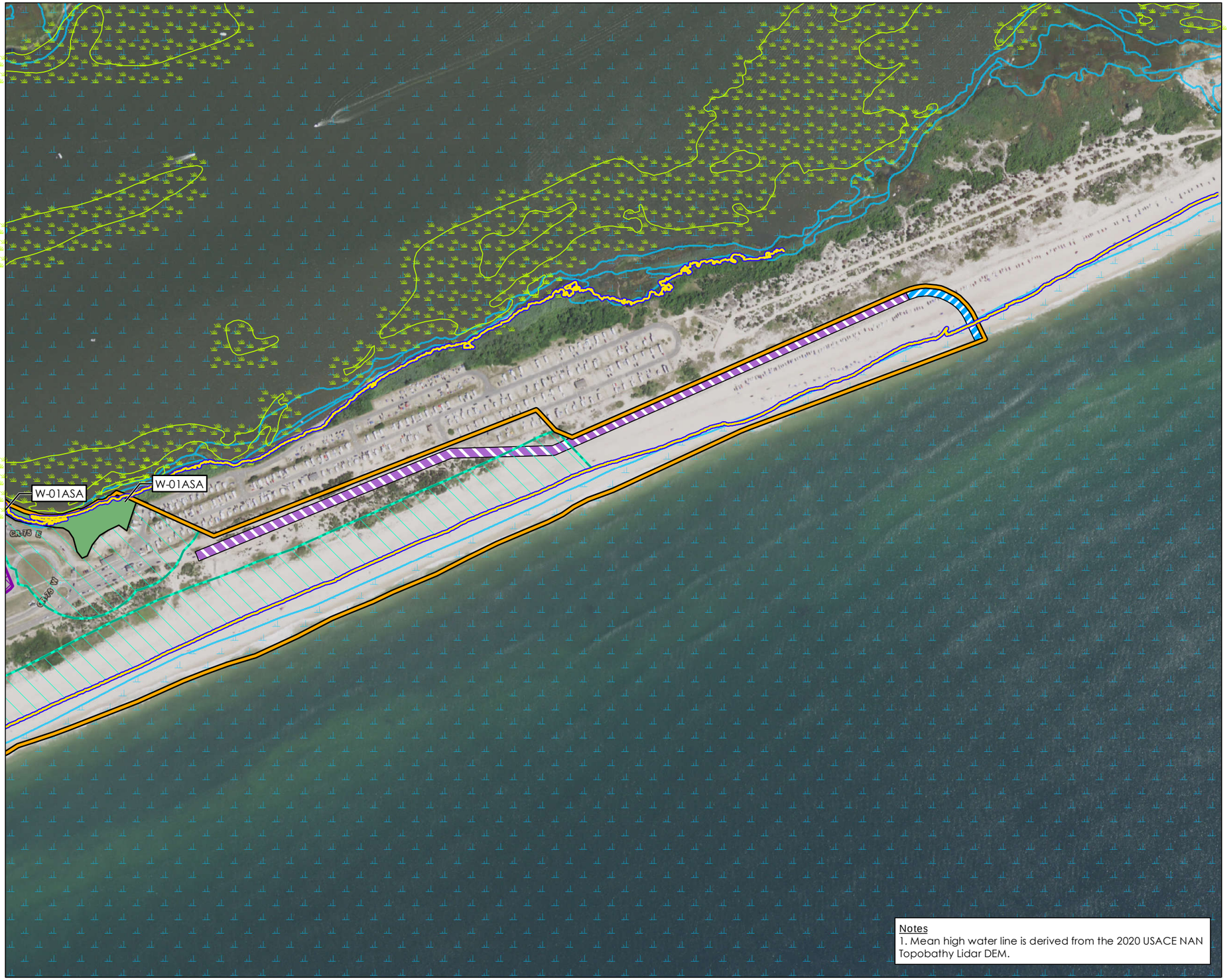
0 0.5 mile
0 0.75 km

N

Scale at 11x17: 1:31,680
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP





Notes
1. Mean high water line is derived from the 2020 USACE NAN Topobathy Lidar DEM.

Figure 3
Delineated Wetlands
Sheet 1 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- Mean High Water Line (2.18-feet)
- Delineated Wetland
- 300-ft Regulated Adjacent Area for NYSDEC-mapped Tidal Wetlands
- NYSDEC Tidal Wetland
- NYSDEC Statewide Seagrass
- Landfall Work Area
- Pipe Sea Access
- Pipe Stringing Area

Sources
Base map: NAIP 2019

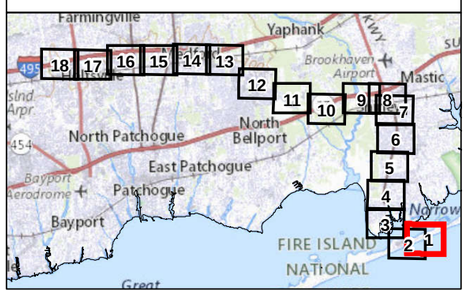
Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



Notes
1. Mean high water line is derived from the 2020 USACE NAN Topobathy Lidar DEM.
2. This figure indicates the potential areas that could be used for a temporary landing structure to support construction of the Landfall HDD and the ICW HDD.
3. The Temporary Landing Structure Area and activities to offload equipment will not occur within the Otis Pike Winderness Area.

Figure 3
Delineated Wetlands
Sheet 2 of 18

Sunrise Wind | Powered by Ørsted & Eversource

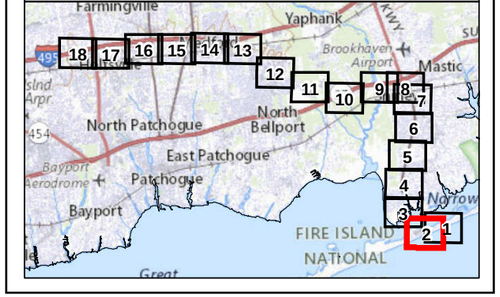
Legend
- Survey Area – LIE Service Road / Interconnection Route
- Mean High Water Line (2.18-feet)
- Open Wetland Boundary
- Delineated Wetland
- 300-ft Regulated Adjacent Area for NYSDEC-mapped Tidal Wetlands
- NYSDEC Tidal Wetland
- NYSDEC Statewide Seagrass
- Temporary Landing Structure Area
- Landfall Work Area
- ICW Work Area
- Pipe Stringing Area

Sources
Base map: NAIP 2019

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters
N
Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



Notes
1. Mean high water line is derived from the 2020 USACE NAN Topobathy Lidar DEM.

Figure 3
Delineated Wetlands
Sheet 3 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- Mean High Water Line (2.18-feet)
- Open Wetland Boundary
- Delineated Wetland
- 300-ft Regulated Adjacent Area for NYSDEC-mapped Tidal Wetlands
- NYSDEC Tidal Wetland
- NYSDEC Freshwater Wetland
- NYSDEC Statewide Seagrass
- ICW Work Area

Sources
Base map: NAIP 2019

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

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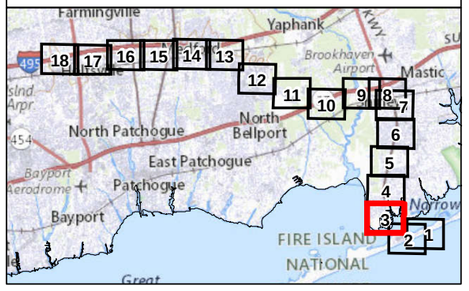

Figure 3
Delineated Wetlands
Sheet 4 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- NYSDEC Tidal Wetland
- NYSDEC Freshwater Wetland

Sources
Base map: NAIP 2019

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet

0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

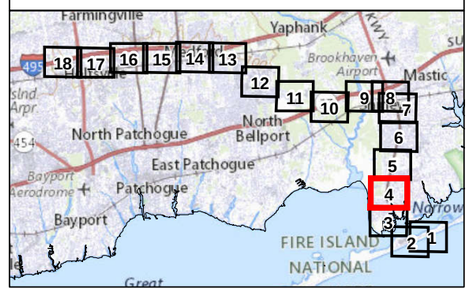

Figure 3
Delineated Wetlands
Sheet 5 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- NYSDEC Tidal Wetland
- NYSDEC Freshwater Wetland

Sources
Base map: NAIP 2019

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

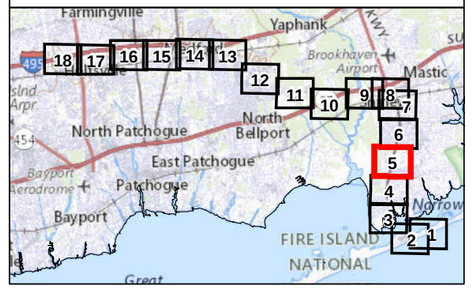

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Figure 3
Delineated Wetlands
Sheet 6 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

Survey Area – LIE Service Road / Interconnection Route

Sources
Base map: NAIP 2019

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet

0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

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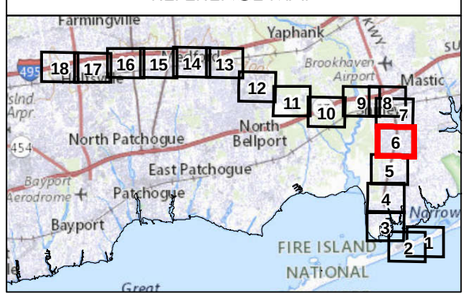

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Figure 3
Delineated Wetlands
Sheet 7 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- Trenchless Crossing Work Area

Sources
Base map: NAIP 2019

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet

0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

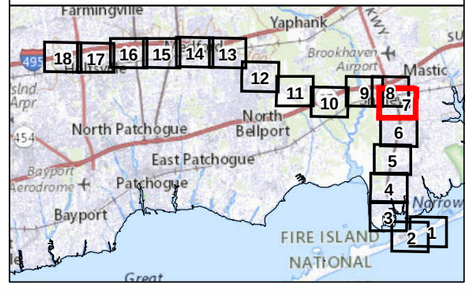

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Figure 3
Delineated Wetlands
Sheet 8 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- Trenchless Crossing Work Area

Sources
Base map: NAIP 2019

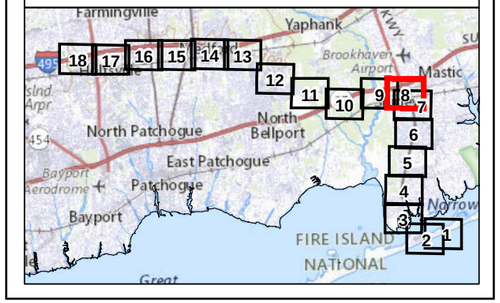
Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



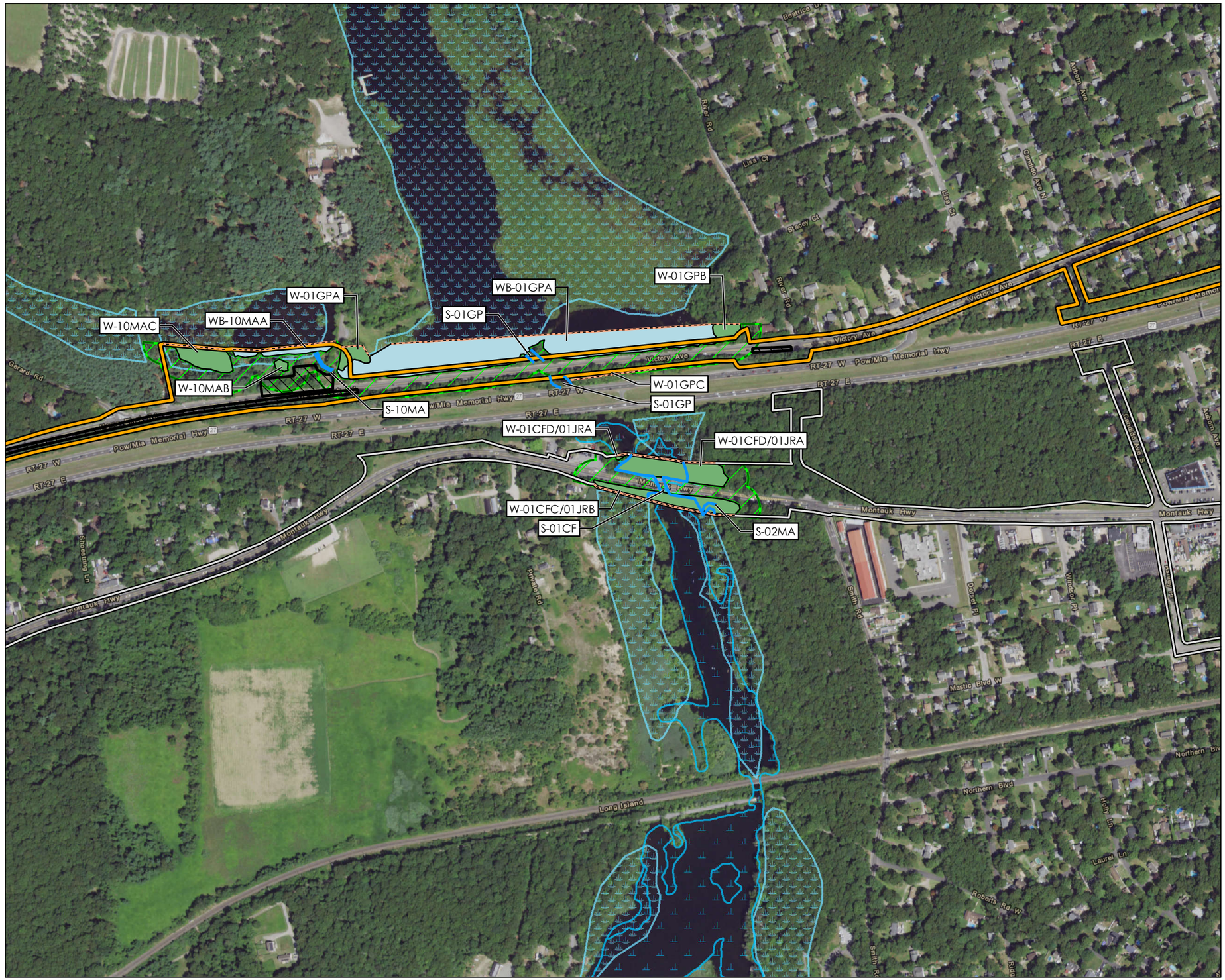


Figure 3
Delineated Wetlands
Sheet 9 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- Delineated Stream
- Open Wetland Boundary
- Delineated Waterbody
- Delineated Wetland
- 100-ft Regulated Adjacent Area for NYSDEC-mapped Freshwater Wetlands
- NYSDEC Tidal Wetland
- NYSDEC Freshwater Wetland
- Trenchless Crossing Work Area

Sources
Base map: NAIP 2019

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

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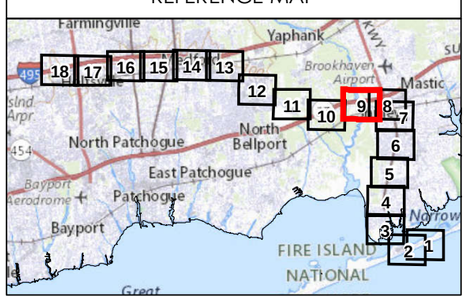

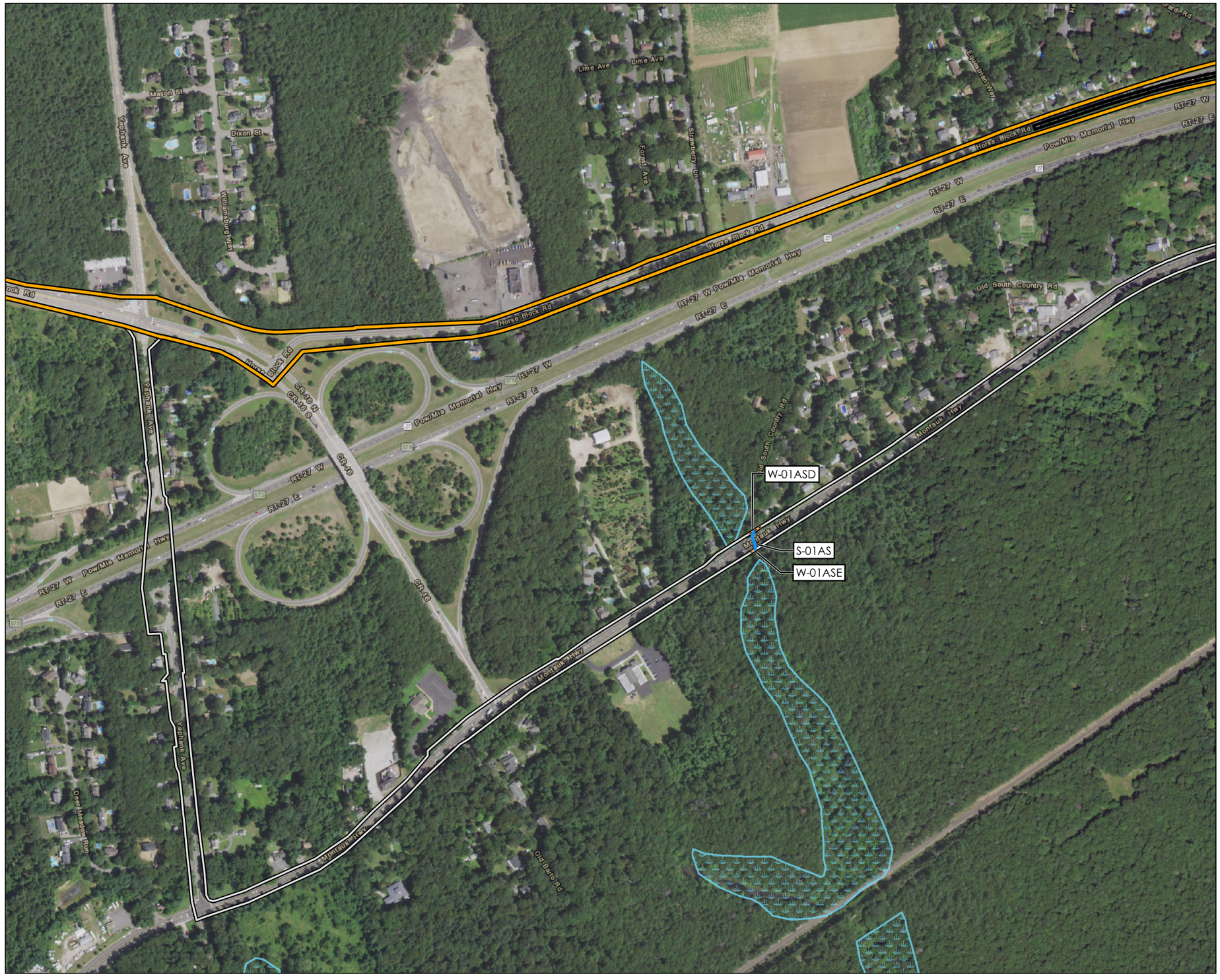

Figure 3
Delineated Wetlands
Sheet 10 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- Delineated Stream
- Open Wetland Boundary
- Delineated Wetland
- NYSDEC Freshwater Wetland
- Trenchless Crossing Work Area

Sources
Base map: NAIP 2019

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters
N
Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

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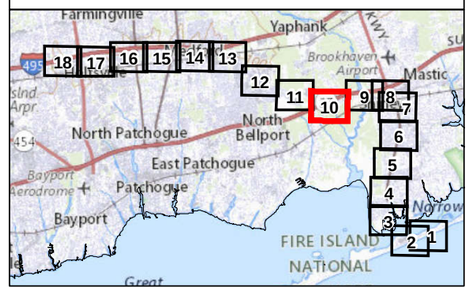

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Figure 3
Delineated Wetlands
Sheet 11 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

Survey Area – LIE Service Road / Interconnection Route

Sources
Base map: NAIP 2019

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

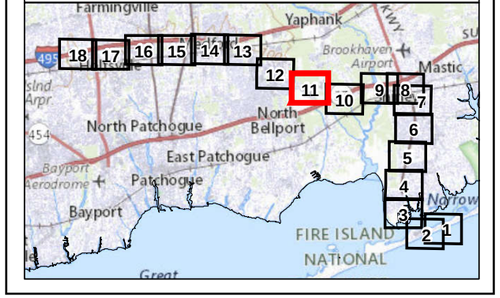

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Figure 3
Delineated Wetlands
Sheet 12 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

Survey Area – LIE Service Road / Interconnection Route

Sources
Base map: NAIP 2019

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

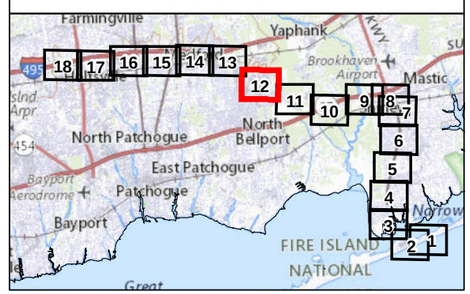
0 500 Feet

0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



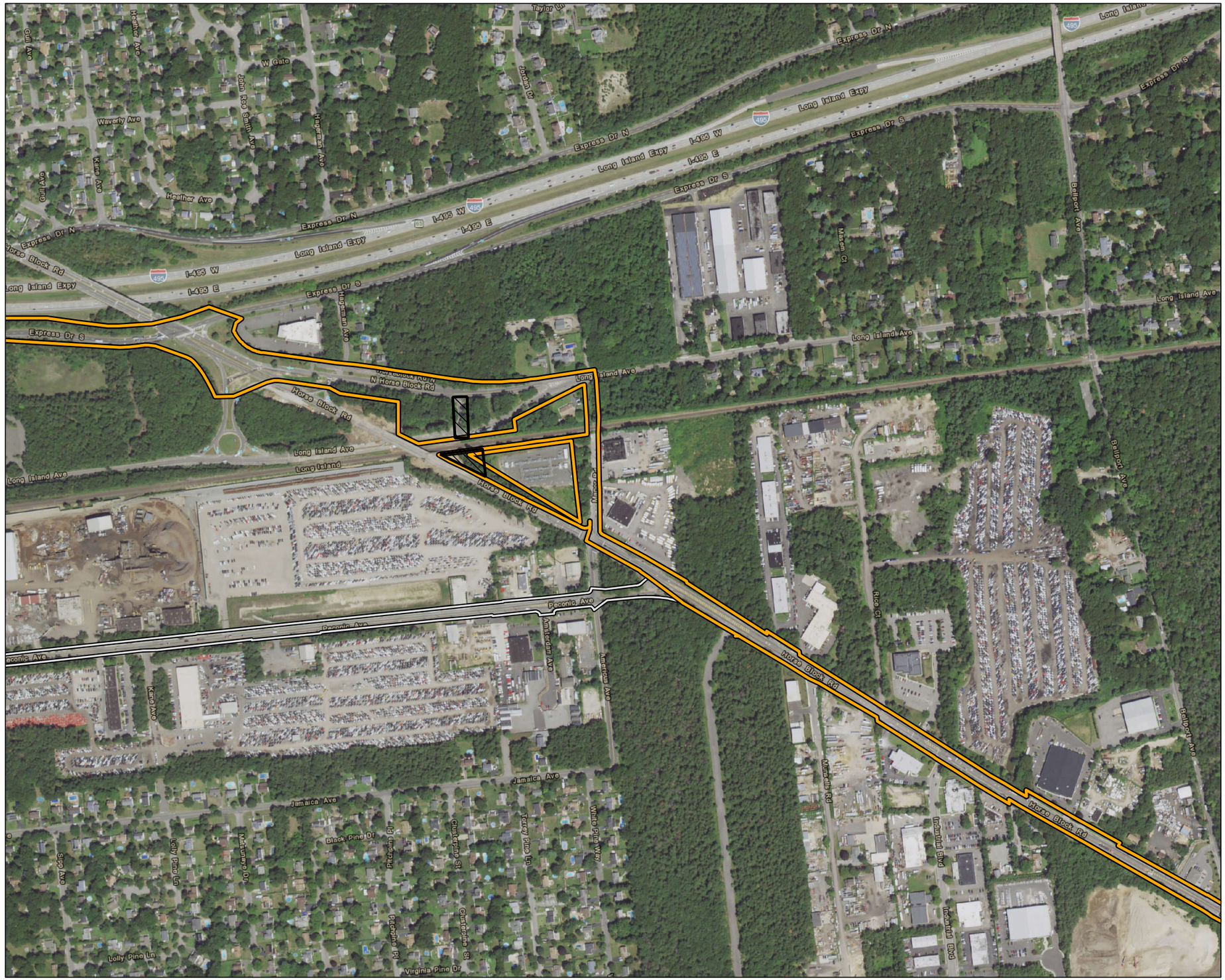


Figure 3
Delineated Wetlands
Sheet 13 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- Trenchless Crossing Work Area

