

Empire Wind 1 Project

Case 21-T-0366

Environmental Management and Construction Plan (EM&CP)

Part 1

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ACRONYMS AND ABBREVIATIONS

Application	Application for a Certificate of Environmental Compatibility and Public Need under Article VII of the PSL
AVEHAP	Analysis of Visual Effects to Historic and Architectural Properties
BMP	Best Management Practice
BOEM	Bureau of Ocean Energy Management
CECONY	Consolidated Edison Company of New York, Inc.
Commission	New York Public Service Commission
Con Edison	Consolidated Edison Company of New York, Inc.
ECP	Environmental Compliance Plan
ECL	Environmental Conservation Law
EM&CP	Environmental Management and Construction Plan
Empire	Empire Offshore Wind LLC
EW1	Empire Wind 1
FDNY	Fire Department of New York
FIRM	Flood Insurance Rate Map
ft	foot
GIS	gas-insulated switchgear
GIE	gas-insulated equipment
HASP	Health and Safety Plan
HVAC	high voltage alternating current
HWPWP	Hazardous Waste and Petroleum Work Plan
IRMWP	Interim Remedial Measures Work Plan
km	kilometer
KOP	Key Observation Point
KP	kilometer post
kV	kiloVolt
Lease Area	Renewable Energy Lease Area OCS-A 0512
m	meter
Marine Archaeological Study Area	Marine Archaeological Resource Study Area
mi	mile
MS4	Municipal Separate Storm Sewer

MSW	municipal solid waste
MUTCD	Manual of Uniform Traffic Control Devices
NERC	North American Electric Reliability Corporation
NHPA	National Historic Preservation Act
nm	nautical mile
NPCC	Northeast Power Coordinating Council
NRHP	National Register of Historic Places
NYC	New York City
NYCDEP	New York City Department
NYCDOT	New York City Department of Transportation
NYCEDC	New York City Economic Development Corporation
NYCEM	New York City Emergency Management
NYCRR	New York Code of Rules and Regulations
NYCSBS	New York City Department of Small Business Services
NYISO	New York Independent System Operator
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York State Department of Transportation
NYSHPO	New York State Historic Preservation Office
NYSRC	New York State Reliability Council
P&P	Plan and Profile
Part	EM&CP Segment
POI	Point of Interconnection
PPE	Personal Protection Equipment
Project	The electric transmission system for the EW1 Project within the State of New York.
PSL	New York Public Service Law
QCP	Quality Control Plan
RAWP	Remedial Action Work Plan
RIR	Remedial Investigation Report
ROW	Right-of-Way
SBMT	South Brooklyn Marine Terminal
SMP	Soil Management Plan
SPCC	Stormwater Pollution Prevention Plan

SRHP	State Register of Historic Places
SWPPP	Stormwater Pollution Prevention Plan
Terrestrial Archaeological Study Area	Terrestrial Archaeological Resource Study Area
TOGS	Technical and Operational Guidance Series
TMP	Traffic Management Plan
UXO	Unexploded Ordnance
VIA	Visual Impact Assessment
Visual Study Area	Visual Resources Study Area
XLPE	Cross-Linked Polyethylene

1. SITE AND PROJECT DESCRIPTION

Empire Offshore Wind LLC (Empire) plans to construct and operate the Empire Wind 1 (EW1) Project as one of two separate offshore wind projects, both to be located within the Bureau of Ocean Energy Management (BOEM) designated Renewable Energy Lease Area OCS-A 0512 (Lease Area). Empire is a joint venture between Equinor and bp. The transmission system for the EW1 Project will connect the offshore wind farm to the point of interconnection (POI) and will include 230-kilovolt (kV) export and 345 kV interconnection lines traversing a total of approximately 17.5 miles (mi) (15.2 nautical miles [nm] or 28.2 kilometers [km]) within the State of New York. This Environmental Management and Construction Plan (EM&CP) applies to the electric transmission system for the EW1 Project within the State of New York, which is subject to Article VII of the New York Public Service Law (PSL) (the Project). The Project will interconnect to the New York State Transmission System operated by the New York Independent System Operator, Inc. (NYISO) at the Gowanus 345 kV Substation (the point of interconnection, or POI). The Gowanus 345 kV Substation is owned by the Consolidated Edison Company of New York, Inc. (Con Edison). The Project's onshore facilities, including the onshore cable route, onshore substation, and the POI, are located entirely within Brooklyn, Kings County, New York.

The Article VII components of the EW1 Project include the following:

- Two three-core 230 kV high-voltage alternating-current (HVAC) submarine export cables located within an approximately 15.1 nm (27.9 km) long submarine export cable corridor from the boundary of New York State waters 3 nm (5.6 km) offshore to the cable landfall in Brooklyn, New York.
- A 0.2 mi (0.3 km) long onshore cable route and substation including:
 - Two three-core 230 kV HVAC EW1 onshore export cables buried underground from the cable landfall transition joint bays to the onshore substation.
 - An onshore substation located at the South Brooklyn Marine Terminal (SBMT), which will increase the voltage to 345 kV for the onshore interconnection cables.
 - Two 345 kV cable circuits, each with three single-core HVAC onshore interconnection cables, buried underground from the onshore substation to the POI.

1.1 EM&CP Introduction

On June 30, 2021, Empire filed an Application for a Certificate of Environmental Compatibility and Public Need under Article VII of the PSL (Application) to construct and operate the Project. Empire's Application was deemed complete on January 24, 2022, and Empire filed a notice of

settlement discussions on April 1, 2022. Following settlement negotiations and the filing of a Joint Proposal on August 15, 2023, the New York Public Service Commission (Commission, or NYSPSC) will issue an Order granting the Certificate of Environmental Compatibility and Public Need (Certificate).

This EM&CP has been prepared to detail the methods that will be used to comply with the terms and conditions of the Certificate, and related authorizations, and protect environmental resources during construction, operation, maintenance, and decommissioning of the Project. In accordance with the EM&CP specifications that were included in the Joint Proposal, Empire's EM&CP provides typical and site-specific construction techniques, procedures, and requirements to be followed in the development and construction of the Project. Empire's EM&CP, including all EM&CP Segments (as defined below), identifies the Project facilities and environmental features within the right-of-way (ROW), defines Empire's organizational framework and procedures to ensure implementation of construction techniques and impact avoidance, minimization and mitigation measures, defines site access and traffic management procedures, discusses protective measures for environmental resources, outlines commercial and recreational mitigation and compensation, identifies operations and maintenance measures, and discusses decommissioning.

The Certificate (Condition A10) allows the filing and review of the EM&CP to be segmented to facilitate construction sequencing and scheduling, provided that with its first EM&CP filing, Empire identifies the remaining EM&CP segments of on-land components of the Project that do not require other permits. Empire's EM&CP is segmented into three parts (each, a "Part") which will each be submitted as separate filings to the Department of Public Service (DPS):

- EM&CP Part 1, this document, which addresses general EM&CP requirements and the following onshore site preparation and below ground construction activities: clearing; grading; demolition; establishing laydown and staging areas; excavation, removal, and/or relocation of existing utilities; excavation, removal, and replacement of upland components of the bulkhead; excavation and installation of duct banks for the Project's onshore cables and interconnection cables; the installation of foundations and pile driving for the onshore substation; and decommissioning for EM&CP Part 1 activities;
- EM&CP Part 2, which addresses all in-water work activities, including in-water structure removal and installation, scour protection, dredging, and submarine cable pre-installation and installation activities, onshore cable splicing and pulling, as well as operations and maintenance (O&M) and decommissioning for the offshore facilities; and
- EM&CP Part 3, which addresses the construction and operation of the Project's aboveground facilities at the onshore substation, onshore cable pulling, control buildings, equipment buildings, electrical works, as well as O&M and decommissioning of the Project's onshore facilities.

Each EM&CP Part will follow the EM&CP process and procedures required by the terms and conditions of the Certificate. **Table 1-1** provides a summary of Project components that will be included in each EM&CP Part, and the anticipated filing schedule.

Table 1-1. EM&CP Components and Anticipated Schedule

EM&CP	EM&CP Description	Anticipated EM&CP Filing	Anticipated Start of Construction
Part 1	Onshore site preparation and some demolition; establishing laydown and staging areas; onshore bulkhead construction; installation of duct banks for the Project's onshore cables; construction of belowground foundations; pile driving for the onshore substation; decommissioning of Part 1 activities.	November 2023	March 2024
Part 2	All in-water work activities construction; some demolition; operations, maintenance, and decommissioning; and onshore cable splicing and pulling.	f	June 2024
Part 3	Aboveground facilities at the onshore substation; and all onshore operations, maintenance, and decommissioning.	May 2024	October 2024

1.1.1 EM&CP Certificate Conditions Summary

Section	Certificate Conditions	Section Title
A	A1-14	General Conditions of the Order
B	B1-7	Laws and Regulations
C	C1-6	Environmental Management and Construction Plan Process
D	D1-9	Public Health and Safety
E	E1-13	Notices and Public Comments
F	F1-9	Oversight and Supervision

G	G1-10	Contractors and Supplies
H	H1-6	Infrastructure Crossings
I	I1-2	Construction and Maintenance Windows and Timing
J	J1-16	Submarine Export Cable Installation
K	K1-11	Dredging
L	L1-12	Onshore Construction
M	M1-6	Roads and Transportation
N	N1-7	Mitigation and Monitoring
O	O1-6	Onshore Erosion and Soil Handling
P	P1-11	Water Resources
Q	Q1-5	Cultural Resources
R	R1-6	Terrestrial and Wildlife Resources
S	S1-2	Invasive Species
T	T1-3	Marine Resources
U	U1-14	Water Quality
V	V1-3	Handling of Petroleum and Hazardous Substances
W	W1-7	Vegetation Management and Herbicide, Fungicide, and Pesticide Use
X	X1	Restoration
Y	Y1-17	EM&CP Contents
Z	Z1-3	Decommissioning
AA	AA1	Preservation of Rights

1.2 Project Facility Location

This Section describes the Project components associated with this EM&CP Part 1 (see Section 1.1), which include limits of the onshore Project site for the cable landfall and substation, the onshore interconnection cable corridor, and associated laydown and staging areas for the onshore facilities. An overview of the onshore Project area and location is provided below. The locations of Project components are further depicted on the Onshore Plan and Profile (P&P) drawings in **Appendix A**, and the general Site Plans in **Appendix B** of this EM&CP Part 1.

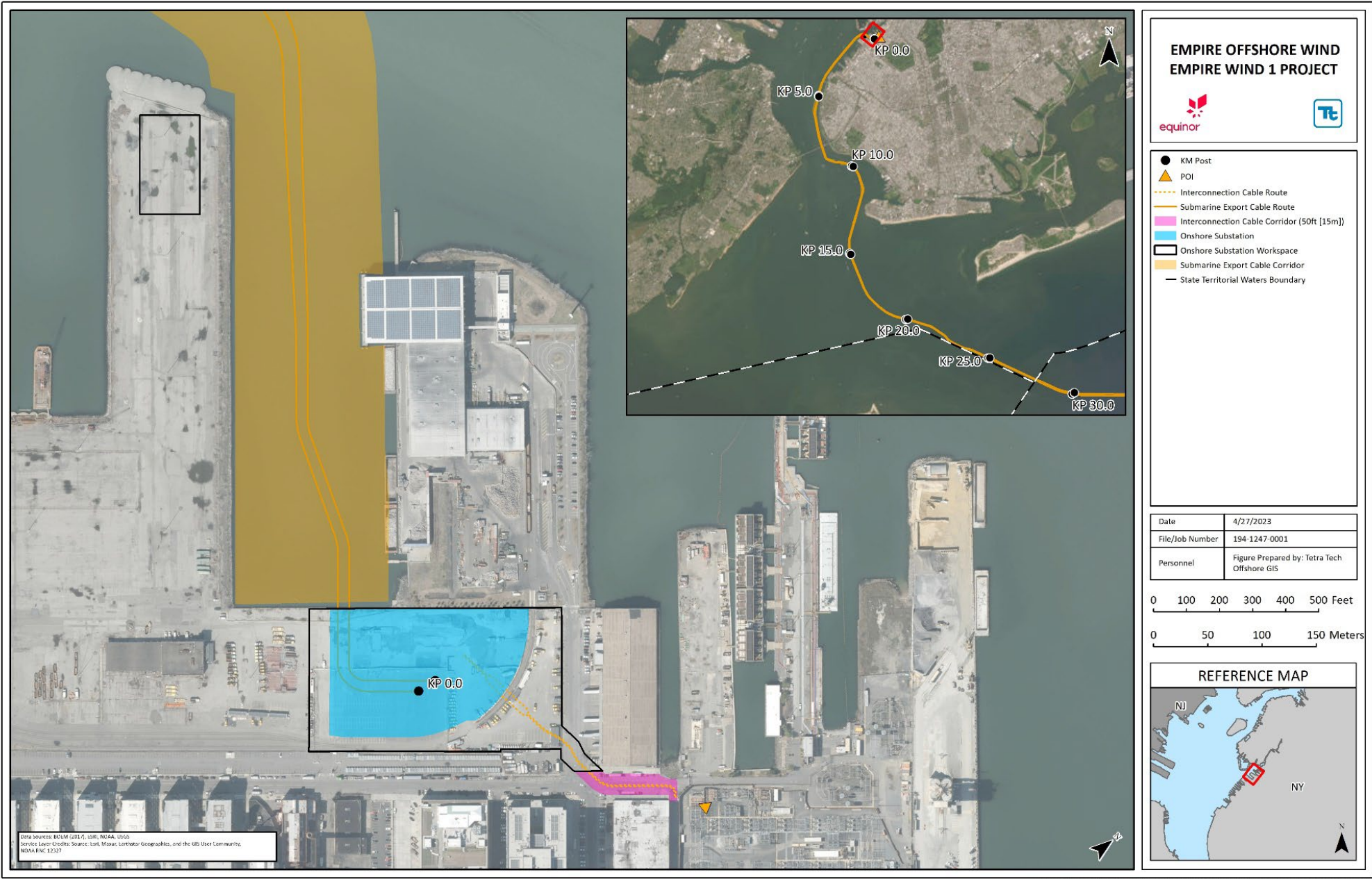


Figure 1. Overview of the Project Components

1.2.1 Onshore Substation

The onshore substation will be a newly constructed facility located directly to the east of the export cable landfall within the SBMT in Brooklyn, New York. SBMT is located along 2nd Avenue and 29th Street. The onshore substation will be constructed within an approximately 9.0-acre (ac, 3.6-hectare [ha]) portion of the SBMT property, which is owned by New York City and under lease to the New York City Economic Development Corporation (NYCEDC) (Block 662, Lot 1). Empire has executed a sublease agreement for use of the onshore substation site. The onshore substation site is zoned for manufacturing (District M3-1) and is currently under industrial use; the site is paved with minimal vegetation and used for parking, equipment, and materials storage. Within that area, the footprint of the proposed onshore substation during operations will be 4.8 ac (1.9 ha). Construction workspace will be located immediately adjacent to the permanent onshore substation site as shown on the **Appendix B** site plans. The onshore substation footprint is bounded to the west by New York Harbor and the Sims Municipal Recycling Sunset Park Material Recovery Facility (SIMS), to the north and east by a single railroad track that is used to transport materials to and from SIMS, and to the south by other portions of the SBMT port facility. Additional details on the site prep construction activities for the onshore substation are provided in Section 4.2 and the location of these activities are depicted in the Site Plans in **Appendix B**.

1.2.2 Export Cable Landfall

The Project's submarine export cable route will make landfall at SBMT in Brooklyn, New York, along the bulkhead directly to the west of the planned onshore substation (31st-33rd Street Bay Bulkhead). Empire will excavate and backfill with fluidized thermal backfill and soil to replace the upland side of the bulkhead/relieving platform at the cable landfall as part of site preparation activities in this EM&CP. The onshore work area for cable landfall will be located within the workspace for the onshore substation at SBMT (see Section 1.2.1), and work activities are further discussed in Section 4.2. This upland work will also include the excavation and duct bank installation for the approximately 263-foot (ft)-long (80.0-meter [m]-long) segment of the two export cables connecting from the upland side of the bulkhead into the onshore substation. Additional details are depicted on the Bulkhead Drawings included in **Appendix C**.

1.2.3 Onshore Interconnection Cable

The 345 kV onshore interconnection cables will traverse approximately 0.2 mi (0.3 km) via portions of 29th Street and 2nd Avenue to the POI at the existing Gowanus 345 kV Substation. The onshore interconnection cables are routed to traverse in underground concrete encased duct banks from the onshore substation northeast across the railroad tracks within the SBMT site, and across 29th Street to 2nd Avenue. 29th Street is controlled by the New York City Department of Small Business Services (NYCSBS), and 2nd Avenue is a public ROW under the jurisdiction of the New York City Department of Transportation (NYCDOT). The onshore interconnection cable route travels approximately one block northeast along 2nd Avenue to the POI at the Gowanus 345 kV

Substation. A subsurface utility engineering (SUE) survey was completed for the route. Additional details are depicted in the Onshore Plan and Profile Drawings in **Appendix A**.

1.2.4 Laydown and Staging Areas

Construction activities for the Project will utilize the designated areas within SBMT for construction workspace and materials storage required for installation, which is discussed in Section 4.2.1 of this EM&CP filing. These designated areas at SBMT are depicted within the Site Plans in **Appendix B** of this EM&CP Part 1.

Mobilization and demobilization of the submarine export cable installation, material storage, staging, and loading/unloading are anticipated to be based out of the cable supplier's factory site, with the submarine export cable installation vessels transiting directly to and from the cable installation corridor. However, supply vessels and crew transfer vessels may operate from local ports, including SBMT, to supply the cable installation vessel and associated support vessels. Further details on the port facilities and construction staging areas related to the in-water work activities will be described in Empire's EM&CP Part 2 filing.

All equipment will be located within the laydown or staging area, within the Project site and/or ROW, provided, however, that if a local contractor is used for the work, the local contractor's facility will also be considered as a marshalling yard or laydown area.

1.3 Description of Proposed Work

This Section provides a description of the Project components included in this EM&CP, including structure specifications for each component. Project details and specifications are included on the Onshore Plan and Profile Drawings in **Appendix A**, Site Plans in **Appendix B**, Bulkhead Drawings in **Appendix C**, and Onshore Asset Protection Drawings in **Appendix D**.

1.3.1 Onshore Substation

Empire is planning to develop the new onshore substation facility with gas-insulated switchgear (GIS) and the design will include a single 230 kV bus as well as a 345 kV bus. Two GIS buildings (one 230 kV and one 345 kV and two control buildings) will also be housed at the site, along with a reactive compensation building and harmonic filter structure as well as transformer buildings. The onshore substation will also contain power metering, protection relays, and communication equipment.

Major equipment anticipated as part of the onshore substation will include, but may not be limited to:

- 345 kV/230 kV main autotransformers
- 230 kV shunt reactors

- 230 kV alternating current filters
- 230 kV capacitor banks, as needed
- 345 kV and 230 kV indoor GIS containing:
 - circuit breakers
 - disconnectors
 - earth switches
 - voltage and current transformers
 - cable terminations
- diesel generator
- low-voltage switchboards
- low-voltage alternating current/direct current supply
- medium-voltage switchgear
- low, medium, and high-voltage cables
- substation auxiliary transformers.

Construction access to the onshore substation site will be through temporary entrances from the north and operations access to the onshore substation site will be from the east, along an access driveway to be constructed within the SBMT site from two entrances off of 29th Street. A maintenance access road will also be located inside the perimeter of the onshore substation, which will be contained within an up to 10 ft (2.8 m) high perimeter fence, constructed of chain link, welded wire, or similar material, with a 6-inch spike extension to discourage climbing. The perimeter fence will have a minimum of one drive-through gate and one walk-through gate to provide entrances into the onshore substation from the access road and the rest of the SBMT site. Parking spaces will be provided within the onshore substation fence line.

Site preparation activities for the onshore substation included in this EM&CP include clearing, grading, utility removal/relocation within the onshore substation footprint, and belowground work for the onshore substation that includes pile driving and the installation of belowground foundations. Additional details on the onshore substation aboveground facilities will be provided in EM&CP Part 3, as outlined in Section 1.1.

1.3.2 Bulkhead Upgrades and Export Cable Landfall

Empire will replace the existing pile supported relieving platform with a new pile-supported platform and bulkhead located between the 35th Street and 29th Street Piers¹. The existing bulkhead and relieving platform at the cable landfall, called the "31st-33rd Street Bay Bulkhead," is in a deteriorated condition and is unable to support the new infrastructure and upland loads required. The Project Area (**Figure 1**) includes the upgrade of the northern portion of the existing pile supported relieving platform and bulkhead between the piers, which is approximately 208 ft (63 m) long. This segment extends north from approximately the southern easement boundary of an existing New York City Department of Environmental Protection (NYCDEP) combined sewer culvert which discharges at the 31st-33rd Street Bay bulkhead.

The relieving platform/bulkhead replacement will consist of the installation of steel pipe piles to support a new high-level concrete platform. In certain portions of the bulkhead segment, new steel sheet piles will also be installed upland of the existing edge of the bulkhead.

Empire will replace the upland side of the existing bulkhead at the landfall as part of site preparation activities described in this EM&CP. A distance of approximately 60 ft (18 m) behind the existing bulkhead will be temporarily excavated for the installation of a new setback sheet pile bulkhead and a new relieving platform between the bulkhead and the current shoreline. See **Appendix C** for detailed construction drawings for the bulkhead upgrades.

1.3.3 Onshore Interconnection Cables

The interconnection cable corridor will contain two circuits of three single-core HVAC with copper conductors enclosed in cross-linked polyethylene (XLPE) insulation, for a total of six cables, with a voltage of 345 kV (voltage of initial operation; 362-kV design voltage). Semi-conductive swelling tape will be applied over the insulation screen, and each dielectric cable will be sheathed in polyethylene, with a metallic laminated or lead sheath as a longitudinal water barrier. Two separate fiber optic cables will also be installed alongside the interconnection cables for communications.

The interconnection cables and fiber optic cables will be housed in two concrete encased duct banks. The configuration of the six interconnection cables and fiber optic cables within the duct banks may vary along the installation corridor. Each of the concrete duct banks will be approximately 2'3" high by 2' wide, with 2'6" to 6'6" separation between the banks. In certain areas, due to crossings, the duct bank profile changes to approximately 1'3" high by 4'1" wide. There may be additional separation between duct banks due to site conditions and spacing constraints. A description of the installation of the cables and cable pulling will be included in EM&CP Part 3.

¹ Note that as relevant to this EM&CP, SBMT includes two areas of bulkheaded landfill that resemble and are referred to as "piers," (herein, the 29th Street and 35th Street Piers), despite being landfill and not pile-supported structures over water.

1.3.4 Laydown and Staging Areas

Construction workspace will be located immediately adjacent to the permanent onshore substation site as shown on the **Appendix B** site plans.

1.4 Project Construction Schedule

Empire anticipates commencing onshore construction activities in March/April 2024, as soon as applicable permits, approvals, and authorizations are obtained for construction in specific areas and for specific activities. "Commencement of Construction" is defined as the beginning of site clearing, ground disturbance, site preparation, or grading activities related to installation of the Project (Certificate Condition [CC] A7). Commencement of Construction for this EM&CP includes the activities outlined in Section 1.3, and further described in Section 4.2. Commencement of Construction does not include soils or groundwater testing, surveying (including but not limited to geotechnical drilling, bathymetric survey, cable/pipeline location surveys, or unexploded ordnance [UXO] surveys) that may be necessary prior to the start of site preparation, remediation activities under a Brownfield Cleanup Agreement and Remedial Action Work Plan (RAWP), or similar pre-construction activities. Commencement of Construction also does not include other activities, such as limited staging and limited tree cutting, that are required to perform such pre-construction activities.

Empire will not commence construction until this EM&CP is approved by the Commission, and all other necessary permits, approvals, and authorizations for this EM&CP Part 1 segment are obtained. However, certain local permits issued by New York City, detailed in the Revised Exhibit 7 and Table 1.4, will be coordinated with New York City and obtained as needed throughout the construction of the Project (CC B6).

At least 14 days prior to the Commencement of Construction, Empire will hold a pre-construction meeting. Invitees will include Empire's construction Contractor(s), DPS Staff, NYSDEC, New York State Department of Agriculture and Markets, NYSDOS, Long Island Commercial Fishing Association (LICFA), New York City, New York City Office of Environmental Coordination, and Con Edison representatives (CC E5). The agenda, location, date, and invitation list will be agreed upon by Empire, DPS Staff, and the New York City Office of Environmental Coordination, and notice of the meeting will be provided to all invitees at least ten (10) days prior to the meeting date. Following the meeting, Empire will supply draft minutes from this meeting to all attendees, and the attendees may offer corrections or comments, which Empire will consider in good faith. Empire will then issue the finalized meeting minutes to all attendees and invitees.

Table 1-2 provides the anticipated construction schedule and activity durations for the onshore portion of the Project. Construction schedules are subject to multiple factors, including but not limited to, State and federal permitting, financial investment decisions, power purchase contracts, and supply chain considerations. As required by the Certificate conditions, this construction

schedule², detailing work activities and allowable work windows, were provided to DPS Staff, NYSDEC, New York State Department of Transportation (NYSDOT), NYSDOS, NYCDEP, NYCDOT, NYCSBS, New York Police Department, and LICFA, for review and comment at least 45 days prior to filing this EM&CP (see **Appendix E** for documentation).

Table 1-2. Anticipated Onshore Construction Schedule

Milestone	Expected Duration	Expected Start
Site Preparation		
Mobilization and establishing temporary power	2 months	March 2024
Site preparation and utility removal	7 months	March 2024
Onshore Substation		
Pile drive and install foundations	2 months	May 2024
Above grade substation installation	13 months	October 2024
Bulkhead Upgrades and Cable Landfall		
Relieving platform fill removal	2 months	May 2024
Upland sheet pile bulkhead & cable trench sheets	2 months	May 2024
Upland trench excavation for export cables	2 months	May 2024
Removal of existing bulkhead ³	2 months	July 2024
Cable landfall dredging ³	2 months	July 2024
Install cable landfall trench bedding layer ³	2 months	September 2024
Submarine export cable pull-in ³	2 months	August 2024
Onshore Interconnection Cable		
Commissioning	8 months	October 2025

Work windows associated with Empire’s onshore construction schedule include the following activities. The offshore construction schedule will be discussed in Part 2 more in depth.

Construction work outside the walls of buildings whose exterior walls and roof are substantially complete shall take place between 7 a.m. and 6 p.m. as required by the New York City Noise Control Code. To the extent that certain construction phases and activities require additional work hours, the Certificate Holder may make arrangements for the extension of additional work hours with appropriate City authorities, and submit to DPS Staff a request to proceed at least 48 hours in advance if planned weekend, evening, or holiday construction becomes necessary. Staff will use appropriate efforts to respond to Certificate Holder’s request in a timely manner (CCI1). Construction vehicles used in New York City will be outfitted with smart back up alarms. See Section 5.9 for additional discussion of noise minimization and mitigation measures.

² Note that the construction schedule is flexible and subject to change.

³ Subject to in-water time of year restrictions as work will be performed from vessel.

Empire may petition the Commission for a modification of any construction window limitation, after consultation with the NYSDEC, NYSDOS and DPS Staff, by filing such petition with the Secretary. A petition to modify any construction window limitation will describe the consultation efforts and results and include a request for a 30 day public comment period. Empire will notify the NYCDOT Office of Construction Mitigation and Coordination if there are any approved modifications of the construction window.

1.4.1 Schedule Planning and Coordination with NYCDOT

Empire and its construction Contractor(s) have been engaging with the NYCDOT on its construction plans, street opening, and traffic management issues. The NYCDOT was provided a copy of the construction schedule for review and comment at least 45 days prior to filing this EM&CP. This section will provide a summary of schedule coordination efforts and any comments received by the NYCDOT on the construction schedule in advance of filing the EM&CP.

During June 2023, the traffic maintenance plan (**Appendix M**) was shared with the NYCDOT. They were generally in agreement with the plan presented and as included in this EM&CP.

During construction, Empire will continue to periodically consult with the NYCDOT about traffic conditions near the Project site and shall make good faith efforts to minimize the impact of the construction of the facilities on area traffic circulation (CC L4).

1.5 Description of Plan and Profile Drawings

Appendices A, B, C, and D contain Onshore Plans and Profile Drawings; Site Plan and Construction Drawings; Bulkhead Drawings, and Onshore Asset Protection Plans, respectively. In general, the plans contain the following information:

- Project facility (cable and structure) plans and profiles, underground utility and non-utility structures, ROW boundaries, engineering and construction details, the relationship of the Project to nearby facilities, location of any new or expanded onshore substation or interconnection facility, locations where trenchless methods are proposed, and designated locations for access, parking, staging and laydown
- Stormwater pollution prevention measures and limits of disturbance
- Vegetation clearing areas and disposal methods
- Building and structure removal
- Locations of floodways or flood hazard areas
- Wetlands and wetland adjacent areas

- Noise sensitive sites
- Invasive species.

Empire will file with the Secretary as-built drawings and shapefiles of the Project certified by a Professional Engineer who is licensed in New York State within 120 days following achievement of Commercial Operation. Within 120 days of Commercial Operation, Empire will also submit the as-built drawings and shapefile data to DPS, New York State Department of Environmental Conservation (NYSDEC), New York State Department of State (NYSDOS), and New York City. To the extent that the drawings and shapefiles contain Critical Energy Infrastructure Information, they shall only be provided to the Commission's Records Access Officer (CC E13). Commercial Operation is defined as the date on which energy is sold in commercial quantities, excluding test energy, and is transmitted through the Project ("Commercial Operation Date" or "Commercial Operation") (CC E11).

1.6 Land Rights

To construct, operate, and maintain the Project, Empire has or will acquire the following land rights:

- Property rights (revocable consent from the NYCDOT and NYCSBS) for the onshore interconnection cables within New York City-owned property
- Property rights (in the form of a sublease agreement) for the onshore substation at the New York City-owned SBMT
- Property rights (revocable consent from the NYCDOT and NYCSBS) for the submarine export cables and export cable landfall within the pierhead line at the New York City-owned SBMT
- Property rights in New York State waters from the New York State Office of General Services.

1.7 Right-of-Way (ROW) Encroachment Plan

Empire will use good faith efforts to enter into a bi-lateral infrastructure crossing or other encroachment agreement with the owners of third-party infrastructure, wherever the Project is expected to cross third-party infrastructure or is expected to come in such proximity to third-party infrastructure that Good Utility Practice, as defined in the NYISO Open Access Transmission Tariff and as required by applicable utility specifications or requirements, would require a specific design to be developed. The third-party infrastructure owner may also provide a letter of no objection to Empire for the crossing or encroachment. Notwithstanding any Crossing Agreement or no objection letter, during operation of the Project, Empire will provide at least 30 days prior notice

to third-party infrastructure owners of any planned repair, construction, or maintenance activity relating to the Project that has the potential to impact third-party infrastructure, and the measures that Empire will undertake to prevent any impacts and/or protect the third-party infrastructure. In the event there is a need for unplanned repair, construction, or maintenance activity relating to the Project that has the potential to impact third-party infrastructure, Empire will provide notice to the third-party infrastructure owners immediately upon knowledge or discovery of the need for unplanned repair, construction, or maintenance activities and include the same information as stated above (CC H3).

In the event Empire becomes aware of any damage to or adverse effect on any third-party infrastructure resulting from its pre-construction, construction, operations, or maintenance activities, Empire will notify the affected third-party infrastructure owner immediately of the nature and existence of such damage or effect and known facts relating to the cause (CC H4).