Sources
Base map: NAIP 2019

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

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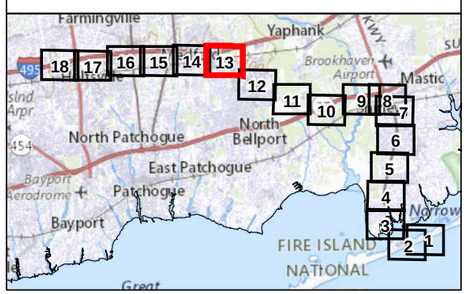

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Figure 3
Delineated Wetlands
Sheet 14 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes

Sources
Base map: NAIP 2019

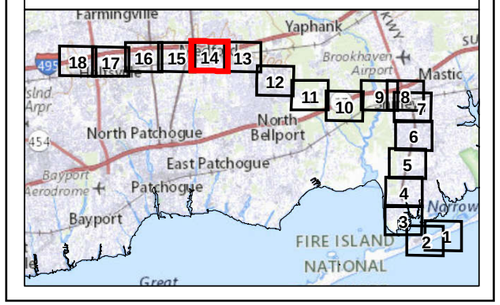
Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



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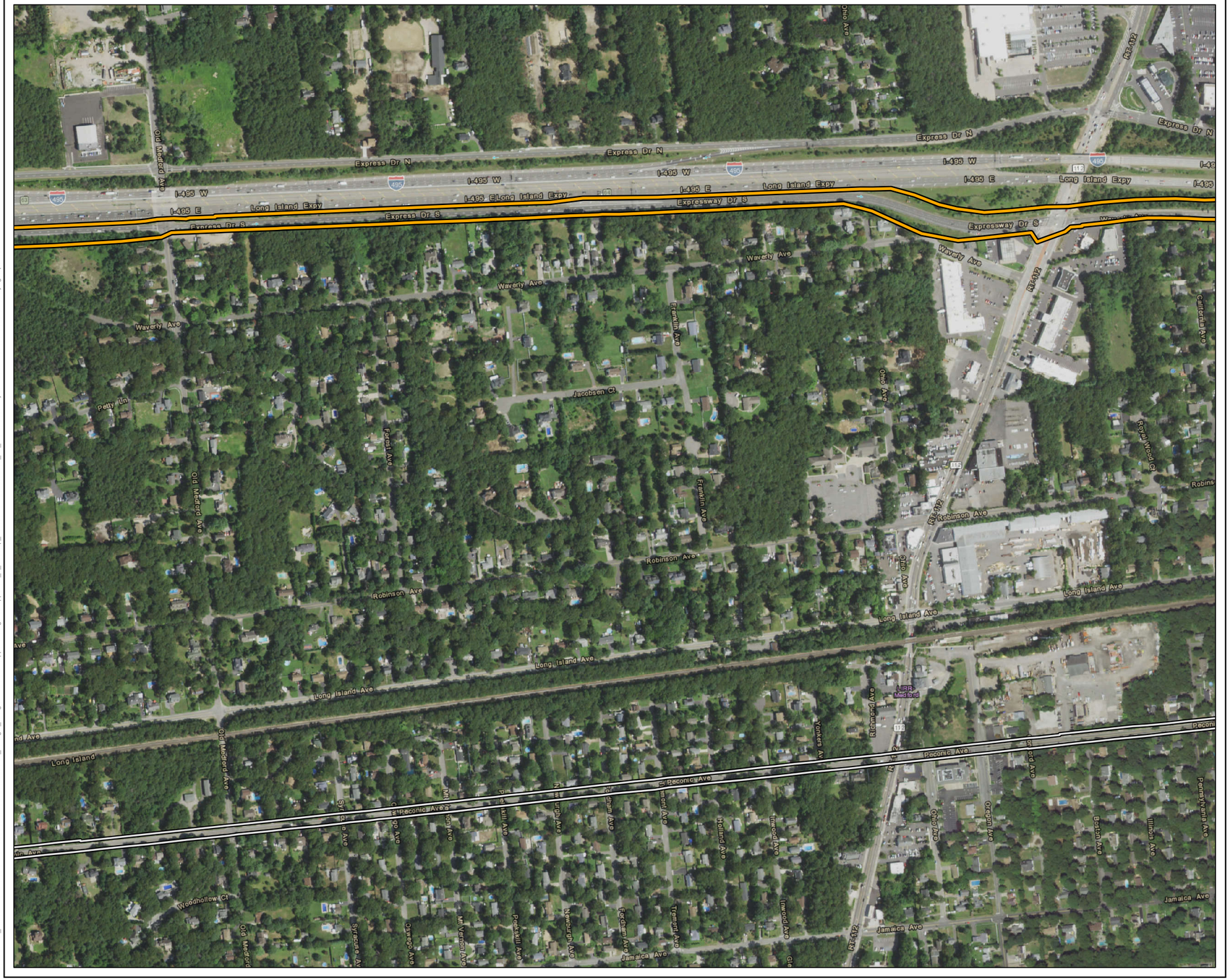

Figure 3
Delineated Wetlands
Sheet 15 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes

Sources
Base map: NAIP 2019

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

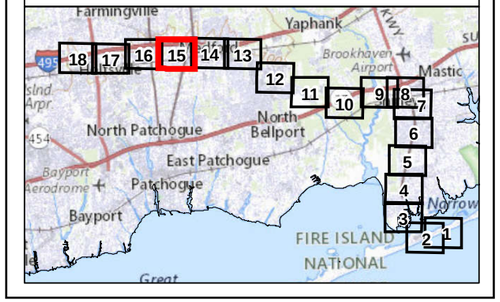

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Figure 3
Delineated Wetlands
Sheet 16 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes

Sources
Base map: NAIP 2019

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

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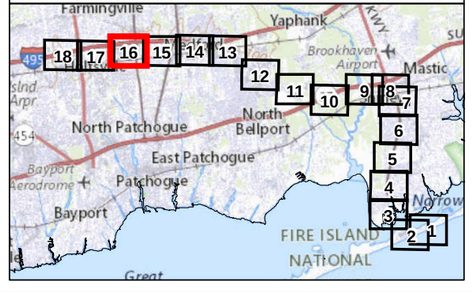


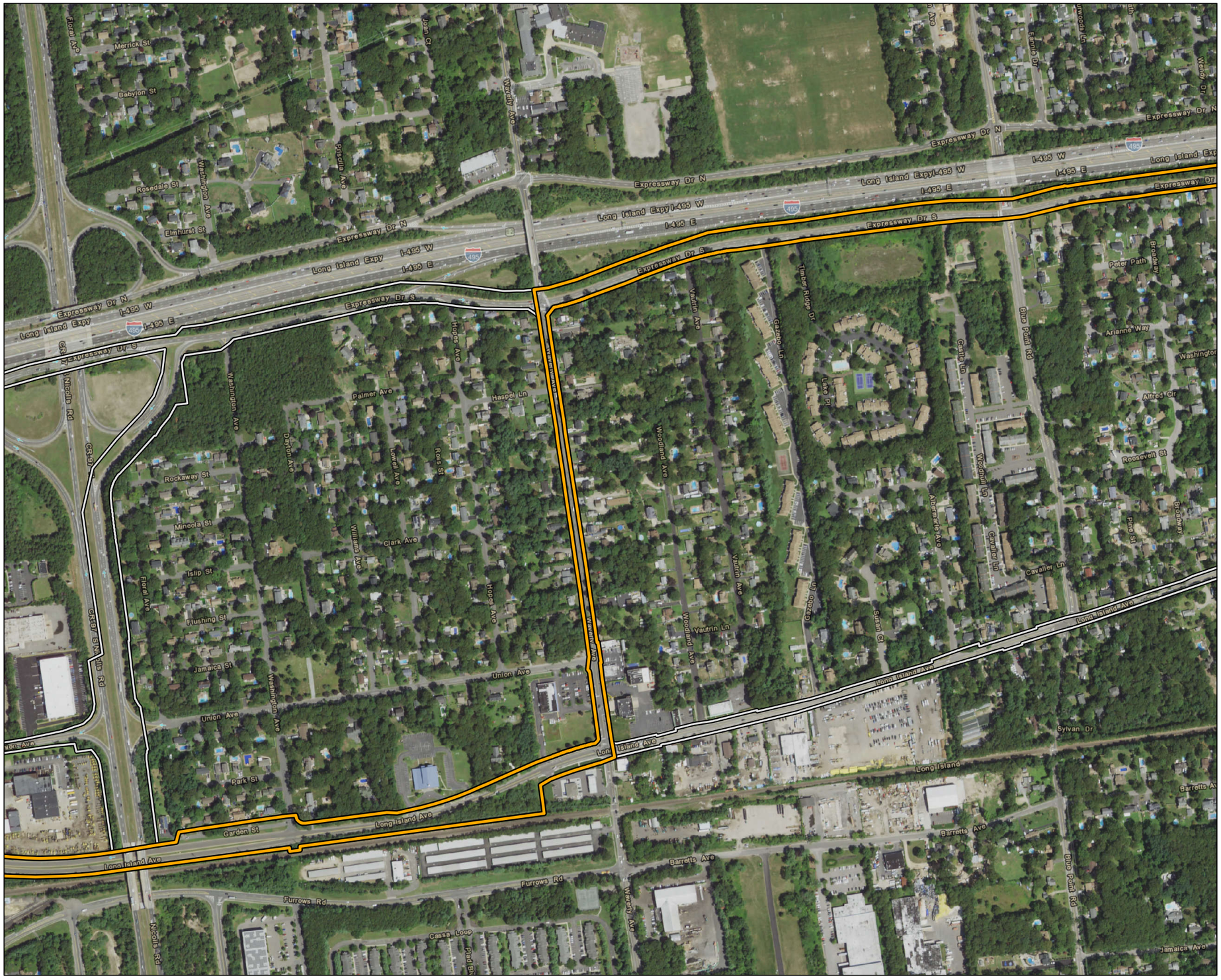


Figure 3
Delineated Wetlands
Sheet 17 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes

Sources
Base map: NAIP 2019

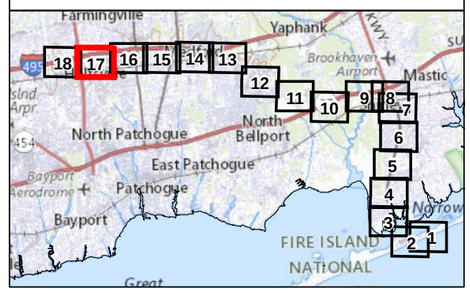
Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



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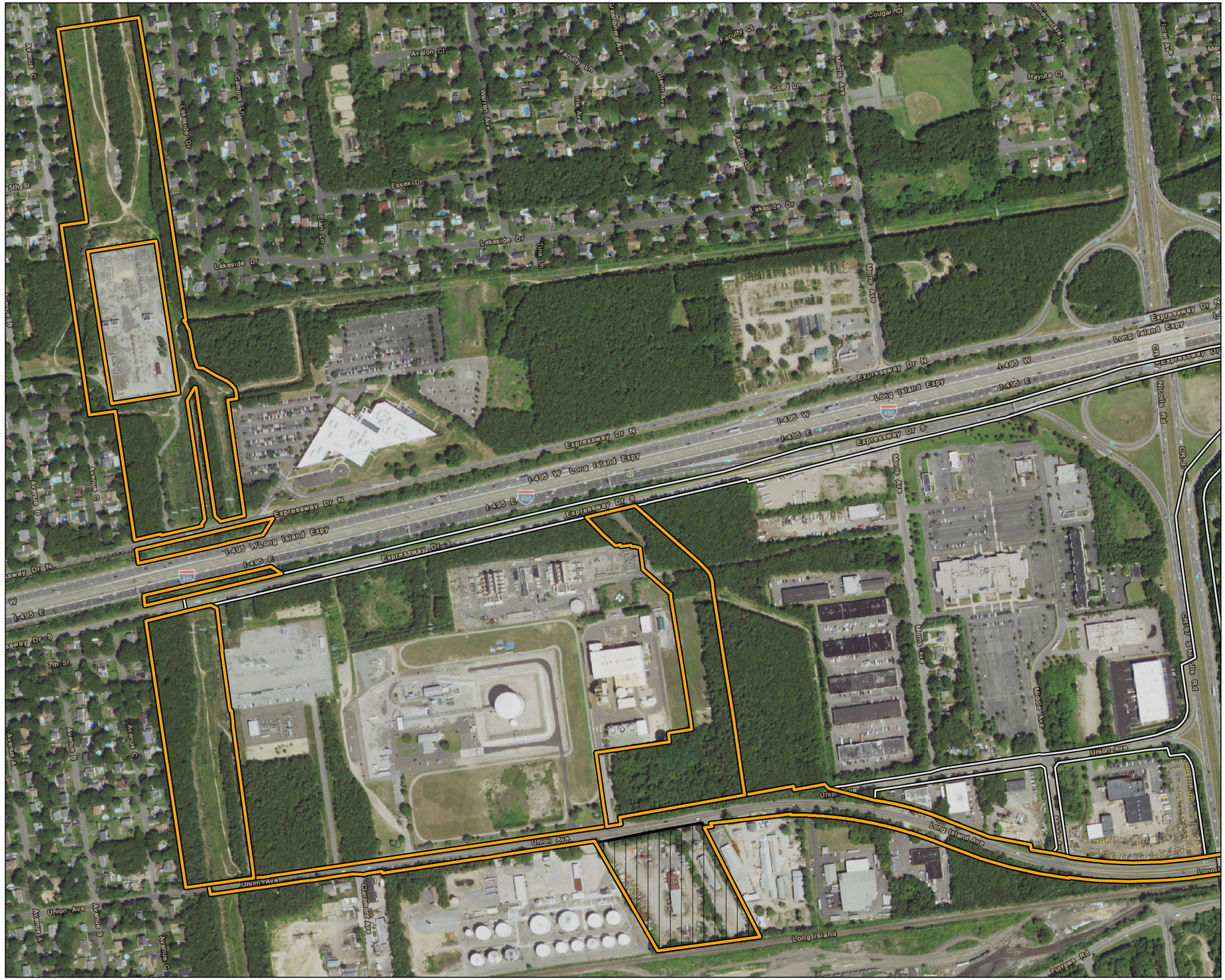

Figure 3
Delineated Wetlands
Sheet 18 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- Union Avenue Site

Sources
Base map: NAIP 2019

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

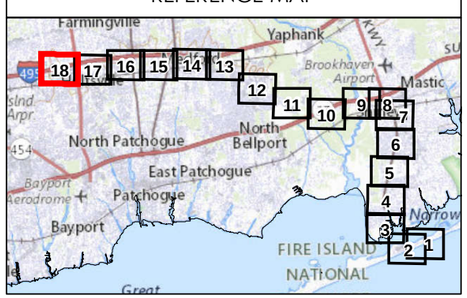

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Figure 4 – Significant and Critical Natural Communities and Habitats Sheet 1 of 3

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Sunrise Wind Export Cable (SRWEC–NYS)
- Landfall HDD A
- Intracoastal Waterway HDD (ICW HDD)
- Onshore Transmission Cable
  LIE Service Road Route
- Town Boundary
- Central Pine Barrens Core Preservation Area
- Central Pine Barrens Compatible Growth Area
- NYSDOS Significant Coastal Fish and Wildlife Habitats
- NYS Natural Heritage Community Occurrences
- NYSDEC Critical Environmental Area

Sources
NYS Office of IT Services GPO, NYS Boundaries, 2018
USFWS NWI Wetlands, 2018
USGS Topo Map

Note
The cable route centerline and trenchless crossing work areas are indicative and subject to final engineering design.

Date	07/11/2022
Project Number	2028113199
Prepared By	GC
Reviewed By	DGN

0 0.5 mile
0 0.75 km

N

Scale at 11x17: 1:31,680
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

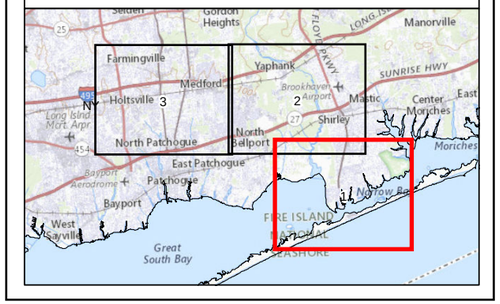


Figure 4 – Significant and Critical Natural Communities and Habitats Sheet 2 of 3

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Onshore Transmission Cable
- LIE Service Road Route
- Montauk Highway Route
- William Floyd Parkway to Montauk Highway Variation
- Town Boundary
- Rare Plant Survey Area
- Central Pine Barrens Core Preservation Area
- Central Pine Barrens Compatible Growth Area
- NYSDOS Significant Coastal Fish and Wildlife Habitats
- NYS Natural Heritage Community Occurrences
- NYSDEC Critical Environmental Area

Sources
NYS Office of IT Services GPO, NYS Boundaries, 2018
USFWS NWI Wetlands, 2018
USGS Topo Map

Note
The cable route centerline and trenchless crossing work areas are indicative and subject to final engineering design.

Date	07/11/2022
Project Number	2028113199
Prepared By	GC
Reviewed By	DGN

0 0.5 mile
0 0.75 km

N

Scale at 11x17: 1:31,680
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

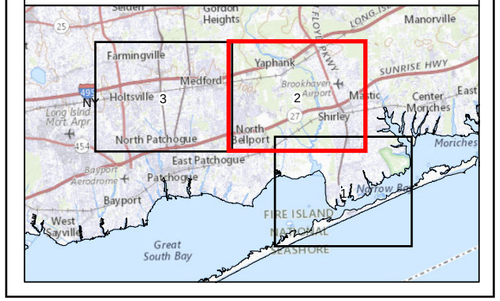


Figure 4 – Significant and Critical Natural Communities and Habitats Sheet 3 of 3

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Onshore Transmission Cable LIE Service Road Route
- Onshore Transmission Cable Peconic Avenue Route
- Nicolls Avenue Variation
- Onshore Interconnection Cable Route
- Union Avenue Site
- Holbrook Substation
- Village Boundary
- Town Boundary
- Central Pine Barrens Compatible Growth Area
- NYSDOS Significant Coastal Fish and Wildlife Habitats
- NYSDEC Critical Environmental Area

Sources
NYS Office of IT Services GPO, NYS Boundaries, 2018
USFWS NWI Wetlands, 2018
USGS Topo Map

Note
The cable route centerline and trenchless crossing work areas are indicative and subject to final engineering design.

Date	07/11/2022
Project Number	2028113199
Prepared By	GC
Reviewed By	DGN

0 0.5 mile
0 0.75 km

N

Scale at 11x17: 1:31,680
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

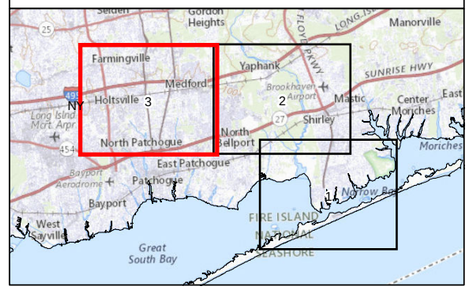


Figure 5
Invasive Plant Species
Sheet 1 of 18

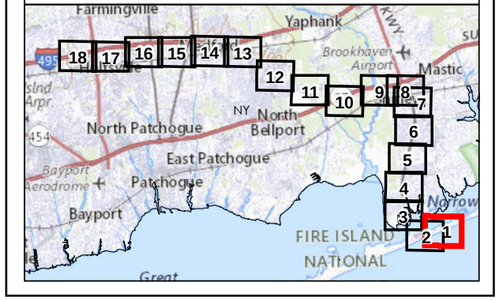
Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- *Phragmites australis* (Common Reed Grass)
- *Phragmites australis* (Common Reed Grass)

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters
N
Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



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Notes
1. Invasive plant species naming convention follows New York State Prohibited and Regulated Invasive Plants (September 10, 2014) by the NYS Departments of Environmental Conservation and Agriculture and Markets
2. Occurrences of invasive plant species are mapped as points and polygons based on the spatial distribution of dominant species observed during field surveys.
3. Base map: NAIP 2019.

Figure 5
Invasive Plant Species
Sheet 2 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- *Phragmites australis* (Common Reed Grass)
- *Phragmites australis* (Common Reed Grass)
- *Phragmites australis* (Common Reed Grass)/ *Rosa multiflora* (Multiflora Rose)

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters
N
Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

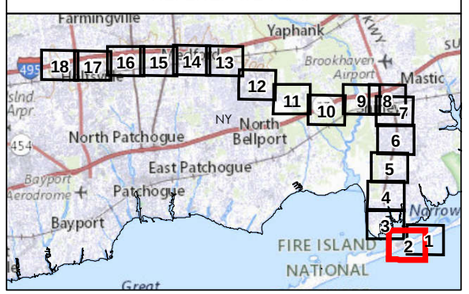


Figure 5
Invasive Plant Species
Sheet 3 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- *Phragmites australis* (Common Reed Grass)
- *Robinia pseudoacacia* (Black Locust)
- *Elaeagnus umbellata* (Autumn Olive)
- *Phragmites australis* (Common Reed Grass)

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

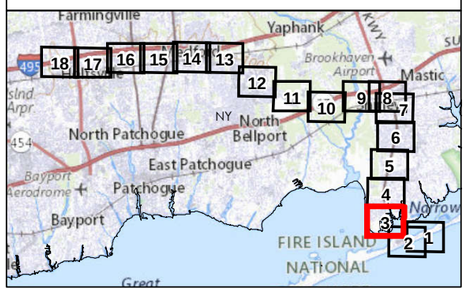
0 500 Feet

0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



Notes

1. Invasive plant species naming convention follows New York State Prohibited and Regulated Invasive Plants (September 10, 2014) by the NYS Departments of Environmental Conservation and Agriculture and Markets
2. Occurrences of invasive plant species are mapped as points and polygons based on the spatial distribution of dominant species observed during field surveys.
3. Base map: NAIP 2019.

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Notes
1. Invasive plant species naming convention follows New York State Prohibited and Regulated Invasive Plants (September 10, 2014) by the NYS Departments of Environmental Conservation and Agriculture and Markets
2. Occurrences of invasive plant species are mapped as points and polygons based on the spatial distribution of dominant species observed during field surveys.
3. Base map: NAIP 2019.

Figure 5
Invasive Plant Species
Sheet 4 of 18

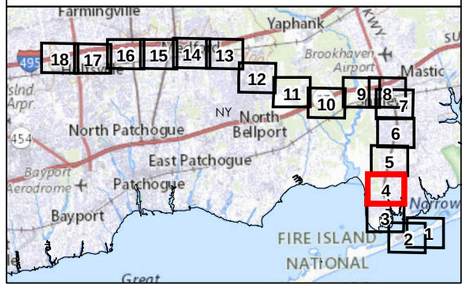
Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters
N
Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



Notes
1. Invasive plant species naming convention follows New York State Prohibited and Regulated Invasive Plants (September 10, 2014) by the NYS Departments of Environmental Conservation and Agriculture and Markets
2. Occurrences of invasive plant species are mapped as points and polygons based on the spatial distribution of dominant species observed during field surveys.
3. Base map: NAIP 2019.

Figure 5
Invasive Plant Species
Sheet 5 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- *Alliaria petiolata* (Garlic Mustard)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Phyllostachys aurea* (Golden Bamboo)
- *Reynoutria japonica* (Japanese Knotweed)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

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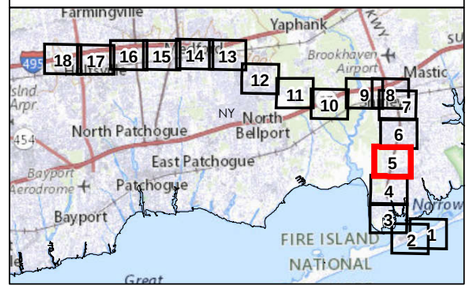

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Notes
1. Invasive plant species naming convention follows New York State Prohibited and Regulated Invasive Plants (September 10, 2014) by the NYS Departments of Environmental Conservation and Agriculture and Markets
2. Occurrences of invasive plant species are mapped as points and polygons based on the spatial distribution of dominant species observed during field surveys.
3. Base map: NAIP 2019.

Figure 5
Invasive Plant Species
Sheet 6 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- *Acer platanoides* (Norway Maple)
- *Artemisia vulgaris* (Mugwort)
- *Berberis thunbergii* (Japanese Barberry)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Centaurea stoebe* (Spotted Knapweed)
- *Ligustrum obtusifolium* (Border Privet)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)

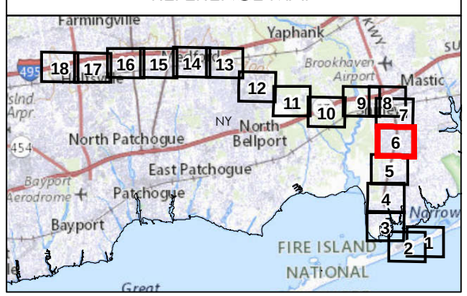
Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



Notes
1. Invasive plant species naming convention follows New York State Prohibited and Regulated Invasive Plants (September 10, 2014) by the NYS Departments of Environmental Conservation and Agriculture and Markets
2. Occurrences of invasive plant species are mapped as points and polygons based on the spatial distribution of dominant species observed during field surveys.
3. Base map: NAIP 2019.

Figure 5
Invasive Plant Species
Sheet 7 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- *Acer pseudoplatanus* (Sycamore Maple)
- *Alliaria petiolata* (Garlic Mustard)
- *Artemisia vulgaris* (Mugwort)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Elaeagnus umbellata* (Autumn Olive)
- *Lonicera japonica* (Japanese Honeysuckle)
- *Rhamnus cathartica* (Common Buckthorn)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)
- *Acer platanoides* (Norway Maple)
- *Artemisia vulgaris* (Mugwort)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Lonicera japonica* (Japanese Honeysuckle)
- *Reynoutria japonica* (Japanese Knotweed)
- *Rosa multiflora* (Multiflora Rose)

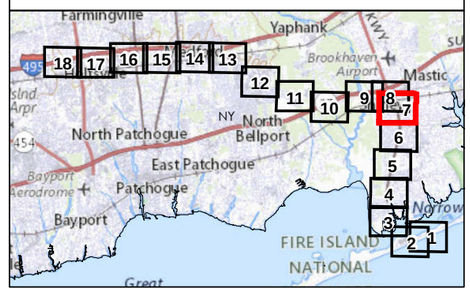
Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



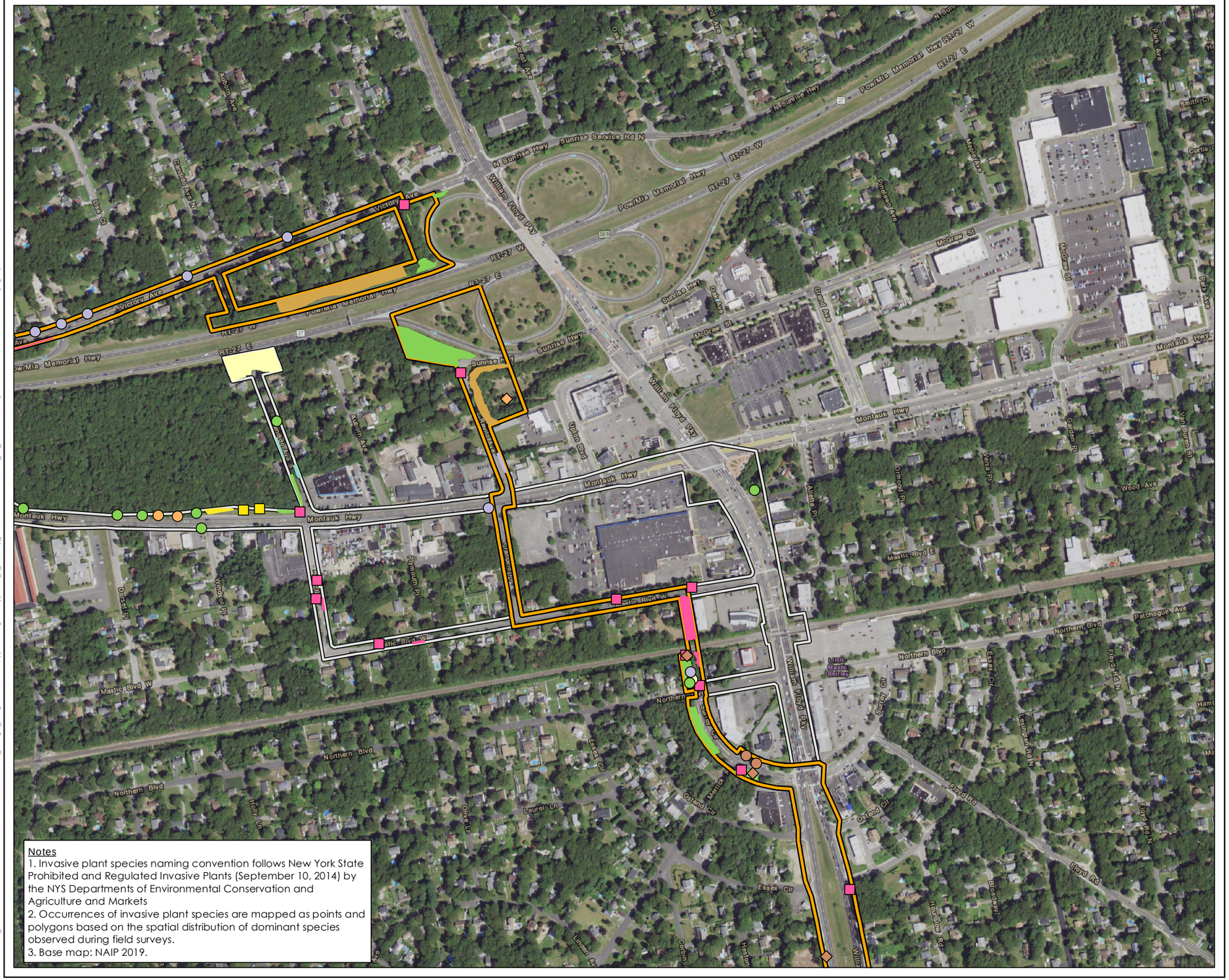


Figure 5
Invasive Plant Species
Sheet 8 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- *Acer pseudoplatanus* (Sycamore Maple)
- *Alliaria petiolata* (Garlic Mustard)
- *Artemisia vulgaris* (Mugwort)
- *Berberis thunbergii* (Japanese Barberry)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Elaeagnus umbellata* (Autumn Olive)
- *Lonicera japonica* (Japanese Honeysuckle)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)
- *Acer platanoides* (Norway Maple)
- *Alliaria petiolata* (Garlic Mustard)
- *Artemisia vulgaris* (Mugwort)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Lonicera japonica* (Japanese Honeysuckle)
- *Reynoutria japonica* (Japanese Knotweed)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

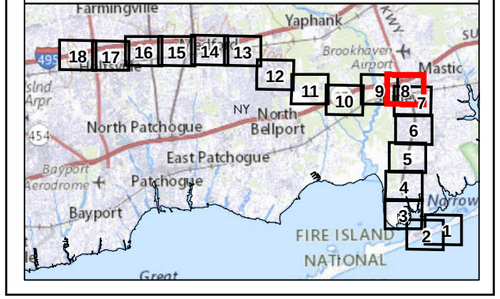
0 500 Feet

0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



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Notes
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3. Base map: NAIP 2019.

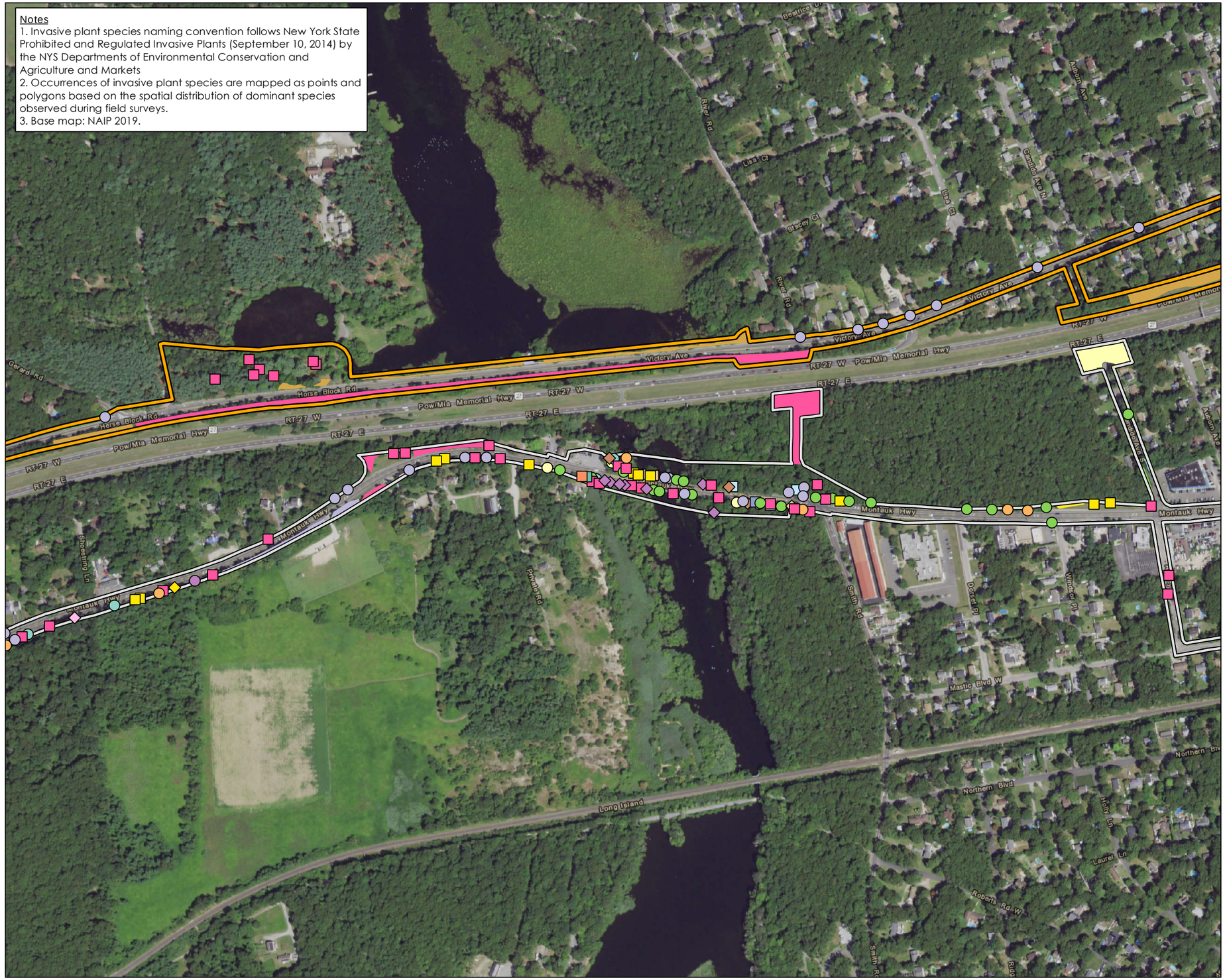

Figure 5
Invasive Plant Species
Sheet 9 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road Route
- Survey Area – Montauk or Peconic Alternative Routes
- *Acer platanoides* (Norway Maple)
- *Alliaria petiolata* (Garlic Mustard)
- *Artemisia vulgaris* (Mugwort)
- *Berberis thunbergii* (Japanese Barberry)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Cynanchum louiseae* (Black Swallow-wort)
- *Ligustrum obtusifolium* (Border Privet)
- *Lonicera japonica* (Japanese Honeysuckle)
- *Lonicera morrowii* (Morrow's Honeysuckle)
- *Microstegium vimineum* (Japanese Stilt Grass)
- *Phragmites australis* (Common Reed Grass)
- *Phyllostachys aurea* (Golden Bamboo)
- *Reynoutria japonica* (Japanese Knotweed)
- *Rhamnus cathartica* (Common Buckthorn)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)
- *Rubus phoenicolasius* (Wineberry)
- *Salix atrocinerea* (Gray Florist's Willow)

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

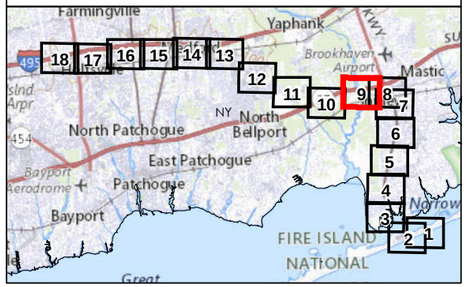

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Figure 5
Invasive Plant Species
Sheet 10 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- *Acer platanoides* (Norway Maple)
- *Alliaria petiolata* (Garlic Mustard)
- *Artemisia vulgaris* (Mugwort)
- *Berberis thunbergii* (Japanese Barberry)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Elaeagnus umbellata* (Autumn Olive)
- *Lonicera japonica* (Japanese Honeysuckle)
- *Miscanthus sinensis* (Chinese Silver Grass)
- *Reynoutria japonica* (Japanese Knotweed)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)
- *Acer platanoides* (Norway Maple)
- *Alliaria petiolata* (Garlic Mustard)
- *Artemisia vulgaris* (Mugwort)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Elaeagnus umbellata* (Autumn Olive)
- *Lonicera japonica* (Japanese Honeysuckle)
- *Reynoutria japonica* (Japanese Knotweed)
- *Rosa multiflora* (Multiflora Rose)

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

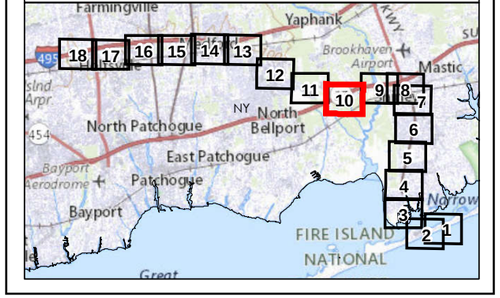
0 500 Feet

0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



Notes

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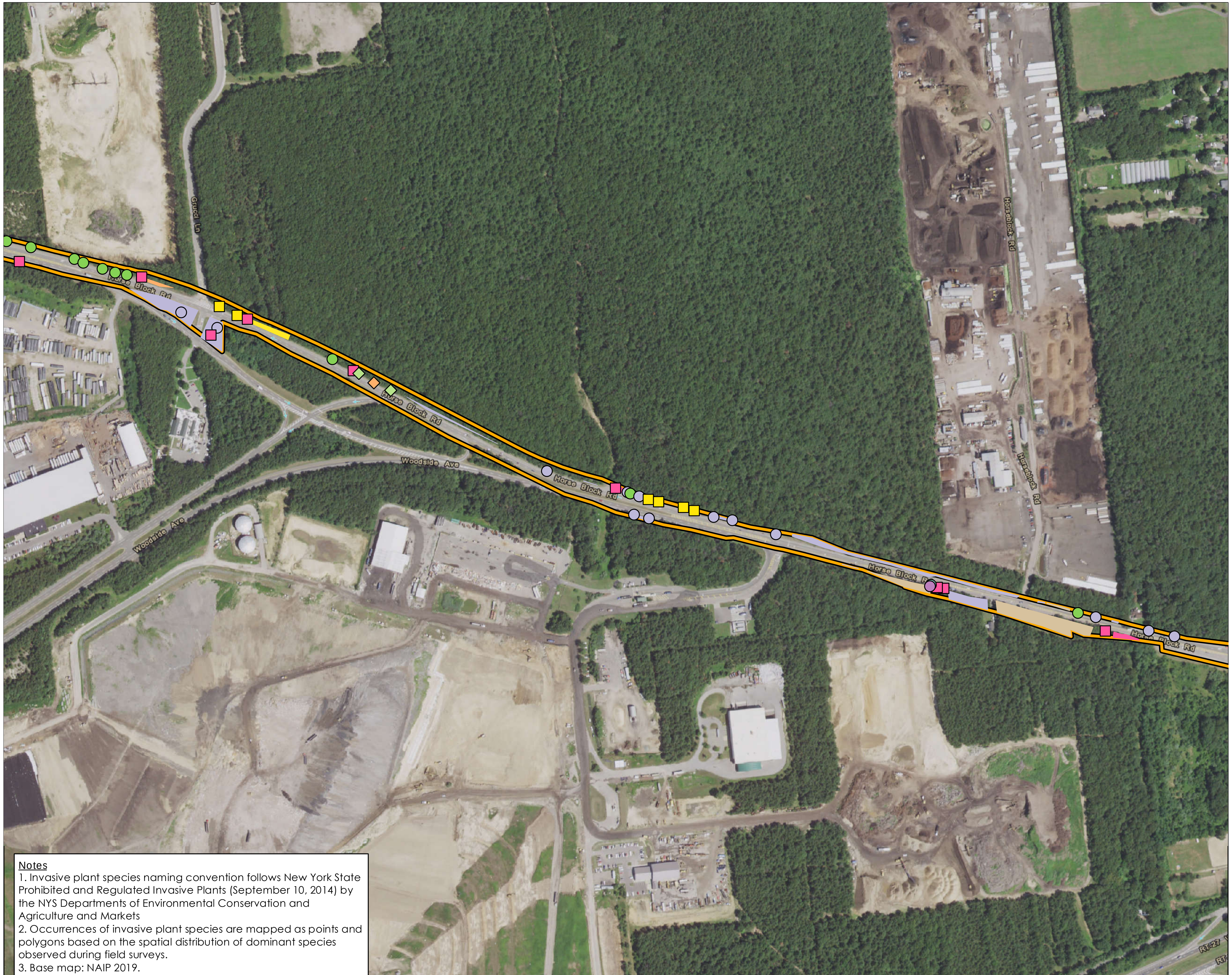
3. Base map: NAIP 2019.

V:\1956\active_Task Owner and other Non-BC\1956 Jobs\2028113199\03_data\gis_cad\gis\MXDs\COP\Appendix Figures\Appendix_L_Desktop_Assessment\2028113199_05_InvaskivesSurveyed.mxd Revised: 2022-07-08 By: gcampentier



Notes

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3. Base map: NAIP 2019.