If damage occurs to third-party infrastructure, and there is no existing agreement regarding the reimbursement of repair costs, Empire will reimburse the third-party infrastructure owner for the reasonable costs they incur to repair damage to their infrastructure caused by Empire or its Contractors in connection with any studies, surveys, testing, sampling, preliminary engineering, pre-construction activities, construction, operation, maintenance, or repair of the Project subject to (CC H5):

- a. Empire must provide to the third-party infrastructure owner and the Department of Public of Service a written description of the scope of the repair work and a good faith estimate of the expected costs.
- b. In order for the third-party infrastructure owner to seek reimbursement for reasonable repair costs under this certificate condition, the third-party infrastructure owner must agree to waive incidental and consequential damages. Empire must file with the Commission the agreement with the owner, in a form reasonably acceptable to the parties, to waive any and all claims of loss of profit, indirect, incidental, special, punitive or consequential damages arising out of or relating to the event or events causing or contributing to the damage to their infrastructure.
- c. Within 60 days of completion of the repair work, or a later date as agreed to between the third-party infrastructure owner and the Certificate Holder, the owner shall provide a final invoice for the actual costs incurred.
- d. Empire shall pay the invoice amount within 30 days of receipt unless it disputes the invoice.

Nothing in the EW1 Certificate will limit or waive any right of the Third-Party Infrastructure owner to pursue any remedy at law or equity in the event of damage to its infrastructure arising from the Project (CC H6).

Empire will manage real estate assets in a manner that minimizes or avoids encroachments; the following steps will be taken to achieve this goal:

- Obtain accurate and complete records of real estate holdings in the Project vicinity
- Classify its holdings by operating, non-operating, surplus, subsidiary properties, etc.
- Enact a proactive encroachment approach, including, an ongoing program to check and monitor vulnerable properties on a regularly scheduled basis, depending on available resources.

To achieve the encroachment policy, Empire will implement the following actions:

- Provide Tax Assessors with easement holdings for City tax maps (not currently shown on all tax maps)
- Provide the New York City Department of City Planning (DCP) personnel with a bulletin on who to contact regarding activities or proposed uses potentially impacting Empire leased lands and property rights
- Develop a long-term plan to survey, pin, and establish plans of real estate holdings
- Obtain copies of plans from surveyors, land owners, and existing utility owners where Empire activities will occur
- Develop and implement a training program for Empire personnel to monitor, report and potentially investigate encroachments.

Encroachments may be identified by the following:

- Empire Commercial Team
- Contract personnel
- Inspectors
- Law enforcement authorities
- Existing utility or third-party infrastructure owners
- Customers/Landowners.

Once an encroachment is reported, Empire will:

- Identify the location of the encroachment using appropriate deeds, plans and other records available
- Determine property rights (e.g., fee, easement or other rights) and identify reservations or usage rights conveyed to others
- Investigate, or arrange to have investigated, all non-emergency encroachments reported within 30 working days (depending on available resources)
- Consult with and seek the assistance of available resources
- After each investigation, complete an encroachment form to be retained by Empire for future reference.

Encroachments involving safety or emergency situations will be investigated immediately either by Empire, operations and maintenance personnel, or regional safety specialists, depending on the nature and location of the encroachment, and the availability of personnel. At the time of the investigation a safety notice will be issued to the encroaching party when possible. Encroachments involving theft, vandalism or environmental damage will be investigated immediately by Empire when they involve unauthorized removal of timber, gravel, excavation of any kind or nature, or illegal dumping. A report will be made to the appropriate enforcement agency as part of the initial investigation, as necessary.

Steps will be taken to follow up on all encroachments to ensure that the agreed upon resolution has been followed; resolution will comply with established Empire policies. Additional investigation will be conducted no later than 90 days after the initial investigation (depending on available resources).

1.8 Permit and Approval Status

Empire will obtain the necessary permits for this EM&CP prior to Commencement of Construction. Empire will not initiate Commencement of Construction of any EM&CP Segment until Empire has obtained all applicable federal permits and approvals for that Segment. Copies of all applicable permits required for construction or operation of the Project, and any amendments or modifications thereto, will be filed with the Commission's Secretary within 15 business days of issuance (CC A11).

Permits, approvals, and agency consultation relevant to this EM&CP are provided in **Appendix E**.

Complete copies of applicable permits and approvals, including any amendments and modifications, will be provided to the Contractor(s) providing services for construction of the Project. This will include copies of the Certificate, the EM&CP, the Order(s) approving the EM&CP, any permit issued pursuant to Section 404 of the Federal Clean Water Act (CWA), the Section 401

Water Quality Certification, and the federal consistency decision issued pursuant to the federal Coastal Zone Management Act (CZMA) (CC E6).

1.8.1 Additional Work Permits

All anticipated additional work permits that have been or will be applied for are described in **Table 1-3**. In conformance with the code requirements of New York City (NYC), the site plans and construction drawings have been packaged according to the applicable permits that the Certificate Holder will seek from the New York City Department of Environmental Protection (DEP) and New York City Department of Transportation (NYCDOT). The Certificate Holder will obtain the services of a professional engineer licensed in the State of New York to inspect the Project prior to the commencement of operation to ensure that it complies with the New York City Construction Code to the extent applicable under its Certificate (CC B7). See Table 1-3 for a list of state and local permits for this EM&CP (see **Appendix E** also).

Table 1-3. Empire Wind 1 – EM&CP Part 1 Additional Work Permits

Description	Agency	Status	Anticipated Approval
State Pollutant Discharge Elimination System (SPDES) Construction Stormwater Permit	NYSDEC	Review underway with MS4	Prior to construction
SPDES Permit to Discharge Groundwater	NYSDEC	Review underway with MS4	Prior to construction
Clean Water Act Section 401 Water Quality Certification	NYSDPS		Prior to construction
Street Opening/Excavation Permit	NYCDOT	Included with this EM&CP for approval	With this EM&CP
Permit for Overweight or Oversize Vehicle	NYCDOT	Included with this EM&CP for approval	With this EM&CP
Permit for construction or alteration of vaults	NYCDOT		
Permit for obstructing street with construction materials/equipment	NYCDOT		
Permits for activities relating to the use and supply of water (e.g. permit for re-routing a water service connection)	NYCDEP	Included with this EM&CP for approval	With this EM&CP
Variance for drilling and excavation within 200 ft horizontal distance of a water tunnel shaft	NYCDEP	Included with this EM&CP for approval	With this EM&CP
Stormwater Pollution Prevention Plan (SWPPP) MS4 Approval	NYCDEP	Review underway	Under review
Water Meter and Backflow Preventer	NYCDEP	Coordination outside EM&CP	Under review

2. CERTIFICATE CONDITIONS COMPLIANCE

Empire will be granted a Certificate, pursuant to Article VII of the PSL, authorizing Empire to construct, operate, and maintain the Project. The following table indicates requirements/conditions of the Certificate, Empire's responses and applicable sections of this EM&CP where the conditions are addressed.

Certificate Condition Letter/Number	Condition Language	Response	Part 1 EM&CP Location of Compliance
A. GENERAL CONDITIONS OF THE ORDER			
A1.	Subject to the conditions set forth in this Opinion and Order, Empire Offshore Wind, LLC (Certificate Holder) is granted a Certificate of Environmental Compatibility and Public Need ("Certificate") authorizing construction and operation of electric transmission facility consisting of: (i) two three-core 230-kilovolt (kV) high-voltage alternating current (HVAC) submarine export cables (submarine export cables) from the boundary of New York State (State) waters 3 nautical miles (5.6 kilometers) offshore to the cable landfall in Brooklyn, New York ; (ii) two three-core 230-kV HVAC EW1 onshore export cables buried underground from the cable landfall either directly to the cable terminations or to a vault within the onshore substation (onshore export cables); (iii) an onshore substation located at the South Brooklyn Marine Terminal (SBMT) (onshore substation), which will step up the voltage to 345 kV for the onshore interconnection cables; and (iv) two 345 kV cable circuits, each with three single-core HVAC onshore interconnection cables (interconnection cables), buried underground from the onshore substation to the POI. The submarine export cables, onshore export and interconnection cables, and onshore substation shall collectively be referred to herein as the Project. The terms of the Joint Proposal, with the additional conditions adopted herein, are adopted in their entirety	Empire will comply.	Section 1

	and incorporated as part of this Opinion and Order. The Certificate and conditions set forth herein shall apply only to the Project, which is within the jurisdictional boundaries of the State of New York.		
A2.	The Project shall be located as shown on the maps included as Appendix B to the Joint Proposal. The Project shall be located within easements, leaseholds, or other interests to be acquired by the Certificate Holder in lands owned by the State of New York and the City of New York (City). The Project is defined geographically by a deviation zone (Allowed Deviation Zone) around a nominal centerline (the Centerline), as depicted in Appendix B to the Joint Proposal. The Allowed Deviation Zone corresponds to a variable-width submarine export cable siting corridor that is typically approximately 500 ft wide (XX m), and up to approximately 900 ft (XX m) wide in certain locations. The Allowed Deviation Zone corresponds to an approximately 50 ft (15.2 m) wide corridor along the nominal centerline for the onshore export and interconnection cables, depicted in Appendix B. Route deviations are allowable within this pre-defined corridor, subject to any restrictions in the proprietary rights such as the New York City revocable consent. Nothing in this Certificate shall guarantee exclusive use of the submarine export cable siting corridor by the Certificate Holder.	Empire will comply.	Section 1; Appendix A (Onshore Plan & Profile Drawings); and Appendix B (Site Plans and Construction Drawings)
A3.	For purposes of the Certificate Conditions, "Project Area" shall be defined as the area in which Certificate Holder is authorized to construct, operate, maintain, repair, and decommission the Project, including any laydown yards and staging areas, pursuant to any permanent and/or temporary easements, leases, licenses, right of way agreements, or other land use authorizations it receives. The Certificate Holder shall further detail the Project Area in the Environmental Management and Construction Plan(s) (EM&CP). The Certificate Holder shall confine construction, operation, maintenance, repair, and decommissioning activities to the Project Area.	Empire will comply.	Section 1; Appendix A (Onshore Plan & Profile Drawings); and Appendix B (Site Plans and Construction Drawings)

A4.	The Certificate Holder shall, within 30 days after the issuance of the Certificate, file with the Secretary of the Public Service Commission (Secretary) either a petition for rehearing or a verified statement that it accepts and will comply with the Certificate. Failure to comply with this condition shall invalidate the Certificate.	Empire will comply.	N/A
A5.	The Certificate Holder shall notify the Secretary in writing should it decide not to complete construction of all or any portion of the Project within 30 days of reaching such a decision and shall serve a copy of such notice upon all parties to this proceeding.	Empire will comply.	N/A
A6.	The Certificate Holder shall construct the Project in accordance with this Certificate and the approved EM&CP.	Empire will comply.	N/A
A7.	For purposes of this Certificate, "Commencement of Construction" shall be defined as: the beginning of tree clearing, site clearing, ground disturbance, site preparation, or grading activities related to installation of the Project. Commencement of Construction does not include soils or groundwater testing, surveying (including but not limited to geotechnical drilling, bathymetric survey, cable/pipeline location surveys, unexploded ordnance [UXO] surveys), remediation activities under a Brownfield Cleanup Agreement and Remedial Action Work Plan (RAWP), if applicable, or similar pre-construction activities offshore or onshore to determine the adequacy of the site for construction and the preparation of filings pursuant to this Certificate. Commencement of Construction also does not include other activities, such as limited staging and limited tree cutting, that are required to perform such pre-construction activities.	Empire will comply.	Section 1.4
A8.	If construction of the Project hereby certified is not commenced within 18 months after the later of approval of the EM&CP by the Commission or receipt of all applicable federal permits and approvals, the Certificate may be vacated by the Commission with notice to the Certificate Holder and all parties.	Empire will comply.	N/A

A9.	The Certificate Holder may request an extension of the 18-month commencement deadline. Any request for an extension must be in writing, must include a justification for the extension, and must be filed with the Secretary at least one day prior to the affected deadline. If a request for an extension is approved, the Certificate Holder must submit the approval to the New York City Department of Transportation (NYCDOT).	Empire will comply.	N/A
A10.	The filing and review of the EM&CP may be segmented (each, a Segment) in order to facilitate construction sequencing and scheduling, provided that with its first EM&CP filing, the Certificate Holder shall identify the remaining EM&CP Segments of on-land components of the Project that do not require other permits. In the event that the Certificate Holder elects to segment the EM&CP, the Certificate Holder shall follow the process and procedures described herein for each Segment of the EM&CP.	Empire will comply.	Section 1.1
A11.	Construction of any Segment of the Project, whether on land or under water, shall not commence until Certificate Holder has received the authorizations, leases, necessary rights and easements from property owners as are necessary to commence construction of that Segment, including as applicable authorizations from the New York State Office of General Services (NYSOGS), and NYCDOT. The Certificate Holder shall operate the Project in accordance with the approved tariffs and applicable rules and protocols of Consolidated Edison Company of New York, Inc. (Con Edison), the New York State Independent System Operator (NYISO), the North American Electric Reliability Corporation (NERC), the New York State Reliability Council (NYSRC), and the Northeast Power Coordinating Council (NPCC). The Certificate Holder shall also obey operational orders issued by the NYISO. The Certificate Holder shall not initiate Commencement of Construction of any Segment of the Project until the Certificate Holder has obtained all applicable federal permits and approvals. Copies of all applicable permits required for construction or operation of the Project and any amendments or modifications thereto will be filed with the Commission's Secretary within 15 business days of issuance.	Empire will comply.	Section 1.8

A12.	For the purposes of these Certificate Conditions, "Certificate Holder" includes contractors in the Certificate Holder's employ. Where a condition will be undertaken by the Certificate Holder's contractor, the Certificate Holder is responsible for providing the contractor documents containing the relevant conditions, as required in CC E6.	Empire will comply.	N/A
A13.	Where any portion of the Project will impact any facilities, property and/or equipment owned by Con Edison, the Certificate Holder must design, engineer, and construct that portion of the Project in accordance with Con Edison's standards, specifications, guidance, and practices.	Empire will comply.	Section 4; Section 6.1.1
A14.	During preparation of the EM&CP, the Certificate Holder shall consult with Con Edison regarding the substation it owns that needs upgrading in order to interconnect the Project facilities. Notwithstanding that any necessary substation upgrade work may be authorized to be performed under the Certificate and the EM&CP, such substation shall not thereafter become subject to Article VII jurisdiction post construction of the Project solely as a result of such Article VII authorization.	Empire will comply.	Section 6.1.1
B. LAWS AND REGULATIONS			
B1.	Each substantive federal, State, and local law, regulation, code, and ordinance applicable to the Project shall apply, except to the extent that the Commission has expressly refused to apply any substantive local law or regulation as being unreasonably restrictive.	Empire will comply.	Section 1.8

B2.	No State or local legal provision purporting to require any approval, consent, permit, certificate, or other condition for the construction or operation of the Project authorized by the Certificate (collectively, State or municipal approvals) shall apply, except: (i) those of the Public Service Law (PSL) and regulations and orders adopted thereunder; (ii) those provided by otherwise applicable State law for the protection of employees engaged in the construction and operation of the facilities; and (iii) those permits issued under a federally delegated or pursuant to a federally approved environmental permitting program, or federal consistency review pursuant to the federal Coastal Zone Management Act, and (iv) those municipal and state approvals expressly authorized in Conditions B4 through B6 of this Certificate, all of which shall be subject to the Commission's continuing jurisdiction. The Certificate Holder will seek a revocable consent from the City of New York for use of City-owned land, and such consent will be filed with the Commission for approval pursuant to Section 68 of the PSL.	Empire will comply.	N/A
B3.	The Certificate Holder shall construct the Project in a manner that conforms to all the applicable local, regional, State, national and international electrical standards, including the applicable and published planning and design standards of Con Edison, the NYISO, NYSRC, NPCC and NERC, and successor organizations. Upon completion of the Project, the Certificate Holder shall file a letter with the Secretary certifying that the Project was constructed in full conformance with the National Electric Safety Code.	Empire will comply.	Section 4
B4.	Nothing herein shall preclude the Certificate Holder from voluntarily subjecting itself to applicable State or local approval, consent, permit, certificate, or other condition for the construction or operation of the Project, subject to the Commission's ongoing jurisdiction.	Empire will comply.	N/A

B5.	To the extent required in connection with the delivery of oversized components, supplies, or equipment for the Project, the Certificate Holder or its suppliers shall obtain any required permits from applicable State or local agencies, including New York State Department of Transportation (NYSDOT) and NYCDOT, subject to the ongoing jurisdiction of the Commission. Oversized delivery of cable and other materials for the Project are expected to be transported primarily via marine transportation, but as applicable, oversized deliveries transported over land shall be coordinated with NYSDOT, NYCDOT, and other local jurisdictions, as appropriate, and will occur in accordance with traffic controls specified herein and in the EM&CP for the applicable Segment to minimize, to the extent practical, disruption of traffic.	Empire will comply.	Section 1.8
B6.	The Certificate Holder will apply for certain enumerated local regulatory permits and approvals listed in the Revised Exhibit 7 of the Application as filed with the Public Service Commission in Case 21-T-0366[1] which would be applicable to construction and operation of those portions of the Project located within the boundaries of the City of New York in the absence of PSL § 130. The Certificate Holder will comply with the substantive provisions of all local laws, New York City Administrative Code, and Rules of the City of New York, including the New York City Zoning Resolution, except to the extent of any waivers granted by the Commission.	Empire will comply.	Section 1.8.1
B7.	The Certificate Holder shall obtain the services of a professional engineer licensed in the State of New York to inspect the Project prior to the commencement of operation to ensure that it complies with the New York City Construction Code to the extent applicable under this Certificate.	Empire will comply.	Section 1.8.2

**C. ENVIRONMENTAL
MANAGEMENT AND
CONSTRUCTION
PLAN PROCESS**

C1.	The following conditions will be applicable for each Segment of the EM&CP.	Empire will comply.	N/A
C2.	The Certificate Holder shall file a copy of the EM&CP with the Secretary for approval by the Commission. Contemporaneously with the submission and service of the EM&CP, Certificate Holder shall provide notice, in the manner specified below, that the EM&CP has been filed (EM&CP Filing Notice). In addition, the Certificate Holder shall provide copies of the EM&CP as follows:	Empire will comply.	Section 6.1
a.	Three hard copies and one electronic copy (USB drive) to the Secretary and City of New York;	Empire will comply.	Section 6.1
b.	One hard copy to: (i) the Commissioner of the New York State Department of Environmental Conservation (NYSDEC); (ii) the Commissioner of the New York State Office of Parks, Recreation and Historic Preservation (OPRHP); (iii) the Commissioner of the NYSDOT; (iv) Con Edison; and (v) the Commissioner of the New York City Department of Environmental Protection (NYCDEP);	Empire will comply.	Section 6.1
c.	One electronic (USB drive) to the NYSDEC's Division of Environmental Permits, Bureau of Energy Project Management, in Albany, and to the Secretary of State of the State of New York (NYSDOS);	Empire will comply.	Section 6.1
d.	One electronic (USB drive) and one hard copy to the Executive Director of the Long Island Commercial Fishing Association (LICFA)	Empire will comply.	Section 6.1
e.	One hard copy to any other New York State agency (and its relevant regional offices) that requests the document;	Empire will comply.	Section 6.1
f.	One electronic copy (USB drive) on all parties on the service list for Case 21-T-0366 who request such document; and	Empire will comply.	Section 6.1
g.	One hard copy for inspection by the public in at least one public library or other convenient location in Brooklyn, New York.	Empire will comply.	Section 6.1
C3.	The Certificate Holder shall serve a copy of the EM&CP Filing Notice on all parties to this proceeding and on persons who own (or reside at, if different from owners) properties that are crossed by or abut against the Project Area. Further, the Certificate Holder	Empire will comply.	Section 6.1

	shall contemporaneously publish the EM&CP Filing Notice in a newspaper of general circulation in the vicinity of the Project.		
C4.	The written EM&CP Filing Notice and the newspaper notice(s) shall contain, at a minimum, the following:	Empire will comply.	Section 6.1
a.	a statement that the EM&CP has been filed;	Empire will comply.	Section 6.1
b.	a general description of the Project, the need for the Project, and of the proposed EM&CP;	Empire will comply.	Section 6.1
c.	a listing of the locations and website where the proposed EM&CP is available for public inspection;	Empire will comply.	Section 6.1
d.	a statement that any person desiring additional information about a specific geographical location or specific subject may request such information from the Certificate Holder;	Empire will comply.	Section 6.1
e.	the name, address, email, and toll-free or local telephone numbers of the Certificate Holder's representative;	Empire will comply.	Section 6.1
f.	the email and postal address of the Secretary and the New York State Department of Public Service (DPS) Document Management and Matter system; and	Empire will comply.	Section 6.1
g.	a statement that any person may be heard by the Commission on any matter or objection regarding the proposed EM&CP by filing written comments with the Secretary within 30 days of the EM&CP filing date or within 30 days of the date of the newspaper notice, whichever is later. Comments on subsequent revisions to the EM&CP, in response to the aforementioned written comments, shall be permitted within 15 days of service by electronic means of said revisions.	Empire will comply.	Section 6.1
C5.	The Certificate Holder shall submit to the Secretary a certificate of service with supporting affidavit indicating upon whom all EM&CP documents and EM&CP Filing Notices were served along with a copy of the EM&CP Filing Notice within five business days after the proposed EM&CP is filed, and shall be a condition precedent to approval of the EM&CP. When available, the Certificate Holder shall file with the Secretary proof of newspaper publication of a copy of the EM&CP Filing Notice.	Empire will comply.	Section 6.1

C6.	The Certificate Holder shall follow the following procedures for any proposed amendments to the EM&CP:	Empire will comply.	Section 3.3.1
a.	The Certificate Holder shall report any proposed changes to the approved EM&CP to DPS Staff. Any proposed changes to the approved EM&CP that will not result in an increase in adverse environmental impacts or are not directly related to contested issues decided by the presiding Administrative Law Judge or the Commission during the proceeding (minor change) may in consultation with the DPS Compliance Staff be approved in writing by the Deputy Director or Chief of Environmental Certification and Compliance of the Office of Electric, System Planning and Performance (ESPP), or their designee. DPS Staff will refer all proposed changes that will result in an increase in adverse environmental impacts or are directly related to contested issues decided by the presiding Administrative Law Judge or the Commission during the proceeding (major change) to the Commission for approval.	Empire will comply.	Section 3.3.1
b.	Upon being advised that DPS Staff will refer a proposed change to the Commission, the Certificate Holder shall serve written notice(s) of the filing of proposed changes to the EM&CP in accordance with Condition C2: (i) on all parties to this proceeding; (ii) on all statutory parties to this proceeding; (iii) on all persons required to be served with the Application by statute or regulation; (iv) on persons who own properties that are crossed by or abut against the Project Area; and (v) as set forth in the Mariner Notification and Public Input Process in Appendix G and shall attach a copy of the notice to each copy of the filing.	Empire will comply.	Section 3.3.1
c.	The notice shall describe the original conditions and the requested change and include any documents supporting the request. Where DPS Staff refers the proposed change to the Commission, the notice shall also state that persons may comment by writing or calling (followed by written confirmation) to the Commission within 21 days of the notification date. Any delay in receipt of	Empire will comply.	Section 3.3.1

	written confirmation will not delay Commission action on the proposed change.		
d.	The Certificate Holder shall not execute any proposed change until the Certificate Holder has received oral or written approval, except in emergency situations threatening personal injury, property, or severe adverse environmental impact. Any oral approval from DPS Staff will be followed by written approval from the Director of ESPP, or their designee, or the Commission.	Empire will comply.	Section 3.3.1
D. PUBLIC HEALTH AND SAFETY			
D1.	The Certificate Holder shall design, engineer, and construct the Project such that its operation shall comply with the electric and magnetic field (EMF) guidelines and standards established by the Commission in Opinion No. 78-13, issued June 19, 1978, and the Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities, issued September 11, 1990 or the Commission's most recent electric and magnetic field guidelines and standards in effect at the time the Commission grants the Certificate.	Empire will comply.	Section 5.12.2
D2.	The Certificate Holder shall engineer and construct the Project to be compatible with the operation and maintenance of any nearby electric, gas, telecommunication, water, sewer, and related facilities; details of such other facilities and measures to protect the integrity, operation, and maintenance of those facilities shall be presented in the EM&CP for the applicable Segment. The EM&CP for the applicable Segment will identify details of nearby electric, gas, telecommunication, water, wastewater, steam, sewer, and related facilities (whether underground, aboveground, or underwater), as well as measures to protect the integrity, operation, and maintenance of those facilities. The EM&CP for the applicable Segment will also explain the safety procedures that will be implemented during construction of the Project.	Empire will comply.	Section 4.2.6

D3.	The Certificate Holder shall keep the Fire Department of the City of New York (FDNY) and New York City Emergency Management (NYCEM), and DPS Staff apprised of the presence of on-site hazardous chemicals and waste. Procedures for the handling of any hazardous chemicals and waste are detailed in Section V, below.	Empire will comply.	Section 5.4.2; Section 3.2.4
D4.	The Certificate Holder shall comply with the requirements for the protection of underground facilities set forth in 16 New York Code of Rules and Regulations (NYCRR) Part 753 "Protection of Underground Facilities."	Empire will comply.	Section 4.2.6
D5.	The Certificate Holder shall have the right to require that any person seeking to access the Project first be appropriately trained in environmental protection and worksite safety. The Certificate Holder will provide site inspectors and scheduled visitors with appropriate personal protective equipment for any tours of the Project. This may include a properly fitted, currently valid hardhat, safety glasses with side shields and high visibility vest at any time while on site, unless the visitor is in a vehicle or in a construction trailer. The Certificate Holder may require site inspectors and scheduled visitors to comply with all safety and security requirements, including supplying their own steel or ceramic toed boots to the extent necessary.	Empire will comply.	Section 3.2.4
D6.	The Certificate Holder will provide periodic training sessions upon request by the FDNY, to review the procedures and protocols necessary to safely respond to emergency events at the onshore facilities. The Certificate Holder shall coordinate with Con Edison to ensure that such training includes procedures and protocols for emergency events at the existing facilities adjacent to the Project's onshore facilities.	Empire will comply.	Section 3.2.4
D7.	The Certificate Holder shall require its contractors or subcontractors to give an on-site tailboard safety briefing to site inspectors/visitors prior to any safety inspectors/visitors entering the Project site.	Empire will comply.	Section 3.1.6; Section 3.2.4

D8.	Any stop work order made in accordance with these Certificate Conditions will be immediately complied with, subject only to any actions needed to (i) obey safety procedures, and (ii) avoid or prevent imminent harm to life, property, the environment or any structure.	Empire will comply.	Section 3.4
D9.	The Certificate Holder will comply with 46 U.S. Code § 70114 requirements for Automatic Information System (AIS) tracking, and all construction and operations vessels associated with the Project will be equipped with working AIS transceivers. AIS systems will be turned on during vessel operations and transit.	Empire will comply.	Not applicable to Part 1
E. NOTICED AND PUBLIC COMMENTS			
E1.	The Certificate Holder will facilitate the submission of comments through the use of a dedicated contact person. The Certificate Holder shall make available to the public a toll-free or local phone number of an agent or employee who will, for the duration of construction of the Project, be available to receive inquiries or complaints from the public about the construction of the Project, and such agent or employee must respond with acknowledgement of receipt to the commenter within one (1) business day. The toll-free or local phone number shall include a recorded outgoing message that will, when a call is not answered by a person, provide the caller with: (i) the number to be called at any time in case of emergency, (ii) when the caller can expect a return call, (iii) the phone number and email address of the Secretary, and (iv) the phone number of the DPS Environmental Certification and Compliance (EC&C) Section.	Empire will comply.	Appendix T (Complaint Management and Resolution Plan)
E2.	The Certificate Holder's Project website shall provide a means for the public to communicate questions and concerns to the Certificate Holder about the Project (e.g., to register complaints or ask questions) through either a direct link to a comment form or email or by providing the contact information (phone and/or email address) of a representative of the Certificate Holder. The Certificate Holder shall post construction notices and other	Empire will comply.	Appendix T (Complaint Management and Resolution Plan)

	publicly relevant information (e.g. night-time work, traffic information) to the Project website. The Project website shall allow users to subscribe (or unsubscribe) to an electronic mailing list for Project update notifications.		
E3.	The Certificate Holder shall create a Complaint Management and Resolution Plan to be included as part of the EM&CP. The Complaint Management and Resolution Plan shall:	Empire will comply.	Appendix T (Complaint Management and Resolution Plan)
a.	Identify and include procedures for filing a complaint (e.g. by telephone, email, website, mail, or in-person) including any protocols that may be unique based on the type of complaint (e.g. noise, marine) and the steps the Certificate Holder will take if the complaint remains unresolved. The Plan shall also include a description of how the complaint process will be communicated to the public (i.e. via the Project website, community meetings, NOI to Commence Construction, etc.) including how these procedures correspond to the notifications required in Appendix G, as well as copies of any public materials informing potential complainants how or when to contact the Certificate Holder to file a complaint.	Empire will comply.	Appendix T (Complaint Management and Resolution Plan)
b.	Require the Certificate Holder to retain, for a period of five years, electronic copies of: (i) the telephone logs for any calls made to the Project's toll-free number; and (ii) any submission to the Project email/website. Such records shall be made available to DPS Staff, the NYSDEC, NYSDOS, and the City upon request. A copy of a blank complaint form and log form will be included in the Complaint Plan.	Empire will comply.	Appendix T (Complaint Management and Resolution Plan)
c.	Require the Certificate Holder to report to DPS Staff and NYSDEC every complaint, and describe the actions taken to address the complaint, within 10 business days after receipt of the complaint. Where the complainant provides contact information, require Certificate Holder to inform the complainant of actions Certificate Holder is taking to address the complaint.	Empire will comply.	Appendix T (Complaint Management and Resolution Plan)
E4.	The Certificate Holder shall comply with the following Notice of Intent to Commence Work (Construction NOI) requirements:	Empire will comply.	Section 6.1

a.	No less than 14 days before commencing construction, the Certificate Holder shall:	Empire will comply.	Section 6.1
i.	Provide the Construction NOI to DPS Staff, the NYSDEC, NYSDOS, NYCDEP, New York City Department of Small Business Services (NYCSBS), NYCEM, and NYCDOT;	Empire will comply.	Section 6.1
ii.	Provide the Construction NOI to the Brooklyn Borough President, State and local legislators, and Community Boards which represent the communities in which construction will occur;	Empire will comply.	Section 6.1
iii.	Provide the Construction NOI to Con Edison and any other affected utilities;	Empire will comply.	Section 6.1
iv.	Provide the Construction NOI for dissemination to local media, including newspaper or newspapers of general circulation in the vicinity of the Project and a free publication or publications in the vicinity of the Project, and display in public places, including but not limited to the Brooklyn Public Library; Red Hook Branch, Flatbush Branch, Sunset Park Interim Branch, Park Slope Branch, and Bay Ridge Branch.	Empire will comply.	Section 6.1
v.	Provide Construction NOI as set forth in the Mariner Notification and Public Input Process in Appendix G.	Empire will comply.	Section 6.1
b.	Provide the Construction NOI to persons who own properties (or reside at such properties, if different from owners) that are crossed by or abut against the Project Area. The Certificate Holder shall give such notices by affixing them to the doors of residences or by mailing the notices via United States Postal Service Mail. The Certificate Holder shall file a copy of the generic form of the Construction NOI to the Secretary prior to the commencement of construction and shall post the same to the Project website.	Empire will comply.	Section 6.1
c.	The Construction NOI shall be written in language reasonably understandable to the average person and shall contain:	Empire will comply.	Section 6.1
i.	a map, including nautical maps with coordinates, and a description of the Project;	Empire will comply.	Section 6.1
ii.	the anticipated date for start of construction;	Empire will comply.	Section 6.1

iii.	the name, address, local or toll-free telephone number, and e-mail address of an employee or agent of the Certificate Holder who will be available to receive complaints, if any, from the public about the construction of the Project;	Empire will comply.	Section 6.1
iv.	a description of where to get more information about the Project including the Project website address and the location of document repositories; and	Empire will comply.	Section 6.1
v.	a statement that construction of the Project is under the jurisdiction of the Commission, which is responsible for enforcing compliance with environmental and construction conditions, and which may be contacted at an address and telephone number to be provided in the NOI.	Empire will comply.	Section 6.1
E5.	The following pre-construction meeting requirements shall apply to the Certificate Holder:	Empire will comply.	Section 6.1
a.	At least 14 days prior to the Commencement of Construction, the Certificate Holder shall hold a preconstruction meeting. An agenda, location, date, and invitation list shall be agreed upon among DPS Staff, New York City Office of Environmental Coordination, and the Certificate Holder. The Certificate Holder shall consult with NYSDEC prior to finalizing the date of the meeting. The Certificate Holder shall provide notice of the meeting to all invitees at least 10 days prior to the meeting date;	Empire will comply.	Section 6.1
b.	Maps showing designated travel routes, construction worker parking and access road locations and a general project schedule will be available at the meeting for the attendees;	Empire will comply.	Section 6.1
c.	The invitation list shall include at a minimum the contractors, DPS Staff, NYSDEC, New York State Department of Agriculture and Markets (NYSAGM), NYSDOS, LICFA, the City, and Con Edison representatives; and	Empire will comply.	Section 6.1
d.	The Certificate Holder shall supply draft minutes from this meeting to all attendees, the attendees may offer corrections or comments, which the Certificate Holder will consider in good faith, and the Certificate Holder shall issue the finalized meeting minutes to all attendees and invitees.	Empire will comply.	Section 6.1