Figure 5
Invasive Plant Species
Sheet 11 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- *Acer platanoides* (Norway Maple)
- *Artemisia vulgaris* (Mugwort)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Cynanchum louiseae* (Black Swallow-wort)
- *Elaeagnus umbellata* (Autumn Olive)
- *Frangula alnus* (Smooth Buckthorn)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)
- *Artemisia vulgaris* (Mugwort)
- *Elaeagnus umbellata* (Autumn Olive)
- *Lonicera tatarica* (Tartarian Honeysuckle)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

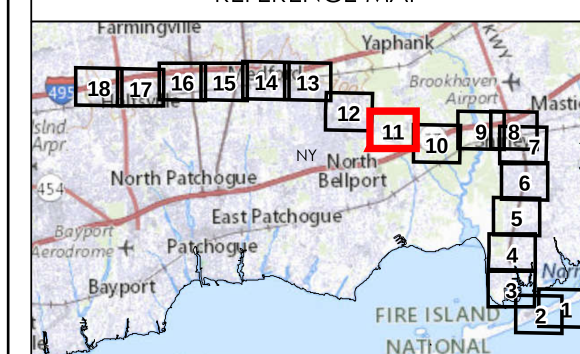
0 500 Feet

0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



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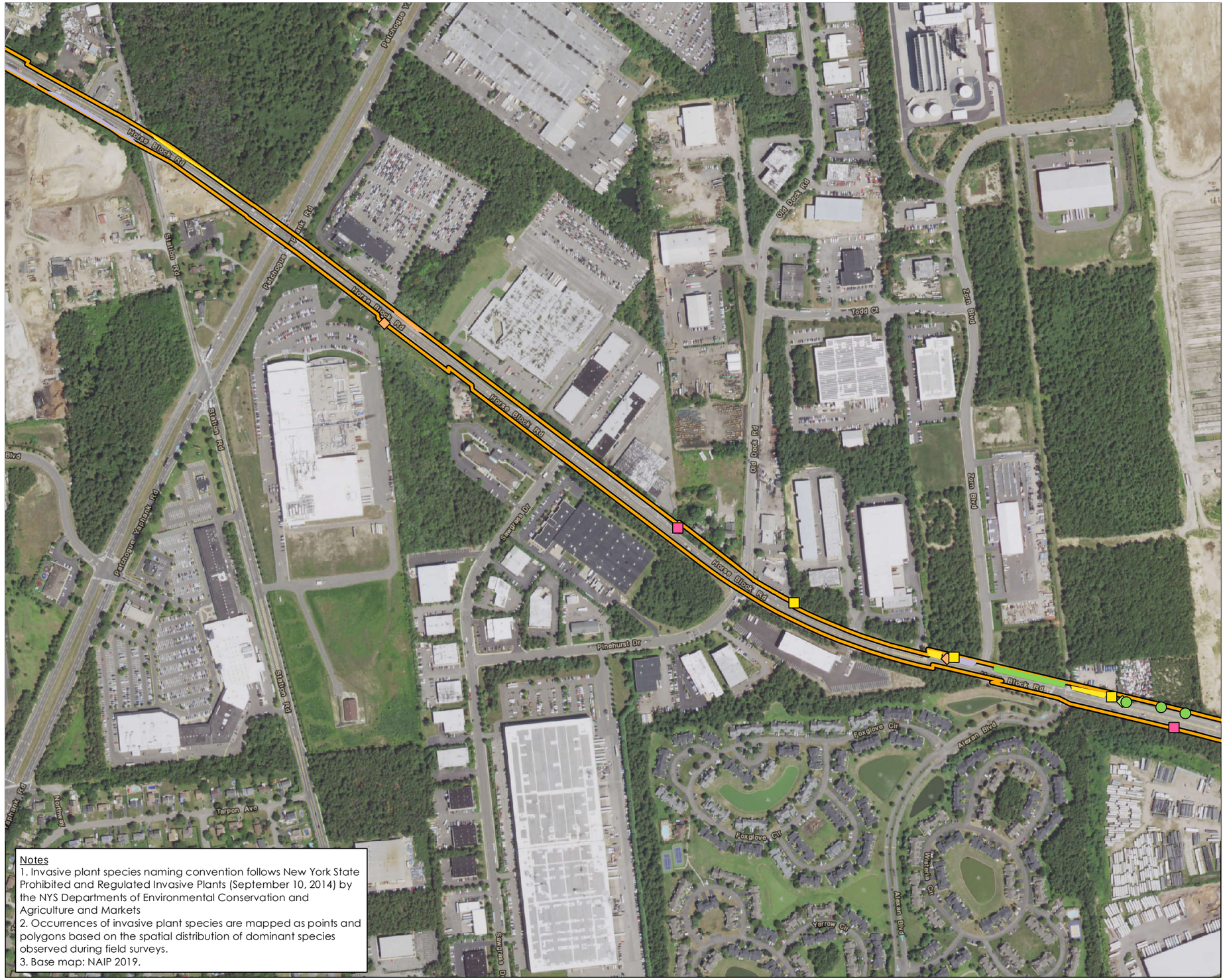

Notes
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2. Occurrences of invasive plant species are mapped as points and polygons based on the spatial distribution of dominant species observed during field surveys.
3. Base map: NAIP 2019.

Figure 5
Invasive Plant Species
Sheet 12 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Elaeagnus umbellata* (Autumn Olive)
- *Frangula alnus* (Smooth Buckthorn)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)
- *Artemisia vulgaris* (Mugwort)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Elaeagnus umbellata* (Autumn Olive)
- *Robinia pseudoacacia* (Black Locust)

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

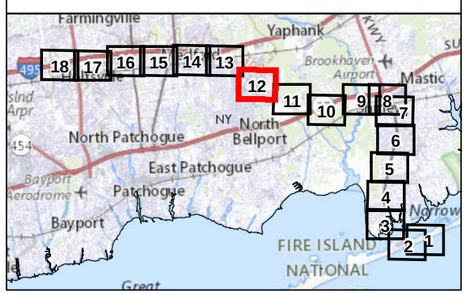

Figure 5
Invasive Plant Species
Sheet 13 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- *Alliaria petiolata* (Garlic Mustard)
- *Artemisia vulgaris* (Mugwort)
- *Berberis thunbergii* (Japanese Barberry)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Cynanchum louiseae* (Black Swallow-wort)
- *Lonicera japonica* (Japanese Honeysuckle)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)
- *Artemisia vulgaris* (Mugwort)
- *Elaeagnus umbellata* (Autumn Olive)
- *Frangula alnus* (Smooth Buckthorn)
- *Lonicera japonica* (Japanese Honeysuckle)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)

Notes
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3. Base map: NAIP 2019.

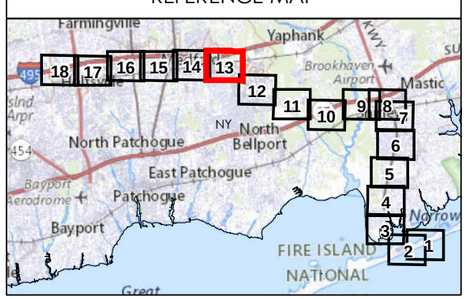
Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

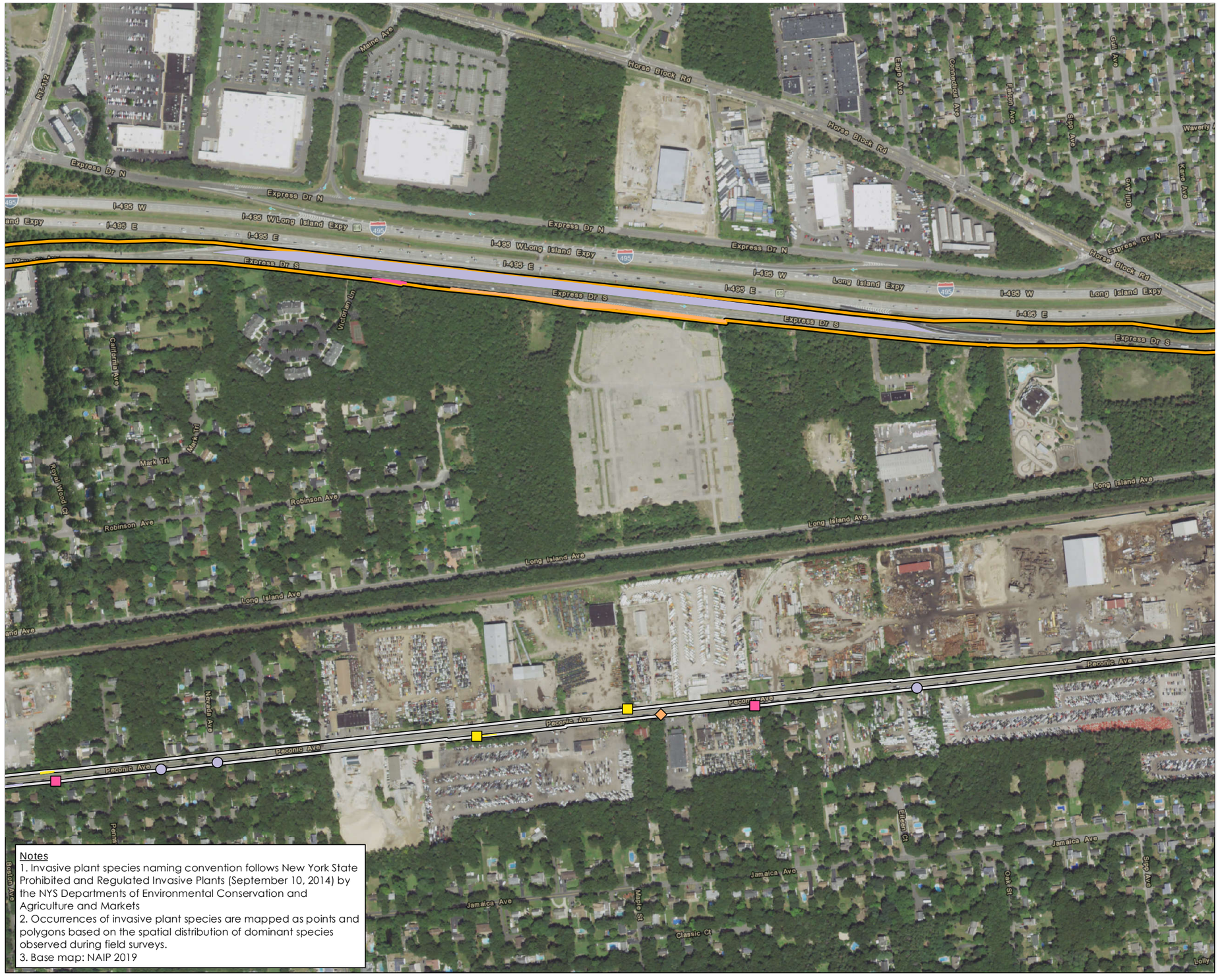
0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP





Notes
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2. Occurrences of invasive plant species are mapped as points and polygons based on the spatial distribution of dominant species observed during field surveys.
3. Base map: NAIP 2019

Figure 5
Invasive Plant Species
Sheet 14 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- *Artemisia vulgaris* (Mugwort)
- *Elaeagnus umbellata* (Autumn Olive)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)
- *Artemisia vulgaris* (Mugwort)
- *Elaeagnus umbellata* (Autumn Olive)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters
N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

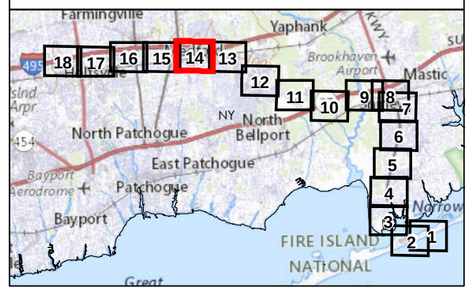

Figure 5
Invasive Plant Species
Sheet 15 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- *Alliaria petiolata* (Garlic Mustard)
- *Artemisia vulgaris* (Mugwort)
- *Rosa multiflora* (Multiflora Rose)
- *Acer platanoides* (Norway Maple)
- *Artemisia vulgaris* (Mugwort)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Elaeagnus umbellata* (Autumn Olive)
- *Robinia pseudoacacia* (Black Locust)

Notes
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Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet

0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

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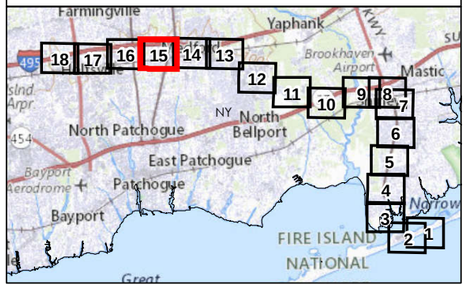

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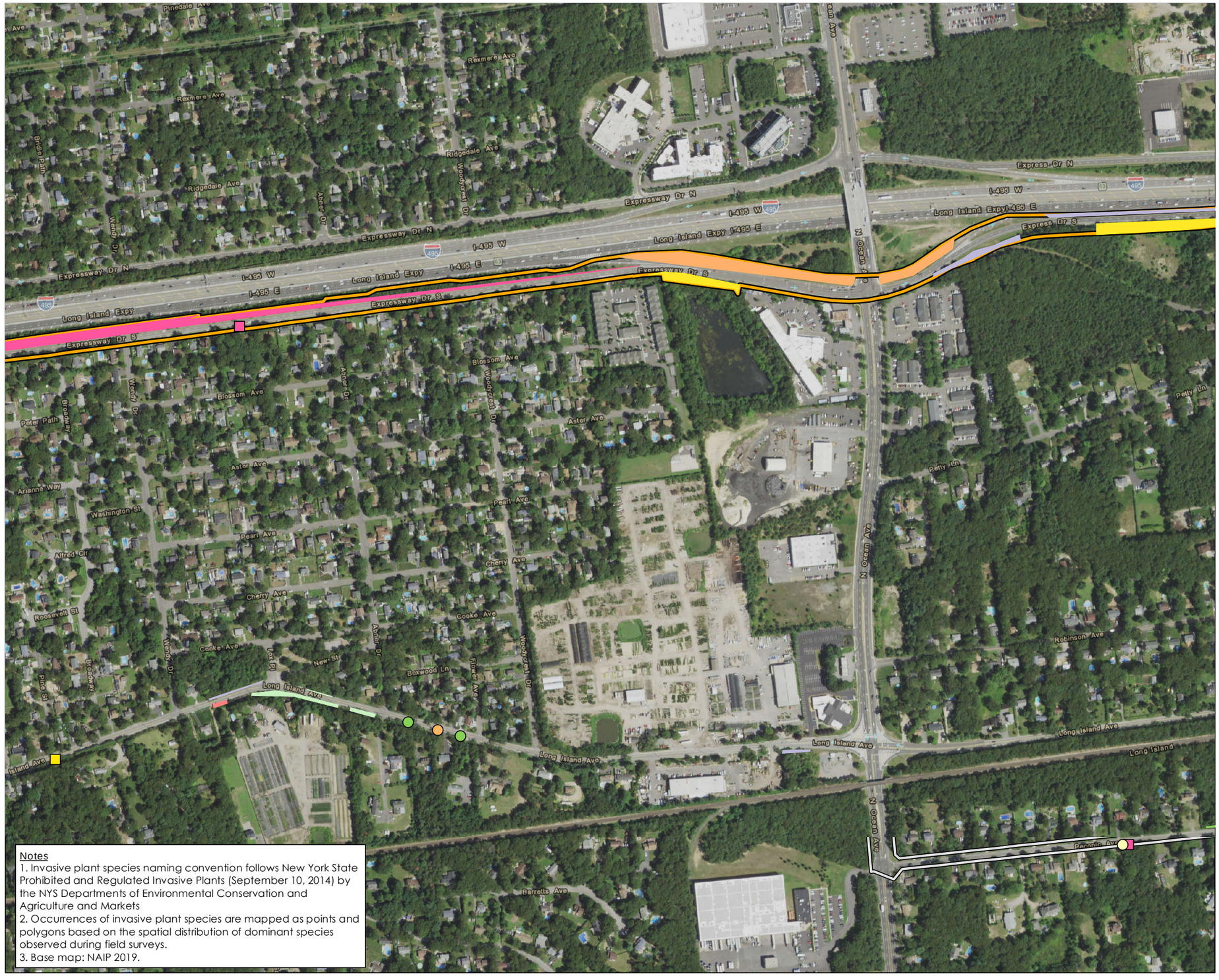

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Figure 5
Invasive Plant Species
Sheet 16 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- *Alliaria petiolata* (Garlic Mustard)
- *Berberis thunbergii* (Japanese Barberry)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)
- *Artemisia vulgaris* (Mugwort)
- *Cardamine impatiens* (Narrowleaf Bittercress)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Elaeagnus umbellata* (Autumn Olive)
- *Reynoutria japonica* (Japanese Knotweed)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters
N
Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

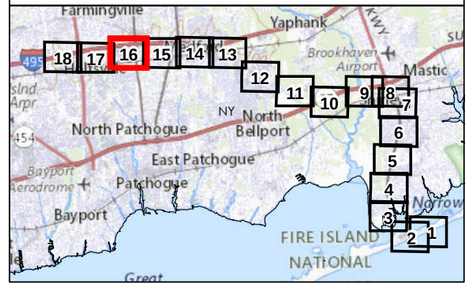


Figure 5
Invasive Plant Species
Sheet 17 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Rhamnus cathartica* (Common Buckthorn)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)
- *Artemisia vulgaris* (Mugwort)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Elaeagnus umbellata* (Autumn Olive)
- *Reynoutria japonica* (Japanese Knotweed)
- *Rosa multiflora* (Multiflora Rose)

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

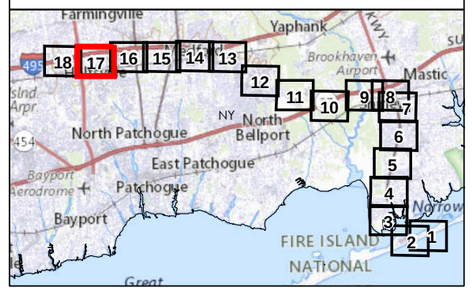
0 500 Feet

0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP



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3. Base map: NAIP 2019.

V:\1956\active_Task Owner and other Non-BC\1956 Jobs\2028113199\03_data\gis_cad\gis\MXD\s\COP\Appendix Figures\Appendix_L_Desktop_Assessment\20281131990 3_InvasivesSurveyed.mxd Revised: 2022-07-08 By: gcampentier

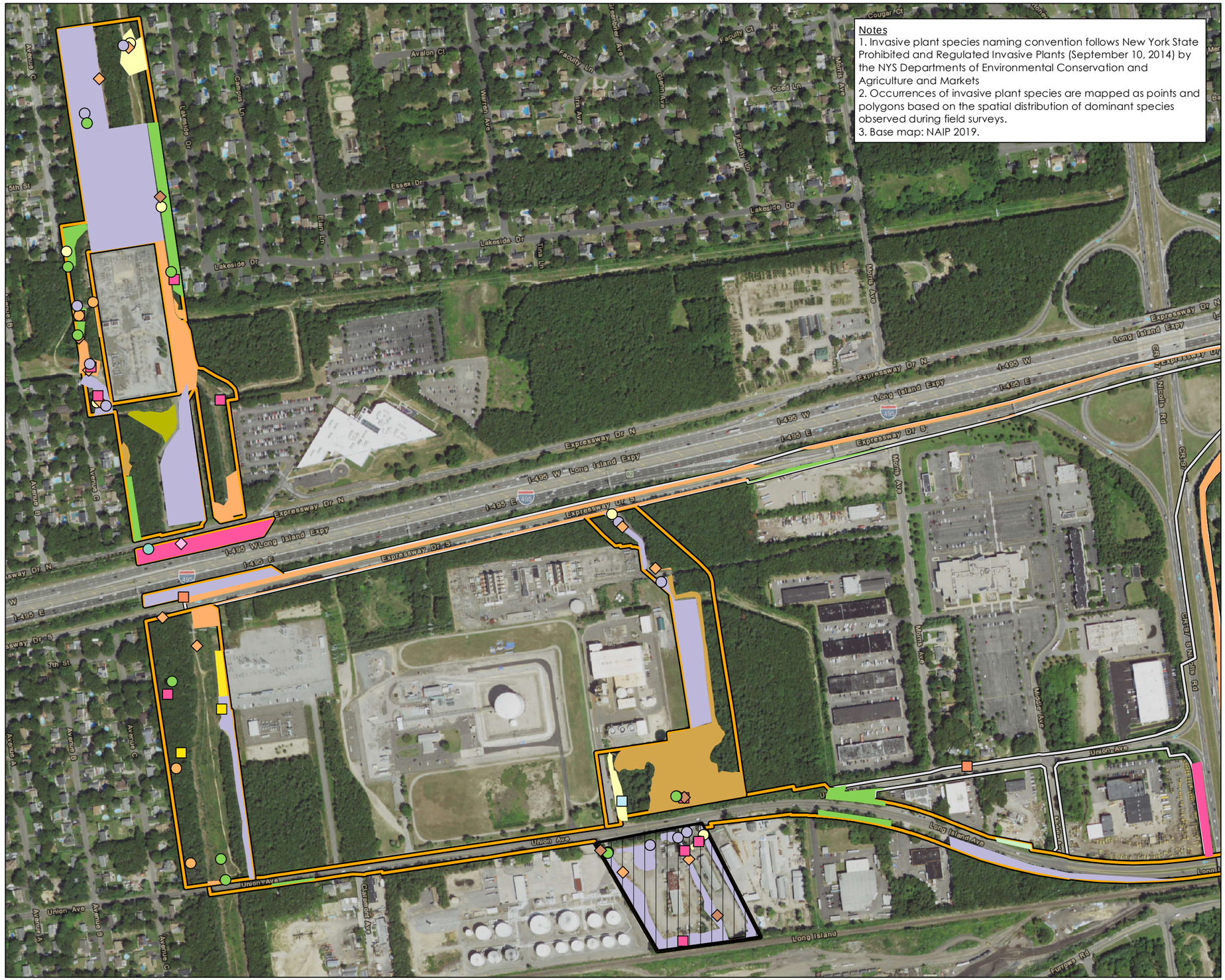


Figure 5
Invasive Plant Species
Sheet 18 of 18

Sunrise Wind | Powered by Ørsted & Eversource

Legend

- Survey Area – LIE Service Road / Interconnection Route
- Survey Area – Montauk or Peconic Alternative Routes
- *Acer platanoides* (Norway Maple)
- *Alliaria petiolata* (Garlic Mustard)
- *Artemisia vulgaris* (Mugwort)
- *Berberis thunbergii* (Japanese Barberry)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Elaeagnus umbellata* (Autumn Olive)
- *Ligustrum obtusifolium* (Border Privet)
- *Lonicera japonica* (Japanese Honeysuckle)
- *Reynoutria japonica* (Japanese Knotweed)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)
- *Rubus phoenicolasius* (Wineberry)
- *Alliaria petiolata* (Garlic Mustard)
- *Artemisia vulgaris* (Mugwort)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Elaeagnus umbellata* (Autumn Olive)
- *Lonicera japonica* (Japanese Honeysuckle)
- *Reynoutria japonica* (Japanese Knotweed)
- *Robinia pseudoacacia* (Black Locust)
- *Rosa multiflora* (Multiflora Rose)
- *Berberis thunbergii* (Japanese Barberry)
- *Lespedeza cuneata* (Chinese Lespedeza)
- Union Avenue Site

Date	07/11/2022
Project Number	2028113199
Prepared By	GAC
Reviewed By	DGN

0 500 Feet
0 150 Meters

N

Scale at 11x17: 1:6,000
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

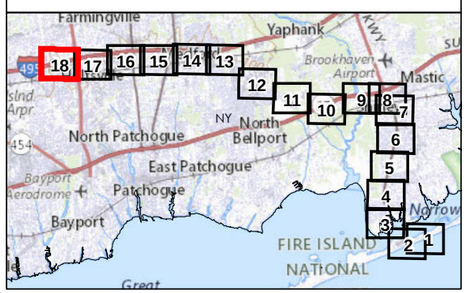


Figure 6
Floodplains

Sunrise Wind | Powered by Ørsted & Eversource

Legend
- Sunrise Wind Export Cable (SRWEC–NYS)
- Landfall HDD A
- Intracoastal Waterway HDD (ICW HDD)
- Onshore Transmission Cable–LIE Service Road Route
- 500 Feet from Project
- Union Avenue Site
- Onshore Interconnection Cable Route
- Holbrook Substation
- Village Boundary
- Town Boundary

Federal Emergency Management Agency (FEMA)

Flood Zone
- Zone A
- Zone AE
- Zone VE

Sources
FEMA NFHL Eastern Long Island, 2020
NYS Office of IT Services GPO, NYS Boundaries, 2018 USGS Topo Map

Note
The cable route centerline and trenchless crossing work areas are indicative and subject to final engineering design.

Date	07/11/2022
Project Number	2028113199
Prepared By	GC
Reviewed By	SBG

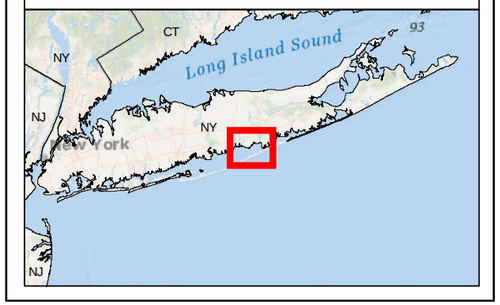
0 1 mile

0 1.5 km

N

Scale at 11x17: 1:63,360
NAD 1983 2011 UTM Zone 18N

REFERENCE MAP

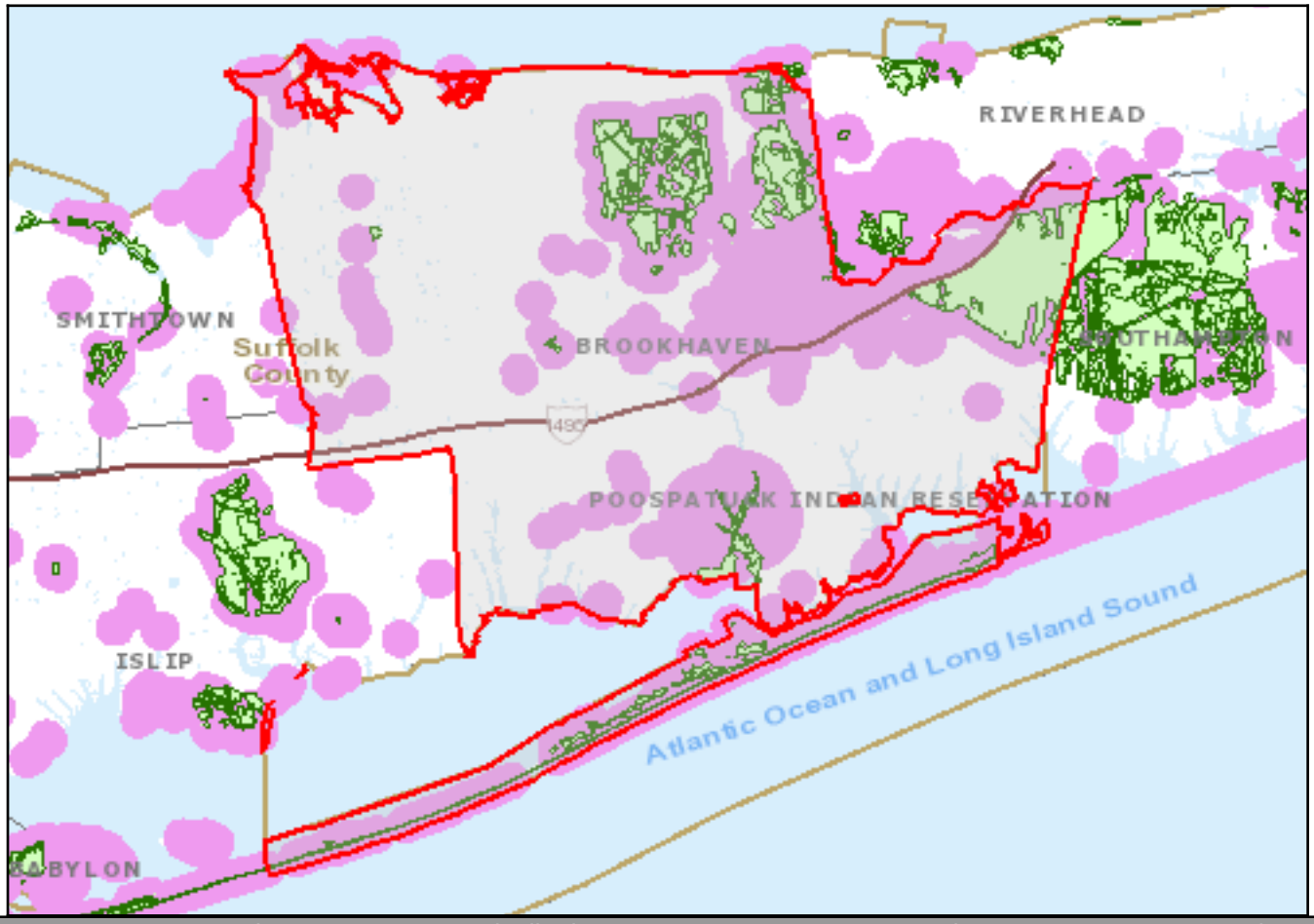


Appendix B NEW YORK NATURE EXPLORER

New York Nature Explorer

Rare Species within Town of Brookhaven

Criteria: Town: Brookhaven



Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status State	Protection Status Federal	Conservation Rank State	Conservation Rank Global
Town: Brookhaven							
Animal: Birds							
Barn Owl *Tyto alba*	Owls	Recently Confirmed	2003	Protected Bird		S1S2	G5
Black Skimmer *Rynchops niger*	Gulls, Terns, Plovers, Shorebirds	Recently Confirmed	2007	Special Concern		S2	G5
Glossy Ibis *Plegadis falcinellus*	Herons, Bitterns, Egrets, Pelicans	Recently Confirmed	2007	Protected Bird		S2	G5

New York Nature Explorer

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
Kentucky Warbler *Geothlypis formosa*	Wood-Warblers	Recently Confirmed	2012	Protected Bird		S2B	G5
Little Blue Heron *Egretta caerulea*	Herons, Bitterns, Egrets, Pelicans	Recently Confirmed	2007	Protected Bird		S2	G5
Seaside Sparrow *Ammodramus maritimus*	Sparrows and Towhees	Recently Confirmed	2002	Special Concern		S2S3B	G4
Snowy Egret *Egretta thula*	Herons, Bitterns, Egrets, Pelicans	Recently Confirmed	2007	Protected Bird		S2S3	G5
Tricolored Heron *Egretta tricolor*	Herons, Bitterns, Egrets, Pelicans	Recently Confirmed	2004	Protected Bird		S2	G5
Yellow-breasted Chat *Icteria virens*	Wood-Warblers	Recently Confirmed	2007	Special Concern		S2?B	G5

Animal: Reptiles

Eastern Wormsnake *Carphophis amoenus*	Snakes	Recently Confirmed	2015	Special Concern		S2	G5

Animal: Amphibians

Eastern Spadefoot *Scaphiopus holbrookii*	Frogs and Toads	Recently Confirmed	2008	Special Concern		S2S3	G5

Animal: Fish

Atlantic Needlefish *Strongylura marina*	Needlefishes	Recently Confirmed	1990			S2S3	G5
Atlantic Silverside *Menidia menidia*	Silversides	Recently Confirmed	1990			S2S3	G5
Eastern Pirate Perch *Aphredoderus sayanus sayanus*	Perches	Recently Confirmed	2016			S1S2	G5T5

Animal: Butterflies and Moths

A Geometrid Moth *Euchlaena madusaria*	Moths	Recently Confirmed	2017			S1	G4
Barrens Itame *Speranza exonerata*	Moths	Recently Confirmed	2017			S1S3	G3G4

New York Nature Explorer

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
Black-bordered Lemon Moth *Marimatha nigrofimbria*	Moths	Recently Confirmed	2017			S1	G5
Chain Fern Borer Moth *Papaipema stenocelis*	Moths	Historically Confirmed	1987			S1?	G4
Chocolate Renia *Renia nemoralis*	Moths	Recently Confirmed	2017			SU	G4
Coastal Barrens Buckmoth *Hemileuca maia ssp. 5*	Moths	Recently Confirmed	2016	Special Concern		S2	G5T3
Dune Sympistis *Sympistis riparia*	Moths	Recently Confirmed	2013			SU	G4
Edwards' Hairstreak *Satyrium edwardsii*	Butterflies and Skippers	Recently Confirmed	2003			S3S4	G5
Golden Aster Flower Moth *Schinia tuberculum*	Moths	Historically Confirmed	1947			S2	G4
Herodias or Pine Barrens Underwing *Catocala herodias gerhardi*	Moths	Recently Confirmed	2017	Special Concern		S1S2	G3T3
Jersey Jair Underwing *Catocala jair ssp. 2*	Moths	Recently Confirmed	2017	Special Concern		S1S2	G4?T4?
Mottled Duskywing *Erynnis martialis*	Butterflies and Skippers	Historically Confirmed	1966	Special Concern		S1	G3
Orange Holomelina *Virbia aurantiaca*	Moths	Recently Confirmed	2017			SU	G5
Orange-striped Oakworm Moth *Anisota senatoria*	Moths	Recently Confirmed	2013			SU	G5
Packard's Lichen Moth *Cisthene packardii*	Moths	Recently Confirmed	2013			SU	G5
Pine Barrens Zanclognatha *Zanclognatha martha*	Moths	Recently Confirmed	2013			S1S2	G4
Pine Tussock Moth *Dasychira pinicola*	Moths	Recently Confirmed	2017			SU	G4
Umber Moth *Hypomecis umbrosaria*	Moths	Recently Confirmed	2017			SU	G4

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
Violet Dart *Euxoa violaris*	Moths	Recently Confirmed	2017			SU	G4
White-m Hairstreak *Parrhasius m-album*	Butterflies and Skippers	Recently Confirmed	2000			SU	G5
Yellow-spotted Graylet *Hyperstrotia flaviguttata*	Moths	Recently Confirmed	2017			SU	G4

Animal: Dragonflies and Damselflies

Atlantic Bluet *Enallagma doubledayi*	Damselflies	Recently Confirmed	2009			S1S2	G5
Blue Corporal *Ladona deplanata*	Dragonflies	Recently Confirmed	2006			S2S3	G5
Comet Darner *Anax longipes*	Dragonflies	Recently Confirmed	2009			S2S3	G5
Common Sanddragon *Progomphus obscurus*	Dragonflies	Recently Confirmed	2006		Special Concern	S1	G5
Double-ringed Pennant *Celithemis verna*	Dragonflies	Recently Confirmed	2009			S1	G5
Golden-winged Skimmer *Libellula auripennis*	Dragonflies	Recently Confirmed	2006			S1S2	G5
Martha's Pennant *Celithemis martha*	Dragonflies	Recently Confirmed	2009			S2	G4
Rambur's Forktail *Ischnura ramburii*	Damselflies	Recently Confirmed	2004			S2S3	G5
Seaside Dragonlet *Erythrodiplax berenice*	Dragonflies	Recently Confirmed	2004			S2	G5
Southern Spreadwing *Lestes australis*	Damselflies	Recently Confirmed	2005			S2S3	G5
Spatterdock Darner *Rhionaeschna mutata*	Dragonflies	Recently Confirmed	2005			S2	G4
Yellow-sided Skimmer *Libellula flavida*	Dragonflies	Historically Confirmed	1926			S1	G5

Animal: Beetles

New York Nature Explorer

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
American Burying Beetle *Nicrophorus americanus*	Carrion Beetles	Historically Confirmed	1934	Endangered	Endangered	SH	G2G3
Eastern Pinebarrens Tiger Beetle *Cicindela abdominalis*	Tiger Beetles	Historically Confirmed	1913			SH	G3G4
Hairy-necked Tiger Beetle *Cicindela hirticollis*	Tiger Beetles	Recently Confirmed	2017			S1S2	G5
Northeastern Beach Tiger Beetle *Cicindela dorsalis dorsalis*	Tiger Beetles	Extirpated	1939	Threatened	Threatened	SX	G3G4T2

Animal: Animal Assemblages

Gull Colony *Gull Colony*	Animal Assemblages	Recently Confirmed	2004			SNRB	GNR

Plant: Flowering Plants

American Ipecac *Euphorbia ipecacuanhae*	Other Flowering Plants	Historically Confirmed	1928	Endangered		S1	G5
Annual Saltmarsh Aster *Symphyotrichum subulatum var. subulatum*	Asters, Goldenrods and Daisies	Recently Confirmed	2011	Threatened		S2S3	G5
Autumnal Water-starwort *Callitriche hermaphroditica*	Other Flowering Plants	Historically Confirmed	1927	Endangered		S1	G5
Black-edge Sedge *Carex nigromarginata*	Sedges	Recently Confirmed	2008	Threatened		S3	G5
Brown Bog Sedge *Carex buxbaumii*	Sedges	Historically Confirmed	1986	Threatened		S2	G5
Button Sedge *Carex bullata*	Sedges	Recently Confirmed	2001	Endangered		S1	G5
Carey's Smartweed *Persicaria careyi*	Other Flowering Plants	Recently Confirmed	2000	Endangered		S1S2	G4
Carolina Redroot *Lachnanthes caroliniana*	Other Flowering Plants	Historically Confirmed	1925	Endangered		S1	G4
Catfoot *Pseudognaphalium micradenium*	Asters, Goldenrods and Daisies	Historically Confirmed	1929	Endangered		SH	G4G5T3?

New York Nature Explorer

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
Clustered Bluets *Oldenlandia uniflora*	Other Flowering Plants	Recently Confirmed	2008	Endangered		S1	G5
Clustered Sedge *Carex cumulata*	Sedges	Possible but not Confirmed	1967	Threatened		S2S3	G4?
Coastal Goldenrod *Solidago latissimifolia*	Asters, Goldenrods and Daisies	Historically Confirmed	1929	Endangered		S1	G5
Coastal Silverweed *Potentilla anserina ssp. pacifica*	Other Flowering Plants	Recently Confirmed	2008	Threatened		S2	G5TNR
Collins' Sedge *Carex collinsii*	Sedges	Historically Confirmed	1987	Endangered		S1	G4
Comb-leaved Mermaid Weed *Proserpinaca pectinata*	Other Flowering Plants	Recently Confirmed	2016	Threatened		S2	G5
Coppery St. John's Wort *Hypericum denticulatum*	Other Flowering Plants	Historically Confirmed	1923	Endangered		S1	G5
Cut-leaved Evening Primrose *Oenothera laciniata*	Other Flowering Plants	Recently Confirmed	1990	Endangered		S1	G5
Dark-green Sedge *Carex venusta*	Sedges	Recently Confirmed	1999	Endangered		S1	G4
Downy Lettuce *Lactuca hirsuta*	Asters, Goldenrods and Daisies	Historically Confirmed	1936	Endangered		S1	G5?
Dwarf Bulrush *Cyperus subsquarrosus*	Sedges	Recently Confirmed	2005	Endangered		S1	G5
Dwarf Hawthorn *Crataegus uniflora*	Other Flowering Plants	Historically Confirmed	1916	Endangered		SH	G5
Early Frostweed *Crocanthemum propinquum*	Other Flowering Plants	Recently Confirmed	2007	Threatened		S2	G4
Eastern Grasswort *Lilaeopsis chinensis*	Other Flowering Plants	Recently Confirmed	2007	Threatened		S2	G5
Eastern Silvery Aster *Symphyotrichum concolor var. concolor*	Asters, Goldenrods and Daisies	Historically Confirmed	1934	Endangered		SH	G5T5
Engelmann's Spike Rush *Eleocharis engelmannii*	Sedges	Historically Confirmed	1919	Endangered		S1	G4G5

New York Nature Explorer

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
Featherfoil *Hottonia inflata*	Other Flowering Plants	Recently Confirmed	1995	Threatened		S2	G4
Few-flowered Nut Sedge *Scleria pauciflora*	Sedges	Historically Confirmed	1985	Endangered		S1	G5
Fibrous Bladderwort *Utricularia striata*	Other Flowering Plants	Recently Confirmed	2005	Threatened		S2	G4G5
Field Beadgrass *Paspalum laeve*	Grasses	Recently Confirmed	2003	Endangered		S2	G4G5
Flax-leaf Whitetop *Sericocarpus linifolius*	Asters, Goldenrods and Daisies	Recently Confirmed	1991	Threatened		S2	G5
Globe-fruited Ludwigia *Ludwigia sphaerocarpa*	Other Flowering Plants	Recently Confirmed	1995	Threatened		S2	G5
Golden Dock *Rumex fueginus*	Other Flowering Plants	Historically Confirmed	1984	Endangered		S1	G5
Great Plains Flatsedge *Cyperus lupulinus ssp. lupulinus*	Sedges	Historically Confirmed	1966	Threatened		S1S2	G5T5?
Large Yellow-eyed Grass *Xyris smalliana*	Other Flowering Plants	Historically Confirmed	1985	Threatened		S2	G5
Little-leaf Tick Trefoil *Desmodium ciliare*	Other Flowering Plants	Recently Confirmed	2007	Threatened		S2S3	G5
Long-beaked Beak Sedge *Rhynchospora scirpoides*	Sedges	Recently Confirmed	2008	Rare		S2	G4
Loose-headed Beak Sedge *Rhynchospora chalarocephala*	Sedges	Extirpated	1932			SX	G5
Marsh Straw Sedge *Carex hormathodes*	Sedges	Historically Confirmed	1985	Threatened		S2S3	G4G5
Minute Duckweed *Lemna perpusilla*	Other Flowering Plants	Historically Confirmed	1944	Endangered		S1	G5
Narrow-leaf Sea Blite *Suaeda linearis*	Other Flowering Plants	Historically Confirmed	1968	Endangered		S1S2	G5
Narrow-leaved Bush Clover *Lespedeza angustifolia*	Other Flowering Plants	Historically Confirmed	1986	Threatened		S2	G5

New York Nature Explorer

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
Northern Blazing Star *Liatris scariosa var. novae-angliae*	Asters, Goldenrods and Daisies	Recently Confirmed	1992	Threatened		S2	G5?T3
Northern Dwarf Huckleberry *Gaylussacia bigeloviana*	Other Flowering Plants	Historically Confirmed	1927	Endangered		S1S2	G5T4T5
Northern Gama Grass *Tripsacum dactyloides var. dactyloides*	Grasses	Recently Confirmed	2007	Threatened		S2	G5TNR
Oakes' Evening Primrose *Oenothera oakesiana*	Other Flowering Plants	Recently Confirmed	2006	Threatened		S2	G4G5Q
Ovate Spike Rush *Eleocharis ovata*	Sedges	Recently Confirmed	2008	Endangered		S1S2	G5
Pale Duckweed *Lemna valdiviana*	Other Flowering Plants	Historically Confirmed	1974	Endangered		S1	G5
Pencil Flower *Stylosanthes biflora*	Other Flowering Plants	Historically Confirmed	1914			SX	G5
Persimmon *Diospyros virginiana*	Other Flowering Plants	Recently Confirmed	2001	Threatened		S2	G5
Pine Barren Bellwort *Uvularia puberula*	Other Flowering Plants	Historically Confirmed	1928	Endangered		S1	G5
Pinebarren Death Camas *Stenanthium leimanthoides*	Other Flowering Plants	Historically Confirmed	1887			S1	G4Q
Primrose-leaved Violet *Viola primulifolia var. primulifolia*	Other Flowering Plants	Historically Confirmed	1927	Threatened		S2	G5TNR
Quill-leaved Arrowhead *Sagittaria teres*	Other Flowering Plants	Recently Confirmed	2005	Endangered		S1	G3
Retrorse Flatsedge *Cyperus retrorsus*	Sedges	Possible but not Confirmed	1976	Endangered		S1	G5
Reznicek's Sedge *Carex reznicekii*	Sedges	Recently Confirmed	2008	Endangered		S1S2	G5
Rose Coreopsis *Coreopsis rosea*	Asters, Goldenrods and Daisies	Recently Confirmed	2014	Rare		S3	G3
Rough Hedge Nettle *Stachys hyssopifolia var. hyssopifolia*	Other Flowering Plants	Recently Confirmed	2004	Threatened		S2	G5T4T5

New York Nature Explorer

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
Round-leaf Boneset *Eupatorium rotundifolium*	Asters, Goldenrods and Daisies	Historically Confirmed	1929	Endangered		SH	G5T5
Rush Bladderwort *Utricularia juncea*	Other Flowering Plants	Recently Confirmed	1991	Endangered		S1	G5
Saltmarsh Bulrush *Bolboschoenus novae-angliae*	Sedges	Recently Confirmed	2007	Endangered		S1	G5
Sand Blackberry *Rubus cuneifolius*	Other Flowering Plants	Possible but not Confirmed	1962	Endangered		SH	G5
Sandplain Agalinis *Agalinis decemloba*	Other Flowering Plants	Historically Confirmed	2007	Endangered	Endangered	S1	G3G4
Sandplain Wild Flax *Linum intercursum*	Other Flowering Plants	Recently Confirmed	1996	Threatened		S2	G4
Screw-stem *Bartonia paniculata ssp. paniculata*	Other Flowering Plants	Recently Confirmed	1997	Endangered		S1	G5T5
Sea Purslane *Sesuvium maritimum*	Other Flowering Plants	Historically Confirmed	1873	Endangered		S1	G5
Seabeach Amaranth *Amaranthus pumilus*	Other Flowering Plants	Recently Confirmed	2018	Threatened	Threatened	S2	G2
Seabeach Knotweed *Polygonum glaucum*	Other Flowering Plants	Recently Confirmed	2003	Rare		S3	G3
Seaside Agalinis *Agalinis maritima var. maritima*	Other Flowering Plants	Recently Confirmed	2007	Threatened		S2S3	G5T5
Seaside Plantain *Plantago maritima var. juncoides*	Other Flowering Plants	Recently Confirmed	2007	Threatened		S2S3	G5T5
Sedge Rush *Juncus scirpoides var. scirpoides*	Rushes	Possible but not Confirmed	1928	Endangered		S1	G5TNR
Short-beaked Beak Sedge *Rhynchospora nitens*	Sedges	Recently Confirmed	2005	Threatened		S2	G4?
Showy Aster *Eurybia spectabilis*	Asters, Goldenrods and Daisies	Recently Confirmed	2004	Threatened		S2	G5
Slender Blue Flag *Iris prismatica*	Other Flowering Plants	Recently Confirmed	2005	Threatened		S2	G4G5