E6.	The Certificate Holder shall provide contractors providing services for construction of the Project with complete copies, including any amendments and modifications, of the Certificate, the EM&CP, the Order(s) approving the EM&CP, any permit issued pursuant to Section 404 of the Federal Clean Water Act, the Section 401 Water Quality Certification, and the federal consistency decision issued pursuant to the federal Coastal Zone Management Act. If, for any reason, the construction contractor cannot finish the construction of the Project, and a new construction contractor is needed, the Certificate Holder shall hold another pre-construction meeting using the same format as outlined above.	Empire will comply.	Section 1.8
E7.	At least fourteen (14) days (or as authorized by DPS Staff) before construction of the onshore interconnection cable route begins in any area, the Certificate Holder shall, in such area: (a) delineate both edges of the onshore interconnection cable corridor, as certified; (b) mark, stake and/or flag all access roads and all work pads and pulling pads for the interconnection cable corridor; and (c) notify DPS Staff, NYSDEC, NYCDEP, and NYCDOT when the above-described field mark-out is complete in such area.	Empire will comply.	Section 4.2.2.1
E8.	For public notification purposes to the mariners and fishermen licensed by NYSDEC (hereinafter referred to as NYSDEC-Licensed Fishermen), the Certificate Holder shall adhere to the public input processes laid out in Appendix G to the Joint Proposal in this proceeding (Mariner Notification and Public Input Process).	Empire will comply.	Not applicable to Part 1
E9.	During construction, the Certificate Holder shall provide DPS Staff and NYSDEC, with bi-weekly status reports transmitted by electronic mail summarizing construction and indicating construction activities and locations scheduled for the following 30 days.	Empire will comply.	Section 6.1

E10.	<p>The Certificate Holder shall notify the public, mariners, NYCDEP, NYCDOT, United States Coast Guard Waterways Management Office, recreational fishermen, and NYSDEC-Licensed Fishermen of:</p> <p>(i) all cable protection measure locations (including coordinates and protection type); (ii) any areas where the minimum Target Burial Depth (defined in Condition J2) is 6 ft and where the post-installation burial depth is less than Target Burial Depth ft; (iii) any areas where the minimum Target Burial Depth is 15 ft below the existing depth or the authorized dredge depth within federally maintained channels and anchorages, and where the post-installation burial depth is less than 12 ft below the existing depth or the authorized dredge depth; (iv) location of cables that deviate outside of the NYSOGS easement(s); and (v) any other potential obstructions caused and/or created by the Project (i.e., relocated boulders) with coordinates and corresponding nautical charts on the Project website, which shall include an accessible graphic/geo-referenced repository for all such information. Such notification will be provided as set forth in the Mariner Notification and Public Input Process in Appendix G. Certificate Holder shall provide such notice as soon as possible, but no later than 15 calendar days of each occurrence of (i) through (iii).</p>	Empire will comply.	Not applicable to Part 1
E11.	<p>The Certificate Holder shall notify the Secretary no later than ten (10) days after the date on which the Project has achieved commercial operation, defined as the date on which energy is sold in commercial quantities, excluding test energy, and is transmitted through the Project (Commercial Operation Date or Commercial Operation).</p>	Empire will comply.	Section 6.1; Section 1.5

E12.	Final restoration of the Project site may occur in phases in order to comply with required work windows and other restrictions. Where final restoration will not occur until a subsequent construction phase, the area shall be stabilized until final restoration can be achieved. Within 10 days of the completion of final restoration for any Segment of the Project, the Certificate Holder shall file notice with the Secretary that all restoration for that Segment has been completed in compliance with this Certificate and the EM&CP for the applicable Segment and shall demonstrate that all other locations have been stabilized until the commencement of the following phase of construction. The Certificate Holder shall periodically monitor the site during the non-construction season to ensure that areas that have not achieved final restoration remain adequately stabilized. The timing of such periodic monitoring shall be described in the EM&CP for the applicable Segment. Corrective measures shall be implemented as soon as practicable for any locations where stabilization is observed to be inadequate.	Empire will comply.	Section 4.2.7
E13.	The Certificate Holder shall file with the Secretary as-built drawings and shapefiles of the Project certified by a Professional Engineer that is licensed in New York State within 120 days following achievement of Commercial Operation. Within 120 days of Commercial Operation, the Certificate Holder shall submit to DPS Staff, NYSDEC, NYSDOS, and the City as-built drawings and shapefile data providing final elevations of the cable and seabed and actual burial depth of the cable. To the extent that the drawings and shapefiles contain Critical Energy Infrastructure Information, they shall only be provided to the Commission's Records Access Officer.	Empire will comply.	Section 1.5
F. OVERSIGHT AND SUPERVISION			
F1.	During construction, the Certificate Holder shall retain at least five (5) individual monitors for Project oversight, as follows:	Empire will comply.	Section 3.1

a.	One (1) independent, third-party consultant will be assigned as an environmental monitor (Environmental Monitor) to the Project for any onshore facility work activities (during or after normal hours) that require environmental monitoring, subject to Condition F3. The environmental monitor may also function as the Stormwater Pollution Prevention Plan (SWPPP) inspector (SWPPP Inspector). The Certificate Holder must assign at least one additional environmental monitor(s) for the duration of all in-water work (Aquatic Environmental Monitor) to the extent such work is undertaken simultaneously with onshore facility construction activities that also require the presence of an environmental monitor.	Empire will comply.	Section 3.1.2
b.	One construction supervisor assigned full-time to the Project;	Empire will comply.	Section 3.1.1
c.	One safety inspector who will inspect the work site full time;	Empire will comply.	Section 3.1.4
d.	One quality assurance inspector who will inspect the work site full time; and	Empire will comply.	Section 3.1.5
e.	One independent, third-party fishing interests monitor (Fishing Monitor) who will be on-site during in-water construction activities.	Empire will comply.	Not applicable to Part 1
F2.	As an update to or to the extent not already included in Appendix E, 30 calendar days in advance of Project Commencement of Construction, the Certificate Holder shall provide an Environmental Compliance Plan regarding the environmental monitor to DPS Staff and NYSDEC for review and acceptance. Upon acceptance by DPS Staff and NYSDEC, the Certificate Holder shall provide a copy of the Environmental Compliance Plan to NYCDEP and LICFA. The Environmental Compliance Plan must include the following information:	Empire will comply.	Section 3.2.2
a.	The Environmental Monitor(s) responsible for compliance with this condition, including:	Empire will comply.	Appendix F (Environmental Compliance Plan)
i.	Names, titles, responsibilities, training, years of relevant experience, and licensing (including, but not limited to, the Environmental Monitor's qualifications that shall satisfy those of a	Empire will comply.	Appendix F (Environmental Compliance Plan)

	"Qualified Inspector" pursuant to the State Pollutant Discharge Elimination System ["SPDES"] General Permit); and		
ii.	Organization structure, including specific names, duties, and responsibilities.	Empire will comply.	Appendix F (Environmental Compliance Plan)
b.	Certification confirming the independence of the Environmental Monitor(s) from the Certificate Holder.	Empire will comply.	Appendix F (Environmental Compliance Plan)
c.	The procedures established to ensure compliance with the Certificate and the applicable Environmental Conservation Law (ECL) provisions and implementing regulations.	Empire will comply.	Appendix F (Environmental Compliance Plan)
d.	Environmental compliance tracking and reporting procedures, including:	Empire will comply.	Appendix F (Environmental Compliance Plan)
i.	Checklist of matters to inspect for compliance, including specific items or locations to be inspected and acceptability criteria to be applied by the environmental monitor(s);	Empire will comply.	Appendix F (Environmental Compliance Plan)
ii.	Purpose and frequency of reports;	Empire will comply.	Appendix F (Environmental Compliance Plan)
iii.	Environmental compliance schedule;	Empire will comply.	Appendix F (Environmental Compliance Plan)
iv.	Methods of reporting non-compliance with Certificate Conditions and the ECL and implementing regulations; and	Empire will comply.	Appendix F (Environmental Compliance Plan)
v.	Quality Assurance/Quality Control ("QA/QC") procedures for environmental compliance.	Empire will comply.	Appendix F (Environmental Compliance Plan)
e.	Procedure for the Certificate Holder to respond to and correct problems found by the environmental monitors.	Empire will comply.	Appendix F (Environmental Compliance Plan)

F3.	During periods of relative inactivity on the Project, after consultation with and acceptance from DPS Staff, the Certificate Holder may temporarily decrease the number of hours worked by Project oversight personnel and the extent of their presence at the Project site commensurate with the decline in Project activity. Likewise, during periods of relatively high activity on the Facility, the number of inspectors and the extent of their presence at the Project site may be temporarily increased commensurate with the increase in activity levels. The Certificate Holder shall ensure that the frequency of inspections by the Environmental Monitor(s) comply with the requirements of the SPDES General Permit.	Empire will comply.	Section 3.1
F4.	Subject to Condition F8, the Environmental Monitor(s) shall have stop work authority over aspects of the Project that could violate the terms of the Certificate, EM&CP, or § 401 Water Quality Certification.	Empire will comply.	Section 3.4
F5.	The Certificate Holder shall provide to DPS Staff, the NYCDEP, and NYCEM the cell phone numbers and weekly schedules of the Certificate Holder's Environmental Monitor(s), Fishing Monitor(s), safety inspector, quality assurance inspector, and construction supervisor(s).	Empire will comply.	Section 3.2.1.2
F6.	The Environmental Monitor(s), Fishing Monitor(s) and construction supervisor(s) shall be equipped with sufficient documentation, transportation, and communication equipment to effectively monitor contractor compliance with the provisions of this Certificate, applicable sections of the PSL, ECL, the EM&CP, every Commission order issued in this proceeding, City Rules and Codes, and the § 401 Water Quality Certification.	Empire will comply.	Section 3.2.1.2
F7.	Subject to the requirements of Conditions D5 and D7, NYSDEC, NYSDOS, and City representatives shall be permitted scheduled visits to the Project site.	Empire will comply.	Section 3.2.1.1
F8.	The authority granted in the Certificate and any subsequent order(s) in this proceeding is subject to the following conditions necessary to ensure compliance with such order(s):	Empire will comply.	N/A

a.	The Certificate Holder shall regard DPS Staff representatives (authorized pursuant to PSL § 8) as the Commission's designated representatives in the field. In the event of any emergency resulting from the specific construction or maintenance activities that violate or may violate the terms of the Certificate or any other order in this proceeding, such DPS Staff representatives may issue a stop-work order for that location or activity.	Empire will comply.	Section 3.4
b.	A stop-work order shall expire in 24 hours unless confirmed by a single Commissioner. If a stop-work order is confirmed, the Certificate Holder may seek reconsideration from the confirming Commissioner or all Commissioners. If the emergency prompting the issuance of a stop-work order is resolved to the satisfaction of the Commissioner or the Commission, the stop-work order will be lifted. If the emergency has not been satisfactorily resolved, the stop-work order will remain in effect.	Empire will comply.	Section 3.4
c.	Stop-work authority will be exercised with due regard to environmental impacts, economic costs involved, public health and safety, possible impact on construction activities, and whether an applicable statute or regulation is violated. Before exercising such authority, DPS Staff representatives will, wherever practicable, consult with the Certificate Holder representatives possessing comparable authority. Within reasonable time constraints, all attempts will be made to address any issue and resolve any dispute in the field. In the event the dispute cannot be resolved, the matter will be immediately brought to the attention of the Certificate Holder, the project manager, and the Director of ESPP. In the event that a DPS Staff representative issues a stop-work order, neither the Certificate Holder nor the contractor will be prevented from undertaking any such safety-related activities as they deem necessary and appropriate under the circumstances. The issuance of a stop-work order or implementation of measures, as described below, may be directed at the sole discretion of the DPS Staff representative during these consultations.	Empire will comply.	Section 3.4

d.	If a DPS Staff representative discovers that a specific activity is a significant environmental threat that is, or may immediately become, a violation of the Certificate, Water Quality Certification, or any other order in this proceeding, the DPS Staff representative may—in the absence of responsible Certificate Holder supervisory personnel or the presence of such personnel who, after consultation with the DPS Staff representative, refuse to take appropriate action—direct the field crews to stop the specific environmentally harmful activity immediately. If responsible Certificate Holder personnel are not on site, the DPS Staff representative will immediately thereafter inform the supervisor and/or environmental monitor of the action taken. The DPS Staff representative may lift the stop-work directive if the situation prompting its issuance is resolved.	Empire will comply.	Section 3.4
e.	If the DPS Staff representative determines that a significant threat exists such that protection of the public or the environment at a particular location requires the immediate implementation of specific measures, the DPS Staff representative may, in the absence of responsible Certificate Holder supervisory personnel, or in the presence of such personnel who, after consultation with the Staff representative, refuse to take appropriate action, direct the Certificate Holder or its contractors to implement corrective measures. The field crews shall comply with the DPS Staff representative directive immediately. The DPS Staff representative will immediately thereafter inform the Certificate Holder's supervisor or environmental monitor of the action taken.	Empire will comply.	Section 3.4
F9.	The Certificate Holder shall organize and conduct site compliance audit inspections for DPS Staff, NYSDEC, and the City as needed, but not less frequently than once per month during the construction and restoration phases of the Project. Inspections shall conclude upon the final sign-off of the SWPPP by the SWPPP Inspector.	Empire will comply.	Section 3.2.1.1

a.	The inspection shall include a review of the status of compliance with all certification conditions, requirements, and commitments, as well as a field review of the Project site, if necessary. The inspection shall also include:	Empire will comply.	Section 3.2.1.1
i.	Review of all complaints received, and their proposed or actual resolutions;	Empire will comply.	Section 3.2.1.1
ii.	Review of any significant comments, concerns, or suggestions made by the public, local governments, or other agencies;	Empire will comply.	Section 3.2.1.1
iii.	Review of the status of the Project in relation to the overall schedule established prior to the commencement of construction; and	Empire will comply.	Section 3.2.1.1
iv.	Other items the Certificate Holder or DPS Staff consider appropriate.	Empire will comply.	Section 3.2.1.1
b.	The Certificate Holder shall provide draft minutes of the inspection audit and/or meeting, including resolution of issues and additional measures to be taken, to all attendees for corrections or comments. Thereafter, the Certificate Holder shall issue to DPS Staff, NYSDEC, and the City the final written record of the results of the inspection audit as part of its scheduled construction update reports, describing resolution of issues and additional measures to be taken.	Empire will comply.	Section 3.2.1.1
G. CONTRACTORS AND SUPPLIES			
G1.	The Certificate Holder shall notify all contractors that the Commission may seek to recover penalties for violation of the Certificate, not only from the Certificate Holder, but also from its contractors, and that contractors may also be liable for other fines, penalties, and environmental damage caused by their actions.	Empire will comply.	Section 3.1
G2.	The Certificate Holder's employees, contractors, and subcontractors assigned to the construction of the Project shall be properly trained in their respective responsibilities.	Empire will comply.	Section 3.1

G3.	At least 14 days prior to Commencement of Construction, the Certificate Holder shall file a report with the Secretary confirming that required construction materials are available. For purposes of this paragraph, an item of construction material is available: (i) if it is located at a staging area or laydown yard; (ii) if it is in a Certificate Holder warehouse or other routine Certificate Holder inventory stocking location; or (iii) if it is on order from a vendor with a scheduled delivery date prior to the time scheduled for its use in the Project.	Empire will comply.	Section 3.2.3
G4.	All equipment shall be located at the staging area(s), laydown yard(s), in construction workspace or on the Project corridor, provided, however, that if a local contractor is used for the work, the local contractor's facility shall be considered as a staging area or laydown yard.	Empire will comply.	Section 4.2.1
G5.	If an accident occurs in connection with work on the Project, the Certificate Holder shall report any such accident to DPS Staff as soon as possible, but no later than 24 hours after Certificate Holder becomes aware of such accident. A copy of the accident report, if any, shall be provided to DPS Staff and the City after it has been finalized.	Empire will comply.	
G6.	If a contractor installs materials, structures, or components that do not meet or exceed the specifications for the same described in the EM&CP for the applicable Segment, the Certificate Holder shall, within 30 days after becoming aware of such deviation, prepare and deliver to DPS Staff a summary report detailing the deviation and the steps to be, or that have been, taken to address the deviation.	Empire will comply.	Section 3.2.3
G7.	The Certificate Holder shall develop a quality control plan (Quality Control Plan) for inclusion in the EM&CP describing how it will ensure that the transmission line components it purchases for the Project conform to the specification for components described in the approved EM&CP. At a minimum, the Quality Control Plan shall include: (i) the name(s) and qualifications of the individual(s) who will conduct audits under the Quality Control Plan (Quality Control	Empire will comply.	Section 3.2.3

	Audits); and (ii) the frequency with which the Quality Control Audits will be performed.		
G8.	Within 10 business days following completion of each Quality Control Audit, the Certificate Holder shall provide to DPS Staff a report of such audit that includes: (i) a description of the results of the audit, particularly with respect to results that identify that one or more components the Certificate Holder purchased for installation in the Project did not conform to the specifications for components described in the approved EM&CP; and (ii) any notes pertinent to the subject matter of such audit which were made at audit meetings by Certificate Holder personnel and/or contractors who performed the audit.	Empire will comply.	Section 3.2.3
G9.	If any Quality Control Audit conducted by the Certificate Holder identifies that one or more structures or components the Certificate Holder purchased for installation in the Project did not conform to the specification for components described in the approved EM&CP, the Certificate Holder shall: (i) provide written notification to the Secretary within not more than 72 hours of the Certificate Holder's discovery of such non-conformity; and (ii) describe the steps the Certificate Holder will take to correct the non-conformity, including whether any components must be dismantled and returned to the manufacturer.	Empire will comply.	Section 3.2.3
G10.	The Certificate Holder shall avoid direct disturbance to properties by accessing the Project from existing roadways or off-right-of-way (ROW) access roads as identified in the EM&CP for the applicable Segment. Parking for Project construction workers shall be in designated areas that do not interfere with normal traffic, cause a safety hazard, or interfere with existing land uses, including public access and recreation. The Certificate Holder shall minimize vehicles traveling to the Project Area and on-street parking for workers where practicable.	Empire will comply.	Section 4.2.2.1; Section 5.1.2

H. INFRASTRUCTURE CROSSINGS

H1.	<p>As discussed in Condition D2, the Certificate Holder shall engineer and construct the Project to be compatible with the operation and maintenance of nearby (within 300 ft of the submarine export cable corridor where the infrastructure is located offshore, or within the same right-of-way where the infrastructure is located onshore) infrastructure including, but not limited to, electric, gas and petroleum products, telecommunication, water, sewer, and related facilities (whether underground, aboveground or underwater) (Third-Party Infrastructure). In order to maintain and protect the integrity, operation, and maintenance of the Third-Party Infrastructure, the Certificate Holder will use good faith efforts to enter into a bi-lateral infrastructure crossing, encroachment, cost reimbursement or other agreement (collectively, Crossing Agreement) with Third-Party Infrastructure owners or to obtain letter of no objection (Letter of No Objection) from Third-Party Infrastructure owners wherever the Project is expected to cross Third-Party Infrastructure or is expected to come in such proximity to Third-Party Infrastructure that Good Utility Practice, as defined in the NYISO Open Access Transmission Tariff (OATT) and as required by applicable utility specifications or requirements, would require a specific design, physical support for the integrity of the Third-Party Infrastructure and/or protection measures to be developed and implemented by Certificate Holder, or the Third-Party Infrastructure owner for the crossing or encroachment. The Letter of No Objection may set forth only reasonable conditions or specifications to be followed by the Certificate Holder, at its sole cost and expense during the construction, operation and maintenance of the Project so as to appropriately protect such Third-Party Infrastructure and to ensure the owner's access thereto. The Certificate Holder's plans must include pertinent studies, calculations, tests, results, explanations, protocols, drawings, proposed construction schedules, and other documents which demonstrate or support the Certificate Holder's position that the Third-Party Infrastructure will be appropriately protected and deleterious impacts will be avoided.</p>	Empire will comply.	Section 1.7; Section 4.2.6
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a.	The Certificate Holder shall submit to the Commission as part of the applicable EM&CP Segment filing, a report detailing:	Empire will comply.	Appendix X (Third Party Infrastructure Documentation)
i.	A figure or map detailing all utility crossings and the associated utilities within the Project corridor;	Empire will comply.	Appendix X (Third Party Infrastructure Documentation)
ii.	A listing of all utility crossings with the associated Crossing Agreement and/or Letter of No Objection for each;	Empire will comply.	Section 4.2.6
iii.	For each and any utilities where the Certificate Holder has not or cannot obtain a Crossing Agreement and/or Letter of No Objection, a detailed explanation of the good faith efforts made to obtain a Crossing Agreement or Letter of No Objection;	Empire will comply.	Appendix X (Third Party Infrastructure Documentation) if applicable
iv.	Details of Third-Party Infrastructure, as well as measures to be implemented by Certificate Holder to protect the integrity, operation, and maintenance of such Third-Party Infrastructure and to ensure owners' access to such Third-Party Infrastructure during construction, operation and maintenance of the Project;	Empire will comply.	Appendix X (Third Party Infrastructure Documentation)
v.	An explanation of the safety procedures related to Third-Party Infrastructure that will be implemented by Certificate Holder during construction, operation and maintenance of the Project;	Empire will comply.	Appendix X (Third Party Infrastructure Documentation)
vi.	A demonstration that the crossings will comply with Certificate conditions and permit requirements; and	Empire will comply.	Appendix X (Third Party Infrastructure Documentation)
vii.	In the instance where the Certificate Holder obtains a Letter of No Objection from a Third-Party Infrastructure owner, and if the Certificate Holder believes the Letter of No Objection includes unreasonable and burdensome requests by the Third-Party Infrastructure owner which are above and beyond of what is expected under Good Utility Practice, the Certificate Owner will provide a report as part of the EM&CP detailing the reasons why the Letter of No Objection is unduly burdensome. The Third-Party Infrastructure owner will be afforded a reasonable opportunity to comment within the time period as described in CC C4.	Empire will comply.	Appendix X (Third Party Infrastructure Documentation) if applicable

b.	Such report to the Commission will include all proposed protections, mitigation, studies, and avoidance measures that were presented to the existing utility owner/operator and will report, if applicable, the Third-Party Infrastructure Owners' objections for not executing a Crossing Agreement or Letter of No Objection.	Empire will comply.	Appendix X (Third Party Infrastructure Documentation) if applicable
c.	If a Crossing Agreement or a Letter of No Objection is not obtained at the time of EM&CP filing, the EM&CP will include a narrative detailing the Certificate Holder's good faith efforts to obtain Crossing Agreements or Letters of No Objection, or, a statement that Project construction and operations will meet the Third-Party Infrastructure owner's technical and safety requirements and all relevant technical and safety manuals to the extent the Certificate Holder believes such requirements are not overly burdensome and impracticable. The contents of a bi-lateral crossing agreement is outside of the scope of this Article VII proceeding; nonetheless, the Certificate Holder, at least 30 days prior to the crossing of individual Third-Party Infrastructure, will file with the Secretary to the Commission, the executed Crossing Agreement or Letter of No Objection, or provide an update of the Certificate Holder's good faith efforts with such Third-Party Infrastructure owners to reach a Crossing Agreement or obtain a Letter of No Objection. A limited notice to proceed from the Department of Public Service is expected to be issued within fifteen (15) days of the notification in the absence of a Crossing Agreement or a Letter of No Objection that will allow work to proceed in accordance with the details of the specific EM&CP segment as outlined in Section H1(a), above. For instances when Crossing Agreements or Letters of No Objection are not secured due to unresponsive Third-Party Infrastructure owners, the Certificate Holder shall file, prior to requesting a Notice to Proceed, a narrative describing efforts made in attempting to contact such unresponsive owners. Filing of Crossing Agreements or Letters of No Objection will also include a site plan detailing the final design as agreed upon by the Third-Party Infrastructure owner and the Certificate Holder in the Crossing Agreement or Letter of No Objection. If any designs	Empire will comply.	Appendix X (Third Party Infrastructure Documentation) if applicable

	finalized through Crossing Agreements or Letters of No Objection result in modification to the proposed location or design of the transmission route or related facilities in the EM&CP, then the Certificate Holder shall address and request approval for such changes in accordance with this Certificate and any applicable Commission regulations.		
H2.	Prior to filing the EM&CP, or any segment thereof, the Certificate Holder will use good faith efforts to consult with Third-Party Infrastructure owners to discuss potential impacts arising from the construction and/or operation of the Project on Third-Party Infrastructure, including the studies required by the exercise of Good Utility Practice regarding the manner in which the Project will be designed and installed wherever they are expected to cross Third-Party Infrastructure or are expected to come in such proximity to Third-Party Infrastructure that Good Utility Practice would require a specific design to be developed.	Empire will comply.	Section 4.2.6
H3.	Notwithstanding any Crossing Agreement or Letter of No Objection that may be entered into between the Certificate Holder and Third-Party Infrastructure owner, during operation of the Project, the Certificate Holder will provide at least 30 days' prior notice to Third-Party Infrastructure owner of any planned repair, construction, or maintenance activity relating to the Project that has the potential to impact Third-Party Infrastructure and the measures the Certificate Holder will undertake, at its sole cost and expense, to prevent any impacts and/or protect the Third-Party Infrastructure. In the event there is a need for unplanned repair, construction, or maintenance activity relating to the Project that has the potential to impact Third-Party Infrastructure, the Certificate Holder will provide notice to the Third-Party Infrastructure owners immediately upon knowledge or discovery of the need for unplanned repair, construction, or maintenance activities and include the same information as stated above.	Empire will comply.	Section 1.7

H4.	In the circumstance where a Crossing Agreement, a Letter of No Objection, or other agreement regarding the reimbursement of repair costs between the Certificate Holder and Third-Party Infrastructure owner is not reached between the Certificate Holder and a Third-Party Infrastructure owner, the Conditions of this Certificate, and specifically Condition H5 below, will govern the processes for reimbursement and/or restoration of potential damages to Third-Party Infrastructure assets. In the event the Certificate Holder has reason to believe any damage to, or adverse effect on, any Third-Party Infrastructure has occurred due to its pre-construction, construction, operations, or maintenance activities, the Certificate Holder shall notify the affected Third-Party Infrastructure owner immediately, to the extent the Certificate Holder can identify the contact information for the Third-Party Infrastructure owner, of the nature and existence of such impact, damage or effect and known facts relating to the cause thereof.	Empire will comply.	Section 1.7
H5.	If there is no Crossing Agreement, Letter of No Objection, or other agreement regarding the reimbursement of repair costs between the Certificate Holder and Third-Party Infrastructure owners, the Certificate Holder shall reimburse such Third-Party Infrastructure owners, to the extent the Certificate Holder can identify the contact information for the Third-Party Infrastructure owners, for the reasonable costs they incur to support and protect the physical integrity of the Third Party Infrastructure, and mitigate, monitor, restore, remedy and/or repair damage to their infrastructure caused by the Certificate Holder and/or its contractors in connection with the Project, including, without limitation, any studies, surveys, testing, sampling, preliminary engineering, pre-construction activities, construction, operation, maintenance or repair of the Project, subject to the following conditions:	Empire will comply.	Section 1.7

a.	The Certificate Holder must provide to the Third-Party Infrastructure owner and to the Department of Public of Service a written description of the scope of any support, protection, mitigation, monitoring, remedy, repair and/or restoration work required hereunder and a good faith estimate of the expected costs to be incurred by the Third-Party Infrastructure owner established under this Section H5 arising out of the Certificate Holders construction, operation and maintenance of the Project.	Empire will comply.	Section 1.7
b.	The affected Third-Party Infrastructure owner shall be afforded a reasonable opportunity to review and comment on the information provided by the Certificate Holder under subsection (a) above, and to provide the Department of Public Service and the Certificate Holder a good faith estimate of costs it expects to incur under this Section H5.	Empire will comply.	Section 1.7
c.	The Certificate Holder must file with the Commission any agreement with the Third-Party Infrastructure owner, in a form reasonably acceptable to Third Party Infrastructure Owner, to waive any and all claims of loss of profit, indirect, incidental, special, punitive or consequential damages (Indirect Damages) arising out of or relating to the event or events causing or contributing to the damage to their infrastructure for which the Third-Party Infrastructure owner is entitled to reimbursement under this certificate condition. To the extent the Certificate Holder cannot file with the Commission an agreement with the Third-Party Infrastructure owner to waive the Indirect Damages, all parties may pursue any legal remedies they may have available as discussed under H6.	Empire will comply.	Section 1.7
d.	Within 60 days of completion of activities for which costs are incurred under this Section H5, or a later date as agreed to between the Third-Party Infrastructure owner and the Certificate Holder, the Third-Party Infrastructure owner will tender an invoice for reimbursement of the actual costs it has incurred.	Empire will comply.	Section 1.7
e.	The Certificate Holder shall pay the invoice amount within 30 days of receipt unless it disputes the invoice.	Empire will comply.	Section 1.7

H6.	Nothing in this Certificate shall limit or waive any right of the Third-Party Infrastructure owner to pursue any remedy at law or equity in the event of damage to its infrastructure arising from the Project.	Empire will comply.	Section 1.7
I. CONSTRUCTION AND MAINTENANCE WINDOWS AND TIMING			
I1.	The Certificate Holder shall conduct onshore construction work outside the walls of buildings whose exterior walls and roof are substantially complete between 7 a.m. and 6 p.m., as required by the New York City Noise Control Code. As set forth in Exhibit 7, to the extent that certain construction phases and activities require additional work hours, the Certificate Holder may make arrangements for the extension of additional work hours with appropriate City authorities, and submit to DPS Staff a request to proceed at least 48 hours in advance if planned weekend, evening, or holiday construction becomes necessary. Staff will use appropriate efforts to respond to Certificate Holder's request in a timely manner.	Empire will comply.	Section 5.10.2
I2.	Species Related Work Restrictions	Empire will comply.	Not applicable to Part 1
a.	No in-water seabed disturbing work, except as identified in I2(a)(i) (1)-(4) below, shall occur during the following seasonal windows:	Empire will comply.	Not applicable to Part 1
i.	between March 1 and June 30 and between October 1 to November 30 in any year to avoid the risk for incidental take of Atlantic and shortnose sturgeon, except as follows:	Empire will comply.	Not applicable to Part 1
1	From kilometer post (KP) 0 to KP 0.6, as shown in mapping in Appendix B of the Joint Proposal the Certificate Holder may conduct Project activities in June, October and/or November, if conducted in accordance with an Atlantic and Shortnose Sturgeon Avoidance, Monitoring and Impact Minimization Plan, including mechanical dredging; backfill; rock protection installation; relieving platform removal; relieving platform pile removal; cable landfall trenching; installation of piles and cable landfall ducts; pre-installation debris clearance; boulder removal/relocation; cable lay	Empire will comply.	Not applicable to Part 1

	and backfill; cable landfall pull-in; installation of sheet piles; work activities associated with the new bulkhead installation and new concrete deck; pre-lay mattress installation and post-lay mattress installation.		
	2 From KP 0.6 to the New York State boundary, as shown in mapping in Appendix B of the Joint Proposal, the Certificate Holder may conduct the following activities in October and November, if conducted in accordance with an Atlantic and Shortnose Sturgeon Avoidance, Monitoring and Impact Minimization Plan and a Net Conservation Benefit Plan (NCBP) that meets the substantive requirements of 6 NYCRR Part 182 that has been developed in consultation with and accepted by NYSDEC and DPS staff: post-lay mattress and rock protection installation.	Empire will comply.	Not applicable to Part 1
	3 From KP 0.6 to the New York State boundary, as shown in mapping in Appendix B of the Joint Proposal, the Certificate Holder may conduct the following activities in June, if conducted in accordance with an Atlantic and Shortnose Sturgeon Avoidance, Monitoring and Impact Minimization Plan and a Net Conservation Benefit Plan (NCBP) that meets the substantive requirements of 6 NYCRR Part 182 that has been developed in consultation with and accepted by NYSDEC and DPS staff: pre-installation trials for the submarine export cables, pre-lay grapnel runs, debris clearance, and boulder removal/relocation.	Empire will comply.	Not applicable to Part 1
ii.	within water depths of 20 ft or less, NAVD88, between December 15 and May 31 of any year, to avoid winter flounder spawning and overwintering, unless the NYSDEC, DPS Staff and NYSDOS agree to waive this timing window on the basis of project-specific habitat surveys or mitigation measures.	Empire will comply.	Not applicable to Part 1
b.	The Atlantic and Shortnose Sturgeon Avoidance, Monitoring and Impact Minimization Plan and the NCBP shall be included as part of the EM&CP for the applicable Segment. The Certificate Holder shall provide the Atlantic and Shortnose Sturgeon Avoidance, Monitoring and Impact Minimization Plan to NYSDEC 45 days prior	Empire will comply.	Not applicable to Part 1

	to filing of the EM&CP for the applicable Segment for NYSDEC's review and acceptance.		
I3.	After consultation with the NYSDEC, NYSDOS and DPS Staff, the Certificate Holder may petition the Commission for a modification of any construction window limitation by filing such petition with the Secretary. Such petition shall describe the consultation efforts and results and shall include a request for a 30-day public comment period. The Certificate Holder shall notify the NYCDOT Office of Construction Mitigation and Coordination of any approved modifications of the construction window.	Empire will comply.	Not applicable to Part 1
J. SUBMARINE EXPORT CABLE INSTALLATION			
J1.	At least 30 days prior to the commencement of construction of the submarine export cables in the New York Harbor, Narrows, New York Bay, and Gravesend Bay, or at such other time as set by the United States Coast Guard (USCG), the Certificate Holder will discuss the details and of its final construction plans, including the submarine export cable route, construction sequence, rate of movement of its vessels, and schedule of time frames for specified waypoints or locations, with the USCG's Waterways Management Office. In coordination with and as directed by the USCG, the Certificate Holder will communicate this information to other maritime users of the New York Harbor, Narrows, New York Bay, and Gravesend Bay. Any and all subsequent changes to the planned route or construction schedule will be communicated immediately to the USCG's Waterways Management Office and maritime users of the Harbor, Narrows, and Bays identified by USCG. Before meeting with the USCG, the Certificate Holder will communicate with NYPD, FDNY, NYCDEP, NYCDOT, ferry operators, and other maritime users of the Harbor identified by USCG regarding its planned schedule of construction (i.e., the days and times when it expects to be at specified waypoints or locations)	Empire will comply.	Not applicable to Part 1

	to identify and avoid or minimize any conflicts between its work and the activities of or overseen by such entities.		
J2.	For the purpose of these conditions, Target Burial Depth refers to the depth of burial below the seabed (measured from top of cable) that the Certificate Holder will attempt to achieve during the installation of the submarine export cables.	Empire will comply.	Not applicable to Part 1
J3.	Prior to the commencement of installation of the submarine export cables, the Certificate Holder will engage in certain offshore site preparation ("pre-installation activities"). Offshore site preparation shall include the following activities, which the Certificate Holder will describe in more detail (e.g., provide methods, locations, and impact minimization measures) in the EM&CP:	Empire will comply.	Not applicable to Part 1
a.	Boulder removal, which will be minimized to the maximum extent practicable, will be conducted in accordance with Condition J8;	Empire will comply.	Not applicable to Part 1
b.	Prelay grapnel run;	Empire will comply.	Not applicable to Part 1
c.	Marine debris removal, as necessary;	Empire will comply.	Not applicable to Part 1
d.	UXO clearance, if necessary;	Empire will comply.	Not applicable to Part 1
e.	Pre-installation surveys;	Empire will comply.	Not applicable to Part 1
f.	Pre-sweeping through use of mass flow excavation or a dredge, where needed for sandwave leveling or utility crossings;	Empire will comply.	Not applicable to Part 1
g.	Utility crossing preparation;	Empire will comply.	Not applicable to Part 1
h.	Pre-trenching by running the cable burial equipment over portions of the route prior to cable lay, where deeper burial depths or seabed conditions may otherwise limit the ability to achieve Target Burial Depth.	Empire will comply.	Not applicable to Part 1

J4.	Exclusive of the portion of the cable approaching the cable landfall, the Certificate Holder shall install the submarine export cables a minimum Target Burial Depth of 6 ft below the existing seabed, except as described in Condition J5. Except as described in Condition J5, should the Target Burial Depth not be achieved during the initial pass of the cable installation tool that is best suited to achieve Target Burial Depth, the Certificate Holder shall perform up to two additional passes with the installation tool, or other burial tool that complies with the requirements of the Certificate, unless (a) additional passes risk causing damage to the submarine export cables or the installation tool; or (b) due to geologic obstructions, additional passes would not increase the burial depth or risk causing cable exposure. The Certificate Holder shall use best efforts to micro-route the cable within the cable corridor to achieve Target Burial Depth during installation.	Empire will comply.	Not applicable to Part 1
J5.	The Certificate Holder shall comply with burial depth requirements of United States Army Corps of Engineers- (USACE) issued permits for the Project and as shown in the EM&CP. The Certificate Holder shall install the submarine export cables to a minimum Target Burial Depth of 15 ft below the existing seabed or below the authorized depth in federally authorized channels, and anchorages, whichever is deeper, and where determined by the Cable Burial Risk Assessment (CBRA). The Certificate Holder shall make at least two attempts to pre-trench the submarine export cable route, before abandoning the attempt and seeking out an alternate route. The Certificate Holder shall use best efforts to micro-route the cable within the submarine export cable siting corridor and conduct offshore site preparation described in Condition J2 to achieve Target Burial Depth during installation.	Empire will comply.	Not applicable to Part 1
J6.	Submarine export cables will be placed in such a manner that the Project will not preclude navigation during construction, operation and maintenance, except as approved in the EM&CP and coordinated with the USCG. Vessels will be allowed to continue to move through the navigation channels safely and efficiently during construction, operation and maintenance of the Project.	Empire will comply.	Not applicable to Part 1

J7.	When the cable siting corridor is proposed parallel to a federally authorized navigation channel at KP 6.1 to KP 8.5, the cable(s) shall be installed a lateral distance from the channel side slope that is equal to or greater than the repair bight and in a manner that maximizes the distance, to the extent practicable, from said side slope. Should the Project adversely impact contours of the federal navigation channel such that navigation is impeded, the Certificate Holder will notify DPS Staff and USACE for potential corrective action.	Empire will comply.	Not applicable to Part 1
J8.	If boulders are not identified during pre-construction surveys but are later identified during installation, and therefore micro-routing the cable is impracticable, the Certificate Holder shall, if required to increase the likelihood of achieving Target Burial Depth, relocate any encountered boulders within 65 ft of the planned centerline of the cable. Boulders should be placed together where possible to reduce overall area of obstruction. Where the Certificate Holder has relocated a boulder 1 m or more in diameter a distance of 2 m or more from the location where it was initially encountered, the Certificate Holder shall provide notice to mariners, recreational fishermen, and NYSDEC-Licensed Fishermen in accordance with Condition E8, <i>supra</i> .	Empire will comply.	Not applicable to Part 1
J9.	The Certificate Holder will develop an Anchoring Plan to be provided in the EM&CP that will discuss how the use of anchoring, if any, during construction and maintenance activities will avoid and/or minimize impacts to sensitive benthic habitats (CC J12), Recognized Ecological Complexes (CC Y17), historic and archeological resources, and impacts to existing buried assets (e.g., telecommunications cables, pipelines, water siphons). The Anchoring Plan will outline the parameters for the use of anchors and spuds, the limits of the anchoring corridor, and identify discrete "No Anchor" areas in the event anchoring is ultimately required. The Anchoring Plan will describe the measures that will be employed to minimize sediment disturbance caused by the anchoring during construction of the submarine export cables (e.g., use of floating mooring ropes). The Certificate Holder shall provide	Empire will comply.	Not applicable to Part 1

	the Anchoring Plan at least 45 days prior to filing the EM&CP to DPS Staff, NYSDOS, and NYSDEC for review and comment.		
J10.	The Certificate Holder shall install the submarine export cables using either simultaneous lay and burial or pre-lay and post-burial processes. The Certificate Holder shall be permitted to conduct pre-installation activities described in CC J2 prior to submarine export cable lay, where necessary to install the submarine export cables and achieve Target Burial Depth.	Empire will comply.	Not applicable to Part 1
a.	The following technologies may be used, individually or in combination, for pre-sweeping, pre-trenching and to install the submarine export cables: mechanical cutter, mechanical plow, jet sled, jet trencher, vertical injector, hydraulic/suction hopper dredging, mechanical dredging and/or mass flow excavator.	Empire will comply.	Not applicable to Part 1
J11.	The Certificate Holder will use best efforts to avoid the use of cable protection if the actual burial depth achieved provides adequate protection. In areas where seabed conditions or geologic or topographic features, or utility crossings do not allow the Certificate Holder to achieve Target Burial Depth, the Certificate Holder is authorized, but not required, to use cable protection methods. Cable protection may include tapered engineered concrete mattresses, rock bags, crushed rock, or other appropriate protection method(s). If cable protection is necessary in "non-trawlable" habitat, then the Certificate Holder shall use materials that reflect the pre-existing conditions of the benthic environment in those locations, to the extent technically feasible. The Certificate Holder shall install and maintain any necessary cable protection measures in a manner that is consistent with the objectives of Condition Y12 (i.e., ability to maintain overtrawlability, minimize shifting over time, and avoids creating a discernable berm). The Certificate Holder shall not leave any portions of the cable exposed on the seabed without cable protection measures.	Empire will comply.	Not applicable to Part 1
J12.	The Certificate Holder must avoid all known sensitive benthic habitats (i.e., hard bottom habitat, commercial shellfish beds, salt marsh, submerged aquatic vegetation, and corals) when installing	Empire will comply.	Not applicable to Part 1

	the cable in New York State waters. If unknown sensitive benthic habitat is encountered, the Certificate Holder will use best efforts to avoid impacts to the greatest extent practicable via micro-siting. If full avoidance is not possible, the Certificate Holder's EM&CP and Benthic Sampling Plan, described in Condition N5, shall describe procedures for avoidance of long-term adverse impacts and to conduct benthic monitoring in the case that any previously unknown sensitive benthic habitat is encountered during construction and is unavoidable.		
J13.	In-water activities shall be undertaken in a manner that minimizes the potential for interference with safe navigation and other maritime uses of the area, including but not limited to fishing and other maritime users identified in the Mariner Notification and Public Input Process (Appendix G).	Empire will comply.	Not applicable to Part 1
J14.	A pre-installation trial will be conducted for any proposed jetting tools (jet sled, jet trencher, vertical injector) and mass flow excavation tools. If alternative jetting tools are proposed in the EM&CP, pre-installation trials for those tools will be included in the Pre-Installation Trial Plan. Pre-installation trials in accordance with the Pre-Installation Trial Plan must be conducted within representative sections or areas proximate to the proposed underwater cable route in NYS waters or during pre-installation activities prior to cable installation to evaluate compliance with Total Suspended Solids (TSS) threshold limit, turbidity, and water quality standards as defined in Condition U6 and U8. The goal of the pre-installation trial is to establish operating conditions that will minimize the suspension of in-situ sediments and contaminants during the jetting and mass flow excavation activities, consistent with the objectives of Conditions U6 and U8. The trial will include approximately 1,000 ft of operations within an area to be specified in the Pre-Installation Trial Plan that will be submitted as part of the EM&CP for the applicable Segment. The following conditions apply to pre-installation trials:	Empire will comply.	Not applicable to Part 1

a.	Appropriate instruments will be specified in the EM&CP and used to measure water column TSS and turbidity on selected transects in the field. Companion water samples will be collected and analyzed by a NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory for TSS;	Empire will comply.	Not applicable to Part 1
b.	Samples of TSS and constituents listed in CC U8 will be collected up-current (for baseline) and at the edge of the mixing zone down-current of the pre-installation trial, at three-interval depths (near surface, mid-depth, and near bottom); the mixing zone shall be as defined in CC U2 and the Suspended Sediment and Water Quality Monitoring Plan;	Empire will comply.	Not applicable to Part 1
c.	The Certificate Holder must work cooperatively with the Aquatic Environmental Monitor, DPS Staff and NYSDEC, to review the results of the TSS field measurements during the pre-installation trials to evaluate whether the operating conditions result in TSS concentrations that exceed the TSS threshold limit;	Empire will comply.	Not applicable to Part 1
d.	If the pre-installation trials demonstrate that the operating conditions result in TSS concentrations that exceed the TSS limit (100 mg/L above background concentration) established in this Certificate, the Certificate Holder must work with the Aquatic Environmental Monitor, DPS Staff and NYSDEC to evaluate and implement practicable operational modifications to the jetting or mass flow excavation tools to further reduce in-situ sediment re-suspension associated with the equipment operations. Operational controls implemented to minimize exceedances of the TSS limit will not result in the material delay of the progress of work to complete in-water installation during one construction season; and	Empire will comply.	Not applicable to Part 1
e.	Jetting and mass flow excavation operations may proceed after the pre-installation trial field results of the applicable equipment are submitted by the Certificate Holder to DPS Staff and NYSDEC and reviewed in real-time. Review of this information by DPS Staff and NYSDEC shall not unreasonably delay the commencement of installation of the underwater cable system. Laboratory results from the pre-installation trial shall be submitted electronically to	Empire will comply.	Not applicable to Part 1

	DPS Staff and NYSDEC as soon as possible, but no later than the 48 hours following receipt from the laboratory.		
J15.	The following conditions apply if jetting or mass flow excavation technologies are used:	Empire will comply.	Not applicable to Part 1
a.	The Certificate Holder must operate the jetting and mass flow excavation tools in accordance with the operating conditions determined through Pre-Installation Trial Plan;	Empire will comply.	Not applicable to Part 1
b.	If, during water quality monitoring, TSS measurements exceed the limit established in this Certificate, DPS Staff, NYSDEC, and the Aquatic Environmental Monitor shall be immediately notified. The Certificate Holder shall employ one or more of the following operational modifications as soon as possible after consultation with the Aquatic Environmental Monitor, DPS Staff and NYSDEC: changing the rate of advancement of the equipment, modifying hydraulic pressures, or implementing other reasonable operational controls that may reduce suspension of in situ sediments but not in a manner that would materially delay the progress of work to complete the in-water installation procedures. The Certificate Holder shall not be required to reduce hydraulic jetting pressures to levels which would not allow burial to the Target Burial Depth specified in the EM&CP or other permits. TSS will be measured after the operational modifications, in accordance with the procedures outlined in the Suspended Sediment and Water Quality Monitoring Plan, and communicated to the Aquatic Environmental Monitor. Measurements will include laboratory analyses of TSS, and if north of KP 15, the constituents listed in Condition U8, the results of which will be provided to DPS Staff, NYSDEC and the Aquatic Environmental Monitor; and	Empire will comply.	Not applicable to Part 1
c.	During implementation of feasible operational modifications, DPS Staff and NYSDEC may specify additional monitoring until compliance with the TSS limit and water quality standards is demonstrated. Samples shall be collected until resumption of routine monitoring is authorized by DPS Staff in consultation with NYSDEC.	Empire will comply.	Not applicable to Part 1

J16.	No changes in the installation technology in Condition J10 or reduction in Target Burial Depth specified in Conditions J4 and J5 shall be allowed without prior consultation with DPS Staff and NYSDOS and a written statement from NYSDOS stating that the deviation would not result in coastal effects that differ significantly from the coastal effects reviewed by NYSDOS in Certificate Holder's original Federal Coastal Consistency Certification (Coastal Consistency Certification). In the event that NYSDOS determines that such deviation would result in coastal effects that differ significantly from those reviewed in the Coastal Consistency Certification, the Certificate Holder shall seek a written concurrence from NYSDOS for any such project changes that would require an amendment to the Certificate Holder's Coastal Consistency Certification. Nothing in this Certificate shall be construed to limit or expand any rights Certificate Holder may have to seek administrative or judicial review of any action or inaction by NYSDOS relating to any such deviation.	Empire will comply.	Not applicable to Part 1
K. DREDGING			
K1.	The Certificate Holder shall conduct dredging activities using either mechanical dredging or hydraulic/suction hopper dredging equipment. The Certificate Holder may also use mass flow excavation, which is not a dredging activity, for pre-sweeping.	Empire will comply.	Not applicable to Part 1
K2.	The Certificate Holder shall use mechanical dredging for dredging operations from the cable landfall to the edge of the Bay Ridge Channel, at approximately KP 0.6, as shown in mapping in Appendix B of the Joint Proposal. From the Bay Ridge Channel to the New York State boundary offshore, the Certificate Holder shall minimize dredging activities and shall use mass flow excavation for pre-sweeping and utility crossing preparation to the extent practicable. If dredging is necessary, the Certificate Holder may use hydraulic/suction hopper dredging or mechanical dredging.	Empire will comply.	Not applicable to Part 1
K3.	For all dredging operations (mechanical dredging and hydraulic/suction hopper dredging), the Certificate Holder shall:	Empire will comply.	Not applicable to Part 1
a.	only use vessels or barges in good operating condition;	Empire will comply.	Not applicable to Part 1

b.	use vessels, barges or scows of solid hull construction or which are sealed;	Empire will comply.	Not applicable to Part 1
c.	avoid washing the gunwales of the scow except to the extent necessary to ensure the safety of workers;	Empire will comply.	Not applicable to Part 1
d.	conduct required water quality monitoring as described in condition U2;	Empire will comply.	Not applicable to Part 1
e.	not sidecast excavated dredged material;	Empire will comply.	Not applicable to Part 1
f.	not use a dragline for excavation; and	Empire will comply.	Not applicable to Part 1
g.	develop and provide a Dredge Management Plan in the EM&CP for all applicable Segments.	Empire will comply.	Not applicable to Part 1
K4.	For mechanical dredging operations, the Certificate Holder shall:	Empire will comply.	Not applicable to Part 1
a.	use a closed (i.e., sealed) environmental (e.g., clamshell) bucket with sealing gaskets or an overlapping sealed design at the jaws and seals or flaps positioned at locations of vent openings to minimize sediment suspension. Drawings and specifications of the environmental bucket must be provided to the NYSDEC Staff and DPS Staff prior to the anticipated start of dredging;	Empire will comply.	Not applicable to Part 1
b.	ensure that seals or flaps designed or installed at the jaws and locations of vent openings tightly cover these openings while the bucket is lifted through the water column and into the barge;	Empire will comply.	Not applicable to Part 1
c.	equip the closed environmental bucket with sensors to ensure complete closure of the bucket before lifting through the water;	Empire will comply.	Not applicable to Part 1
d.	excessive loss of water from the environmental bucket will be investigated and resolved;	Empire will comply.	Not applicable to Part 1
e.	operate the bucket so as to control the rate of the descent and to maximize the depth of penetration without overfilling the bucket;	Empire will comply.	Not applicable to Part 1
f.	control bucket retrieval rates to minimize turbidity;	Empire will comply.	Not applicable to Part 1
g.	lower the bucket to the level of the barge gunwales prior to release of the load and place the excavated material deliberately and in a controlled manner;	Empire will comply.	Not applicable to Part 1
h.	bucket hoist speed shall be limited to approximately 2 ft per second and the bucket shall be lifted in a continuous motion through the water column and into the barge;	Empire will comply.	Not applicable to Part 1

i.	suspend operations until any necessary repairs or replacements are made when a significant loss of water and visible sediments from the bucket is observed;	Empire will comply.	Not applicable to Part 1
j.	not use deck barges, unless modified to allow no barge overflow and approved by the Environmental Monitor and DPS Staff in consultation with NYSDEC;	Empire will comply.	Not applicable to Part 1
k.	allow no barge overflow during dredging operations;	Empire will comply.	Not applicable to Part 1
l.	not commence decanting of barges until approved by DPS Staff, in consultation with NYSDEC. If decanting is proposed, a plan for decanting must be included in the Dredge Management Plan in the EM&CP for the applicable segment for DPS and NYSDEC staff to review. If decanting is permitted, allow a minimum 24 hours of settlement prior to decanting barges and ensure that decanting does not violate water quality standards or guidance values for TSS, turbidity, and contaminants;	Empire will comply.	Not applicable to Part 1
K5.	For hydraulic/suction hopper dredging, the Certificate Holder shall:	Empire will comply.	Not applicable to Part 1
a.	remove displaced dredged material to a barge or trailing suction hopper dredger. The dredged material will be transported for beneficial reuse or disposal at a permitted disposal facility;	Empire will comply.	Not applicable to Part 1
b.	The Certificate Holder shall operate the equipment so as to minimize sediment transport.	Empire will comply.	Not applicable to Part 1
K6.	If the use of dredge material as backfill is proposed, the Certificate Holder shall submit a plan to DPS Staff and NYSDEC for review and comment. If backfilling with dredge material occurs, it must be conducted in accordance with CC I2. The dredged material may be used as the top 3 ft of backfill.	Empire will comply.	Not applicable to Part 1
K7.	If the Certificate Holder cannot reuse dredged material and backfill is needed, the Certificate Holder may use clean material of similar grain size to the dredged material to the extent possible. The Certificate Holder shall consult with NYSDEC, NYSDOS, and DPS Staff on the source and grain size of such fill material prior to use and shall include the source location in the EM&CP for the applicable Segment.	Empire will comply.	Not applicable to Part 1

K8.	Management of contaminated dredged material shall be as follows:	Empire will comply.	Not applicable to Part 1
a.	if the material is not eligible for a Beneficial Use Determination, prior to dredging, the Certificate Holder shall identify the final dredged material disposal location, including a letter from the permitted disposal facility verifying that they will accept the material. All contaminated material shall be handled in accordance with the Hazardous Waste and Petroleum Work Plan and Materials Management Plan submitted as part of the EM&CP for the applicable Segment.	Empire will comply.	Not applicable to Part 1
b.	the final material disposal location shall be submitted to DPS Staff, and NYSDEC at least 14 days prior to disposal. Disposal of all material must comply with 6 NYCRR Part 360 et seq.	Empire will comply.	Not applicable to Part 1
c.	Contaminated material may not be used as backfill.	Empire will comply.	Not applicable to Part 1
K9.	The Environmental Monitor shall inspect all excavating and backfilling equipment prior to use and shall perform periodic inspections of all such equipment no less than once per week when in use. For mechanical dredging, the Certificate Holder shall demonstrate to the Environmental Monitor that the equipment operator has sufficient control over the bucket operation so that the sediment re-suspension from bucket contact with the bottom and bucket over-filling is minimized.	Empire will comply.	Not applicable to Part 1
K10.	If dewatering or on-barge decanting of dredge material is proposed, the Certificate Holder shall submit a Dredge Management Plan in the EM&CP for the applicable Segment for DPS and NYSDEC staff for review and comment.	Empire will comply.	Not applicable to Part 1
K11.	During excavation and backfill activities, the Certificate Holder shall provide to DPS Staff, NYSDEC and NYSDOS monthly progress reports that demonstrate compliance with Certificate requirements and such other information as determined necessary based on consultation with DPS Staff, NYSDEC, and NYSDOS.	Empire will comply.	Not applicable to Part 1

L. ONSHORE CONSTRUCTION

L1.	The method for installation of the onshore interconnection cables within the NYCDOT ROW will be detailed in the EM&CP for the applicable Segment and comply with NYCDOT specifications. Prior to filing the EM&CP for the applicable Segment, the Certificate Holder shall consult with the NYCDOT.	Empire will comply.	Section 4.1.2; Section 4.2.2.2
L2.	The onshore interconnection cables may be installed in an underground duct bank consisting of PVC and/or PE conduits, utilizing temporary cable pull-in pits and permanent cable vaults for installation and maintenance access. Each vault will be accessible by a manhole cover visible from the surface.	Empire will comply.	Section 4.2.2.2
L3.	The Certificate Holder shall instruct its contractors to park in designated areas, which do not interfere with normal traffic, do not cause any safety hazard or interfere with existing land uses.	Empire will comply.	Section 4.2.2.1; Section 5.1.2
L4.	The Certificate Holder shall periodically consult with the NYCDOT about traffic conditions near the Project site and shall make good faith efforts to minimize the impact of the construction of the facilities on area traffic circulation.	Empire will comply.	Section 1.4.1; Section 4.3.1
L5.	The Certificate Holder shall coordinate construction activities with other construction and maintenance activities taking place at the same time and in the same vicinity conducted by entities including but not limited to the federal, State and City agencies (such as Gowanus Canal dredging), SBMT, other utilities, nearby property owners, and business owners. Details of construction schedule planning and coordination with these entities and a design plan for emergency access during local road closures shall be included in the EM&CP for the applicable Segment.	Empire will comply.	Section 4.1.2
L6.	The Certificate Holder shall confine construction and subsequent maintenance activities to the locations identified in Appendix B of the Joint Proposal and approved additional work areas, as detailed in the EM&CP for the applicable Segment.	Empire will comply.	Section 5.1.2
L7.	The Certificate Holder shall coordinate with Con Edison to minimize outages.	Empire will comply.	Section 6.1.1

L8.	The Certificate Holder shall thoroughly clear debris related to underground electric line construction within the interconnection cable corridor.	Empire will comply.	Section 4.1.2
L9.	The Certificate Holder shall take appropriate measures, as outlined in the Fugitive Dust Plan in the EM&CP for the applicable Segment, to minimize fugitive dust and airborne debris from construction activities. Except where such activities may create ice, exposed soils and roadways shall be wetted as needed during extended dry periods to minimize dust generation. To the extent practicable, water for dust control shall come from municipal water supplies/sources. The Fugitive Dust Plan will be consistent with Title 15, Chapter 13 of the Rules of the City of New York. Under the NYSDEC BCP Program (DEC Site No. C224360) on the onshore substation site (as indicated in mapping in Appendix B of the Joint Proposal), the Certificate Holder shall conform to practices and procedures described in the DER-10/Technical Guidance for Site Investigation and Remediation and the NYSDOH Generic Community Air Monitoring Plan (CAMP), to the extent applicable.	Empire will comply.	Appendix S (Fugitive Dust Control Plan)
L10.	Following construction, all Project areas shall be restored to pre-construction contours, unless the EM&CP specifies otherwise. Erosion controls and permanent vegetation shall be restored as appropriate for those locations. Disturbed pavement, curbs, and sidewalks (if applicable) shall be restored to their original preconstruction condition or improved.	Empire will comply.	Section 4.2.7
L11.	The Certificate Holder shall, upon completion of construction of the Project:	Empire will comply.	N/A
a.	Conduct an assessment of the need for additional restoration work and landscape improvements, including vegetation planting, earthwork or installed features to screen or landscape the Project with respect to road crossings, residential areas, and substations. The Certificate Holder shall consult with NYCDOT regarding any restoration work and landscape improvement assessments involving streets, sidewalks, and other public rights-of-way, and it	Empire will comply.	Section 5.9.2

	should consult with affected landowners regarding such assessments, where applicable.		
b.	Prepare plans for any visual mitigation found necessary, and, in connection therewith, removal, rearrangement and supplementation of existing landscape improvements or plantings should be considered, as appropriate.	Empire will comply.	Section 5.9.2
c.	Present draft assessments and visual mitigation plans to DPS Staff for review and acceptance and file a final plan with the Secretary within one year after the date the Project is placed in service. Any assessments and plans that pertain to streets, sidewalks, and other public rights-of-way should also be presented to NYCDOT for review and input.	Empire will comply.	Section 5.9.2
d.	Install, as appropriate, visual mitigation measures as identified in final plans as identified in (a) through (c), above.	Empire will comply.	Section 5.9.2
L12.	At the time the Certificate Holder places an order with a supplier for GIE for the Project ("Project GIE"), the Certificate Holder shall comply with all applicable laws and regulations relating to SF6 then in effect. To the extent acquired Project GIE contains SF6 (SF6-Containing Project GIE), the SF6-Containing Project GIE shall have an annual SF6 emission rate of 1% or less or be hermetically sealed[1]. To the extent the installation of SF6 in GIE is prohibited by applicable law or regulation that comes into effect before the Certificate Holder installs any SF6-Containing Project GIE, the Certificate Holder may avail itself of any applicable exception, variance or grandfathering provision provided for in any law or regulation applicable to SF6 in GIE.	Empire will comply.	N/A
M. ROADS AND TRANSPORTATION			
M1.	The Certificate Holder shall coordinate all construction work on the onshore Project Area with the appropriate State and City officials, and shall obtain the required authorization for such work, subject to the Commission's continuing jurisdiction as appropriate. The Certificate Holder shall periodically consult with NYCDOT about traffic conditions near the Project site and shall notify NYCDOT of	Empire will comply.	Section 4.1.2

	the approximate date manhole-related work will begin within roadways under their jurisdiction.		
M2.	All work zones shall be compliant with the NYSDOT Manual of Uniform Traffic Control Devices (MUTCD) and the NYS Supplement to the National MUTCD. Per the MUTCD, the minimum lane width standard shall be 10 ft on local roads as measured from the near edge of the channelizing devices to the edge of the pavement or the outside edge of the paved shoulder.	Empire will comply.	Section 4.3.1
M3.	The Certificate Holder, with respect to all work it performs on the onshore Project, shall coordinate with the NYCDOT regarding a Traffic Management Plan that details traffic management of roads under State and municipal jurisdiction. The Traffic Management Plan shall be included as part of the EM&CP for the applicable Segment. The Certificate Holder shall consult, not less than weekly, with the NYCDOT about traffic conditions near the Project site and shall implement appropriate modifications to traffic management protocols as necessary to minimize disruption to traffic circulation during construction.	Empire will comply.	Section 4.3.1; Appendix M (Traffic Management Plan)
a.	The Certificate Holder shall consult with the NYC Department of Education prior to the commencement of construction and will include the outcome of that consultation, as well as any traffic-related measures taken by the Certificate Holder based on that consultation, in the Traffic Management Plan.	Empire will comply.	Section 4.3.1; Appendix M (Traffic Management Plan)
M4.	The Certificate Holder shall not construct, improve, or use any access roads not described in the EM&CP except in the case of emergency situations. A notice of any such emergency shall be promptly filed with the Secretary.	Empire will comply.	Section 4.2.2.1
M5.	NYCDOT shall have authority to place inspectors on site to monitor and observe the Certificate Holder's activities on local roads, or to request the presence of State or local police to ensure the safety of travelers, at such times and for such periods as the NYCDOT deems appropriate. All costs thereof shall be borne by the Certificate Holder.	Empire will comply.	Section 3.2.1.1