New York Nature Explorer

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
Slender Crab Grass *Digitaria filiformis var. filiformis*	Grasses	Historically Confirmed	1955	Endangered		S1	G5TNR
Slender Marsh Pink *Sabatia campanulata*	Other Flowering Plants	Recently Confirmed	2006	Endangered		S1	G5
Slender Pinweed *Lechea tenuifolia*	Other Flowering Plants	Recently Confirmed	2000	Threatened		S2	G5
Slender Spike Rush *Eleocharis tenuis var. pseudoptera*	Sedges	Possible but not Confirmed	1962	Endangered		S1	G5T5?
Small Floating Bladderwort *Utricularia radiata*	Other Flowering Plants	Recently Confirmed	2000	Threatened		S2	G4
Small White Snakeroot *Ageratina aromatica*	Asters, Goldenrods and Daisies	Historically Confirmed	1883	Endangered		S1	G5
Smooth Tick Trefoil *Desmodium laevigatum*	Other Flowering Plants	Historically Confirmed	1914	Endangered		SH	G5
Southern Snailseed Pondweed *Potamogeton diversifolius*	Other Flowering Plants	Historically Confirmed	1938	Endangered		S1	G5
Southern Yellow Flax *Linum medium var. texanum*	Other Flowering Plants	Historically Confirmed	1925	Threatened		S2	G5T5
Spotted Pondweed *Potamogeton pulcher*	Other Flowering Plants	Historically Confirmed	1878	Threatened		S2	G5
Stargrass *Aletris farinosa*	Other Flowering Plants	Recently Confirmed	2004	Threatened		S2	G5
Stiff Tick Trefoil *Desmodium obtusum*	Other Flowering Plants	Recently Confirmed	2007	Endangered		S1	G4G5
Swamp Oats *Sphenopholis pensylvanica*	Grasses	Historically Confirmed	1874	Endangered		S1	G4
Swamp Sunflower *Helianthus angustifolius*	Asters, Goldenrods and Daisies	Recently Confirmed	2006	Threatened		S2	G5
Thickleaf Orach *Atriplex dioica*	Other Flowering Plants	Historically Confirmed	1920	Endangered		S1	G5
Three-ribbed Spike Rush *Eleocharis tricostata*	Sedges	Recently Confirmed	2005	Endangered		S1	G4

New York Nature Explorer

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
Tooth Cup *Rotala ramosior*	Other Flowering Plants	Recently Confirmed	2005	Threatened		S2	G5
Trailing Pearlwort *Sagina decumbens ssp. decumbens*	Other Flowering Plants	Historically Confirmed	1924	Endangered		S1	G5T5
Trinerved White Boneset *Eupatorium subvenosum*	Asters, Goldenrods and Daisies	Recently Confirmed	2004	Threatened		S2S3	G5T4
Velvety Bush Clover *Lespedeza stuevei*	Other Flowering Plants	Recently Confirmed	2007	Threatened		S2	G4?
Virginia Ground Cherry *Physalis virginiana var. virginiana*	Other Flowering Plants	Historically Confirmed	1929	Endangered		SH	G5T5
Water Pigmyweed *Crassula aquatica*	Other Flowering Plants	Historically Confirmed	1988	Endangered		S1	G5
Weak Rush *Juncus debilis*	Rushes	Historically Confirmed	1936	Endangered		S1	G5
Whip Nut Sedge *Scleria triglomerata*	Sedges	Recently Confirmed	1991	Endangered		S1	G5
White Milkweed *Asclepias variegata*	Other Flowering Plants	Historically Confirmed	1878	Endangered		S1	G5
Wright's Panic Grass *Dichanthelium wrightianum*	Grasses	Historically Confirmed	1925	Endangered		S1S2	G4
Yellow Flatsedge *Cyperus flavescens*	Sedges	Possible but not Confirmed		Endangered		S1	G5

Plant: Conifers

Atlantic White Cedar *Chamaecyparis thyoides*	Conifers	Historically Confirmed	1923	Threatened		S2	G4
Virginia Pine *Pinus virginiana*	Conifers	Possible but not Confirmed	1878	Endangered		S1	G5

Natural Community: Uplands

Coastal Oak-Heath Forest *Coastal oak-heath forest*	Forested Uplands	Recently Confirmed	2007			S3	G4

New York Nature Explorer

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
Maritime Beach *Maritime beach*	Open Uplands	Recently Confirmed	2001			S3S4	G5
Maritime Dunes *Maritime dunes*	Open Uplands	Recently Confirmed	2007			S3	G4
Maritime Holly Forest *Maritime holly forest*	Forested Uplands	Recently Confirmed	2000			S1	G1G2
Maritime Pitch Pine Dune Woodland *Maritime pitch pine dune woodland*	Barrens and Woodlands	Recently Confirmed	1998			S1	G2G3
Pitch Pine-Oak Forest *Pitch pine-oak forest*	Forested Uplands	Recently Confirmed	2013			S2S3	G4G5
Pitch Pine-Oak-Heath Woodland *Pitch pine-oak-heath woodland*	Barrens and Woodlands	Recently Confirmed	2013			S2S3	G3G4

Natural Community: Freshwater Nontidal Wetlands

Coastal Plain Pond Shore *Coastal plain pond shore*	Open Mineral Soil Wetlands	Recently Confirmed	2005			S2	G3G4
Maritime Freshwater Interdunal Swales *Maritime freshwater interdunal swales*	Open Mineral Soil Wetlands	Recently Confirmed	2006			S2	G3G4
Pine Barrens Shrub Swamp *Pine barrens shrub swamp*	Open Mineral Soil Wetlands	Recently Confirmed	1998			S3	G5
Red Maple-Blackgum Swamp *Red maple-blackgum swamp*	Forested Mineral Soil Wetlands	Recently Confirmed	1998			S2	G3G4

Natural Community: Lakes and Ponds

Coastal Plain Pond *Coastal plain pond*	Natural Lakes and Ponds	Historically Confirmed	1985			S2	G3G4

Natural Community: Tidal Wetlands

Brackish Tidal Marsh *Brackish tidal marsh*	Intertidal Wetlands	Recently Confirmed	1998			S3S4	G4
High Salt Marsh *High salt marsh*	Intertidal Wetlands	Recently Confirmed	2016			S3S4	G4
Salt Panne *Salt panne*	Intertidal Wetlands	Recently Confirmed	1998			S3	G3G4

Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global
Salt Shrub	Intertidal Wetlands	Recently Confirmed	1998			S1	G5
Salt shrub							

Natural Community: Marine

Marine Back-barrier Lagoon	Marine Subtidal	Recently Confirmed	2016			S2	G5
Marine back-barrier lagoon							
Marine Eelgrass Meadow	Marine Subtidal	Recently Confirmed	2004			S1S2	G5
Marine eelgrass meadow							
Marine Rocky Intertidal	Marine Intertidal	Recently Confirmed	2004			S1?	G5
Marine rocky intertidal							

Note: Restricted plants and animals may also have also been documented in one or more of these Towns or Cities, but are not listed in these results. This application does not provide information at the level of Town or City on state-listed animals and on other sensitive animals and plants. A list of the restricted animals and plants documented in the corresponding county (or counties) can be obtained via the County link(s) on the original Town Search Results page. Any individual plant or animal on this county's restricted list may or may not occur in this particular Town or City.

This list only includes records of rare species and significant natural communities from the databases of the NY Natural Heritage Program. This list is not a definitive statement about the presence or absence of all plants and animals, including rare or state-listed species, or of all significant natural communities. For most areas, comprehensive field surveys have not been conducted, and this list should not be considered a substitute for on-site surveys.

Appendix C AGENCY COMMUNICATIONS

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

March 27, 2020

Sarah Boucher Gravel
Stantec
30 Park Drive
Topsham, ME 04086

Re: Sunrise Offshore Wind Farm
County: Suffolk Town/City: Brookhaven

Dear Ms. Boucher Gravel:

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

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur along the proposed cable routes and landfall locations or in their vicinity. Note there are state-listed animal species documented from the proposed routes.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to 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 sources may be required to fully assess impacts on biological resources.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 1 Office, Division of Environmental Permits, at dep.r1@dec.ny.gov, (631) 444-0365.

Sincerely,

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

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The following state-listed animals have been documented along the proposed cable routes and landfall locations or in their vicinity.

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed.

For information about any permit considerations for the project, contact the NYSDEC Region x Office, Division of Environmental Permits, at dep.r1@dec.ny.gov, (631) 444-0365.

The following species have been documented on or very near the proposed cable routes and landfall locations at Fire Island and Smith Point County Park.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*
Piping Plover *Breeding*	*Charadrius melodus*	Endangered	Threatened
Least Tern *Breeding*	*Sternula antillarum*	Threatened	
Common Tern *Breeding*	*Sterna hirundo*	Threatened	

The following species have been documented in the offshore waters crossed by the proposed offshore cable route.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*
Humpback Whale *Nonbreeding*	*Megaptera novaeangliae*	Endangered	Endangered
Fin Whale	*Balaenoptera physalus*	Endangered	Endangered

The following species has been documented at several locations within .5 mile of much of the onshore cable routes, and several more locations are within 1.5 miles. Individual animals may travel 1.5 miles or more from documented locations.
The main impact of concern for bats is the removal of potential roost trees.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*
Northern Long-eared Bat *Maternity roosts and other summer locations*	*Myotis septentrionalis*	Threatened	Threatened

This report only includes records from the NY Natural Heritage database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NYSDEC at www.dec.ny.gov/animals/7494.html.

The following rare plants, rare animals, and significant natural communities along the proposed cable routes and landfall locations or in their vicinity.

We recommend that potential impacts of the proposed project on these species or communities be addressed as part of any environmental assessment or review conducted as part of the planning, permitting and approval process. Field surveys of the project site may be necessary to determine whether a species currently occurs at the site, particularly for sites that are currently undeveloped and may still contain suitable habitat. Final requirements of the project to avoid, minimize, or mitigate potential impacts are determined by the lead permitting agency or the government body approving the project.

The animals listed in this report, while not listed by New York State as Endangered or Threatened, are rare in New York and are of conservation concern.

The plants listed in this report are listed as Endangered or Threatened by New York State, and/or are rare in New York State, and so are a vulnerable natural resource of conservation concern.

The natural communities listed in this report are considered significant from a statewide perspective by the NY Natural Heritage Program. Each community is either an example of a community type that is rare in the state, or a high-quality example of a more common community type. By meeting specific, documented criteria, the NY Natural Heritage Program considers these community occurrences to have high ecological and conservation value.

The following species and communities have been documented at the proposed cable route and landfall on Fire Island.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*
Hairy-necked Tiger Beetle	*Cicindela hirticollis*	Unlisted	Critically Imperiled in NYS

Fire Island Great South Beach, 2017: Sand beach.

Maritime Beach — High Quality Occurrence of Uncommon Community Type

Fire Island: A 32 mile long maritime beach along the south shore of Fire Island, 7 miles of which is designated as Federal Wilderness Area where driving is not allowed for most of the year. Natural processes are affected by stablization and nourishment in some areas.

The following species has been documented within .5 mile of the proposed cable route.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*
Sandplain Wild Flax	*Linum intercursum*	Threatened	Imperiled in NYS

Station Avenue roadside, 1996-08-08: The plants are on a pine barrens roadside with very sparse vegetation, dominated by grasses and legumes.

The following significant community is crossed by the proposed cable route at Carmans River, and also extends along Yaphank Creek to within 100 yards of the proposed cable route.

COMMON NAME	*HERITAGE CONSERVATION STATUS*
Red Maple-Blackgum Swamp	High Quality Occurrence of Rare Community Type

Carmans River Wetlands, extending north and south of Montauk Highway: The swamp is of moderate size with good diversity and some large diameter trees. The swamp is minimally buffered and located at the edge of a locally intact landscape block.

The following species and community have been documented south of the proposed cable route in or along the Carmans River in Wertheim National Wildlife Refuge.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*
Water Pigmyweed	*Crassula aquatica*	Endangered	Critically Imperiled in NYS

Carmans River, west side immediately south of Montauk Highway, 1988-08-31: Bank of an intertidal section of river at a road embankment.

Eastern Pirate Perch	*Aphredoderus sayanus sayanus*	Unlisted	Critically Imperiled in NYS

Carmans River within .3 mile south of Montauk Highway, also Yaphank Creek, 1990-11-15.

Atlantic Silverside	*Menidia menidia*	Unlisted	Imperiled in NYS

Carmans River within .4 mile south of Montauk Highway, 1990-11-14.

Brackish Tidal Marsh	High Quality Occurrence of Uncommon Community Type

Carmans River Wetlands, within .4 mile south of Montauk Highway: This is a large marsh in good to fair condition, in a good landscape that is mostly protected.

The following species have been documented north of the proposed cable route in Southaven County Park.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*
Eastern Pirate Perch	*Aphredoderus sayanus sayanus*	Unlisted	Critically Imperiled in NYS

Carmans River just north of NYS Route 27, 2015-08-04.

Collins' Sedge	*Carex collinsii*	Endangered	Critically Imperiled in NYS

Southaven County Park, within .25 mile of proposed cable route, 1986-11-04: Abandoned fish hatchery (part of Suffolk County Park) in a red maple-tupelo swamp.

Blunt-lobe Grape Fern	*Botrychium oneidense*	Threatened	Imperiled in NYS

Southaven County Park, within .25 mile of proposed cable route, 1986-11-04: In wet soil under shrubs and vines in red maple swamp.

The following communities are crossed by the proposed cable route in the waters between Fire Island and the mainland (Smith Point County Park).

COMMON NAME	*HERITAGE CONSERVATION STATUS*
Marine Eelgrass Meadow	High Quality Occurrence of Rare Community Type

Great South Bay and Moriches Bay: This is an expansive patch of eelgrass in good condition within a fair quality landscape.

Marine Back-barrier Lagoon	High Quality Occurrence of Rare Community Type

Great South Bay and Moriches Bay: This is a very large marine back-barrier lagoon that is in good condition within a fair quality, but mostly developed landscape.

This report only includes records from the NY Natural Heritage database. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, from NatureServe Explorer at www.natureserve.org/explorer, and from USDA's Plants Database at http://plants.usda.gov/index.html (for plants).

Information about many of the natural community types in New York, including identification, dominant and characteristic vegetation, distribution, conservation, and management, is available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org. For descriptions of all community types, go to www.dec.ny.gov/animals/29384.html for Ecological Communities of New York State.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
Phone: (631) 286-0485 Fax: (631) 286-4003

In Reply Refer To:
Consultation Code: 05E1LI00-2020-SLI-0367
Event Code: 05E1LI00-2020-E-00839
Project Name: Confidential Project

March 11, 2020

Subject: List of threatened and endangered species that may occur in your proposed project location, and/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

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

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 Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1LI00-2020-SLI-0367

Event Code: 05E1LI00-2020-E-00839

Project Name: Confidential Project

Project Type: POWER GENERATION

Project Description: Proposed wind energy project

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/40.81649280425459N72.91040200081957W

Counties: Suffolk, NY

Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

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

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

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

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

Mammals

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

Birds

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot *Calidris canutus rufa* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Roseate Tern *Sterna dougallii dougallii* Population: Northeast U.S. nesting population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2083	Endangered

Flowering Plants

NAME	STATUS
Sandplain Gerardia *Agalinis acuta*	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/8128	
Seabeach Amaranth *Amaranthus pumilus*	Threatened
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/8549	

Critical habitats

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

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

April 15, 2021

Sarah Boucher Gravel
Stantec
30 Park Drive
Topsham, ME 04086

Re: Sunrise Offshore Wind Farm
County: Suffolk Town/City: Brookhaven

Dear Sarah Boucher Gravel:

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

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur at, along, or near the onshore components of the project.

The New York Natural Heritage Program database does not include full information on the rare and listed species occurring in New York's offshore marine waters. For information on the presence of rare and listed marine species in the vicinity of the offshore components of this project, on potential impacts and permit considerations regarding these species, and on other marine natural resources, please contact the NYSDEC Division of Marine Resources at (631) 444-0462, marineprotectedresources@dec.ny.gov.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to 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 sources may be required to fully assess impacts on biological resources.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYSDEC Division of Environmental Permits.

Sincerely,

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

The following state-listed animals have been documented at or near the onshore components and landfall locations of the proposed Sunrise Offshore Wind Farm.

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed.

For information about any permit considerations for the project, contact the NYSDEC Division of Environmental Permits.

The following species have been documented on or very near the proposed cable routes and landfall locations on Fire Island and at Smith Point County Park.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Piping Plover *Breeding*	*Charadrius melodus*	Endangered	Threatened	1224
Least Tern *Breeding*	*Sternula antillarum*	Threatened		4472
Common Tern *Breeding*	*Sterna hirundo*	Threatened		12085

The following species has been documented at several locations within .5 mile of the onshore cable route, and at many more locations within 1.5 miles, between Smith Point County Park and NYS Route 112. Individual animals may travel 1.5 miles or more from documented locations.
The main impact of concern for bats is the removal of potential roost trees.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Northern Long-eared Bat *Maternity roosts and other summer locations*	*Myotis septentrionalis*	Threatened	Threatened	15849

This report only includes records from the NY Natural Heritage database.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NYSDEC at www.dec.ny.gov/animals/7494.html.

The following rare plants, rare animals, and significant natural communities have been documented at or near the onshore components and landfall locations of the proposed Sunrise Offshore Wind Farm.

We recommend that potential impacts of the proposed project on these species or communities be addressed as part of any environmental assessment or review conducted as part of the planning, permitting and approval process. For species documented near the project site, if suitable habitat is present at the project site, the species may also be present. Field surveys may be necessary to determine the status of a species or its habitat at the project site, particularly for areas that are currently undeveloped. Final requirements of the project to avoid, minimize, or mitigate potential impacts are determined by the lead permitting agency or the government body approving the project.

The animals in this report, while not listed by New York State as Endangered or Threatened, are rare in New York and are of conservation concern.

The plants in this report are listed as Endangered or Threatened by New York State, and so are a vulnerable natural resource of conservation concern.

The natural communities listed in this report are considered significant from a statewide perspective by the NY Natural Heritage Program. Each community is an example of a community type that is rare in the state or a high-quality example of a more common community type. By meeting specific, documented criteria, the NY Natural Heritage Program considers these community occurrences to have high ecological and conservation value.

The following species and communities have been documented at the proposed cable route and landfall location on Fire Island.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*
Hairy-necked Tiger Beetle	*Cicindela hirticollis*	Unlisted	Critically Imperiled in NYS

Fire Island Great South Beach, 2017: Sand beach.

Maritime Beach and **Maritime Intertidal Gravel/Sand Beach** — High Quality Occurrences of Uncommon Community Types

Fire Island: A 32 mile long maritime beach along the south shore of Fire Island, 7 miles of which is designated as Federal Wilderness Area where driving is not allowed for most of the year. Natural processes are affected by stablization and nourishment in some areas.

The following species has been documented adjacent to the proposed cable route in Southaven County Park.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*
Eastern Pirate Perch	*Aphredoderus sayanus sayanus*	Unlisted	Critically Imperiled in NYS

Carmans River (Hards Lake) just north of NYS Route 27, 2015-08-04.

The following species have been documented just to the north of the proposed cable route in Southaven County Park.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*
Collins' Sedge	*Carex collinsii*	Endangered	Critically Imperiled in NYS

Southaven County Park, within .2 mile of proposed cable route, 1986-11-04: Abandoned fish hatchery in a red maple-tupelo swamp.

Blunt-lobe Grape Fern	*Botrychium oneidense*	Threatened	Imperiled in NYS

Southaven County Park, within .2 mile of proposed cable route, 1986-11-04: In wet soil under shrubs and vines in red maple swamp.

The following species and community have been documented south of the proposed cable route in or along the Carmans River in Wertheim National Wildlife Refuge.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*
Water Pigmyweed	*Crassula aquatica*	Endangered	Critically Imperiled in NYS

Carmans River, .2 mile south of proposed cable route, 1988-08-31: Bank of an intertidal section of river at a road embankment.

Eastern Pirate Perch	*Aphredoderus sayanus*	Unlisted	Critically Imperiled in NYS

Carmans River, .4 mile south of proposed cable route, and Yaphank Creek, 1/3 mile south of proposed cable route, 1990.

Red Maple-Blackgum Swamp	High Quality Occurrence of Rare Community Type

Wetlands along the Carmans River, extending north to the south side of NYS Route 27, and also extending north along Yaphank Creek to 1/3 mile south of the proposed cable route The swamp is of moderate size with good diversity and some large diameter trees. The swamp is minimally buffered and located at the edge of a locally intact landscape block.

The following species has been documented within .4 mile of the proposed cable route.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*
Sandplain Wild Flax	*Linum intercursum*	Threatened	Imperiled in NYS

Station Avenue roadside, .6 mile south of intersection with Horseblock Road (County Route 160) and .4 mile southwest of proposed cable route, 1996-08-08: The plants are on a pine barrens roadside with very sparse vegetation, dominated by grasses and legumes.

The following communities are crossed by the proposed cable route in the waters between Fire Island and the mainland (Smith Point County Park).

COMMON NAME	*HERITAGE CONSERVATION STATUS*
Marine Eelgrass Meadow	High Quality Occurrence of Rare Community Type

Great South Bay and Moriches Bay: This is an expansive patch of eelgrass in good condition within a fair quality landscape.

Marine Back-barrier Lagoon	High Quality Occurrence of Rare Community Type

Great South Bay and Moriches Bay: This is a very large marine back-barrier lagoon that is in good condition within a fair quality, but mostly developed landscape.

This report only includes records from the NY Natural Heritage database. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, from NatureServe Explorer at www.natureserve.org/explorer, and from USDA's Plants Database at http://plants.usda.gov/index.html (for plants).