M6.	The Certificate Holder shall comply with the following provisions for snow and ice removal on all roads on which Project construction is occurring.	Empire will comply.	Section 4.3.1
a.	Interference with snow plowing operations by drums, barricades, and other traffic control equipment shall be kept to a minimum. Any devices disturbed or damaged by snow and ice control operations shall be replaced and/or reset as necessary and as soon as possible by the Certificate Holder;	Empire will comply.	Section 4.3.1
b.	Drainage frames, grates and covers, and other castings shall not be adjusted in a travel lane unless the final pavement course is to be placed prior to the onset of snow and ice weather. Steel plates, etc. shall not protrude above the adjacent pavement. If any of these protrusions exist in a non-travel lane prior to a snow and ice condition, then temporary asphalt ramps must be placed so that for every 1 inch of rise, there is a 6 ft run of ramp;	Empire will comply.	Section 4.3.1
c.	All pavement cuts shall be restored to the adjacent pavement grade to eliminate recessed areas where snow cannot be plowed or where the plows may snag; and	Empire will comply.	Section 4.3.1
d.	Where the work zone traffic control schemes require installation of single or multiple runs of temporary concrete barrier, the Certificate Holder shall remove any snow remaining along the temporary barrier.	Empire will comply.	Section 4.3.1
N. MITIGATION AND MONITORING			

N1.	The Certificate Holder shall conduct an AC Magnetic Field Study of the 60-Hertz (Hz) alternating current (AC) magnetic field associated with the operation of both onshore and offshore cables as detailed below and in a plan included as part of the EM&CP for the applicable Segment. The AC Magnetic Field Study shall occur during commercial operation of the Project and shall cover the first 6 months after the Project has achieved full Commercial Operation (when all turbines are available for commercial operation). The AC Magnetic Field Study will establish the relationship between the wind farm-generated electrical current measured in amperes on the export cables and AC magnetic field levels. The Certificate Holder shall file a written report of the results of the AC Magnetic Field Study with the Secretary within 6 months of the conclusion of the measurements. The AC Magnetic Field Study will include reporting on the following elements:	Empire will comply.	Not applicable to Part 1
a.	Sensitivity of marine species to AC fields: a tabular summary of the reported biological sensitivities of marine species common in the Project Area to AC electric and magnetic fields.	Empire will comply.	Not applicable to Part 1
b.	Bathymetric measurements: Post-construction bathymetric measurements will be used to locate the submarine export cables and burial depths, which will be analyzed by the Certificate Holder along with the submarine export cables' as-built configuration, installation plan and profile drawings, and maps to identify deviations that could potentially cause the cables to exceed stated cable ratings (i.e., to carry long-term currents greater than stated in the Appendix F to the Application). Any such deviations shall be reported and summarized in a detailed impact assessment, including an evaluation as to whether any deviations would pose a hazard to public safety, adverse impact to marine navigation, or is demonstrated to adversely impact marine species.	Empire will comply.	Not applicable to Part 1
c.	Cable current flow: Monitoring of the current flow on the submarine export cables (the current flow on the onshore underground cables will be similar) for the first six months after full Commercial Operation. Measurements of the harmonic	Empire will comply.	Not applicable to Part 1

	frequencies of AC currents flowing on the cables will be recorded monthly during this period.		
d.	Magnetic field study: Based upon the as-built configurations and recorded current flows, the Certificate Holder will file with the Secretary a study of the magnetic field produced by the submarine export cables during the first six months of full Commercial Operation. The AC Magnetic Field Study will validate the results of Certificate Holder's Application (i.e., Appendix F) by comparing the calculated levels of magnetic fields, and induced electric fields submitted in the Application to the levels of the fields determined from the as-built operational data. A statistical summary and evaluation of recorded current flow data on the cables will be part of this assessment and included in the AC Magnetic Field Study report. Representative onshore and offshore locations will be selected for the AC Magnetic Field Study:	Empire will comply.	Not applicable to Part 1
i.	Offshore:	Empire will comply.	Not applicable to Part 1
one.	the locations selected for the assessment of the offshore submarine export cables will span a range of burial depths and cable configurations as identified in the post-construction bathymetric survey. Additionally, the crossing locations of existing 138 kV, 345 kV third-party submarine cables in New York Harbor, as well as the HVDC Neptune Regional Transmission System (The Neptune Cable) will be included in the assessment. The AC magnetic field modeling study based upon the as-built configurations and recorded current flows shall be provided for each representative location at 1 meter (3.28 ft) above the seabed above the centerline of one of the submarine export cables and will provide tabular and graphical representations of the AC magnetic fields (reported in units of milligauss) at one-foot intervals for horizontal distances of 0 to 200 ft along transects perpendicular to the submarine export cable. Additionally, a best effort calculation will be provided for the combined magnetic field above the crossing locations of existing 138 kV and 345 kV third-party submarine cables in New York Harbor, as well as the Neptune	Empire will comply.	Not applicable to Part 1

	Cable, to the extent data on such third-party cables is publicly available, can be reasonably assumed, or is provided by the third-party cable owner upon request.		
two.	Field measurements of the AC magnetic field taken above representative offshore segments of the submarine export cable after energization will be included for comparison with the magnetic field assessment results consistent with the limits of the combined measurement accuracy and measurement variation. AC magnetic-field measurements will be performed, except as otherwise identified:	Empire will comply.	Not applicable to Part 1
(a)	along transects out to 100 ft taken to either side of the cable at up to three representative locations to establish the magnetic field from the submarine export cable;	Empire will comply.	Not applicable to Part 1
(b)	at a minimum of one location sufficiently far from cable magnetic field sources to establish the background AC field level, and a DC measurement will be taken to establish the background DC field level at the same location;	Empire will comply.	Not applicable to Part 1
(c)	as close as practicable to each of the crossing locations of existing 138 kV and 345 kV AC third-party submarine cables in New York Harbor;	Empire will comply.	Not applicable to Part 1
(d)	as close as practicable to the crossing of the Neptune Cable, which will include both AC and DC magnetic field measurements; and	Empire will comply.	Not applicable to Part 1
(e)	at locations sufficiently far from the Empire wind offshore cable to characterize AC magnetic-field levels at each of the third-party cables in (c) and (d), including DC magnetic-field levels at the Neptune Cable, based on available data for the locations of the third-party cables.	Empire will comply.	Not applicable to Part 1
ii.	Onshore: The representative locations selected by the Certificate Holder for assessment of the onshore export cables and interconnection cables will describe the range of the different cable configurations proposed by the Project. At each representative location, the Certificate Holder will submit measurements of the AC magnetic field before and after energization of the cable taken 1 m above ground over the centerline of the duct bank housing	Empire will comply.	Not applicable to Part 1

	the onshore cables and at a horizontal distance of 12.5 ft from the centerline of the duct bank, if possible. These measurements will be performed in general accordance with applicable standards (e.g., IEEE Std. 644-2019 or C95.3-2021) to confirm that the magnitudes of the calculated AC magnetic fields at each location, based upon as-built specifications and recorded AC current flow, are an accurate predictor of the measured AC magnetic field, consistent with the limits of the combined measurement accuracy and measurement variation. The measurements will be included in the AC Magnetic Field Study report.		
e.	The data collected for the AC Magnetic Field Study will be summarized in a report to be submitted by the Certificate Holder within six months after the end of monitoring of the first six months of full Commercial Operation (i.e., within one year of full Commercial Operation).	Empire will comply.	Not applicable to Part 1
N2.	The Certificate Holder shall submit, after prior consultation with DPS Staff, NYSDEC, and NYSDOS, a Cable Monitoring and Management Plan in the Operations and Maintenance Plan ("O&M Plan") as part of the EM&CP for the applicable Segment. The Certificate Holder will comply with the measures described in the Cable Monitoring and Management Plan to maintain burial or protection of the submarine export cables. The Cable Monitoring and Management Plan shall include, at a minimum:	Empire will comply.	Not applicable to Part 1
a.	the method for determining the actual cable location and burial depth of the submarine export cables and the timing for undertaking such efforts, including, for example, the use of distributed temperature sensing (DTS) technology;	Empire will comply.	Not applicable to Part 1

b.	a requirement that the Certificate Holder establish depth of burial relative to seabed and the accurate level of the seabed relative to vertical datum during post-construction survey operations. Following this, the Certificate Holder will conduct multibeam echo sounder (MBES) surveys to inspect sections of the export cables in higher risk locations as defined in the CBRA, and areas where Target Burial Depth could not be achieved and other protection measures are utilized, in Commercial Operation in: year 1, between years 2 and 3, and between years 5 and 8. Any findings from these MBES surveys will trigger a full survey of the cable system. Throughout the operational life of the Project additional MBES surveys will be conducted after storm events resulting in 1-in-100 year wave heights as will be defined in the EM&CP based on wave height, and associated temporal descriptions, and after any cable repair activity. Timing/frequency of inspections following year 8 and additional to these will be determined through application of a risk-based assessment to ensure required cable burial. This risk-based assessment will be described and detailed further in the EM&CP.	Empire will comply.	Not applicable to Part 1
i.	The risk-based assessment shall identify a risk to exist if the submarine export cable reaches a burial depth less than 4 ft (measured from top of cable) below the seabed for greater than 25 linear ft, in areas where the actual burial depth at the time of installation was greater than 4 ft. If this risk is identified, the Certificate Holder shall follow the process outlined in CC N3.	Empire will comply.	Not applicable to Part 1
c.	a plan for remedying cable exposures within time-of-year restrictions described in CC I2;	Empire will comply.	Not applicable to Part 1
d.	a plan for remedying exposures that pose a hazard to public safety, navigation, or marine resources outside of time-of-year restrictions, including avoidance and minimization techniques for Threatened and Endangered (T&E) species;	Empire will comply.	Not applicable to Part 1
e.	a description of methods to maintain burial depth;	Empire will comply.	Not applicable to Part 1
f.	a plan for marking the location of any cable exposures; and	Empire will comply.	Not applicable to Part 1

g.	a plan for notifying DPS Staff and providing incident details and anticipated next steps to the Secretary in the event that a third-party anchor strikes the submarine export cables during Project operations.	Empire will comply.	Not applicable to Part 1
N3.	The Cable Monitoring and Maintenance Plan in the O&M Plan shall specify that if the Certificate Holder finds or is alerted that the burial depth poses a hazard to public safety, navigation, or marine resources, or the integrity of the submarine export cables as per the risk-based assessment, the Certificate Holder shall undertake remedial measures including burial and/or protection measures consistent with the Certificate and approved EM&CP for the applicable Segment. Before undertaking any such remedial action, the Certificate Holder shall provide a notice to DPS Staff, NYSDOS, and NYSDEC describing its immediate and long-term plan of actions for reducing the risk to acceptable levels while minimizing impacts. The Certificate Holder shall notify mariners, recreational fishermen, and NYSDEC-Licensed Fishermen in accordance with the process set forth in Condition E8, <i>supra</i> .	Empire will comply.	Not applicable to Part 1
a.	The Cable Monitoring and Maintenance Plan shall further specify that, in the event the cable's burial depth is determined to pose a risk as defined in Condition N2 (b) (i), the Certificate Holder will consult with DPS Staff, NYSDEC, and NYSDOS and a determination will be made as to whether the cable poses an unacceptable risk to existing uses or resources per the risk-based assessment and necessitates remedial action consistent with the Certificate and approved EM&CP. Before undertaking any such remedial action, the Certificate Holder shall provide a notice describing its immediate and long-term plan of actions for reducing the risk to acceptable levels while minimizing impacts to DPS Staff, NYSDOS, and NYSDEC. The Certificate Holder shall notify mariners, recreational fishermen, and NYSDEC-Licensed Fishermen in accordance with the process set forth in Appendix G to the Joint Proposal.	Empire will comply.	Not applicable to Part 1

N4.	<p>The Certificate Holder shall be responsible for remedying any exposure of the submarine export cables in accordance with the Cable Monitoring and Maintenance Plan. The Certificate Holder shall begin implementing the Cable Monitoring and Maintenance Plan within a maximum of 15 days of when the Certificate Holder is notified of such submarine export cable exposure, unless the Certificate Holder files a request with the Commission to extend the start of implementation on the basis of risks to safety, the environment, or maritime operations, weather conditions, equipment availability and/or service impacts. Any such extension request will provide the reason for the extension and the anticipated repair schedule. Unless the Commission approves an extension request, if the Certificate Holder does not begin implementing the Cable Monitoring and Maintenance Plan within 15 days of the date the Certificate Holder is notified of such submarine export cable exposure, or if the Certificate Holder ceases to diligently implement the Cable Monitoring and Maintenance Plan with respect to such exposure to the reasonable satisfaction of the Commission, the appropriate letter of credit identified in CC Z2 may be drawn upon pursuant to the terms of Condition Z2. Within 120 days of Commercial Operation, the Certificate Holder shall submit to DPS Staff, NYSDEC, NYCDOT, NYSDOS, and LICFA as-built drawings and shapefile data providing final elevations of the cable and seabed and actual burial depth of the cable and locations of any cable protection measures; also, drawings will include locations and type of cable protection measures installed along the Project.</p>	Empire will comply.	Not applicable to Part 1
N5.	<p>The Certificate Holder shall include in the EM&CP for the applicable Segment a Benthic Sampling Plan that provides for one additional pre-cable installation benthic sampling survey and at least two post-cable installation benthic sampling surveys for the area along the submarine export cables from the proposed cable landfall to the territorial limit of NYS waters (the Benthic Sampling Plan). The Benthic Sampling Plan will specify that:</p>	Empire will comply.	Not applicable to Part 1

a.	pre-construction sampling shall occur between August 1 and October 31, prior to construction, at intervals of one thousand (1,000) ft along the proposed centerline of the submarine export cable corridor from the shore to the territorial limit of NYS waters;	Empire will comply.	Not applicable to Part 1
b.	the pre-construction survey shall consist of the collection and analysis of at least three replicate paired images from each station collected with a Sediment Profile Imaging/Plan-View Imaging system (SPI/PV) consistent with the techniques utilized in the Application. At each SPI/PV station a conductivity, temperature, depth sensor will be used to measure the salinity and temperature through the water column to the sediment surface. The temperature of the sediments will also be measured at each SPI/PV station. The SPI/PV sampling will be supplemented with three replicate grab samples collected at intervals of 2,000 ft. A minimum of three (3) replicate grab samples will be analyzed and results will be summarized with metrics. The variance estimated from these data will be used in a statistical power analysis for the comparison of these metrics between pre- and post-installation time periods. Results of the statistical power analysis and estimation of ecologically meaningful difference will be presented to NYSDEC for review prior to the post-construction sampling surveys.	Empire will comply.	Not applicable to Part 1
c.	the post-construction benthic sampling shall occur between August 1 and October 31, within (24) months of the Project's Commercial Operation Date, in an area extending approximately 100 ft on either side of the submarine export cables. The Benthic Sampling Plan shall explain that:	Empire will comply.	Not applicable to Part 1
i.	during the post-construction benthic sampling, three stations will be sampled with SPI/PV in a transect perpendicular to the submarine export cables at the centerline with one station as close as practicable to the centerline of one of the cables and two stations each approximately 100 ft on either side of both cables. Each set of stations will be at 1,000 ft intervals from the cable landfall to the territorial limit of NYS waters. At each SPI/PV station a conductivity, temperature, depth sensor will be used to measure	Empire will comply.	Not applicable to Part 1

	the salinity and temperature through the water column to the sediment surface. The temperature of the sediments will also be measures at each SPI/PV station.		
ii.	at each station, a minimum of three replicate paired images shall be collected and analyzed. The SPI/PV sampling will be supplemented with two grab stations with one station as close as practicable to the centerline and one station approximately 100 ft on the eastern side of the cable with three replicate grab samples at each grab station collected at intervals of 2,000 ft. One of the replicate grab samples at each grab station will be tested, and the remaining replicates will be archived. Where analysis indicates that there is an ecologically meaningful difference with pre-installation results, the additional replicates will be analyzed. The Benthic Sampling Plan shall require that results of the pre-cable installation SPI/PV benthic sampling event and of each post-cable installation benthic sampling event shall be submitted to DPS Staff, NYSDOS and NYSDEC in a final written report, including the benthic community analysis (BCA) within 6 months of the completion of the sampling event.	Empire will comply.	Not applicable to Part 1

iii.	<p>The Benthic Sampling Plan shall include pre- and post-installation sediment chemistry monitoring in areas of contaminated sediment from KP 15 north to the landfall. The plan shall provide that pre- and post-installation surficial sediment samples (top two centimeters) will be collected and analyzed prior to and subsequent to the completion of the in-water installation of the cable system, and that post-installation sampling shall commence as soon as practicable and in conjunction with other benthic sampling efforts. Specific methods and equipment shall be described to ensure the top two centimeters of ambient sediment are adequately collected, retained and sequestered for analysis. Samples shall be collected and analyzed for total arsenic, total lead, total copper, total cadmium, total mercury, total PAH, and sum of DDT, DDE, DDD and Total PCBs using a congener-specific method, as outlined in the USACE/Environmental Protection Agency ("EPA") Regional Testing Manual for Dredged Materials, as described in NYSDEC TOGS 5.1.9. Three (3) stations will be sampled in a transect perpendicular to the submarine export cables at the centerline with one (1) station as close as practicable to the centerline of one of the cables and two (2) stations each approximately one hundred (100) ft on either side of both cables. Each set of stations will be at five thousand (5,000) -ft intervals from the cable landfall to KP 15 of the cable route, such locations to be determined after consultation with DPS Staff in consultation with NYSDEC. The Certificate Holder shall submit to the NYSDEC and DPS Staff a report which provides the analytical results and compares them to pre-installation chemical concentrations in surficial sediments located along the approved route.</p>	Empire will comply.	Not applicable to Part 1
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N6.	<p>The Certificate Holder shall establish a Fisheries Studies Working Group (FSWG) for the purposes of designing, conducting, and analyzing: (i) an appropriate study of the marine fish and invertebrates along the submarine export cable route prior to the commencement of construction; and (ii) an acoustic telemetry study of the potential AC Magnetic Frequency and thermal impacts associated with the operation of the submarine cables on behaviors and migratory patterns of commercially and ecologically important species along the submarine export cable route for (the Fisheries Studies). Because the as-built configurations and recording of operational current levels on the submarine export cables will allow accurate evaluation of magnetic and induced electric field levels at any time, location, and distance from the installed submarine export cables, the Certificate Holder will provide the EMF levels obtained for specific locations, days, and time of operation in conjunction with the above-referenced study to the researchers conducting the monitoring under the FSWG. The Fisheries Studies shall provide for monitoring of the composition of the pre- and post-construction nearshore fish community with a focus on species important to recreational and commercial fisheries along the submarine export cable route. A final Fisheries Studies Work Plan shall be included as part of the EM&CP for the applicable Segment. The Certificate Holder shall provide funding for five study years and provide at minimum one year, and a goal of two years of pre-construction data, one year of data during construction, and two years of data following Commercial Operation of the Project.</p>	Empire will comply.	Not applicable to Part 1
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a.	A draft Fisheries Study Work Plan shall be developed in consultation with a select group of qualified Subject Matter Experts ("SMEs") and scientists, which encourages use of technology and innovation as well as utilizing traditional methods as appropriate. The draft Fisheries Study Work Plan shall be presented to the FSWG for review and comment a minimum of 45 days prior to the final Fisheries Studies Work Plan being included as part of the EM&CP for the applicable Segment. The FSWG shall consist of representatives from the Certificate Holder, NYSDEC, DPS Staff, NYSDOS, LICFA, SMEs from certain marine science research institutions, and the fishing industry ("FSWG Members"). A list of the FSWG Members shall be included in the final Fisheries Studies Work Plan.	Empire will comply.	Not applicable to Part 1
b.	The Fisheries Studies will collect data on seasonal composition, abundance, migration patterns, and/or seasonality of fish stocks common to the area of submarine export cable route. Studies may focus on bait fish (e.g., Atlantic menhaden, sand lance, bay anchovy, Atlantic and blueback herring, alewife, mullet, and longfin squid), and certain other key species (e.g., winter flounder, striped bass, dogfish, skates, fluke, Atlantic cod, black sea bass and tautog. Studies specifically targeting Atlantic sturgeon may be conducted if deemed appropriate by the FSWG).	Empire will comply.	Not applicable to Part 1
c.	After one (1) year of data collection, the FSWG shall meet to discuss the collected data.	Empire will comply.	Not applicable to Part 1
d.	In all instances, the Fisheries Study data and reporting will be reviewed and analyzed by the Certificate Holder's SMEs, in consultation with the FSWG members. No more than six (6) months after the completion of two (2) years of post-construction Fisheries Studies data collection, a report analyzing the Fisheries Studies data ("Fisheries Studies Report") will be compiled by the SMEs, in consultation with the FSWG members. The FSWG shall meet to review the results of the Fisheries Studies Report and discuss potential mitigation measures. The Certificate Holder shall consider any mitigation measures proposed by the FSWG.	Empire will comply.	Not applicable to Part 1

e.	During the Fisheries Studies, the Certificate Holder shall also collect the following data: (i) temperature; (ii) salinity; and (iii) conductivity.	Empire will comply.	Not applicable to Part 1
N7.	The Certificate Holder shall make publicly available in raw form survey data collected during the Benthic and Fisheries pre- and post- energization studies and surveys. The AC Magnetic Field Study Report (Condition N1) will be filed with the Commission's Secretary and be publicly available on the Commission's website for this docket.	Empire will comply.	Not applicable to Part 1
O. ONSHORE EROSION AND SOIL HANDLING			
O1.	Prior to Commencement of Construction, the Certificate Holder shall install erosion and sediment control practices as indicated in any applicable EM&CP and any stormwater and erosion control plans. Installed erosion and sediment control practices shall be inspected daily and promptly repaired, where necessary in areas of active construction. In areas without active construction, where temporary stabilization measures have been applied to all disturbed areas, erosion and sediment control practices shall be inspected weekly and promptly repaired, where necessary, if permanent stabilization has not been achieved. All erosion and sediment control practices shall be designed and installed per the "New York State Standards and Specifications for Erosion and Sediment Control" and shall be inspected and maintained in accordance with the requirements of the SPDES General Permit in effect at the time of construction.	Empire will comply.	Section 4.2.2.1; Appendix I (SWPPP); Appendix A (Onshore Plan and Profiles)
O2.	To the extent available, all erosion control fabric or netting used for slope or soil stabilization will be 100 percent biodegradable natural product (not photodegradable fabric), excluding geotextiles used for road construction and temporary erosion control devices such as silt fence and silt sock.	Empire will comply.	Appendix I (SWPPP)
O3.	The Certificate Holder shall comply with the following debris and fill requirements:	Empire will comply.	N/A

a.	Any debris or excess construction materials shall be removed to a facility duly authorized to receive such material. No burying or burning of construction debris or excess construction materials will be allowed.	Empire will comply.	Section 4.3.2
b.	Except where required to comply with the design specifications, to restore roadway and shoulder surfaces, and to reuse suitable excavated materials, all fill shall consist of clean soil, sand, crushed concrete aggregate ("CCA"), and/or gravel that is free of the following substances: asphalt, slag, broken concrete, rebar, demolition debris, garbage, household refuse, tires, woody materials including tree or landscape debris, and metal objects. Best efforts will be made use fill materials that are visually free of invasive species as outlined in Appendix H ("Invasive Species Plan Specifications").	Empire will comply.	Section 4.3.2; Appendix W (Invasive Species Management Plan)
O4.	The Certificate Holder shall prepare a "Geotechnical Site Investigation Report," to be included in the EM&CP for the applicable Segment, verifying subsurface conditions for the approved onshore facilities.	Empire will comply.	Appendix U (Geotechnical Engineering Report)
O5.	Soil and sediment control measures will be implemented early in the construction process and be installed prior to and maintained in acceptable condition for the duration from any clearing or earthmoving operations through to the permanent stabilization of the soil. Erosion and sediment control devices shall be installed in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, the approved EM&CP, the SWPPP, permit conditions, regulatory approvals, and as otherwise necessary or directed by the Environmental Monitor to prevent adverse impacts to environmentally sensitive areas.	Empire will comply.	Section 5.3.2
O6.	The Certificate Holder will develop a stormwater management plan to preserve the existing pre-development drainage patterns to the maximum extent possible. Stormwater Management Practice ("SMP") shall be implemented to comply with the NYCDEP requirements.	Empire will comply.	Not applicable to Part 1

**P. WATER
RESOURCES**

P1.	Except as otherwise permitted in the Certificate or EM&CP, no construction activities shall occur within any regulated wetlands, including tidal and freshwater wetlands and regulated adjacent areas, and no construction materials, equipment, or vehicles shall be allowed to enter upon such wetlands.	Empire will comply.	Appendix V (Wetlands Impact Minimization and Mitigation Plan)
P2.	Jurisdictional waterbodies and wetlands will be referred to herein as "wetlands and waterbodies" and the "regulated adjacent areas" shall mean (i) the 100-foot adjacent area associated with State jurisdictional Article 24 Freshwater Wetlands, and (ii) the 150-foot (or less due to the presence of a qualifying structure[s] as defined by 6 NYCRR Part 661) adjacent area associated with State jurisdictional Article 25 Tidal Wetlands. When the terms are used together, they will be listed as "wetlands and waterbodies and/or regulated adjacent areas."	Empire will comply.	Appendix V (Wetlands Impact Minimization and Mitigation Plan)
P3.	The Certificate Holder shall perform all construction, operation, and maintenance activities along the onshore interconnection cable route in a manner that avoids or minimizes adverse impacts to waterbodies, wetlands, and/or regulated adjacent areas. Any such activities shall be performed in accordance with a Wetland Impact Minimization and Mitigation Plan to be included in the EM&CP for the applicable Segment.	Empire will comply.	Appendix V (Wetlands Impact Minimization and Mitigation Plan)
P4.	The Certificate Holder shall notify DPS Staff, NYSDOS and NYSDEC within two (2) hours of observing or being made aware of a discharge to a wetland or waterbody by the Certificate Holder or a contractor of the Certificate Holder resulting in a violation of NYS Water Quality Standards, or as described in the Suspended Sediment and Water Quality Monitoring Plan in the EM&CP for the applicable Segment per Condition U4. For each occurrence of discharge to a wetland or waterbody, the Certificate Holder shall provide a follow-up report via email to DPS Staff, NYSDOS and NYSDEC that includes a written description of the occurrence,	Empire will comply.	Appendix V (Wetlands Impact Minimization and Mitigation Plan)

	photographs, and a summary of the corrective or remedial actions taken.		
P5.	The Certificate Holder shall take all necessary precautions to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate, washings from transit mix trucks, mixers, or other devices or any other environmentally deleterious materials associated with the Project. If required, concrete batch plant operations and concrete washout areas shall be located a minimum of one hundred and fifty (150) ft away from any wetland or waterbody.	Empire will comply.	Appendix V (Wetlands Impact Minimization and Mitigation Plan)
a.	If concrete batch plant operation(s) are required, the location(s), site plans and appropriate measures for avoiding adverse impacts, restoring sites upon project completion, and complying with local code requirements will be included in the EM&CP.	Empire will comply.	Appendix V (Wetlands Impact Minimization and Mitigation Plan)
P6.	Except as detailed in the EM&CP, the Certificate Holder shall secure and safely contain all equipment and machinery more than one hundred (100) ft landward of any freshwater wetlands and one hundred and fifty (150) ft from tidal wetlands, at the end of each work day, unless moving the equipment will cause additional environmental impact. Storage of materials that do not contain potential contaminants are allowed within these areas.	Empire will comply.	Appendix V (Wetlands Impact Minimization and Mitigation Plan)

P7.	Except as detailed in the EM&CP, all mobile equipment, excluding dewatering pumps, must be fueled, repaired, or maintained in a location at least one hundred (100) ft from freshwater wetlands and one hundred and fifty (150) ft from tidal wetlands, to the maximum extent practicable or unless moving the equipment will cause additional environmental impact. Dewatering pumps operated closer than one hundred (100) ft from the freshwater wetlands or within one hundred and fifty (150) ft from tidal wetlands, must be within secondary containment large enough to hold the pump and accommodate refueling. Requirements for refueling within one hundred (100) ft of freshwater wetlands or within one hundred and fifty (150) ft from tidal wetlands will be allowed under certain circumstances as identified in the EM&CP.	Empire will comply.	Appendix V (Wetlands Impact Minimization and Mitigation Plan)
a.	Refueling of handheld equipment will be allowed within one hundred (100) ft of freshwater wetlands or one hundred and fifty (150) ft from tidal wetlands when secondary containment is used. Secondary containment will be constructed of an impervious material capable of holding the handheld equipment to be refueled and at least 110 percent of the fuel storage container capacity. Fuel tanks of handheld equipment will be initially filled in an upland location greater than one hundred (100) ft from freshwater wetlands or one hundred and fifty (150) ft from tidal wetlands in order to minimize the amount of refueling within these sensitive areas. Crews will have sufficient spill containment equipment on hand at the secondary containment location and shall use such equipment to provide prompt control and cleanup in the event of a release. Absorbent pads or portable basins will be deployed under the refueling operation.	Empire will comply.	Appendix V (Wetlands Impact Minimization and Mitigation Plan)

b.	Refueling of equipment that is not handheld equipment will be allowed within one hundred (100) ft of freshwater wetlands or one hundred and fifty (150) ft from tidal wetlands when necessary to maintain continuous operations and where removing equipment from a sensitive area for refueling would increase adverse impacts to the sensitive area. Fuel tanks of such equipment will be initially filled in an upland location greater than one hundred (100) ft from freshwater wetlands or one hundred and fifty (150) ft from tidal wetlands in order to minimize the amount of refueling within these sensitive areas. All refueling of equipment within one hundred (100) ft of freshwater wetlands or one hundred and fifty (150) ft from tidal wetlands will be conducted under the direct supervision of the environmental monitor. Prior to any refueling that occurs within one hundred (100) ft of freshwater wetlands or one hundred and fifty (150) ft from tidal wetlands, absorbent pads or portable basins will be deployed under the refueling operation. In addition, the fuel nozzle will be wrapped in an absorbent pad and the nozzle will be placed in a secondary containment vessel (e.g., bucket) when moving the nozzle from the fuel truck to the equipment to be refueled. All equipment operating within one hundred (100) ft of freshwater wetlands or one hundred and fifty (150) ft from tidal wetlands will have sufficient spill containment equipment on board and shall use such equipment to provide prompt control and cleanup in the event of a release.	Empire will comply.	Appendix V (Wetlands Impact Minimization and Mitigation Plan)
P8.	The Certificate Holder shall submit an Onshore Dewatering Plan in the EM&CP for DPS, NYSDEC staff, and NYCDEP review and comment. The Onshore Dewatering Plan must address all onshore temporary dewatering operations associated with installation of the transmission cable, substation, and appurtenant structures. All dewatering operations shall comply with the following conditions:	Empire will comply.	Appendix P (Dewatering Plan)
a.	Dewatering operations must be conducted as specified in the Certificate Holder's Onshore Dewatering Plan in the EM&CP for the applicable Segment;	Empire will comply.	Appendix P (Dewatering Plan)

c.	In consultation with NYSDEC Staff, groundwater baseline sampling will occur prior to the start of construction at representative locations where excavations are anticipated to extend below the groundwater table to identify potential groundwater contamination that may require testing, treatment, or disposal during construction. The testing, treatment, baseline sampling, and/or disposal practices, as necessary, will be addressed in the Certificate Holder's Onshore Dewatering Plan;	Empire will comply.	Appendix P (Dewatering Plan)
d.	Water generated from dewatering operations that exceeds NYSDEC standards, criteria, or guidance values, or more stringent applicable levels of other authorities or agencies in effect at the time of dewatering operations must be treated and disposed of in compliance with the approved Onshore Dewatering Plan and/or SPDES permit issued by NYSDEC; and	Empire will comply.	Appendix P (Dewatering Plan)
f.	Water resulting from dewatering operations shall not be directly discharged into any wetland or waterbody, except in accordance with an approved SPDES permit if required.	Empire will comply.	Appendix P (Dewatering Plan)
g.	Where any effluent from dewatering operations will be discharged into the sewer system, the Certificate Holder will provide advance notice to NYCDEP, including the timing and expected amount of effluent to be discharged. In the event NYCDEP seeks additional information regarding such discharges, the Certificate Holder shall timely respond to such requests. The Certificate Holder may discharge effluent from dewatering operations into the sewer system only during construction, and only during periods when there is no precipitation occurring or forecast to occur within 24 hours.	Empire will comply.	Appendix P (Dewatering Plan)
h.	Dewatering operations involving water withdrawal from one or more dewatering wells on a single property with a total capacity in excess of 45 gallons per minute ("gpm") or 64,800 gallons per day ("gpd"), will be conducted in compliance with the substantive requirements of 6 NYCRR Part 602.	Empire will comply.	Appendix P (Dewatering Plan)

P9.	All sampling, disposal, and construction activities must be performed in a manner consistent with NYSDEC standards, criteria, or guidance in effect at the time of such activities.	Empire will comply.	Section 3.2
P10.	The Certificate Holder shall inform the USACE and NYSDOS of any changes in the design of the Project that have the potential to impact any USACE-issued permit or authorization and shall file a copy of such correspondence with the Secretary.	Empire will comply.	Section 6.1
P11.	Equipment or machinery shall not be washed in any regulated wetland or adjacent area, and runoff resulting from washing operations or other construction activities shall not be permitted to directly enter any wetland or waterbody.	Empire will comply.	Section 5.7.2
Q. CULTURAL RESOURCES			
Q1.	The Certificate Holder shall not undertake construction in previously undisturbed areas where archeological surveys have not been completed until such time as the appropriate authorities, including OPRHP, and DPS Staff, have reviewed the results of any historic properties and archeological surveys that are required.	Empire will comply.	Section 5.2.2
Q2.	Should archeological materials be encountered during onshore construction, and continuing construction in the immediate vicinity (within fifty [50] ft) would be incompatible with the objective of preserving the quality and integrity of the resource, the Certificate Holder shall stabilize the area and cease all ground-disturbing activities in the immediate vicinity (within 50 ft) of the find and protect the find from further damage. The restricted areas would extend from the maximum discernable limit of the archaeological resource. The only earth-moving activities that may occur within the restricted areas prior to notifications are those necessary for immediate stabilization of the exposed archaeological feature or deposit. The Certificate Holder shall flag, fence off, or securely cover with steel plates the archaeological discovery location and take reasonable measures to ensure site security. If unanticipated archaeological discoveries occur during offshore construction, the Certificate Holder shall stop work in the immediate vicinity (one	Empire will comply.	Section 5.2.2

	<p>hundred fifty [150] ft) and consult a qualified marine archaeologist to assist in determining the origin of any finds and immediate measures, if appropriate and feasible, to stabilize the archaeological resource. Within twenty-four (24) hours of such onshore or offshore discovery, the Certificate Holder shall notify and consult with DPS Staff and OPRHP to determine the best course of action. Any discovery made on a weekend (from 5pm on Friday to 9am on Monday) or state holiday will be protected until DPS Staff and OPRHP are notified of the discovery. No construction activities shall be permitted in the vicinity of the find until such time as the significance of the resource has been evaluated by OPRHP and the need for and scope of impact mitigation has been determined by DPS Staff in consultation with OPRHP and the Certificate Holder. The Certificate Holder may engage qualified archaeologists to assist in preliminary visual assessments and documentation, consultations with OPRHP and DPS Staff, and development of appropriate treatment/mitigation measures.</p>		
Q3.	<p>Should human remains or evidence of human burials be encountered during the conduct of archeological data recovery fieldwork or during construction, all work in the immediate vicinity (within fifty [50] ft) of the find shall be halted immediately for the remains to be protected from further disturbance. Immediately upon any such discovery, the Certificate Holder shall notify and consult with DPS Staff and OPRHP. The Certificate Holder shall ensure that treatment of human remains is done in accordance with the OPRHP's Human Remains Discovery Protocol (dated August 2018).</p>	Empire will comply.	Section 5.2.2
Q4.	<p>The Certificate Holder shall ensure that all archaeological or remains-related encounters and their handling are reported in the status reports summarizing construction activities.</p>	Empire will comply.	Section 5.2.2

Q5.	The Certificate Holder shall have a continuing obligation during construction to respond promptly (within seventy-two [72] hours) to complaints of negative archeological impacts from New York State agencies or the public and, if necessary, to mitigate any actual impacts through on-site design modifications and off-site mitigation techniques in accordance with the Marine Archeological Resources Treatment Plan and Unanticipated Discoveries Plan developed in consultation with OPRHP as required in the federal Construction and Operations Plan ("COP") approval for the Project.	Empire will comply.	Section 5.2.2; Appendix R (Unanticipated Discoveries of Cultural Resources and Human Remains)
R. TERRESTRIAL AND WILDLIFE RESOURCES			
R1.	The Certificate Holder shall refer to 6 NYCRR Part 182 and http://www.dec.ny.gov/animals/7494.html for lists of New York State threatened and endangered ("T&E") animal species and with 6 NYCRR Part 193 for New York State T&E plant species. Prior to the commencement of construction of the onshore Project, the Certificate Holder will provide all workers with pertinent information on potential T&E species in the Project Area.	Empire will comply.	Section 5.8.1
R2.	If any T&E animal or plant species, or associated habitat are directly or incidentally observed from the onshore Project construction corridor, access roads, laydown yards, staging areas, and any other areas where Project activities authorized in this Certificate are conducted, the Certificate Holder shall immediately notify the Environmental Monitor to determine the appropriate actions, if any, to protect the identified species or its potentially occupied habitat from immediate harm, and shall also notify DPS Staff and NYSDEC within twenty-four (24) hours.	Empire will comply.	Section 5.8.1
R3.	To protect such T&E species or its habitat from immediate harm from construction activities, the Certificate Holder shall secure the area where access rights exist and safely cease construction in that area until DPS Staff, in consultation with NYSDEC authorizes recommencement of activities. Prior to the recommencement of construction in the secured area, the Certificate Holder shall	Empire will comply.	Section 5.8.1

	provide all workers with pertinent information on the species encountered and indicate measures to minimize risks to the T&E species during construction.		
R4.	During construction, restoration, operation and maintenance of the Facility and associated facilities, the Certificate Holder shall maintain a record of all observations T&E species as follows:	Empire will comply.	Section 5.8.1
a.	Construction. During construction, the on-site Environmental Monitor shall be responsible for recording all occurrences of Federal and NYS threatened or endangered species within the Project construction corridor. All occurrences shall be reported in a biweekly monitoring report submitted to the DPS Staff and NYSDEC and such reports shall include the information described in subparagraph (c) of this paragraph. If a NYS threatened or endangered bird species is demonstrating breeding or roosting behavior, it shall be reported to the DPS Staff and NYSDEC within twenty-four (24) hours (or as soon as possible, in the event that more than 24 hours are needed to compile the required details for such reports/notifications).	Empire will comply.	Section 5.8.1
b.	Post-Construction Restoration. After construction is complete, incidental observations of any NYS threatened or endangered species shall be documented and reported to the DPS Staff and NYSDEC, in accordance with the reporting requirements in subparagraph (c) of this paragraph.	Empire will comply.	Section 5.8.1
c.	Reporting Requirements. All reports of NYS and/or federally threatened or endangered species shall include the following information: species; number of individuals; age and sex of individuals (if known); observation date(s) and time(s); Global Positioning System ("GPS") coordinates of each individual observed (if operation and maintenance staff do not have GPS available; the report shall specify the nearest road or cross roads location); behavior(s) observed; identification and contact	Empire will comply.	Section 5.8.1

information of the observer(s); and the nature of and distance to any Project construction, maintenance or restoration activity.

R5.	If any work results in or is likely to result in an incidental take of a T&E species as defined in ECL § 11-0535 and 6 NYCRR Part 182, the Certificate Holder must stop work where the take occurred or is likely to occur ("Stop Work Area"), notify the Environmental Monitor, and must submit an Endangered or Threatened Species Mitigation Plan and Implementation Agreement ("T&E Plan/Agreement") demonstrating proposed mitigation measures that will result in a Net Conservation Benefit to that species. Such T&E Plan/Agreement must be prepared in accordance with ECL § 11-0535 and 6 NYCRR Part 182. Work must not recommence in the Stop Work Area until the T&E Plan/Agreement is developed in consultation with and accepted by NYSDEC and such T&E Plan/Agreement is implemented.	Empire will comply.	Section 5.8.1
R6.	For bald eagles, an area at least 660 ft in radius with a visual buffer, or 1/4 mile with no visual buffer, around the active nest or roost shall be posted and avoided until notice to continue construction, ground clearing, grading, maintenance, or restoration activities are granted by DPS Staff and NYSDEC. The active nest(s) or nest tree(s) or roost(s) shall not be approached under any circumstances unless authorized by DPS Staff and NYSDEC.	Empire will comply.	Section 5.8.1

S. INVASIVE SPECIES

S1.	The Certificate Holder shall prepare an Invasive Species Control and Management Plan in accordance with the applicable requirements of ECL Article 9 and 6 NYCRR Part 575 and 6 NYCRR Part 663. Forty-five (45) days prior to filing the EM&CP for the applicable Segment, the Certificate Holder shall submit the Invasive Species Control and Management Plan to DPS Staff and NYSDEC, for review and comment. The Certificate Holder shall file said Invasive Species Control and Management Plan as part of the EM&CP for the applicable Segment. The Invasive Species Control and Management Plan shall be developed in accordance with the Invasive Species Control and Management Plan Specifications, which are attached as Appendix H of the Joint Proposal.	Empire will comply.	Appendix W (Invasive Species Management Plan)
S2.	To minimize the risk of introducing invasive species, use of hay is strictly prohibited.	Empire will comply.	Section 5.11.2

T. MARINE RESOURCES

T1.	The Certificate Holder must comply with Bureau of Ocean Energy Management (BOEM) and National Oceanic and Atmospheric Administration (NOAA) requirements for noise mitigation for protected species in New York State waters as required in the federal COP approval and Incidental Take Authorization issued for the EW1 Project.	Empire will comply.	Not applicable to Part 1
T2.	The Certificate Holder must comply with NOAA and BOEM requirements for protected species mitigation, monitoring and reporting as detailed in the federal COP approval and Incidental Take Authorization issued for the EW1 Project. All protected species reports submitted to BOEM and NOAA will be copied to NYSDEC.	Empire will comply.	Not applicable to Part 1
T3.	Sightings of North Atlantic Right whales must be reported as soon as possible, but no later than 24 hours, to NOAA.	Empire will comply.	Not applicable to Part 1

U. WATER QUALITY

U1.	Water quality standards set forth in 6 NYCRR Parts 701, 702, 703 and 704, and sections 301, 302, 303, 306, and 307 of the federal Clean Water Act (see 33 USC §§ 1311, 1312, 1313, 1313a, and 1317) shall not be contravened. Issuance of a Water Quality Certification also implies compliance with standards assuming that conditions placed in the certification are complied with.	Empire will comply.	N/A
U2.	Limits for TSS, turbidity and water quality standards for other chemical parameters must be achieved at the defined mixing zone distance, down current (based on tide direction) of sediment disturbing activities. The mixing zone distances shall be defined as follows:	Empire will comply.	Not applicable to Part 1
a.	For TSS and turbidity, the mixing zone shall be 1,500 ft for the portion of the submarine export cable route from approximately KP 15, as shown in mapping in Appendix B of the Joint Proposal, south to the limits of New York State waters;	Empire will comply.	Not applicable to Part 1
b.	For TSS and turbidity, the mixing zone shall be 500 ft for the portion of the submarine export cable route from approximately KP 15, as shown in mapping in Appendix B of the Joint Proposal, north to the cable landfall;	Empire will comply.	Not applicable to Part 1
c.	For dissolved arsenic, dissolved lead, dissolved copper, dissolved cadmium, total mercury, benzo(a)pyrene, DDT, DDE, DDD and Total PCBs the mixing zone shall be 500 ft. As detailed in Condition U4, monitoring for these constituents shall be conducted from approximately KP 15, as shown in mapping in Appendix B of the Joint Proposal, north to the cable landfall; and	Empire will comply.	Not applicable to Part 1
d.	The mixing zone distances along the submarine cable route will be restated in the Suspended Sediment and Water Quality Monitoring Plan, which must be prepared in accordance with the "Scope of Study: Suspended Sediment and Water Quality Monitoring" attached as Appendix B of the Joint Proposal.	Empire will comply.	Not applicable to Part 1

U3.	Water quality monitoring shall be conducted during dredging, dewatering of dredged material, barge decanting, pre-sweeping, pre-trenching, jet trenching activities, cable installation and maintenance and decommissioning activities (together, "Monitored Construction Activities") that involve disturbance of sediments in accordance with the Suspended Sediment and Water Quality Monitoring Plan. Monitoring shall also be conducted during pre-installation trials in accordance with Condition J12. Cable installation, maintenance and decommissioning activities that result in only minor disturbance of sediments, including: (i) anchor sweep; (ii) anchoring; (iii) placement of jack-up barge; (iv) hand jetting; (v) temporary cable lay without simultaneous burial; (vi) other activities as determined by DPS Staff, in consultation with NYSDEC, shall not require water quality monitoring.	Empire will comply.	Not applicable to Part 1
U4.	The Certificate Holder shall incorporate within the EM&CP for the applicable Segment and implement, a Suspended Sediment and Water Quality Monitoring Plan pertaining to offshore activities. The Certificate Holder must submit a Suspended Sediment and Water Quality Monitoring Plan for review and acceptance by DPS Staff, NYSDEC, and NYSDOS 45 days prior to the filing of the EM&CP for the applicable Segment. The Suspended Sediment and Water Quality Monitoring Plan must be prepared in accordance with the "Scope of Study: Suspended Sediment and Water Quality Monitoring" attached as Appendix I of the Joint Proposal. The Suspended Sediment and Water Quality Monitoring Plan must:	Empire will comply.	Not applicable to Part 1
a.	Specify sample location, depth of samples, frequency of sampling, and sampling during various tidal cycles;	Empire will comply.	Not applicable to Part 1
b.	Describe procedures for background sampling and monitoring during construction;	Empire will comply.	Not applicable to Part 1
c.	Include daily sampling during each tidal cycle;	Empire will comply.	Not applicable to Part 1
d.	Use an Acoustic Doppler Current Profiler, or similar technology, to locate the plume;	Empire will comply.	Not applicable to Part 1
e.	Require whole water samples in the vertical water column (from at least 3 depths – approximately 18 inches below the surface, at mid-	Empire will comply.	Not applicable to Part 1

	depth and at three ft above the bottom) at the edge of the applicable mixing zone;		
f.	Include an up-current transect outside the influence of Monitored Construction Activities;	Empire will comply.	Not applicable to Part 1
g.	Provide that prior to commencing maintenance and decommissioning activities, the Certificate Holder shall submit for NYSDEC review a water quality monitoring plan for activities that may require such monitoring;	Empire will comply.	Not applicable to Part 1
h.	Provide that during Monitored Construction Activities, the Certificate Holder will measure dissolved arsenic, dissolved lead, dissolved copper, dissolved cadmium, total mercury, benzo(a)pyrene, DDT, DDE, DDD, Total PCBs, and TSS, within the water column at a point outside the effects of the Monitored Construction Activities (the up-current background station) and at the transects down-current of the Monitored Construction Activities described in the Suspended Sediment and Water Quality Monitoring Plan. Metals shall be reported both as totals and as dissolved fractions, except mercury, which shall be reported as total mercury;	Empire will comply.	Not applicable to Part 1
i.	Dissolved arsenic, dissolved lead, dissolved copper, dissolved cadmium, total mercury, benzo(a)pyrene, DDT, DDE, DDD and Total PCBs shall only be measured during Monitored Construction Activities along the portion of the submarine export cable route from approximately KP 15, as shown in mapping in Appendix B of the Joint Proposal, north to the cable landfall.	Empire will comply.	Not applicable to Part 1
ii.	TSS (laboratory and field) and optical backscatter (OBS turbidity) shall be measured during Monitored Construction Activities along the entire submarine export cable route.	Empire will comply.	Not applicable to Part 1
i.	Identify a procedure whereby, if sampling results indicate consistent compliance with the monitoring standards, the Certificate Holder can submit a request in writing to DPS Staff and NYSDEC to reduce the sampling frequency;	Empire will comply.	Not applicable to Part 1

j.	Specify that TSS estimates in the field must be collected during daytime using appropriate instrumentation and by collecting water samples daily at various depths for laboratory analysis of TSS according to the methods and method detection limits identified in the Suspended Sediment and Water Quality Monitoring Plan;	Empire will comply.	Not applicable to Part 1
k.	Require that monitoring locations must be (i) at the edge of the applicable mixing zone defined in Condition U2, down current of any Monitored Construction Activities; and (ii) at a background/control station for monitoring ambient conditions, as defined in the Suspended Sediment and Water Quality Monitoring Plan, which will be up-current and out of the influence of the Monitored Construction Activities; and	Empire will comply.	Not applicable to Part 1
l.	Specify that, if Monitored Construction Activities resulting in sediment disturbance occur concurrently in multiple locations, each activity that may cause resuspension of bottom sediments must be monitored separately.	Empire will comply.	Not applicable to Part 1
U5.	A pre-activity water quality calibration will be conducted to ensure that TSS may be accurately estimated in the field during water quality monitoring activities. The pre-activity water quality calibration will be described in detail in the Suspended Sediment and Water Quality Monitoring Plan.	Empire will comply.	Not applicable to Part 1
U6.	The following conditions apply to TSS during sediment disturbing activities:	Empire will comply.	Not applicable to Part 1
a.	None from sewage, industrial waste or other wastes that will cause deposition or impair the waters for their best usages;	Empire will comply.	Not applicable to Part 1

b.	A TSS limit of 100 mg/L above ambient will be achieved at the mixing zone distance down current (based on tide direction) of sediment disturbing activities, wherever practicable operational controls can be implemented without compromising health and safety, the integrity of the cable, or the achievement of the Target Burial Depth. If, during Monitored Construction Activities, TSS concentrations estimated in the field at the edge of the mixing zone distance defined in Condition U2 exceed the up current background station by the TSS limit (100 mg/L), the Aquatic Environmental Monitor shall be notified, and the Certificate Holder's contractor shall be alerted to employ practicable operational controls to bring TSS levels back into compliance. Operational controls implemented to minimize exceedances of the TSS limit will not be implemented in such a manner that it will result in the material delay of the progress of work to complete the in-water installation during one construction season. The Certificate Holder shall not be required to reduce hydraulic jetting pressures to levels which would not allow burial to the Target Burial Depth specified in the EM&CP or other permits.	Empire will comply.	Not applicable to Part 1
U7.	Visual observations of turbidity caused by Monitored Construction Activities must be conducted to ensure compliance with the narrative water quality standard in 6 NYCRR § 703.2, which states, "No increase that will cause a substantial visible contrast to natural conditions."	Empire will comply.	Not applicable to Part 1
U8.	The concentrations of the constituents listed in the table below measured in the samples collected down-current of the sediment disturbance activities, at the edge of the applicable mixing zone, shall not exceed the greater of: (A) the levels set forth in the table below or (B) 1.3 times the highest ambient background level measured during the same sampling day at the up-current background station at the same depth as the down-current sample.	Empire will comply.	Not applicable to Part 1
a.	When a detection limit listed above is greater than the water quality standard, the water quality standard will be presumed to be	Empire will comply.	Not applicable to Part 1

	met when analytical results demonstrate compliance with the detection limit.		
U9.	All water quality analyses required by this Certificate must be conducted by a laboratory certified by the NYSDOH ELAP.	Empire will comply.	Not applicable to Part 1
U10.	The Certificate Holder shall use commercially reasonable efforts to request the most expedited turnaround time available for laboratory samples for locations along the submarine export cable route. Analytical results must be sent electronically to DPS Staff and NYSDEC within 48 hours of receipt from the laboratory. Exceedances must be highlighted.	Empire will comply.	Not applicable to Part 1
U11.	During Monitored Construction Activities, if the TSS limit or any water quality standards are exceeded at the edge of the mixing zone, the Certificate Holder will notify DPS Staff and NYSDEC. The Certificate Holder will implement practicable operational modifications to reduce in-situ sediment re-suspension as described in Condition U6(b) when the TSS limit is exceeded. If modifications do not restore compliance with the TSS limit and/or any water quality standard, the Certificate Holder shall consult with DPS staff and NYSDEC regarding an acceptable solution; nothing in this Condition shall result in a material delay of progress of work to complete the in-water installation during one construction season.	Empire will comply.	Not applicable to Part 1
U12.	Within four months of the completion of the submarine export cable installation, the Certificate Holder must file with the Secretary an analysis comparing the actual water quality monitoring results obtained during installation with any model predictions previously provided in support of the Project.	Empire will comply.	Not applicable to Part 1
U13.	Within four months of completion of dredging, the Certificate Holder shall file with the Secretary a "Dredging and Water Quality Monitoring Report" report summarizing the results of dredging, associated water quality monitoring, and dredged material management operations. The report must include:	Empire will comply.	Not applicable to Part 1
a.	Location and extent of dredging;	Empire will comply.	Not applicable to Part 1
b.	Total amount of material dredged;	Empire will comply.	Not applicable to Part 1

c.	Ultimate placement location of dredged material;	Empire will comply.	Not applicable to Part 1
d.	Description of problems or difficulties encountered during dredging;	Empire will comply.	Not applicable to Part 1
e.	Water quality monitoring results and corrective actions (when needed) taken.	Empire will comply.	Not applicable to Part 1
U14.	Certificate Holder shall comply with any conditions contained in a Water Quality Certification issued pursuant to Section 401 of the Federal Clean Water Act, a draft of which is set forth in Appendix F.	Empire will comply.	Not applicable to Part 1

V. HANDLING OF PETROLEUM AND HAZARDOUS SUBSTANCES

V1.	Stationary fuel tanks and hazardous chemical storage must be appropriately contained and shall be located a minimum of 150 ft from streams, waterbodies and wetlands, and chemicals and petroleum products will not be stored, mixed, or loaded within one hundred and fifty (150) ft from streams, waterbodies and wetlands, unless: (i) the EM&CP provides justification, including that impacts have been avoided or minimized to the maximum extent practicable; or (ii) adequate secondary containment (containing at least 110 percent of the volume stored), as identified in the EM&CP, is otherwise provided, in which case storage can occur within 150 ft of such resources.	Empire will comply.	Section 4.2.1
V2.	Uncontaminated drill cuttings and drilling muds from drilling processes which utilize only air, water, or water-based drilling fluids are considered construction and demolition debris under 6 NYCRR Part 360 (Solid Waste) and can be disposed of at either construction and demolition debris landfills or at municipal solid waste (MSW) landfills. Drill cuttings from drilling processes that utilize polymer-based mud containing mineral oil lubricant are considered contaminated and can only be disposed of at MSW landfills. Dewatered drilling muds including polymer-based mud	Empire will comply.	Section 4.3.2

	containing mineral oil lubricant can only be disposed of at MSW landfills.		
V3.	The Certificate Holder shall comply with the following spill requirements:	Empire will comply.	N/A
a.	A Spill Prevention, Control, and Countermeasure (SPCC) Plan to minimize the potential for unintended releases of petroleum and other hazardous chemicals during Project construction and operation shall be included in the EM&CP;	Empire will comply.	Appendix N (SPCC)
b.	All non-passenger vehicles must be equipped with a spill kit that is appropriate for the volume of fuel carried by the vehicle. Any leaks must be stopped and cleaned up immediately;	Empire will comply.	Appendix N (SPCC)
c.	Spillage of fuels, waste oils, other petroleum products or hazardous materials shall be reported to NYSDEC's Spill Hotline (1-800-457-7362) within 2 hours, in accordance with the NYSDEC Spill Reporting and Initial Notification Requirements Technical Field Guidance (http://www.dec.ny.gov/docs/remediation_hudson_pdf/1x1.pdf); and	Empire will comply.	Appendix N (SPCC)
d.	The Certificate Holder shall report all spills meeting the NYSDEC spill reporting criteria, regardless of whether it is the spiller, to both the NYSDEC Spill Hotline and DPS Staff, in accordance with all federal and State regulations, and provide a copy of such notification contemporaneously to the NYCDEP and affected property owner.	Empire will comply.	Appendix N (SPCC)
W. VEGETATION MANAGEMENT and HERBICIDE, FUNGICIDE, AND PESTICIDE USE			
W1.	The Certificate Holder shall prepare an O&M Plan as part of the EM&CP for the applicable Segment. Such O&M Plan shall include a plan for vegetation management. Forty-five days prior to filing the EM&CP for the applicable Segment, the Certificate Holder shall	Empire will comply.	Not applicable to Part 1

	submit the O&M Plan to DPS Staff and NYSDEC for review and comment.		
W2.	The Certificate Holder shall use best efforts to maximize the use of mechanical vegetation management techniques, and where necessary, shall only use the organic pesticides, fungicides, and herbicides specified in the EM&CP. If the Certificate Holder desires a change to the organic pesticides, herbicides, and fungicides specified in the EM&CP, including mix proportions, additives (with the exception of dyes), or method of application, the Certificate Holder shall submit the proposed change for approval pursuant to CC C6. No change inconsistent with the labeling for such pesticides, herbicides, fungicides shall be approved.	Empire will comply.	Not applicable to Part 1
W3.	The Certificate Holder shall comply with the currently effective NYSDEC general permit for vegetation maintenance for pesticide applications in regulated wetlands and adjacent areas, if available. If no NYSDEC general permit is available for vegetation maintenance for the geographical area or type of wetland resource, the Certificate Holder shall apply for an individual permit to apply pesticides in regulated wetlands and adjacent areas.	Empire will comply.	Appendix V (Wetlands Impact Minimization and Mitigation Plan)
W4.	The supervising certified applicator shall be certified in accordance with all applicable NYS laws and shall be familiar with and understand the applicable provisions of this Certificate and the most recent version of the Certificate Holder's O&M Plan.	Empire will comply.	Not applicable to Part 1
W5.	Unless described otherwise in the EM&CP, all trees over four (4) inches in diameter (measured four (4) ft above ground) or shrubs over four (4) ft in height damaged or destroyed by the Certificate Holder's activities during construction, operation, or maintenance, regardless of where located, shall be replaced by the Certificate Holder with the equivalent type trees or shrubs, subject to the provisions of 6 NYCRR Part 575, Prohibited and Regulated Invasive Species, except where:	Empire will comply.	Not applicable to Part 1

a.	equivalent-type replacement trees or shrubs would interfere with the proper clearing, construction, operation, or maintenance of the Project;	Empire will comply.	Not applicable to Part 1
b.	replacement would be contrary to sound ROW management practices or to any approved O&M Plan applicable to the Project; or	Empire will comply.	Not applicable to Part 1
c.	a property owner on whose land the damaged or destroyed trees or shrubs were located, or other recorded easement or license holder with the right to control replacement, declines replacement.	Empire will comply.	Not applicable to Part 1
W6.	Clearing of natural vegetation shall be limited to the Commission-accepted O&M Plan and vegetation that poses a hazard or hindrance to construction activity and/or operation.	Empire will comply.	Not applicable to Part 1
W7.	Application of herbicides shall conform to all label instructions and all applicable federal and state laws and regulations. Applicators shall reference the EM&CP to identify treatment areas, and wetland and adjacent area boundaries, prior to treating. Applications required in seasonally flooded freshwater wetlands shall be undertaken during a dry season.	Empire will comply.	Appendix V (Wetlands Impact Minimization and Mitigation Plan)
X. RESTORATION			
X1.	The Certificate Holder, where necessary, shall negotiate for additional temporary easements for construction purposes as identified in the EM&CP and approved by the Commission. Any temporary easement or construction areas not identified in the approved EM&CP may be requested through changes thereto. Unless otherwise specified in the EM&CP, Certificate Holder shall, following restoration, let the temporary construction area revegetate naturally or return to its original land use to the extent that it does not interfere with the inspection, operation, or maintenance of the utility facilities. Except where otherwise specified in the EM&CP, stem-specific removal of trees or side trimming shall be conducted in accordance with long-range ROW management plans, real property rights of the City, and provisions of any and all host community agreements, easements, leases, and/or license agreements.	Empire will comply.	Section 4.2.7

**Y. EM&CP
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Y1.	The Certificate Holder shall not undertake Commencement of Construction for any Segment of the Project before the Certificate Holder has submitted to the Commission and the Commission has approved, an EM&CP for that Segment.	Empire will comply.	N/A
Y2.	The EM&CP shall be prepared in accordance with the terms of the Certificate for the construction, operation, and maintenance of the Project. Provisions of the Certificate, EM&CP, and orders approving the EM&CP, shall be incorporated in any design, construction, and maintenance associated with the Project. The Certificate Holder shall provide the following details in the EM&CP, where applicable to the EM&CP Segment:	Empire will comply.	N/A
a.	The delineation of certified ROW and additional work areas to which Certificate Holder shall confine construction and subsequent maintenance activities, depicting property rights, clearing rights, access rights, and such other matters as appropriate to address the site and environmental conditions and property interests of affected landowners, and relevant conditions and requirements of the EM&CP. The delineation shall include the specific location and acreage of all needed real property or real property rights.	Empire will comply.	Appendix A (Onshore Plan and Profile Drawings)
b.	Details of street work, after prior consultation with the City, including provisions for minimizing the duration and extent of open excavation, traffic disruptions, and work within and adjoining public streets and ROWs;	Empire will comply.	Appendix A (Onshore Plan and Profile Drawings); Appendix M (Traffic Management Plan)
c.	Drawings delineating the locations for existing and proposed access roads. Proposed access road improvements shall be indicated, including measures for environmental impact minimization and access control; and	Empire will comply.	Appendix A (Onshore Plan and Profile Drawings)
d.	A TMP for all roadways directly affected by construction activities prepared in conformance with the MUTCD and NY State Supplement.	Empire will comply.	Appendix M (Traffic Management Plan)