Information about many of the natural community types in New York, including identification, dominant and characteristic vegetation, distribution, conservation, and management, is available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org. For descriptions of all community types, go to www.dec.ny.gov/animals/97703.html for Ecological Communities of New York State.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
Phone: (631) 286-0485 Fax: (631) 286-4003

In Reply Refer To: April 19, 2021
Consultation Code: 05E1LI00-2021-SLI-0492
Event Code: 05E1LI00-2021-E-01156
Project Name: Onshore Transmission Project

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

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

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 Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1LI00-2021-SLI-0492
Event Code: 05E1LI00-2021-E-01156
Project Name: Onshore Transmission Project
Project Type: TRANSMISSION LINE
Project Description: The described section of the proposed onshore transmission project will traverse along Victory Avenue in Shirley, NY.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.80148595,-72.89669998231415,14z

Counties: Suffolk County, New York

Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

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

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

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

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

Mammals

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

Birds

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot *Calidris canutus rufa* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Roseate Tern *Sterna dougallii dougallii* Population: Northeast U.S. nesting population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2083	Endangered

Flowering Plants

NAME	STATUS
Sandplain Gerardia *Agalinis acuta*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8128	
Seabeach Amaranth *Amaranthus pumilus*	Threatened
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8549	

Critical habitats

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

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
Phone: (631) 286-0485 Fax: (631) 286-4003

In Reply Refer To: April 19, 2021
Consultation Code: 05E1LI00-2021-SLI-0493
Event Code: 05E1LI00-2021-E-01158
Project Name: Onshore Transmission Project

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

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

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 Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1LI00-2021-SLI-0493
Event Code: 05E1LI00-2021-E-01158
Project Name: Onshore Transmission Project
Project Type: TRANSMISSION LINE
Project Description: The outlined segment of the proposed onshore transmission project will traverse from the existing road north to the existing infrastructure. The timeline for the project is TBD.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.818811,-73.07195827317469,14z

Counties: Suffolk County, New York

Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

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

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

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

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

Mammals

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

Birds

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot *Calidris canutus rufa* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Roseate Tern *Sterna dougallii dougallii* Population: Northeast U.S. nesting population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2083	Endangered

Flowering Plants

NAME	STATUS
Sandplain Gerardia *Agalinis acuta*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8128	
Seabeach Amaranth *Amaranthus pumilus*	Threatened
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8549	

Critical habitats

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

Appendix D USACE WETLAND DELINEATION FORMS AND SITE PHOTOGRAPHS

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Fire Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Andy Smith	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Rise	Local Relief:	Convex
Slope (%):	0-1%	Latitude:	Longitude: Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	06/09/20
County:	Suffolk
State:	New York
Wetland ID:	W01ASA
Sample Point:	**Upland**
Community ID:	Upland

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ **Yes** ☑ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present) ☐

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

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	2/2	100	--	--	--	--	--	sandy loam
2	18	2	10YR	5/3	100	--	--	--	--	--	sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present) ☐
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☐ Yes ☑ No

Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Fire Island, NY | Wetland ID: W01ASA | Sample Point **Upland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Morella pensylvanica*	50	Y	FAC
2.	*Toxicodendron radicans*	30	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	80		

Herb Stratum (Plot size: 2 meter radius)

1.	*Toxicodendron radicans*	25	Y	FAC
2.	*Artemisia vulgaris*	15	Y	UPL
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	40		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks: Prevelance index is > than 3.0, and no indicators of hydric soil or wetland hydrology present.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	105	x 3 =	315
FACU spp.	0	x 4 =	0
UPL spp.	15	x 5 =	75
Total	120 (A)		390 (B)

Prevalence Index = B/A = ***3.250***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Fire Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Andy Smith	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Floodplain	Local Relief:	Concave
Slope (%):	0-1%	Latitude:	Longitude: Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	06/09/20
County:	Suffolk
State:	New York
Wetland ID:	W01ASA
Sample Point:	**Wetland**
Community ID:	E2SS/EM

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐)

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

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

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 10	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks: A wrack line was observed within the wetland

SOILS

Map Unit Name: Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR 2/2	100	--	--	--	--	sandy loam
2	16	2	10YR 5/2	85	7.5YR 5/6	3	C	M	sandy loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Fire Island, NY | Wetland ID: W01ASA | Sample Point: Wetland

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Rosa palustris*	20	Y	OBL
2.	*Iva frutescens*	10	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	30		

Herb Stratum (Plot size: 2 meter radius)

1.	*Phragmites australis*	20	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	20		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	20	x 1 =	20
FACW spp.	30	x 2 =	60
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	50 (A)		80 (B)

Prevalence Index = B/A = ***1.600***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Fire Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Andy Smith	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Rise	Local Relief:	Convex
Slope (%):	0-1%	Latitude:	Longitude: Datum:

Date: 06/09/20
County: Suffolk
State: New York
Wetland ID: W01ASB
Sample Point: **Upland**
Community ID: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ **Yes** ☑ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

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

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	16	1	10YR	4/4	100	--	--	--	--	--	sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☐ Yes ☑ No

Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Fire Island, NY Wetland ID: W01ASB Sample Point **Upland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Rosa multiflora*	30	Y	FACU
2.	*Prunus serotina*	20	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	50		

Herb Stratum (Plot size: 2 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	0		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***0.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	50	x 4 =	200
UPL spp.	0	x 5 =	0
Total	50 (A)		200 (B)

Prevalence Index = B/A = ***4.000***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Fire Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Andy Smith	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Floodplain	Local Relief:	Concave
Slope (%):	0-1%	Latitude:	Longitude: Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	06/09/20
County:	Suffolk
State:	New York
Wetland ID:	W01ASB
Sample Point:	**Wetland**
Community ID:	E2SS/EM

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐)

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

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

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 10	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks: A wrack line was observed within the wetland

SOILS

Map Unit Name: Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	2/2	100	--	--	--	--	--	sandy loam
2	9	2	10YR	4/1	100	7.5YR	5/6	3	C	M	sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Fire Island, NY Wetland ID: W01ASB Sample Point **Wetland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Baccharis halimifolia*	30	Y	FACW
2.	*Morella pensylvanica*	20	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	50		

Herb Stratum (Plot size: 2 meter radius)

1.	*Phragmites australis*	20	Y	FACW
2.	*Atropa beladonna*	10	Y	UPL
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	30		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	50	x 2 =	100
FAC spp.	20	x 3 =	60
FACU spp.	0	x 4 =	0
UPL spp.	10	x 5 =	50
Total	80 (A)		210 (B)

Prevalence Index = B/A = ***2.625***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Long Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Andy Smith	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Side slope	Local Relief:	Convex
Slope (%):	0-1%	Latitude:	Longitude: Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☑, Soil ☑, or Hydrology ☑ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☐ Yes ☑ No

Date:	06/09/20
County:	Suffolk
State:	New York
Wetland ID:	W01ASC
Sample Point:	**Upland**
Community ID:	Upland

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ **Yes** ☑ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

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

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	6	1	7.5YR	3/3	100	--	--	--	--	--	sandy loam
6	16	2	7.5YR	4/3	100	--	--	--	--	--	sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☐ Yes ☑ No

Remarks:

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Long Island, NY Wetland ID: W01ASC Sample Point **Upland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Panicum dichotomiflorum*	60	Y	
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	60		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks: Located on slope of earthen berm

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***0.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	0 (A)		0 (B)

Prevalence Index = B/A = ***NA***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Long Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Andy Smith	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-1%	Latitude:	Longitude: Datum:

Date: 06/09/20
County: Suffolk
State: New York
Wetland ID: W01ASC
Sample Point: **Wetland**
Community ID: PEM

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☑, Soil ☑, or Hydrology ☑ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☐ Yes ☑ No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ **Yes** ☐ **No**

Remarks: Wetland is contained in a man-made basin

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐)

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

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

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: 0 Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	2	1	7.5YR 4/6	100	--	--	--	--	sand
2	16	2	7.5YR 5/1	95	7.5YR 5/6	3	C	M	sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Long Island, NY Wetland ID: W01ASC Sample Point: Wetland

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Iva frutescens*	10	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Phragmites australis*	80	Y	FACW
2.	*Toxicodendron radicans*	10	N	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	90		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	90	x 2 =	180
FAC spp.	10	x 3 =	30
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	100 (A)		210 (B)

Prevalence Index = B/A = ***2.100***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Long Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Andy Smith	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Side slope	Local Relief:	Convex
Slope (%):	0-1%	Latitude:	Longitude: Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	06/11/20
County:	Suffolk
State:	New York
Wetland ID:	W01ASD
Sample Point:	**Upland**
Community ID:	Upland

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ **Yes** ☑ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐)

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

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR	4/2	100	--	--	--	--	--	--gravelly road fill
6	15	2	10YR	4/3	100	--	--	--	--	--	sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☐ Yes ☑ No

Remarks:

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Long Island, NY Wetland ID: W01ASD Sample Point **Upland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Juglans nigra*	15	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	15		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Artemisia vulgaris*	60	Y	UPL
2.				
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	60		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***0.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	15	x 4 =	60
UPL spp.	60	x 5 =	300
Total	75 (A)		360 (B)

Prevalence Index = B/A = ***4.800***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Long Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Andy Smith	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Floodplain	Local Relief:	Concave
Slope (%):	0-3%	Latitude:	Longitude: Datum:

Date:	06/11/20
County:	Suffolk
State:	New York
Wetland ID:	W01ASD
Sample Point:	**Wetland**
Community ID:	PSS

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

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

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

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 8	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: 0 Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	10	1	10YR	2/1	100	--	--	--	--	--	sandy loam
10	20	2	10YR	3/1	95	10YR	4/6	5	C	M	sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Long Island, NY | Wetland ID: W01ASD | Sample Point: Wetland

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Rosa multiflora*	20	Y	FACU
2.	*Viburnum recognitum*	10	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	30		

Herb Stratum (Plot size: 2 meter radius)

1.	*Impatiens capensis*	50	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	50		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	*Vitis riparia*	20	Y	FAC
2.	*Smilax hispida*	20	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	40		

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***80.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	50	x 2 =	100
FAC spp.	50	x 3 =	150
FACU spp.	20	x 4 =	80
UPL spp.	0	x 5 =	0
Total	120 (A)		330 (B)

Prevalence Index = B/A = ***2.750***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Long Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Andy Smith	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Floodplain	Local Relief:	Concave
Slope (%):	0-3%	Latitude:	Longitude: Datum:

Date:	06/11/20
County:	Suffolk
State:	New York
Wetland ID:	W01ASE
Sample Point:	**Upland**
Community ID:	Upland

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ **Yes** ☑ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

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

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

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth:	(in.)
Saturation Present?	☑ Yes	☐ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 4/2	100	--	--	--	--	gravelly road fill
4	14	2	10YR 3/2	100					fine sandy loam
					--	--	--	--	
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☐ Yes ☑ No

Remarks:

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Long Island, NY Wetland ID: W01ASE Sample Point: **Upland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Rosa multiflora*	10	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Artemisia vulgaris*	60	Y	FACU
2.				
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	60		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	*Smilax hispida*	75	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	75		

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

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

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

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	75	x 3 =	225
FACU spp.	70	x 4 =	280
UPL spp.	0	x 5 =	0
Total	145 (A)		505 (B)

Prevalence Index = B/A = ***3.483***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

Road side, road fill

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Long Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Andy Smith	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Floodplain	Local Relief:	Concave
Slope (%):	0-3%	Latitude:	Longitude: Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	06/11/20
County:	Suffolk
State:	New York
Wetland ID:	W01ASE
Sample Point:	**Wetland**
Community ID:	PSS

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐)

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

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:		(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	8	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	2/1	100	--	--	--	--	--	fine sandy loam
2	8	2	10YR	3/2	95	10YR	4/6	5	C	M	fine sandy loam
8	18	3	10YR	5/1	100	--	--	--	--	--	sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Long Island, NY Wetland ID: W01ASE Sample Point Wetland

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Rosa multiflora*	10	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Symplocarpus foetidus*	80	Y	OBL
2.	*Impatiens capensis*	30	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	110		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	*Smilax hispida*	75	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	75		

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	80	x 1 =	80
FACW spp.	30	x 2 =	60
FAC spp.	75	x 3 =	225
FACU spp.	10	x 4 =	40
UPL spp.	0	x 5 =	0
Total	195 (A)		405 (B)

Prevalence Index = B/A = ***2.077***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Fire Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Charles Ferris	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Rise	Local Relief:	Convex
Slope (%):	0-1%	Latitude:	Longitude: Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	06/09/20
County:	Suffolk
State:	New York
Wetland ID:	W01CFA
Sample Point:	**Upland**
Community ID:	Upland

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ **Yes** ☑ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present) ☐

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

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	4/2	100	--	--	--	--	--	sandy loam
2	5	2	2.5Y	4/3	100	--	--	--	--	--	sand
5	20	3	2.5Y	5/4	100	--	--	--	--	--	sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present) ☐

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

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☐ Yes ☑ No

Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Fire Island, NY | Wetland ID: W01CFA | Sample Point **Upland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Morella pensylvanica*	75	Y	FAC
2.	*Toxicodendron radicans*	30	Y	FAC
3.	*Prunus maritima*	5	N	NI
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	110		

Herb Stratum (Plot size: 2 meter radius)

1.	*Avena sativa*	25	Y	UPL
2.	*Toxicodendron radicans*	15	Y	FAC
3.	*Artemisia vulgaris*	15	Y	UPL
4.	*Ammophila breviligulata*	7	N	UPL
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	62		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks: Prevelance index is > than 3.0, and no indicators of hydric soil or wetland hydrology present.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***60.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	120	x 3 =	360
FACU spp.	0	x 4 =	0
UPL spp.	52	x 5 =	260
Total	172 (A)		620 (B)

Prevalence Index = B/A = ***3.605***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Fire Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Charles Ferris	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Floodplain	Local Relief:	Concave
Slope (%):	0-1%	Latitude:	Longitude: Datum:

Date: 06/09/20
County: Suffolk
State: New York
Wetland ID: W01CFA
Sample Point: **Wetland**
Community ID: E2SS/EM

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐)

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

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

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 8	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks: A wrack line was observed within the wetland

SOILS

Map Unit Name: Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR 2/2	100	--	--	--	--	sandy loam
2	9	2	2.5Y 5/2	85	7.5YR 5/6	3	C	M	sandy loam
9	20	3	2.5Y 5/1	85	7.5YR 5/6	5	C	M	sandy loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Fire Island, NY Wetland ID: W01CFA Sample Point **Wetland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Iva frutescens*	40	Y	FACW
2.	*Morella pensylvanica*	15	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	55		

Herb Stratum (Plot size: 2 meter radius)

1.	*Phragmites australis*	75	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	75		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	115	x 2 =	230
FAC spp.	15	x 3 =	45
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	130 (A)		275 (B)

Prevalence Index = B/A = ***2.115***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Long Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Charles Ferris	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Side slope	Local Relief:	Convex
Slope (%):	3-5%	Latitude:	Longitude: Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☑, Soil ☑, or Hydrology ☑ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☐ Yes ☑ No

Date:	06/09/20
County:	Suffolk
State:	New York
Wetland ID:	W01CFB
Sample Point:	**Upland**
Community ID:	Upland

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ **Yes** ☑ **No**

Remarks: Upland plot located on the slope of a man-made earthen berm containing W01CFB.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐)

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

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	20	1	2.5Y	4/3	100	--	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☐ Yes ☑ No

Remarks: Located on slope of earthen berm.

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Long Island, NY Wetland ID: W01CFB Sample Point **Upland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Phragmites australis*	90	Y	FACW
2.	*Solidago rugosa*	5	N	FAC
3.	*Artemisia vulgaris*	3	N	UPL
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	98		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks: Located on slope of earthen berm

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	90	x 2 =	180
FAC spp.	5	x 3 =	15
FACU spp.	0	x 4 =	0
UPL spp.	3	x 5 =	15
Total	98 (A)		210 (B)

Prevalence Index = B/A = ***2.143***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Long Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Charles Ferris	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Depression	Local Relief:	Concave
Slope (%):	0-1%	Latitude:	Longitude: Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☑, Soil ☑, or Hydrology ☑ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☐ Yes ☑ No

Date:	06/09/20
County:	Suffolk
State:	New York
Wetland ID:	W01CFB
Sample Point:	**Wetland**
Community ID:	PEM

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ **Yes** ☐ **No**

Remarks: Wetland is contained in a man-made basin

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

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

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

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 8	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: 0 Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	20	1	2.5Y 4/2	90	7.5YR 5/6	10	C	M	fine sandy loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Long Island, NY Wetland ID: W01CFB Sample Point **Wetland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Phragmites australis*	100	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	100		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	100	x 2 =	200
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	100 (A)		200 (B)

Prevalence Index = B/A = ***2.000***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Long Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Charles Ferris	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Side slope	Local Relief:	Convex
Slope (%):	0-1%	Latitude:	Longitude: Datum:

Date:	06/11/20
County:	Suffolk
State:	New York
Wetland ID:	W01CFC
Sample Point:	**Upland**
Community ID:	Upland

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ **Yes** ☑ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐)

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

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	3/1	100	--	--	--	--	--	sandy loam
2	10	2	10YR	4/3	80	--	--	--	--	--	sand
10	20	3	10YR	5/3	85	--	--	--	--	--	sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☐ Yes ☑ No

Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Long Island, NY Wetland ID: W01CFC Sample Point **Upland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Quercus velutina*	80	Y	UPL
2.	*Nyssa sylvatica*	30	Y	FAC
3.	*Acer rubrum*	25	Y	FAC
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	135		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Clethra alnifolia*	65	Y	FAC
2.	*Nyssa sylvatica*	10	N	FAC
3.	*Acer rubrum*	3	N	FAC
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	78		

Herb Stratum (Plot size: 2 meter radius)

1.	*Celastrus scandens*	20	Y	FACU
2.	*Maianthemum canadense*	3	N	FACU
3.	*Maianthemum racemosum*	3	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	26		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks: Prevelance index is > than 3.00, and no indicators of hydric soil or wetland hydrology present.

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***60.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	133	x 3 =	399
FACU spp.	26	x 4 =	104
UPL spp.	80	x 5 =	400
Total	239 (A)		903 (B)

Prevalence Index = B/A = ***3.778***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☑ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Long Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Charles Ferris	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	PFO
Landform:	Floodplain	Local Relief:	Concave
Slope (%):	0-1%	Latitude:	Longitude: Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	06/11/20
County:	Suffolk
State:	New York
Wetland ID:	W01CFC
Sample Point:	**Wetland**
Community ID:	PFO

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐)

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

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

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 10	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: 0 Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	10	1	10YR	3/1	100	--	--	--	--	--	sandy loam
10	20	2	10YR	4/2	95	7.5YR	5/6	5	C	M	sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Long Island, NY Wetland ID: W01CFC Sample Point **Wetland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer rubrum*	60	Y	FAC
2.	*Nyssa sylvatica*	30	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Clethra alnifolia*	60	Y	FAC
2.	*Lindera benzoin*	25	Y	FACW
3.	*Rosa multiflora*	10	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	95		

Herb Stratum (Plot size: 2 meter radius)

1.	*Symplocarpus foetidus*	40	Y	OBL
2.	*Onoclea sensibilis*	10	N	FACW
3.	*Celastrus scandens*	10	N	FACU
4.	*Maianthemum canadense*	5	N	FACU
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	65		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	40	x 1 =	40
FACW spp.	35	x 2 =	70
FAC spp.	150	x 3 =	450
FACU spp.	25	x 4 =	100
UPL spp.	0	x 5 =	0
Total	250 (A)		660 (B)

Prevalence Index = B/A = ***2.640***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Long Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Charles Ferris	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	
Landform:	Side slope	Local Relief:	Convex
Slope (%):	0-1%	Latitude:	Longitude: Datum:

Date:	06/11/20
County:	Suffolk
State:	New York
Wetland ID:	W01CFD
Sample Point:	**Upland**
Community ID:	Upland

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ **Yes** ☑ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

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

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	10	1	10YR	3/1	100	--	--	--	--	--	sandy loam
10	16	2	10YR	5/3	100	--	--	--	--	--	sandy loam
16	20	3	10YR	4/4	100	--	--	--	--	--	sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☐ Yes ☑ No

Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Long Island, NY Wetland ID: W01CFD Sample Point **Upland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer rubrum*	75	Y	FAC
2.	*Nyssa sylvatica*	25	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	100		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Clethra alnifolia*	80	Y	FAC
2.	*Lindera benzoin*	10	N	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	90		

Herb Stratum (Plot size: 2 meter radius)

1.	*Maianthemum canadense*	10	Y	FACU
2.	*Parthenocissus quinquefolia*	7	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	17		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***60.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	180	x 3 =	540
FACU spp.	17	x 4 =	68
UPL spp.	0	x 5 =	0
Total	207 (A)		628 (B)

Prevalence Index = B/A = ***3.034***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Long Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Charles Ferris	Investigator #2:	
Soil Unit:		NWI/WWI Classification:	PFO
Landform:	Floodplain	Local Relief:	Concave
Slope (%):	0-1%	Latitude:	Longitude: Datum:

Date:	06/11/20
County:	Suffolk
State:	New York
Wetland ID:	W01CFD
Sample Point:	**Wetland**
Community ID:	PFO

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐)

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

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

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 10	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR	3/1	100	--	--	--	--	--	sandy loam
6	20	2	10YR	4/1	95	7.5YR	5/6	5	C	M	sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☑ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Long Island, NY Wetland ID: W01CFD Sample Point **Wetland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Nyssa sylvatica*	50	Y	FAC
2.	*Acer rubrum*	40	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	90		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Clethra alnifolia*	60	Y	FAC
2.	*Lindera benzoin*	5	N	FACW
3.	*Sassafras albidum*	3	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	68		

Herb Stratum (Plot size: 2 meter radius)

1.	*Symplocarpus foetidus*	60	Y	OBL
2.	*Maianthemum canadense*	5	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	65		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	*Smilax hispida*	25	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	25		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***83.3%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	60	x 1 =	60
FACW spp.	5	x 2 =	10
FAC spp.	175	x 3 =	525
FACU spp.	8	x 4 =	32
UPL spp.	0	x 5 =	0
Total	248 (A)		627 (B)

Prevalence Index = B/A = ***2.528***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Fire Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Matt Arsenault	Investigator #2:	Joe Roy
Soil Unit:		NWI/WWI Classification:	UPL
Landform:	Terrace	Local Relief:	Linear
Slope (%):	0-1%	Latitude: 40.801237	Longitude: -72.88251 Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/19/20
County:	Suffolk
State:	New York
Wetland ID:	W01JRA
Sample Point:	**Upland**
Community ID:	Upland

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ **Yes** ☑ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present) ☑

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

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	3	1	2.5Y	3/1	100	--	--	--	--	--	peat
3	8	2	10YR	5/3	100	--	--	--	--	--	sand
8	16	3	7.5YR	4/4	100	--	--	--	--	--	sand
16	20	4	7.5YR	4/3	100	--	--	--	--	--	sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☐ Yes ☑ No

Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Fire Island, NY Wetland ID: W01JRA Sample Point **Upland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer rubrum*	55	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	55		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Clethra alnifolia*	85	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	85		

Herb Stratum (Plot size: 2 meter radius)

1.	*Clethra alnifolia*	5	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	5		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	*Smilax rotundifolia*	5	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	5		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	150	x 3 =	450
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	150 (A)		450 (B)

Prevalence Index = B/A = ***3.000***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Remarks: Prevelance index is > than 3.0, and no indicators of hydric soil or wetland hydrology present.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Fire Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Matt Arsenault	Investigator #2:	Joe Roy
Soil Unit:		NWI/WWI Classification:	PFO
Landform:	Floodplain	Local Relief:	Linear
Slope (%):	0-1%	Latitude: 40.801325	Longitude: -72.88291 Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/19/20
County:	Suffolk
State:	New York
Wetland ID:	W01JRA
Sample Point:	**Wetland**
Community ID:	PFO

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐)

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

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

Field Observations:

Surface Water Present?	☑ Yes ☐ No	Depth:	1	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	0	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	30	1	2.5Y	2.5/1	100	--	--	--	--	--	muck
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☑ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Fire Island, NY Wetland ID: W01JRA Sample Point **Wetland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer rubrum*	45	Y	FAC
2.	*Nyssa sylvatica*	25	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	70		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Clethra alnifolia*	75	Y	FAC
2.	*Viburnum recognitum*	10	N	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	85		

Herb Stratum (Plot size: 2 meter radius)

1.	*Clethra alnifolia*	20	Y	FAC
2.	*Carex trisperma*	5	N	OBL
3.	*Glyceria striata*	5	N	OBL
4.	*Pilea pumila*	1	N	FACW
5.	*Thalictrum pubescens*	2	N	FACW
6	*Rosa multiflora*	2	N	FACU
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	35		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	10	x 1 =	10
FACW spp.	3	x 2 =	6
FAC spp.	175	x 3 =	525
FACU spp.	2	x 4 =	8
UPL spp.	0	x 5 =	0
Total	190 (A)		549 (B)

Prevalence Index = B/A = ***2.889***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Fire Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Matt Arsenault	Investigator #2:	Joe Roy
Soil Unit:		NWI/WWI Classification:	PFO
Landform:	Floodplain	Local Relief:	Linear
Slope (%):	0-1%	Latitude: 40.801275	Longitude: -72.882656 Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/19/20
County:	Suffolk
State:	New York
Wetland ID:	W01JRA
Sample Point:	**Wetland**
Community ID:	PFO