Y3.	During the preparation of the EM&CP(s) and prior to Commencement of Construction, the Certificate Holder shall contact NYSDEC, NYS Natural Heritage Program, NYSDOS, NOAA, and United States Fish and Wildlife Service (USFWS) to check for any updates or changes of known T&E species or habitat, NYS Significant Coastal Fish and Wildlife Habitats, Recognized Ecological Complexes, or Significant Natural Communities in the Project Area.	Empire will comply.	Section 5.8; Appendix E (Permits and Agency Correspondence)
Y4.	The Certificate Holder shall prepare a detailed Soil Handling and Erosion Control Plan to be included in the SWPPP in the EM&CP for the applicable Segment. The Soil Handling and Erosion Control Plan shall include specifications for testing, stockpiling, reuse or removal from site, storage, erosion control, restoration, and compaction of backfill in trenches. Such plan shall be consistent with the acknowledged SPDES General Permit (SPDES General Permit) and SWPPP. The Certificate Holder shall develop the EM&CP for the applicable Segment in accordance with the SWPPP requirements in the SPDES General Permit in effect at the time of the filing of the EM&CP for the applicable Segment. The SWPPP shall include a schedule for necessary inspections at all control measure locations. The SWPPP shall be available at the construction site and available to the public upon five days written notice.	Empire will comply.	Appendix I (SWPPP)
Y5.	Prior to the approval of the EM&CP for the applicable Segment, the Certificate Holder shall file with the Secretary upon receipt: the Municipal Separate Storm Sewer (MS4) approval(s), 5-acre waiver (if necessary), and NYSDEC's letter of acknowledgement of the Notice of Intent for coverage under the SPDES General Permit. If any of the aforementioned documents require modification of the EM&CP, such modifications shall be filed with the Secretary prior to EM&CP approval. Notwithstanding the foregoing, if the MS4 approval has not been obtained by the Certificate Holder prior to the EM&CP for the applicable Segment being filed with the Secretary, the Certificate Holder shall file a draft SWPPP at the time it files the EM&CP for the applicable Segment with the Secretary.	Empire will comply.	Section 5.5.4

Y6.	The Certificate Holder shall include a Lighting Plan as part of the EM&CP for the applicable Segment, which shall include:	Empire will comply.	Not applicable to Part 1
a.	security lighting needs at the onshore substation and any exterior equipment storage yards;	Empire will comply.	Not applicable to Part 1
b.	plan and profile figures to demonstrate the lighting area needs and proposed lighting arrangement at the onshore substation and any exterior equipment storage yards;	Empire will comply.	Not applicable to Part 1
c.	a specification that lighting should be designed to provide safe working conditions at appropriate locations;	Empire will comply.	Not applicable to Part 1
d.	a specification that exterior lighting design shall be specified to avoid off-site lighting effects, by:	Empire will comply.	Not applicable to Part 1
i.	using task lighting only as needed and as appropriate to perform specific installation, maintenance, repair, or emergency-response tasks; task lighting shall be designed to be capable of manual or auto-shut off switch activation rather than motion detection; and	Empire will comply.	Not applicable to Part 1
ii.	requiring full cutoff fixtures, with no drop-down optical elements (that can spread illumination and create glare) for permanent exterior security lighting.	Empire will comply.	Not applicable to Part 1
e.	manufacturer's cut sheets of all proposed lighting fixtures shall be provided.	Empire will comply.	Not applicable to Part 1
Y7.	The EM&CP for the applicable Segment shall include details of proposed noise control features and design requirements of the onshore substation to comply with the substantive requirements of local regulations for operational noise at noise-sensitive receptor locations.	Empire will comply.	Not applicable to Part 1
Y8.	At least sixty (60) days prior to the start of construction, the Certificate Holder shall file with the Secretary the following:	Empire will comply.	Not applicable to Part 1
a.	Final drawings for the onshore substation, incorporating any changes to the design, including:	Empire will comply.	Not applicable to Part 1
i.	Location of all noise sources and receptors identified with Geographic Information Systems (GIS) coordinates and GIS files;	Empire will comply.	Not applicable to Part 1
ii.	Proposed grading and noise source heights and ground elevations;	Empire will comply.	Not applicable to Part 1

iii.	Site plan and elevation details of substation components as related to the location of all relevant noise sources (e.g., transformers, reactors, HVAC equipment, and emergency generators, if any);	Empire will comply.	Not applicable to Part 1
iv.	Identified mitigations, specifications, and appropriate clearances (e.g., for sound walls, barriers, enclosures);	Empire will comply.	Not applicable to Part 1
b.	Sound information from the manufacturers for all noise sources (e.g. transformers, reactors, HVAC equipment, emergency generators, if any).	Empire will comply.	Not applicable to Part 1
c.	Revised sound modeling with the final specifications of equipment selected for construction to demonstrate that the Project is modeled to meet limits contained in Section § 42-21 (Performance Standards Regulating Noise) (more specifically Sections 42-213 and 42-214) and § 24-232 of the New York City Zoning Resolution for properties or buildings existing as of the date the Certificate Order is issued as noted.	Empire will comply.	Not applicable to Part 1
d.	Final computer noise modeling and tonal evaluation shall be conducted in accordance with the Specifications for Computer Noise Modeling and Tonal Evaluation, Appendix J.	Empire will comply.	Not applicable to Part 1
Y9.	The EM&CP for the applicable Segment shall identify any water withdrawal activities that the Certificate Holder anticipates will be regulated pursuant to 6 NYCRR §§ 601.3 and 601.6, including dewatering directly from the excavation not meeting the exemption criteria pursuant to 6 NYCRR §§ 601.9(o). The EM&CP shall also provide the information outlined in 6 NYCRR § 601.10 for any such activities. Prior to commencement of such activities, DPS Staff, in consultation with NYSDEC, will determine whether to recommend that the Commission impose any conditions or restrictions on such activities. Such determination will be based on the substantive portions of the following regulations: 6 NYCRR §§ 601.11, 601.12, 601.16, 601.19, and 601.20.	Empire will comply.	
Y10.	The EM&CP for the applicable Segment shall identify the property locations, if any, where the Certificate Holder anticipates that it will install one or more wells to conduct temporary dewatering activity for the Project at a total withdrawal capacity of such well or wells	Empire will comply.	Appendix P (Dewatering Plan); Section 5.5.3.2

	on any one property in excess of 45 gpm (with capacity based on the capacity of the pumps to be installed, not on the contemplated draft). The EM&CP for the applicable Segment shall also provide the substantive information outlined in 6 NYCRR § 602.3(c)-(d) for any such activities. Prior to commencement of such activities, DPS Staff, in consultation with NYSDEC, will determine whether to recommend that the Commission impose any conditions or restrictions on such activities. Such determination will be based on the standards of issuance in ECL § 15-1527(4).		
Y11.	Certificate Holder shall provide an Onshore Dewatering Plan at least 45 days prior to filing the EM&CP for the applicable Segment to DPS Staff, NYSDEC, NYCDOT, and NYCDEP for review and comment. The Onshore Dewatering Plan shall be in compliance with any required SPDES permit issued by NYSDEC. The Onshore Dewatering Plan shall be filed with the EM&CP for the applicable Segment and include:	Empire will comply.	Appendix P (Dewatering Plan)
a.	groundwater sampling results from the Hazardous Waste and Petroleum Work Plan;	Empire will comply.	Appendix P (Dewatering Plan)
b.	evaluation of any known or suspected contaminated sites to determine if proposed dewatering operations will influence or draw in any contamination from the site, and the expected maximum concentrations of the contaminants;	Empire will comply.	Appendix P (Dewatering Plan)
c.	locations where dewatering will be required, including the anticipated depth of groundwater and the installation depth of the cable and vaults at those locations;	Empire will comply.	Appendix P (Dewatering Plan)
d.	method of dewatering, including the number and depth of the well points (if applicable);	Empire will comply.	Appendix P (Dewatering Plan)
e.	pump capacity, rate, and estimated daily pumpage and duration of dewatering for each location requiring dewatering;	Empire will comply.	Appendix P (Dewatering Plan)
f.	details on any dewatering operations involving water withdrawal from one or more dewatering wells on a single property with a total capacity in excess of 45 gallons per minute (gpm) or 64,800 gallons per day;	Empire will comply.	Appendix P (Dewatering Plan)

g.	if uncontaminated water from dewatering operations will be discharged to groundwater or surface water, include the following:	Empire will comply.	Appendix P (Dewatering Plan)
i.	a map showing proposed discharge location points;	Empire will comply.	Appendix P (Dewatering Plan)
ii.	if discharging to a storm drain or recharge basin, verify these systems are designed to handle the proposed rate for the duration of the discharge and the substantive requirements for all State, county, and City approvals are being met for such discharges;	Empire will comply.	Appendix P (Dewatering Plan)
iii.	if discharging to a storm drain, identify the ultimate surface water outfall location;	Empire will comply.	Appendix P (Dewatering Plan)
iv.	if discharging to an existing recharge basin or creating a new recharge basin, evaluate mounding effects to ensure that mounding does not adversely affect any surrounding properties and underground structures; and	Empire will comply.	Appendix P (Dewatering Plan)
v.	best management practices to prevent erosion and sedimentation from dewatering operations;	Empire will comply.	Appendix P (Dewatering Plan)
h.	maps of areas requiring dewatering with wells (if applicable);	Empire will comply.	Appendix P (Dewatering Plan)
i.	verification that dewatering operations conducted using wells are carried out by a well driller duly registered in accordance with ECL § 15-1525;	Empire will comply.	Appendix P (Dewatering Plan)
j.	effluent limits provided by NYSDEC based on applicable regulations, standards, criteria, and guidance values;	Empire will comply.	Appendix P (Dewatering Plan)
k.	treatment and disposal plan for contaminated water generated from the dewatering operations;	Empire will comply.	Appendix P (Dewatering Plan)
l.	sampling plan that will be followed during dewatering operations of influent and effluent; and	Empire will comply.	Appendix P (Dewatering Plan)
m.	sampling plan that will be followed in the event dewatering is required in locations that were not anticipated.	Empire will comply.	Appendix P (Dewatering Plan)
Y12.	The EM&CP shall address, as applicable for the EM&CP Segment, but shall not be limited to, the following information:	Empire will comply.	N/A

a.	a construction schedule detailing work activities and allowable work windows, which shall be provided to DPS Staff, NYSDEC, NYSDOT, NYSDOS, NYCDEP, NYCDOT, NYCSBS, New York Police Department, and LICFA, at least forty-five (45) days prior to filing the EM&CP for review and comment;	Empire will comply.	Section 1.4
b.	detail on pre-installation activities, including any proposed pre-sweeping, prior to submarine export cable installation. The EM&CP shall describe how the Certificate Holder has avoided or minimized pre-sweeping (sandwave leveling), especially in areas with contaminated sediments, with the submarine cable export cable route. The Certificate Holder will describe further measures minimize pre-sweeping during submarine export cable installation, for example, by micro-siting; reducing the disturbance corridor by adjusting the equipment power, pressure, progress speed, and height above seabed; and/or undertaking pre-installation trials to calibrate. The Certificate Holder shall provide this information to DPS Staff, NYSDEC and NYSDOS at least forty-five (45) days prior to the filing of the EM&CP for review and comment;	Empire will comply.	Not applicable to Part 1
c.	cable burial techniques and adjustments, including a detailed graphical representation of anticipated minimum and maximum achievable burial depths based on sediment conditions (e.g., sediment densities, shear strengths, and other limiting factors) at 100-ft intervals along the submarine export cable route, and written evaluation of the likelihood of achieving target burial depths based on the results of the study; and a quantitative CBRA that analyses of risks to the cable and coastal users along the submarine export cable route and adjustments to deeper cable burial depths as warranted based upon risk assessment and geotechnical conditions. The Certificate Holder shall also include a written evaluation of the efficacy of alternative cable protection measures that may be required along the submarine export cable route and justification for why the selected cable protection method is preferred at each site. The analysis shall: (i) include, to the extent available, technical documentation from cable protection manufacturers; and (ii) evaluate a range of cable	Empire will comply.	Not applicable to Part 1

	protection measures (e.g., concrete mattresses with taper edges, dagger boards, self-burying, crushed rock, and rock bags or other appropriate protection method[s]) with respect to their ability to maintain overtrawlability, minimize shifting over time, and avoid creating a discernable berm on the seafloor. The Certificate Holder shall provide this information to DPS Staff, NYSDEC, and NYSDOS at least 30 days prior to filing the EM&CP for the applicable Segment for review and comment;		
d.	measures employed during design and installation to minimize the lateral separation distance between the EW1 submarine export cables to the maximum extent practicable.	Empire will comply.	Not applicable to Part 1
e.	a Dredge Management Plan for dredging activities including specific practices to be used during dredging, specifications of any dredging equipment and equipment purpose, and proof of the ability to provide proper disposal, which shall be provided to DPS Staff, NYSDEC, and NYSDOS at least forty-five (45) days prior to filing the EM&CP for the applicable Segment for review and comment;	Empire will comply.	Not applicable to Part 1
f.	drawings and specifications of any closed environmental bucket or other dredging equipment, including specifications demonstrating that appropriate design considerations are incorporated in equipment selected for deployment, which shall be provided to DPS Staff, NYSDEC, and NYSDOS at least forty-five (45) days prior to filing the EM&CP for the applicable Segment for review and comment;	Empire will comply.	Not applicable to Part 1
g.	a Suspended Sediment and Water Quality Monitoring Plan for in-water construction activities, which shall be provided to DPS Staff, NYSDEC and NYSDOS at least 45 days prior to filing the EM&CP for the applicable Segment for review and comment;	Empire will comply.	Not applicable to Part 1
h.	details of cable pulling and splicing plans. The splicing plan shall be provided to DPS Staff, NYSDEC, LICFA and NYSDOS at least 45 days prior to filing the EM&CP for the applicable Segment for review and comment; and	Empire will comply.	Not applicable to Part 1

i.	details on the area and duration of any temporary in-water closures needed during pre-installation and submarine export cable installation activities; a summary of coordination with ferry terminals and other shoreside facilities and plans to preserve the facilities' uninterrupted water access and operations; how these areas and durations have been minimized; details on how mariners and fishermen will be alerted to the presence of the in-water work area, including any Private Aids to Navigation (PATON) that may be required in State waters; and identification of activities that will be the subject of USCG Local Notice to Mariners.	Empire will comply.	Not applicable to Part 1
j.	analysis of the potential impacts to Gravesend Bay anchorage area by estimating the number of vessels and duration that they will be displaced from using this area during each project phase; evaluation of avoidance and minimization measures to address temporary and permanent reductions in anchorage capacity; and assessment of potential mitigation measures such as installing and maintaining mooring buoys or alternative berthing options to offset reduced capacity, if any.	Empire will comply.	Not applicable to Part 1
k.	details on the locations of water-dependent recreational and commercial uses, if known at the time of the EM&CP submission for the applicable Segment, that would affect or be affected by facility construction, operation, and maintenance. Explain how these uses or plans will be accommodated.	Empire will comply.	Not applicable to Part 1
Y13.	The Certificate Holder must comply with the Hazardous Waste and Petroleum Work Plan provided in the EM&CP for the applicable Segment.	Empire will comply.	Appendix O (Hazardous Waster and Petroleum Work Plan)

Y14.	The Certificate Holder shall provide in the EM&CP for the applicable Segment a Hazardous Waste and Petroleum Work Plan for the entire onshore facilities for testing and treatment and/or disposal of soil and groundwater, as described in (a)-(c) below, unless the Certificate Holder demonstrates such work has already completed as part of remediation activities under a Brownfield Cleanup Agreement, RAWP, and Site Management Plan (SMP), if applicable. The Certificate Holder shall provide the Hazardous Waste and Petroleum Work Plan at least 45 days prior to filing the EM&CP for the applicable Segment to DPS Staff and NYSDEC for review and comment. The Hazardous Waste and Petroleum Work Plan must be consistent with the Brownfield Cleanup Agreement, RAWP, and SMP, if applicable, as well as NYSDEC guidance as set forth in the Division of Environmental Remediation's Technical Guidance for Site Investigation and Remediation (DER-10), or other NYSDEC standards, criteria, or guidance in effect at the time the EM&CP for the applicable Segment is filed with the Secretary, and must include the following:	Empire will comply.	Appendix O (Hazardous Waste and Petroleum Work Plan)
a.	Provide protocols for sampling to be completed during construction, including sampling if visibly contaminated material is encountered or if groundwater is encountered in areas that were not previously sampled;	Empire will comply.	Appendix O (Hazardous Waste and Petroleum Work Plan)
b.	Identify location(s) where all material exceeding NYSDEC standards, criteria, or guidance values will be disposed; and	Empire will comply.	Appendix O (Hazardous Waste and Petroleum Work Plan)
c.	Identify source(s) of clean backfill (clean sand, recycled concrete aggregate, gravel, or soil) to be used wherever contaminated material is encountered and removed.	Empire will comply.	Appendix O (Hazardous Waste and Petroleum Work Plan)
Y15.	For the purposes of the Hazardous Waste and Petroleum Work Plan, and Certificate Conditions K8, Y11, Y14, and V2, the following definitions apply: "Contaminant" shall include the following: all substances in the full Target Analyte List/Target Compound List (inclusive of volatile organic compounds [VOCs] and semi-volatile organic compounds [SVOCs]); Per- and Polyfluoroalkyl Substances;	Empire will comply.	Appendix O (Hazardous Waste and Petroleum Work Plan)

	1,4-Dioxane; and pesticides and herbicides. "Contaminated" shall mean the presence of any contaminant above applicable NYSDEC standards, criteria, guidance, or more stringent applicable levels of other authorities or agencies, that are to be determined in consultation with the NYSDEC, in any environmental medium, such as soil, surface water, sediment, groundwater, soil vapor, ambient air, or indoor air, along the proposed terrestrial cable route or at the onshore substation.		
Y16.	The Certificate Holder must submit a Fisheries Compensation Plan for Project activities in New York State waters as part of Fisheries Management Plan in the EM&CP for the applicable Segment. The Fisheries Compensation Plan shall include:	Empire will comply.	Not applicable to Part 1
a.	A narrative overview of the claim process, including summary of the initial decision-making process;	Empire will comply.	Not applicable to Part 1
i.	This narrative will include more details on the Fishing Conflict Prevention/Hazard Notification Claim Procedure, which covers claims for:	Empire will comply.	Not applicable to Part 1
one.	commercial fisheries gear losses during all phases of the Project, including fisheries and benthic monitoring efforts, scientific study, survey, construction, operation, maintenance, and/or decommissioning for the life of the Project (up to 100% value of gear); and	Empire will comply.	Not applicable to Part 1
two.	a reimbursement process for any temporary displacement, or temporary impairment to fishing following gear loss, of commercial fishing directly resulting from the Project's fisheries and benthic monitoring efforts, scientific study, survey, construction and maintenance activities, including any necessary cable reburial activities, and decommissioning activities (up to 50% of lost gross revenue).	Empire will comply.	Not applicable to Part 1
ii.	As will be detailed further in the Fisheries Compensation Plan: (1) a claimant may take advantage of both types of claims for a single event, and (2) in the event a claim is denied initially, the claimant will be informed why.	Empire will comply.	Not applicable to Part 1

iii.	The Fisheries Compensation Plan will not preclude the Certificate Holder from delegating the claims process to a third-party administrator and will conform to BOEM's Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf, to the extent practicable.	Empire will comply.	Not applicable to Part 1
iv.	The Fisheries Compensation Plan will identify the methods by which the Certificate Holder will notify potential claimants of the claims process and how the Fisheries Compensation Plan corresponds with the Mariner Notification and Public Input Process as required by this Certificate.	Empire will comply.	Not applicable to Part 1
b.	A narrative overview of the process for claimants to appeal any decision regarding their claims to an independent third-party arbitrator, including the ability of a claimant who is successful on appeal to seek reimbursement for any lost revenue associated with the appeal process; and	Empire will comply.	Not applicable to Part 1
i.	Certificate Holder will inform any claimant when a third-party arbitrator has been assigned to their appeal. The third-party arbiter will be unbiased (i.e. individuals not employed by the Certificate Holder). He or she will be a practicing or retired attorney, current or former judge, arbitrator and/or mediator. In all cases, the third-party arbiter will have knowledge of the offshore environment and general knowledge of various offshore activities including but not limited to fishing, shipping, surveying and offshore construction. Appeals will be provided to the third- party arbiter with the Notice of Appeal and the claimant's complete claim. No new information will be considered on appeal.	Empire will comply.	Not applicable to Part 1
c.	A statement that the number of claims submitted by persons or entities pursuant to sections (i) (1) and (2) of this section and adjudicated by the Certificate Holder shall not be limited.	Empire will comply.	Not applicable to Part 1
d.	The Certificate Holder shall file with the Secretary a summary of all claims filed and/or settled on an annual basis, including the claim type the impacted fishing activity, date of the incident, claim filing date, date closed, value requested, and value paid;	Empire will comply.	Not applicable to Part 1

e.	The Certificate Holder must notify DPS Staff, NYSAGM, NYSDEC, and NYSDOS via electronic mail within 30 days of any resolution (i.e., denial or award) of a fisheries compensation claim. The notification must include the claim, claim type, species impacted, and the fishing activity disrupted and/or displaced and the resolution;	Empire will comply.	Not applicable to Part 1
f.	The Certificate Holder shall not require any fisherman, as a condition of filing a claim, to waive their right to seek resolution of such claim within a court of competent jurisdiction in the event the claim is not resolved through the Fisheries Compensation Plan process;	Empire will comply.	Not applicable to Part 1
g.	The Certificate Holder must not require any fisherman settling a fisheries compensation claim to sign a Non-Disclosure Agreement nor require waiver of any claims beyond the loss event initially claimed; and	Empire will comply.	Not applicable to Part 1
h.	Following resolution of a successful claim under Condition Y16 that involves a repeatable incident, Certificate Holder will circulate appropriate internal messaging, including, as appropriate, to its contractors, to reduce likelihood of such recurrence.	Empire will comply.	Not applicable to Part 1
Y17.	In the EM&CP for the applicable Segment, the Certificate Holder will detail the activities and anticipated timeframes proposed within all Recognized Ecological Complexes (RECs) (i.e., Gravesend Bay REC) and identify avoidance and impact minimization measures.	Empire will comply.	Not applicable to Part 1
Z. DECOMMISSIONING			
Z1.	As part of decommissioning, the Certificate Holder shall survey and use best efforts to remove installed cable protection measures that are within 2 ft of the seabed surface.	Empire will comply.	Not applicable to Part 1
Z2.	The Certificate Holder shall prepare a Decommissioning Plan, for inclusion in the EM&CP for the applicable Segment. The Certificate Holder shall provide the Decommissioning Plan to the DPS Staff, NYSDEC, NYSOGS, LICFA, NYSDOS, NYCDEP, NYCDOT, and NYCSBS at least forty-five (45) days prior to filing the EM&CP for	Empire will comply.	Appendix Y (Decommissioning Plan)

the applicable Segment for review and comment. The Decommissioning Plan shall include: (i) the anticipated life of the Project; (ii) estimates of the decommissioning costs (in current4. dollars scrap and resale value cannot be used for offsetting decommissioning costs) for each of: (a) that portion of the submarine export cable route from the boundary of New York State territorial waters to the mean high water line (the "New York State Area"); and (b) the onshore facilities; (iii) letters of credit or performance bond with surety will be available for decommissioning and restoration as provided in the Plan; (iv) an analysis of the options for decommissioning the Project, including any cable protection measures used, and restoring the Project Area, including any decommissioning methods and potential impacts to the environment and fishermen for each option; (v) if applicable, how the Certificate Holder will address impacts of leaving any portion of the Project in place, including but not limited to, potential impacts to fishermen, fisheries, and other environmental resources, etc.; and (vi) procedures and timeframes for notifying municipal officials and landowners and residents (if different from owners) of all properties that are crossed by or abut against the Project Area along the route about decommissioning activities. An outline of the Decommissioning Plan is attached as Appendix K to the Joint Proposal.

a.	The decommissioning estimates contained in the Decommissioning Plan shall be updated based on the as-built Project, to reflect inflation, and any other increases due to labor or other costs, by a qualified independent engineer licensed in the State of New York, after one year of Project operation, and every fifth year thereafter provided that the Certificate Holder may submit an attestation with appropriate justification if there are no material changes to the previously filed decommissioning estimates. Such updates shall be filed (one year after commercial operation date and every fifth year thereafter), with the Secretary to the Commission. Scrap and re-sale value cannot be used for offsetting of decommissioning costs in the required estimate	Empire will comply.	Appendix Y (Decommissioning Plan)
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	updates. The value of the letters of credit secured for decommissioning purposes shall never be reduced below the initial Decommissioning Cost Estimate.		
b.	The Certificate Holder shall work with DPS Staff, and/or the NYSOGS to craft a letter of credit that will establish a right for the Commission and/or NYSOGS to draw on an irrevocable letter of credit in the event of the Certificate Holder's failure to timely decommission the facilities located in the New York State Area and for the State to use such funds to restore that area in accordance with the Decommissioning Plan (the "New York State Area Letter of Credit"). The New York State Area Letter of Credit shall state on its face that it is held by and for the sole benefit of the Commission and/or NYSOGS.	Empire will comply.	Appendix Y (Decommissioning Plan)
c.	The Certificate Holder shall engage the services of an independent trustee and enter into a Standby Trust Agreement for the administration of the funds from the Letter of Credit. The form of the Standby Trust Agreements shall be included as part of the EM&CP with proof of obtaining the relevant security.	Empire will comply.	Appendix Y (Decommissioning Plan)
d.	The Letter of Credit shall provide that the beneficiaries thereof may, subject to the cure provisions set forth in Condition Z3, exercise their right to draw on it and enter the Project area and carry out the Decommissioning Plan in accordance with the terms of the Letter of Credit following the occurrence of any of the events set forth in subsection (i) hereof:	Empire will comply.	Appendix Y (Decommissioning Plan)
i.	Decommissioning will commence if: (1) the Project's construction has halted for a period of 12 continuous months, unless the 12-month period of inactivity is the result of reasonably unforeseen circumstances, recommencement is being actively pursued in good faith by the Certificate Holder, the period of inactivity is due to a Force Majeure event, or the Certificate Holder otherwise obtains approval from the Commission for such construction inactivity; or (2) after commercial operation of the Project, if the Project has not generated electricity for a period of 12 continuous months, unless the 12-month period of no energy output is due to a Force Majeure	Empire will comply.	Appendix Y (Decommissioning Plan)

event or the result of a repair, restoration, or improvement to an integral part of the Project that affects the generation of electricity and that repair, restoration, or improvement is being actively pursued in good faith by the Certificate Holder, or the Certificate Holder otherwise obtains approval from the Commission for the Project to not generate electricity for such period of time. The Certificate Holder shall file notice with the Secretary within 30 days of becoming aware of any condition which precipitates Certificate Holder's request, if it is anticipated that repairs or completion of construction (or similar) will extend beyond a 12-month inactive period; written notice shall also be provided to: (1) DPS Staff, NYSDEC, NYSDOT, and NYSDOS, and (2) landowners and residents (if different from owner) of property crossed or abutted by the Project of planned decommissioning and site restoration activities prior to commencement of those activities.

Z3.

Prior to exercising the right to draw on a letter of credit, the beneficiaries thereof shall provide the Certificate Holder written notice by certified mail of their intent to draw on a letter of credit. If within 90 days of the date of such written notice Certificate Holder has documented to the beneficiaries' reasonable satisfaction that Certificate Holder is, as applicable: (i) diligently implementing the Decommissioning Plan; (ii) diligently acting to restore commercial operations; or (iii) diligently addressing the subject cable exposure, then the letter of credit shall not be drawn upon. If, after ninety (90) days, the beneficiaries thereof determine that the Certificate Holder has not met the requirements set forth in (i) through (iii), above, the beneficiaries shall, at their sole individual discretion, draw on the letter of credit. In the event that a letter of credit is drawn upon, Certificate Holder shall have no further liability relating to the activities for which the letter of credit was drawn.

Empire will comply.

Section 7

AA. PRESERVATION OF RIGHTS

AA1.	Certificate Holder shall not assert, argue, or claim, in any action or proceeding or before any court, commission, agency, mediator, or other tribunal, that the New York State Public Service Law, any federal law applicable to the Project, any regulations promulgated under any such State and/or federal laws, this Certificate, and/or any condition of this Certificate preempts, supersedes, nullifies, or renders unenforceable in whole or in part any right under, or provision of, any contract, easement, lease, or other agreement that the City has entered into, or may enter into in the future, with Certificate Holder, or with any entity affiliated or associated with Certificate Holder or the Project.	Empire will comply.	N/A
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3. PROJECT PERSONNEL AND PROCEDURES

During construction, Project personnel will implement the procedures described in this EM&CP, comply with regulatory requirements and Certificate Conditions, and apply quality control for safe and efficient construction. Personnel will monitor construction activity continually to confirm Project procedures are accomplished efficiently while concurrently maintaining a clean and safe construction site.

Empire is a joint venture between Equinor and bp where Equinor is the Service Provider. Equinor follows a management system that describes the fundamentals and requirements for the whole company; it defines a common framework for the way Equinor works. The management system consists of three primary components consisting of universally applied company vision, values and philosophies, broad company directives, and governing documents and work processes for all Equinor employees, projects, and Contractors. The management system helps Equinor to operate in a safe, sustainable, and predictable way, manage challenges, handle deviations, utilize opportunities, and perform tasks in a systematic manner. In addition to the regulatory requirements and Certificate Conditions embodied in this EM&CP, Empire will follow Equinor's management system throughout the construction and operational phases of the project.

3.1 Project Personnel

Project construction will involve direct employees of Empire, Contractors, and subcontractors in various supervisor, monitor, inspector, and construction personnel roles. The types of personnel and their responsibilities are described below. While hired positions are assigned as either full- or part-time, the responsibilities and time commitments may fluctuate with the Project activity. During periods of relative inactivity on the Project, after consultation with and acceptance from DPS Staff, Empire may temporarily decrease the number of hours worked by Project oversight personnel and the extent of their presence at the Project site. Likewise, during periods of relatively high activity, the number of inspectors and the extent of their presence at the Project site may be temporarily increased. Empire will ensure that the frequency of inspections by the Environmental Monitor(s) complies with the requirements of the SPDES General Permit for Construction Activity, GP-0-20-001 (SPDES General Permit) (CC F3).

In some cases, multiple inspectors or monitors may be hired in a role to satisfy requirements for inspection during after-hours work activities. The numbers of Project personnel actively working on site will correspond with each construction element as it occurs. All personnel will be trained in and implement their respective responsibilities.

The Certificate Holder's employees, Contractors, and subcontractors assigned to the construction of the Project will be properly trained in their respective responsibilities (CC G2). Empire will provide any contractor providing services for construction of the Project with complete copies, including any amendments and modifications, of the Certificate, the EM&CP(s), the Order(s)

approving the EM&CP(s), any permit issued pursuant to Section 404 of the CWA, the Section 401 Water Quality Certification, and the federal consistency decision issued pursuant to the CZMA (CC E6). Empire will also supply safety plans and procedures to Contractors. Empire will notify all Contractors that the Commission may seek to recover penalties for violation of the Certificate, not only from Empire, but also from its Contractors, and that Contractors may also be liable for other fines, penalties, and environmental damage caused by their actions (CC G1).