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present) ☐

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

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

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks: Subtle indicators of hydrology

SOILS

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/1	100	--	--	--	--	--	peat
3	9	2	2.5Y	5/1	100	--	--	--	--	--	sand
9	12	3	2.5Y	5/3	100	--	--	--	--	--	sand
12	18	4	7.5YR	4/4/	100	--	--	--	--	--	sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present) ☐
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☑ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Fire Island, NY Wetland ID: W01JRA Sample Point **Wetland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer rubrum*	60	Y	FAC
2.	*Nyssa sylvatica*	20	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Clethra alnifolia*	80	Y	FAC
2.	*Nyssa sylvatica*	20	N	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	100		

Herb Stratum (Plot size: 2 meter radius)

1.	*Clethra alnifolia*	5	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	5		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	*Smilax rotundifolia*	1	N	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	1		

Remarks: Acer rubrum and Nyssa sylvatica trees with buttressing and shallow roots

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	186	x 3 =	558
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	186 (A)		558 (B)

Prevalence Index = B/A = ***3.000***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☑ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Fire Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Matt Arsenault	Investigator #2:	Joe Roy
Soil Unit:		NWI/WWI Classification:	UPL
Landform:	Terrace	Local Relief:	Linear
Slope (%):	0-1%	Latitude: 40.800517	Longitude: -72.882265
Datum:			

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/20/20
County:	Suffolk
State:	New York
Wetland ID:	W01JRB
Sample Point:	**Upland**
Community ID:	Upland

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ **Yes** ☑ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑)

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

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/3	100	--	--	--	--	--	peat
3	4	2	10YR	3/1	100	--	--	--	--	--	sand
4	8	3	10YR	5/3	100	--	--	--	--	--	sand
8	16	4	7.5YR	4/6	100	--	--	--	--	--	sand
16	20	5	7.5YR	5/6	100	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☐ Yes ☑ No

Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Fire Island, NY Wetland ID: W01JRB Sample Point **Upland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer rubrum*	55	Y	FAC
2.	*Nyssa sylvatica*	20	Y	FAC
3.	*Quercus rubra*	10	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	85		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Clethra alnifolia*	35	Y	FAC
2.	*Vaccinium corymbosum*	10	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	45		

Herb Stratum (Plot size: 2 meter radius)

1.	*Clethra alnifolia*	10	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	10		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks: Buttressing on Acer rubrum and Nyssa sylvatica

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	120	x 3 =	360
FACU spp.	10	x 4 =	40
UPL spp.	0	x 5 =	0
Total	140 (A)		420 (B)

Prevalence Index = B/A = ***3.000***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☑ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Northeast and Northcentral Region

Project/Site:	Sunrise Wind/ Fire Island, NY	Stantec Project #:	2028113199
Applicant:	Sunrise Wind LLC		
Investigator #1:	Matt Arsenault	Investigator #2:	Joe Roy
Soil Unit:		NWI/WWI Classification:	PFO
Landform:	Floodplain	Local Relief:	Linear
Slope (%):	0-1%	Latitude: 40.800535	Longitude: -72.882451 Datum:

Date:	10/20/20
County:	Suffolk
State:	New York
Wetland ID:	W01JRB
Sample Point:	**Wetland**
Community ID:	PFO

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☑ Yes ☐ No
Wetland Hydrology Present? ☑ Yes ☐ No
Hydric Soils Present? ☑ Yes ☐ No
Is This Sampling Point Within A Wetland? ☑ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐)

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

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

Field Observations:

Surface Water Present?	☑ Yes ☐ No	Depth:	2	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	0	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	3	1	10YR	3/2	100	--	--	--	--	--	peaty muck
3	4	2	10YR	2/1	100	--	--	--	--	--	sand
4	5	3	10YR	5/2	97	7.5YR	4/4	3	C	M	sand
5	10	4	7.5YR	5/2	95	7.5YR	4/4	5	C	M	sand
10	16	5	10YR	4/3	95	7.5YR	4/4	5	C	M	sand
16	20	6	10YR	4/5	97	7.5YR	4/4	3	C	M	sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☑ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)
- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (**LRR K, L, R**)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (**LRR K, L**)
- ☐ S9 - Thin Dark Surface (**LRR K, L**)
- ☐ F12 - Iron-Manganese Masses (**LRR K, L, R**)
- ☐ F19 - Piedmont Floodplain Soils (**MLRA 149B**)
- ☐ TA6 - Mesic Spodic (**MLRA 144A, 145, 149B**)
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: Depth:

Hydric Soil Present? ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site: Sunrise Wind/ Fire Island, NY Wetland ID: W01JRB Sample Point **Wetland**

VEGETATION (Species identified in all uppercase are non native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer rubrum*	65	Y	FAC
2.	*Nyssa sylvatica*	35	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	100		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	*Clethra alnifolia*	80	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	80		

Herb Stratum (Plot size: 2 meter radius)

1.	*Clethra alnifolia*	15	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	15		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Remarks: Acer rubrum and Nyssa sylvatica with buttressing and exposed roots

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***100.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	195	x 3 =	585
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	195 (A)		585 (B)

Prevalence Index = B/A = ***3.000***

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☑ Yes ☐ No Dominance Test is > 50%
- ☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
- ☑ Yes ☐ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☑ Yes ☐ No

Additional Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Sunrise Wind City/County: Brookhaven/Long Island Sampling Date: 3/29/2021

Applicant/Owner: Sunrise Wind LLC State: NY Sampling Point: Upland

Investigator(s): Matt Arsenault Section, Township, Range:

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

Subregion (LRR or MLRA): MLRA 149B Lat: 40.803009 Long: -72.882256 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	if yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsley 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 in Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Surface Water Present?	Yes	No X	Depth (inches)	
Water Table Present?	Yes	No X	Depth (inches)	Wetland Hydrology Present? Yes No X
Saturation Present?	Yes	No X	Depth (inches)	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-01GPB**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Prunus serotina	10	X	FACU
Pinus rigida	5	X	FACU
Quercus rubra	5	X	FACU
	20	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Berberis thunbergii	40	X	FACU
Clethra alnifolia	5		FAC
Lonicera morrowii	5		FACU
	50	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera japonica	10	X	FACU
	10	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	5	x 3	15	
FACU species	75	x 4	300	
UPL species	0	x 5	0	
Column Totals	80	(A)	315	(B)

Prevalence Index = B/A = 3.94

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test For Hydrophytic Vegetation

_____ 2- Dominance Test is > 50%

_____ 3- Prevalence Index is =< 3.0

_____ 4- Morphological Adaptations

_____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Upland-01GPB**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-16	10YR 3/3	100					Loamy Sand	
16-20	10YR 4/4	100					Sand	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Sunrise Wind City/County: Brookhaven/Long Island Sampling Date: 3/29/2021

Applicant/Owner: Sunrise Wind LLC State: NY Sampling Point: Wetland

Investigator(s): Matt Arsenault Section, Township, Range:

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Linear Slope (%) 0 - 0

Subregion (LRR or MLRA): MLRA 149B Lat: 40.803108 Long: -72.882386 Datum: NAD83

Soil Map Unit Name: NWI Classification: PFO

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: 01GPB
Wetland Hydrology Present?	Yes X	No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

Surface Water (A1)	Water-Stained Leaves (B9)	
High Water Table (A2)	Aquatic Fauna (B13)	
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 Imagery (B7)	Other (Explain in Remarks)	
Sparsley Vegetated Concave Surface (B8)		

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

Surface Water Present?	Yes	No X	Depth (inches)
Water Table Present?	Yes	No X	Depth (inches)
Saturation Present?	Yes	No X	Depth (inches)

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-01GPB**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	65	X	FAC
Ulmus americana	12		FACW
	77 = Total Cover		

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Smilax rotundifolia	3		FAC
	3 = Total Cover		

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	12	x 2	24	
FAC species	68	x 3	204	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	80	(A)	228	(B)

Prevalence Index = B/A = 2.85

Hydrophytic Vegetation Indicators:

- [ ] 1- Rapid Test For Hydrophytic Vegetation
- [X] 2- Dominance Test is > 50%
- [X] 3- Prevalence Index is =< 3.0
- [ ] 4- Morphological Adaptations
- [ ] 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-01GPB**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-3	10YR 3/1	100					Mucky Peat	
3-5	10YR 3/1	100					Mucky Loam	
5-8	10YR 4/2	90	7.5YR 4/6	10	C	M	Sand	
8-20	2.5Y 5/2	85	10YR 5/6	15	C	M	Sand	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Sunrise Wind City/County: Brookhaven/Long Island Sampling Date: 3/29/2021

Applicant/Owner: Sunrise Wind LLC State: NY Sampling Point: Upland

Investigator(s): Matt Arsenault Section, Township, Range:

Landform (hillslope, terrace,etc.): Side Slope Local relief (concave, convex, none): Concave Slope (%) 10 - 10

Subregion (LRR or MLRA): MLRA 149B Lat: 40.802673 Long: -72.884687 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes ____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample point on roadway embankment

HYDROLOGY

Wetland Hydrology Indicators:

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

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____	
Water Table Present?	Yes ____	No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Saturation Present?	Yes ____	No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-01GPC**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Quercus rubra	40	X	FACU
	40	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rosa multiflora	3		FACU
	3	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Carex pensylvanica	70		FACU
	70	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Lonicera japonica	5	X	FACU
	5	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	0	x 3	0	
FACU species	113	x 4	452	
UPL species	0	x 5	0	
Column Totals	113	(A)	452	(B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test For Hydrophytic Vegetation

_____ 2- Dominance Test is > 50%

_____ 3- Prevalence Index is =< 3.0

_____ 4- Morphological Adaptations

_____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Carex pensylvanica is not listed on the NWPL; assigned status of FACU based on published description of habitat per Haines 2011: "Dry, well-drained, often sandy, soils of grasslands and oak-, pine-, and/or hickory-dominated woodlands and forests"

SOIL Sampling Point: **Upland-01GPC**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-16	10YR 4/3	100					Sand	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Hardpan

Depth (inches): 16

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Sunrise Wind City/County: Brookhaven/Long Island Sampling Date: 3/29/2021

Applicant/Owner: Sunrise Wind LLC State: NY Sampling Point: Wetland

Investigator(s): Matt Arsenault Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 0

Subregion (LRR or MLRA): MLRA 149B Lat: 40.802627 Long: -72.884662 Datum: NAD83

Soil Map Unit Name: NWI Classification: PFO

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: 01GPC
Wetland Hydrology Present?	Yes X	No	

Remarks: (Explain alternative procedures here or in a separate report.)

Wetland positioned in narrow vegetated zone between roadways

HYDROLOGY

Wetland Hydrology Indicators:

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

				Secondary Indicators (minimum of two required)	
X	Surface Water (A1)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
X	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)	X	Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes X	No	Depth (inches)	3
Water Table Present?	Yes X	No	Depth (inches)	3
Saturation Present?	Yes X	No	Depth (inches)	0

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-01GPC**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Acer rubrum	65	X	FAC
	65	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Viburnum recognitum	5	X	FAC
Lyonia ligustrina	1		FACW
	6	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Juncus effusus	15	X	OBL
Carex stricta	5	X	OBL
Osmundastrum cinnamomeum	2		FACW
	22	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	20	x 1	20	
FACW species	3	x 2	6	
FAC species	70	x 3	210	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	93	(A)	236	(B)

Prevalence Index = B/A = 2.54

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-01GPC**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-16	10YR 4/2	90	10YR 5/6	10	C	M	Sand	

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)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Sunrise Wind City/County: Brookhaven/Long Island Sampling Date: 3/29/2021

Applicant/Owner: Sunrise Wind LLC State: NY Sampling Point: Upland

Investigator(s): Matt Arsenault Section, Township, Range:

Landform (hillslope, terrace,etc.): Footslope Local relief (concave, convex, none): Concave Slope (%) 0 - 0

Subregion (LRR or MLRA): MLRA 149B Lat: 40.802823 Long: -72.890673 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present? Yes X No ____	if yes, optional Wetland Site ID: ____
Wetland Hydrology Present? Yes ____ No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present? Yes ____ No X Depth (inches) ____	
Water Table Present? Yes ____ No X Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Saturation Present? Yes ____ No X Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-10MAB**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Pinus strobus	65	X	FACU
	65	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Vaccinium corymbosum	12	X	FACW
	12	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Smilax rotundifolia	1		FAC
Pinus strobus	1		FACU
	2	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Smilax rotundifolia	3		FAC
	3	= Total Cover	

Dominance Test Worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	12	x 2	24	
FAC species	4	x 3	12	
FACU species	66	x 4	264	
UPL species	0	x 5	0	
Column Totals	82	(A)	300	(B)

Prevalence Index = B/A = 3.66

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test For Hydrophytic Vegetation

_____ 2- Dominance Test is > 50%

_____ 3- Prevalence Index is =< 3.0

_____ 4- Morphological Adaptations

_____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Upland-10MAB**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-3	10YR 4/3	100					Loamy Sand	
3-16	10YR 4/2	95	7.5YR 4/6	5	C	M	Loamy Sand	

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)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Hardpan

Depth (inches): 16

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Sunrise Wind City/County: Brookhaven/Long Island Sampling Date: 3/29/2021

Applicant/Owner: Sunrise Wind LLC State: NY Sampling Point: Wetland

Investigator(s): Matt Arsenault Section, Township, Range:

Landform (hillslope, terrace,etc.): Depression Local relief (concave, convex, none): Concave Slope (%) 0 - 0

Subregion (LRR or MLRA): MLRA 149B Lat: 40.802835 Long: -72.890571 Datum: NAD83

Soil Map Unit Name: NWI Classification: PSS

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: 10MAB
Wetland Hydrology Present?	Yes X	No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

X Surface Water (A1)	Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required)
X High Water Table (A2)	Aquatic Fauna (B13)	Surface Soil Cracks (B6)
X Saturation (A3)	Marl Deposits (B15)	Drainage Patterns (B10)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Saturation Visible in Aerial Imagery (C9)
Iron Deposits (B5)	Thin Muck Surface (C7)	Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	X Geomorphic Position (D2)
Sparsley Vegetated Concave Surface (B8)		Shallow Aquitard (D3)
		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Surface Water Present?	Yes X	No	Depth (inches) 4	
Water Table Present?	Yes X	No	Depth (inches) 4	Wetland Hydrology Present? Yes X No
Saturation Present?	Yes X	No	Depth (inches) 0	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-10MAB**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Pinus strobus	35	X	FACU
Acer circinatum	17	X	FAC
	52	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhododendron viscosum	25	X	FACW
Vaccinium corymbosum	15	X	FACW
Clethra alnifolia	10		FAC
Lyonia ligustrina	5		FACW
	55	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	45	x 2	90	
FAC species	27	x 3	81	
FACU species	35	x 4	140	
UPL species	0	x 5	0	
Column Totals	107	(A)	311	(B)

Prevalence Index = B/A = 2.91

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-10MAB**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-20	10YR 3/1	100					Mucky Peat	

Hydric Soil Indicators:

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Sunrise Wind City/County: Brookhaven/Long Island Sampling Date: 3/30/2021

Applicant/Owner: Sunrise Wind LLC State: NY Sampling Point: Upland

Investigator(s): Matt Arsenault Section, Township, Range:

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

Subregion (LRR or MLRA): MLRA 149B Lat: 40.802779 Long: -72.891871 Datum: NAD83

Soil Map Unit Name: NWI Classification: UPL

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	if yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes ____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsley 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 in Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Surface Water Present?	Yes ____	No X	Depth (inches) ____	
Water Table Present?	Yes ____	No X	Depth (inches) ____	Wetland Hydrology Present? Yes ____ No X
Saturation Present?	Yes ____	No X	Depth (inches) ____	

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Upland-10MAC**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Quercus rubra	25	X	FACU
Nyssa sylvatica	20	X	FAC
Pinus strobus	20	X	FACU
	65	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Clethra alnifolia	70	X	FAC
	70	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
	= Total Cover		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

OBL species	0	x 1	0	
FACW species	0	x 2	0	
FAC species	90	x 3	270	
FACU species	45	x 4	180	
UPL species	0	x 5	0	
Column Totals	135	(A)	450	(B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

_____ 1- Rapid Test For Hydrophytic Vegetation

_____ 2- Dominance Test is > 50%

_____ 3- Prevalence Index is =< 3.0

_____ 4- Morphological Adaptations

_____ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Upland-10MAC**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-2	2.5Y 3/1	100					Peat	
2-8	2.5Y 4/3	100					Sand	
8-18	10YR 4/6	100					Sand	
18-20	10YR 5/6	100					Sand	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Sunrise Wind City/County: Brookhaven/Long Island Sampling Date: 3/30/2021

Applicant/Owner: Sunrise Wind LLC State: NY Sampling Point: Wetland

Investigator(s): Matt Arsenault Section, Township, Range:

Landform (hillslope, terrace,etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%) 0 - 0

Subregion (LRR or MLRA): MLRA 149B Lat: 40.802836 Long: -72.891746 Datum: NAD83

Soil Map Unit Name: NWI Classification: PFO

Are climatic / hyrologic conditions on the site typical for this time of year? Yes X No (if no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	if yes, optional Wetland Site ID: 10MAC
Wetland Hydrology Present?	Yes X	No	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

				Secondary Indicators (minimum of two required)	
X	Surface Water (A1)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B15)		Moss Trim Lines (B16)
X	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)	X	Saturation Visible in Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsley Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Surface Water Present?	Yes X	No	Depth (inches)	4
Water Table Present?	Yes X	No	Depth (inches)	4
Saturation Present?	Yes X	No	Depth (inches)	0

Wetland Hydrology Present? Yes X No

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

Remarks:

VEGETATION - Use scientific names of plants Sampling Point: **Wetland-10MAC**

Tree Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Nyssa sylvatica	45	X	FAC
Acer rubrum	30	X	FAC
	75	= Total Cover	

Shrub Stratum (Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Rhododendron viscosum	25	X	FACW
Vaccinium corymbosum	15	X	FACW
Clethra alnifolia	15	X	FAC
Acer rubrum	10		FAC
	65	= Total Cover	

Herb Stratum (Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status
Symplocarpus foetidus	10	X	OBL
	10	= Total Cover	

Woody Vine Stratum (Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

OBL species	10	x 1	10	
FACW species	40	x 2	80	
FAC species	100	x 3	300	
FACU species	0	x 4	0	
UPL species	0	x 5	0	
Column Totals	150	(A)	390	(B)

Prevalence Index = B/A = 2.6

Hydrophytic Vegetation Indicators:

- ___ 1- Rapid Test For Hydrophytic Vegetation
- X 2- Dominance Test is > 50%
- X 3- Prevalence Index is =< 3.0
- ___ 4- Morphological Adaptations
- ___ 5- Problematic Hydrophytic Vegetation

Definitions of Vegetation Strata:

Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.

Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.

Woody Vines- All woody vines greater than 3.28ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: **Wetland-10MAC**

Depth (inches	Matrix Color	%	Redox Features Color	%	Type	Loc	Texture	Remarks
0-6	2.5Y 2.5/1	100					Mucky Peat	
6-9	2.5Y 3/1	100					Sand	
10-20	2.5Y 5/1	100					Sand	

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (B15)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matric (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Soils:

- ___ 2 cm Muck (A10)
- ___ Coast Prarie Redox (A16)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Iron-Manganese Masses (F12)
- ___ Piedmont Floodplain Soils (F19)
- ___ Mesic Spodic (TA6)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

Photograph 1. Wetland 01ASA – Wetland View looking east. Stantec. June 2020.

Photograph 2. Wetland 01ASA – Upland View looking south. Stantec. June 2020.

Photograph 3. Wetland 01CFA – Wetland View looking northeast. Stantec. June 2020.

Photograph 4. Wetland 01CFA – Upland View looking southwest. Stantec. June 2020.

Photograph 5. Wetland 01ASB – Wetland View looking west. Stantec. June 2020.

Photograph 6. Wetland 01ASB – Upland View looking south. Stantec. June 2020.

Photograph 7. Wetland 01ASC – Wetland View looking north. Stantec. June 2020.

Photograph 8. Wetland 01ASC – Upland View looking north. Stantec. June 2020.

Photograph 9. Wetland 01CFB – Upland and Wetland View looking west. Stantec. June 2020.

Photograph 10. Wetland 01CFC/01JRB – Wetland View looking west across Carmans River from public right-of-way. Stantec. June 2020.

Photograph 11. Wetland 10MAA – Wetland View looking north. Stantec. March 2021.

Photograph 12. Wetland 10MAB – Wetland View looking north. Stantec. March 2021.

Photograph 13. Wetland 10MAC – Wetland View looking north. Stantec. March 2021.

Photograph 14. Wetland 01GPA (Carmans River impoundment)– Wetland View looking east. Stantec. March 2021.

Photograph 15. Wetland 01GPB– Wetland View looking north. Stantec. March 2021.

Photograph 16. Wetland 01GPC– Wetland View looking east. Stantec. March 2021.

Photograph 17. Watercourse S-10MA. Stream view facing south. Stantec. March 2021.

Photograph 18. Watercourse S-01GP. View northwest of Dam on Carmans River from Victory Avenue. Stantec. March 2021.

Photograph 19. Watercourse S-01GP. View south of Carmans River between Victory Avenue and State Route 27. Stantec. March 2021.

Photograph 20. Wetland 01CFC/01JRB – Upland View looking east across Carmans River from public right-of-way. Stantec. June 2020.

Photograph 21. Wetland 01CFD/01JRA – Wetland View looking north. Stantec. October 2020.

Photograph 22. Wetland 01CFD/01JRA – Upland View looking east. Stantec. October 2020.

Photograph 23. Wetland 01ASD – Wetland View looking south towards Montauk Highway. Stantec. June 2020.

Photograph 24. Wetland 01ASD – Upland View looking west across Montauk Highway from public right-of-way. Yaphank Creek runs south through culvert in image. Stantec. June 2020.

Photograph 25. Wetland 01ASE – Wetland View looking south from public right-of-way. Stantec. June 2020.

Photograph 26. Wetland 01ASE – Upland View looking east across Montauk Highway from public right-of-way. Stantec. June 2020.

Photograph 27. Watercourse S-01CF – Carmans River looking south from public right-of-way. Stantec. June 2020.

Photograph 28. Watercourse S-02MA – Tributary to Carmans River looking east. Stantec. October 2020.

Photograph 29. Watercourse S-01AS – Yaphank Creek looking south towards Montauk Highway from public right-of-way. Stantec. June 2020.

Appendix E RARE PLANT SURVEY RESULTS

Contains Confidential Information – Not for Public Disclosure

This Appendix contains trade secrets and/or commercial or financial information that is exempt from the public disclosure under the Federal Freedom of Information Act, the New York Freedom of Information Law, the Massachusetts Public Records Law, and the Rhode Island Access to Public Records Act.