As detailed in this Section, Empire will provide a minimum of one Construction Supervisor, one Safety Inspector and one Quality Assurance Inspector assigned to the Project full-time, and a minimum of one independent, third-party Environmental Monitor and one independent, third-party Fishing Monitor to monitor and inspect construction and restoration activities and compliance with environmental protection measures. These personnel will coordinate with Empire's project management to ensure proper oversight of the Project and compliance with the requirements of the Project's Certificate and EM&CP. The remainder of this Section provides a description of the organization and responsibilities associated with these roles, along with Empire's Contractor(s). The Environmental Compliance Plan (ECP) in **Appendix F** further describes the environmental compliance procedures, monitoring and reporting. The Quality Control Plan (QCP) in **Appendix G** describes the Project's quality assurance, management, and control measures.

A Project contact list, with emergency contacts, is provided in **Appendix H**.

3.1.1 Construction Supervisor

One Construction Supervisor will be assigned full-time by Empire and will coordinate with Environmental Monitor(s), Fishing Monitor(s), Safety Inspector, and Quality Assurance Inspector (CC F1). The Construction Supervisor's responsibilities will include the following:

- Provide oversight of the Contractor(s), ensuring contract compliance and commitments are delivered, and confirming that contract personnel are implementing standards of safe and secure practices and environmental compliance on the Project
- Confirm that Contractor(s) resource needs are identified and addressed to facilitate the contractual work plans, reports, schedule, and budget
- Confirm Contractor(s) personnel are properly assigned, trained, and licensed in accordance with the Certificate and this EM&CP
- Interface with and report to Empire's Project management on construction progress and activities, and coordinate with the Project's internal and external resources
- Participate in regular update conference calls during construction and supporting the Contractor in producing the required weekly updates and reports

- Understand and provide resource support during emergency response procedures
- Coordinate pre-construction and construction meetings as required per the Certificate.

3.1.2 Environmental Monitor/Aquatic Environmental Monitor

The Environmental Monitor will be an independent, third-party consultant assigned to the Project full-time during construction. Additional Environmental Monitors may also be assigned as necessary to comply with the monitoring requirements of the Certificate or other applicable permits. Empire will ensure that Environmental Monitor(s) are present during construction and restoration activities, whether occurring during or after normal working hours. The Environmental Monitor(s) during onshore construction activities may also function as the Stormwater Pollution Prevention Plan (SWPPP) inspector. Empire will also assign at least one additional Environmental Monitor during in-water work to serve as Aquatic Environmental Monitor to the extent that in-water work occurs simultaneously with any onshore facility construction activities also requiring the presence of an environmental monitor.

The Environmental and Aquatic Environmental Monitor(s) will be responsible for the following:

- Monitor construction activities including, but not limited to, access, clearing, grading, installation, and maintenance of erosion prevention and sediment controls, work around sensitive resources (e.g., wetlands, streams, protected species and habitats), and site restoration
- Conduct SWPPP inspections, as described in the SWPPP in **Appendix I**.
- Monitor and manage compliance with the environmental management and protection requirements specified in the Certificate, this EM&CP, and all other applicable environmental permits, and advising and coordinating with the Construction Supervisor and Contractor(s) on complying with the provisions and conditions of these requirements and corrective actions, if necessary
- Organize and participate in required compliance audit inspections with DPS Staff, the Construction Supervisor and other Project personnel, and other agency site visits and inspections, as necessary
- Exercise stop-work authority, when necessary, as described in Section 3.10
- Coordinate with DPS Staff, NYSDEC, and other agencies during regulatory inspections
- Keep records of inspections, compliance with environmental conditions, and corrective actions

- Coordinate with Empire's Construction Supervisor on resource needs to support compliance on site.

As an update to or to the extent not already included in Appendix E of the Joint Proposal, no less than 30 days before the start of Project construction, Empire will provide to DPS Staff and NYSDEC the name, title, responsibilities, training, years of relevant experience, and licensing of the Environmental Monitor(s) and confirm the independence of the Environmental Monitor(s) from Empire through the submission of the ECP. Upon acceptance by DPS Staff and NYSDEC, the Certificate Holder shall provide a copy of the Environmental Compliance Plan (**Appendix F**) to the NYCDEP and LICFA (CC F2).

3.1.3 Fishing Monitor

The Fishing Monitor will be an independent, third-party consultant assigned to the Project full-time during construction (CC F1). The Fishing Monitor will monitor to protect fishing interests during construction and will be on-site whenever in-water construction activities are occurring.

The Fishing Monitor will be responsible for the following:

- Coordinate with Empire's Fisheries Liaison regarding fishing interests, notifications, and fishing-related concerns during in-water construction activities
- Monitor and manage compliance with the environmental protection measures to minimize impacts to fishing interests, and advising and coordinating with the Construction Supervisor and Contractor(s) on minimizing impacts and adverse interactions
- Foster communication and interaction with the public, mariners, and fishermen regarding Project activities, vessel movements, and Project schedule, and ensuring compliance with Empire's Mariner Communication and Public Input Process
- Coordinate with fishermen on static gear removal or relocation requests, and monitoring vessel and gear interactions.

3.1.4 Safety Inspector

One Safety Inspector will be employed full-time on the Project (CC F1). The Safety Inspector will oversee regulatory compliance and incident-prevention measures to promote the health and safety of all Project personnel. The Safety Inspector's responsibilities may cover multiple work sites. The Safety Inspector will be responsible for the following:

- Facilitate the implementation of the Safety Procedures During Construction (**Appendix J**) by all construction personnel

- Work with management to develop the measures that need to be taken to eliminate hazards and prevent incidents
- Assist management through the use of safety specialists to analyze incidents related to safety
- Establish and implement incident-prevention activities, such as hazard recognition exercises, to promote the health and safety of employees, Contractor and subcontractor personnel, and the public exposed to Project construction activities
- Develop incident-prevention programs to reduce events that may lead to personal injury and property damage.

3.1.5 Quality Assurance Inspector

One Quality Assurance Inspector will be employed full-time on the Project to conduct site inspections in accordance with the QCP (**Appendix G**) (CC F1). The Quality Assurance Inspector responsibilities will include the following:

- Perform quality audits on electrical transmission construction and onshore substation as applicable to the Project
- Verify construction complies with applicable specifications
- Write and issue reports relating results of construction audits
- Issue and track non-conformances for items failing to meet required specification
- Enforce the submission of corrective and preventive actions for detected nonconformances
- Work with Contractor(s), subcontractors, system delivery, and Empire's project management to validate that controls and procedures are in place and working and provide confirmation that adherence to controls and procedures is recorded in a systematic manner and available for review
- Update quality control instructions and documents to reflect the current processes
- Identify opportunities for adaptive management and improve quality control
- Provide instructions and statistical reports, forms, and charts to support the quality control program.

3.1.6 Other Inspection and Monitoring Personnel

Other personnel are likely to be required for inspections and monitoring at various times during Project construction. Such personnel may include representatives and staff from other state and local agencies. Representatives and staff from the NYSDEC, NYSDOS, and New York City may schedule visits to the Project site. NYCDOT may send inspectors to monitor and observe Project construction activities on local roads or request police to secure safety during roadway activities, as they deem appropriate. Other New York City inspectors may visit the site during various activities. The Certificate Holder requires its Contractors and/or subcontractors to give an on-site tailboard safety briefing to site inspectors/visitors prior to any safety inspectors/visitors entering the Project site (CC D7).

3.1.7 Contractor(s)

The Project will be constructed under a variety of separate contracts, rather than under a single primary or prime contractor. Therefore, a variety of Contractors (for Part 1 – GE/Bond and Jacobs/Skanska) and their subcontractors will be onsite during construction. Each Contractor will be responsible for having their own crew or crews, resources, and designated roles and responsibilities, including their own oversight, needed to carry out their contract scope of work, in addition to the separate monitors/inspectors described above.

3.2 Project Procedures

The employees, Contractors, subcontractors, and monitoring and inspection personnel will administer the following Project procedures to facilitate compliance with the Certificate and all issued permits and provisions of applicable rules and regulations for all construction activities.

As Empire is an Equinor project, all project personnel must also abide by Equinor's project procedures as set forth in its company directives and guiding documents. Equinor has developed specific over-arching policies, plans, and procedures for Empire to foster compliance with Equinor's management system. Equinor maintains project-specific plans for quality and risk management, safety, and sustainability, which all project personnel are expected to follow in addition to this EM&CP.

All sampling, disposal, and construction activities must be performed in a manner consistent with NYSDEC standards, criteria, or guidance in effect at the time of such activities (CC P9).

3.2.1 Inspection and Monitoring Procedures

This section describes the procedures for inspection and monitoring during Project construction and restoration. A sample Environmental Inspection Form is provided in **Appendix K**.

3.2.1.1 Inspection Schedule

The Inspection Schedule will depend directly on the level of construction activity. After consultation with and acceptance from DPS Staff, the number of hours worked by Project oversight personnel and the extent of their presence at the Project site may temporarily decrease commensurate with the decline in Project activity. Likewise, during periods of relatively high activity on the Project (such as excavation and duct bank installation), the number of inspectors and the extent of their presence at the Project site may temporarily increase commensurate with the increase in activity levels.

Installed erosion and sediment controls will be inspected daily and promptly repaired, where necessary, in areas of active construction. In areas without active construction, where temporary stabilization measures have been applied to all disturbed areas, erosion and sediment controls will be inspected weekly and promptly repaired, where necessary, if permanent stabilization has not been achieved. All erosion and sediment control measures shall be designed and installed per the "New York State Standards and Specifications for Erosion and Sediment Control" and will be inspected and maintained in accordance with the requirements of the SPDES General Permit for Construction Activity.

Subject to the requirements of Conditions D5 and D7, NYSDEC, NYSDOS, and New York City representatives will be permitted scheduled visits to the Project site (CC F7). Empire will organize and conduct site compliance audit inspections for DPS Staff, NYSDEC, NYSDOT, and New York City as needed, but these will be offered at least one time per month during construction. Inspections will conclude when the SWPPP Inspector provides the final sign-off on the SWPPP (CC F9).

The inspection will include a review of the status of compliance with all certification conditions, requirements, and commitments, as well as a field review of the Project site, if necessary. The inspection will also include (CC F9a):

- Review of all complaints received, and their proposed or actual resolutions
- Review of any significant comments, concerns, or suggestions made by the public, local governments, or other agencies
- Review of the status of the Project in relation to the overall schedule established prior to the commencement of construction
- Other items the Certificate Holder or DPS Staff consider appropriate.

The Certificate Holder shall provide draft minutes of the inspection audit and/or meeting, including resolution of issues and additional measures to be taken, to all attendees for corrections or comments. Thereafter, the Certificate Holder shall issue to DPS Staff, NYSDEC, and New York City the final written record of the results of the inspection audit as part of its scheduled

construction update reports, describing resolution of issues and additional measures to be taken (CC F9b).

NYCDOT will have authority to place inspectors on site to monitor and observe the Certificate Holder's activities on local roads, or to request the presence of State or local police to ensure the safety of travelers, at such times and for such periods as NYCDOT deems appropriate. All costs thereof shall be borne by the Certificate Holder (CC M5).

3.2.1.2 Inspections and Monitoring Provisions

The Environmental Monitor(s), Fishing Monitor(s) and Construction Supervisor(s) will be equipped with sufficient documentation, transportation, and communication equipment to effectively monitor contractor compliance with the provisions of the Certificate, applicable sections of the PSL, ECL, the EM&CP, every Commission Order issued in this proceeding, New York City Rules and Codes, as applicable, and the Section 401 Water Quality Certification (CC F6). Empire will provide DPS Staff, NYCDEP, and NYCEM, the cell phone numbers and weekly schedules of the Environmental Monitor(s), Fishing Monitor(s), Safety Inspector, Quality Assurance Inspector, and Construction Supervisor (CC F5).

Prior to the commencement of operations, Empire will obtain the services of a professional engineer licensed in the State of New York to inspect the Project, to ensure that it complies with the New York City Construction Code to the extent applicable under the Certificate.

3.2.2 Environmental Compliance Plan

The Environmental Compliance Plan (ECP) is in **Appendix F** of the EM&CP. The ECP will be the tool for tracking compliance with the Certificate and all issued permits and provisions of applicable rules and regulations for all construction activities (including at the onshore substation, laydown and staging areas, and along the onshore cable ROW). The tracking and reporting procedures include a checklist for inspection, a description of the purpose and frequency of reports, an environmental compliance schedule, methods for reporting non-compliances, and quality assurance/quality control procedures for environmental compliance. The ECP provides the framework for methods to be employed for avoiding and minimizing potential environmental impacts from construction activities, and procedures for responding to and correcting problems that may be found by the Environmental Monitor(s).

Specific measurements and controls will be applied to each construction site/activity and referenced as appropriate in design documents. The ECP also outlines the roles and responsibilities of the Environmental Monitor, Aquatic Environmental Monitor, and Compliance Manager, including how these individuals will respond to compliance issues and conduct appropriate notifications. The ECP will be periodically reviewed for adequacy and revised to address any amendments or changes to permit conditions applied to the Project.

As an update to or to the extent not already included in Appendix E of the Joint Proposal, 30 calendar days in advance of Commencement of Construction, Empire will provide the final ECP regarding the Environmental Monitor to DPS Staff and NYSDEC for review and acceptance. Upon acceptance by DPS Staff and NYSDEC, the Certificate Holder will provide a copy of the ECP to NYCDEP and LICFA. The final ECP will include information on the Environmental Monitor(s) responsible for compliance, including the organization structure, names, titles, duties, responsibilities, training, years of relevant experience, and licensing (including, but not limited to, the Environmental Monitor's qualifications that shall satisfy those of a "Qualified Inspector" pursuant to the State Pollutant Discharge Elimination System General Permit) (CC F2).

Example reporting forms for the Project are provided in **Appendix L**.

3.2.3 Quality Control Plan

As required in the Certificate, a Quality Control Plan (QCP) was prepared and included in **Appendix G**. In addition, Equinor maintains a Quality and Risk Management Plan developed for EW1. This plan will be followed by Equinor and all its team members and Contractors in addition to the QCP.

Empire will implement the QCP (**Appendix G**) to evaluate and confirm the materials and components purchased for the Project conform to the specification components of this EM&CP. The QCP describes the following (CC G7):

- 1) Performance of Quality Control Audits
- 2) The name(s) and qualifications of the individual(s) who will conduct audits under the QCP ("Quality Control Audits")
- 3) The frequency with which the Quality Control Audits will be performed
- 4) Submission of the results of audits to DPS Staff
- 5) Notification to DPS Staff of the identification of components that do not conform to the specification for structures and components described in this EM&CP
- 6) Steps for handling of non-conformance components purchased
- 7) Corrective measures if a contractor installs materials, structures, or components that do not conform with the specifications for the same described in this EM&CP.

Within 10 business days following completion of each Quality Control Audit, Empire will provide DPS Staff with a report of the audit that includes: (i) a description of the results of the audit, particularly with respect to results that identify if one or more components that Empire purchased for installation in the Project did not conform to the specifications for components described in the approved EM&CP; and (ii) any notes pertinent to the subject matter of such audit which were

made at audit meetings by Empire personnel and/or contractors who performed the audit (CC G8).

If any Quality Control Audit identifies that one or more structures or components Empire purchased for installation in the Project did not conform to the specification for components described in the approved EM&CP, Empire will: (i) provide written notification to the Secretary within not more than 72 hours of the Empire's discovery of such non-conformity; and (ii) describe the steps Empire will take to correct the non-conformity, including whether any components must be dismantled and returned to the manufacturer (CC G9).

If a contractor installs materials, structures, or components that do not meet or exceed the specifications for the same described in the applicable EM&CP, Empire will, within 30 days after becoming aware of such deviation, prepare and deliver to DPS Staff a summary report detailing the deviation and the steps to be, or that have been, taken to address the deviation (CC G6).

At least 14 days prior to Commencement of Construction, Empire will file a report with the Secretary confirming that required construction materials are available. An item of construction material is considered to be available: (i) if it is located at a staging area or laydown yard; (ii) if it is in Empire's warehouse or other routine inventory stocking location for Empire; or (iii) if it is on order from a vendor with a scheduled delivery date prior to the time scheduled for its use in the Project (CC G3).

3.2.4 Health, Safety, and Emergencies

Equinor maintains a specific corporate-level Safety and Sustainability Plan developed for Empire. This plan will be followed by Equinor and all its team members and Contractors in addition to the Safety Procedures during Construction identified in **Appendix J** as required in the Certificate.

Empire and its Contractor(s) will implement health and safety plans throughout the construction of the Project. A Health and Safety Plan for the onshore activities is provided in the Safety Procedures during Construction (**Appendix J**). As described in Section 3.1.4, Empire will employ a full-time Safety Inspector for the Project.

Persons seeking to access any of the Project construction sites must first be appropriately trained in environmental protection and worksite safety. Empire will provide site inspectors and scheduled visitors with appropriate personal protective equipment for any tours of the Project. This may include a properly fitted, currently valid hardhat, safety glasses with side shields, and high visibility vest at any time while on site, unless the visitor remains in a vehicle or in a construction trailer. All site personnel and crane operators will have qualifications in accordance with the requirements of NYC building codes. Empire may require site inspectors and scheduled visitors to comply with all safety and security requirements, including supplying their own steel or composite toed boots to the extent necessary (CC D5). Empire will require its Contractor(s) or their subcontractors to

give an on-site tailboard safety briefing to site inspectors/visitors prior to their entering the Project site (CC D7).

Empire will notify the Fire Department of New York (FDNY) and New York City Emergency Management (NYCEM), and DPS Staff on the start of construction activities and keep them apprised of the presence of on-site hazardous chemicals and waste (CC D3). Empire will provide periodic training sessions upon request by the FDNY, to review the procedures and protocols necessary to safely respond to emergency events at the onshore facilities. Empire will coordinate with Con Edison to ensure that such training includes procedures and protocols for emergency events at the existing facilities adjacent to the Project's onshore facilities (CC D6).

If an accident occurs in connection with work on the Project, Empire will report the accident to DPS Staff as soon as possible, but no later than twenty-four (24) hours after Empire becomes aware of the accident. A copy of the accident report, if any, will be provided to DPS Staff and New York City after it has been finalized (CC G5).

3.3 Reporting and Document Management

3.3.1 Change Notices

The Certificate Holder will follow the following procedures for any proposed amendments to the EM&CP (CC C6). The Certificate Holder will report any proposed changes to the approved EM&CP to DPS Staff. Any proposed changes to the approved EM&CP that will not result in an increase in adverse environmental impacts may in consultation with the DPS Staff be approved in writing by the Deputy Director or Chief of Environmental Certification and Compliance of the Office of Electric, System Planning and Performance (ESPP), or their designee. DPS Staff will refer all proposed changes that will result in an increase in adverse environmental impacts to the Commission for approval.

Upon being advised that DPS Staff will refer a proposed change to the Commission, the Certificate Holder will serve written notice(s) of the filing of proposed changes to the EM&CP in accordance with Condition C2: (i) on all parties to this proceeding; (ii) on all statutory parties to this proceeding; (iii) on all persons required to be served with the Application by statute or regulation; (iv) on persons who own properties that are crossed by or abut against the Project Area; and (v) as set forth in the Mariner Notification and Public Input Process (forthcoming appendix in Part 2) and will attach a copy of the notice to each copy of the filing.

The notice will describe the original conditions and the requested change and include any documents supporting the request. Where DPS Staff refers the proposed change to the Commission, the notice will also state that persons may comment by writing or calling (followed by written confirmation) to the Commission within twenty-one (21) days of the notification date. Any delay in receipt of written confirmation will not delay Commission action on the proposed change.

The Certificate Holder will not execute any proposed change until the Certificate Holder has received oral or written approval, except in emergency situations threatening personal injury, property, or severe adverse environmental impact. Any oral approval from DPS Staff will be followed by written approval from the Director of the ESPP or their designee, or the Commission.

A sample EM&CP Notice of Change form is provided in **Appendix Q**.

3.3.2 Additional Reporting Requirements

Table 3-1 identifies reporting requirements per the Certificate.

Table 3-1. Reporting Requirements

Certificate Condition	Reporting Requirement	Frequency/Timing
CC G3	The Certificate Holder will file a report with the Secretary confirming that required construction materials are available. For purposes of this paragraph, an item of construction material is available: (i) if it is located at a staging area or laydown yard; (ii) if it is in a Certificate Holder warehouse or other routine Certificate Holder inventory stocking location; or (iii) if it is on order from a vendor with a scheduled delivery date prior to the time scheduled for its use in the Project.	At least 14 days prior to Commencement of Construction
CC E9	During construction, the Certificate Holder shall provide DPS Staff and NYSDEC, with bi-weekly status reports transmitted by electronic mail summarizing construction and indicating construction activities and locations scheduled for the following 30 days	Bi-weekly
CC F9	The Certificate Holder will provide draft minutes of the monthly compliance inspection audit and/or meetings, including resolution of issues and additional measures to be taken, to all attendees for corrections or comments. Thereafter, the Certificate Holder will issue to DPS Staff, NYSDEC, and the City the final written record of the results of the inspection audit as part of its scheduled construction update reports, describing resolution of issues and additional measures to be taken	Monthly
CC G5	If an accident occurs in connection with work on the Project, the Certificate Holder will report any such accident to DPS Staff as soon as possible, but no later than 24 hours after Certificate Holder becomes aware of such accident. A copy of the accident report, if any, will be provided to DPS Staff and the City after it has been finalized	Within 24 hours
CC G6	If a contractor installs materials, structures, or components that do not meet or exceed the specifications for the same described in the EM&CP for the applicable Segment, the Certificate Holder will, within 30 days after becoming aware of such deviation, prepare and deliver to DPS Staff a summary report detailing the deviation and the steps to be, or that have been, taken to address the deviation	Within 30 days of deviation
CC G8	Within 10 business days following completion of each Quality Control Audit, the Certificate Holder will provide to DPS Staff a report of such audit that includes: (i) a description of the results of the audit, particularly with respect to results that identify that one or more components the Certificate Holder purchased for installation in the Project did not conform to the specifications for	Within 10 business days following completion of each Quality Control Audit

Certificate Condition	Reporting Requirement	Frequency/Timing
	components described in the approved EM&CP; and (ii) any notes pertinent to the subject matter of such audit which were made at audit meetings by Certificate Holder personnel and/or contractors who performed the audit	
CC K11	During excavation and backfill activities, the Certificate Holder will provide to DPS Staff, NYSDEC and NYSDOS monthly progress reports that demonstrate compliance with Certificate requirements and such other information as determined necessary based on consultation with DPS Staff, NYSDEC, and NYSDOS	Monthly
CC P4	The Certificate Holder will notify DPS Staff, NYSDOS and NYSDEC within 2 hours of observing or being made aware of a discharge to a wetland or waterbody by the Certificate Holder or a contractor of the Certificate Holder resulting in a violation of NYS Water Quality Standards, or as described in the Water Quality and Suspended Sediment Monitoring Plan in the EM&CP for the applicable Segment per Condition U4. For each occurrence of discharge to a wetland or waterbody, the Certificate Holder shall provide a follow-up report via email to DPS Staff, NYSDOS and NYSDEC that includes a written description of the occurrence, photographs, and a summary of the corrective or remedial actions taken	Within 2 hours of observation

3.4 Stop Work Orders

In circumstances of an emergency, a stop work order may be issued for observed conditions that may pose risks to public health, safety, or property; cause environment impacts; alter planned construction activities; present increases in economic costs; or violate an applicable statute or regulation. The Environmental Monitor(s) and Construction Supervisor will have and may exercise stop work authority if construction or maintenance activities violate or could violate the terms of the Certificate, EM&CP, or the 401 Water Quality Certificate (WQC) (CC F4). Additionally, the Certificate Holders will train all staff on-site during construction regarding when stop work orders are necessary to ensure proceedings are safe.

DPS Staff representatives, as the Commission's designated representatives in the field (authorized pursuant to PSL Section 8), may also issue a stop-work order for a location or activity where any emergency resulting from the specific construction or maintenance activities violate or may violate the terms of the Certificate or any other Commission Orders for the Project (CC F8a).

Any stop work order made in accordance with the conditions of the Certificate or any other Commission Orders for the Project will be immediately complied with, subject only to any actions needed to (i) obey safety procedures, and (ii) avoid or prevent imminent harm to life, property, the environment or any structure (CC D8).

A stop work order issued by DPS Staff representatives will expire in 24 hours unless confirmed by a single Commissioner. If a stop work order is confirmed, Empire may seek reconsideration from the confirming Commissioner or all Commissioners. If the emergency prompting the issuance of a stop work order is resolved to the satisfaction of the Commissioner or the Commission, the stop work order will be lifted. If the emergency has not been satisfactorily resolved, the stop work order will remain in effect (CC F8b).

Stop-work authority will be exercised with due regard to environmental impacts, economic costs involved, public health and safety, possible impact on construction activities, and whether an applicable statute or regulation is violated. Before exercising its authority, DPS Staff representatives will, wherever practicable, consult with the Certificate Holder representatives possessing comparable authority. Within reasonable time constraints, all attempts will be made to address any issue and resolve any dispute in the field. In the event the dispute cannot be resolved, the matter will be immediately brought to the attention of Empire's project manager, and the Director of the ESPP. In the event that a DPS Staff representative issues a stop work order, neither Empire nor the contractor will be prevented from undertaking any such safety-related activities as they deem necessary and appropriate under the circumstances. The issuance of a stop work order or implementation of measures, as described below, may be directed at the sole discretion of the DPS Staff representative during these consultations (CC F8c).

If a DPS Staff representative discovers that a specific activity is a significant environmental threat that is, or may immediately become, a violation of the Certificate, Water Quality Certification, or any other order in this proceeding, the DPS Staff representative may—in the absence of responsible supervisory personnel or the presence of such personnel who, after consultation with the DPS Staff representative, refuse to take appropriate action—direct the field crews to stop the specific environmentally harmful activity immediately. If responsible personnel are not on site, the DPS Staff representative will immediately thereafter inform the Construction Supervisor and/or Environmental Monitor of the action taken. The DPS Staff representative may lift the stop work directive if the situation prompting its issuance is resolved (CC F8d).

If the DPS Staff representative determines that a significant threat exists such that protection of the public or the environment at a particular location requires the immediate implementation of specific measures, the DPS Staff representative may, in the absence of responsible supervisory personnel, or in the presence of such personnel who, after consultation with the Staff representative, refuse to take appropriate action, direct the Empire or its Contractors to implement corrective measures. The field crews shall comply with the DPS Staff representative directive

immediately. The DPS Staff representative will immediately thereafter inform the Empire's Construction Supervisor or Environmental Monitor of the action taken (CC F8e).

4. STANDARD CONSTRUCTION PRACTICES AND PROCEDURES

The following section discusses the anticipated general construction practices and procedures to be implemented during construction activities in this EM&CP. Empire will construct the Project in accordance with the Certificate and the approved EM&CP. For purposes of this EM&CP, the Project Area (**Figure 1**) is defined as the area in which Empire is authorized to construct, operate, maintain, repair, and decommission the Project, including any laydown yards and staging areas, pursuant to any permanent and/or temporary easements, leases, licenses, right of way agreements, or other land use authorizations it receives. Empire will confine construction, operation, maintenance, repair, and decommissioning activities to the Project Area.

Empire will construct the Project in a manner that conforms to all the applicable local, regional, State, national, and international electrical standards, including the applicable and published planning and design standards of Con Edison, the NYISO, New York State Reliability Council (NYSRC), Northeast Power Coordinating Council, (NPCC) and North American Electric Reliability Corp (NERC), and successor organizations. Upon completion of the Project, Empire will file a letter with the Secretary certifying that the Project was constructed in full conformance with the National Electric Safety Code (CC B3).

4.1 Construction Sequencing

Construction sequencing for this EM&CP will be based on typical construction methods and equipment. Construction activities will be coordinated with other construction and maintenance activities taking place at the same time and in the same vicinity conducted by entities including but not limited to the federal, State and City agencies, SBMT, other utilities, nearby property owners, and business owners (CC L5). The full Project construction schedule is outlined in Section 1.4. The general installation sequence for the onshore site preparation, onshore bulkhead construction, and below grade installation is as follows:

4.1.1 Onshore Site Preparation, Demolition and Below Grade Utilities

- Survey, mark and stake the Project site, ROW, access and work areas.
- Mark and protect any sensitive areas or resources.
- Coordinate utility mark outs with NYC and 811 Dig Safe prior to all ground disturbing activities.
- Install erosion and sediment controls in accordance with the SWPPP (**Appendix I**).
- Establish traffic management and control devices along public roadways (**Appendix M**).
- Mobilize equipment and materials to the site.

- Establish temporary site facilities, office trailers, fencing, parking areas, laydown areas, construction power and water.
- Establish internal access roads on site and necessary external lighting.
- Install security fencing, and other safety and security measures.
- Demolish existing pavement and cut and cap, or relocate existing utilities as needed, rough grade site to subgrade.
- Install new permanent storm drainage system and other utilities.
- Construct electrical grounding, duct banks, and underground conduits.

4.1.2 Onshore Interconnection Cable

- Consult with the NYCDOT for work within 2nd Avenue (CC L1) (see **Appendix E** for Agency Correspondence).
- Establish traffic management and control devices along public roadways (see **Appendix M** for Traffic Management Plan).
- Notify NYCDOT of the approximate date manhole-related work will begin within roadways under their jurisdiction (CC M1).
- Saw cut pavement along 2nd Avenue interconnection cable ROW.
- Thoroughly clear debris related to underground electric line construction within the interconnection cable corridor (CC L8).
- Install onshore pile vaults.
- Install underground duct bank.
- Replace the existing 12-inch LCP water main with 12-inch DIP, class 56
- Restore with temporary pavement patch (final restoration to occur at completion of Project construction).

4.1.3 Upland Bulkhead Preparation

- Excavate upland trench for export cables to transition joint bay.
- Install upland sheet pile wall behind the existing timber sheet pile.

- Partially demolish existing low-level platform.

4.1.4 Onshore Substation Piles and Foundations

- Install a combination of vertical and battered piles (battered at 1h to 6v slope).
- Ensure all piles are 14-inch-diameter (or potentially larger), concrete-filled steel pipe piles.
- Install reinforced concrete mat foundations and concrete piers to support onshore substation above grade facilities.⁴

4.2 Description of Work

As previously described, Empire is segmenting the EM&CP into three parts to accommodate the necessary order of construction activities by various contractors, and in hopes that construction activities are approved in concert with applicable time of year restrictions for the Project. For purposes of this EM&CP filing, onshore construction is defined as: site mobilization, site preparation, below grade utility work, demolition, utility construction (onshore interconnection cable installation), upland bulkhead preparation, and installation of piles and foundations for the onshore substation.

4.2.1 Construction Laydown, Staging and Equipment

All equipment will be located at the staging area(s), laydown yard(s), construction workspace, or on the Project site or ROW, provided, however, that if a local contractor is used for the work, the local contractor's facility will be considered as a staging area or laydown yard (CC G4). Construction staging and laydown for onshore construction will occur within the Project Area and are shown on Project Site Plans in **Appendix B**. Equipment being used daily will be staged near the work zones and hand tools will also be maintained near the work areas.

Except where otherwise indicated in this EM&CP, Empire will require that all equipment and machinery is secure and safely contained more than one hundred and fifty (150) ft from tidal wetlands, at the end of each workday, unless moving the equipment will cause additional environmental impact. Storage of materials that do not contain potential contaminants will be allowed within these areas. Except where otherwise indicated in this EM&CP, mobile equipment, excluding dewatering pumps, will be fueled, repaired, or maintained in a location at least 100 ft from freshwater wetlands and 150 ft from tidal wetlands to the maximum extent practicable or unless moving the equipment will cause additional environmental impact. Secondary containment methods will be employed to prevent refueling operations from potentially impacting nearby

⁴ Onshore substation above grade construction is not part of this EM&CP and will be submitted in a future EM&CP filing as outlined in Section 1.1.

waterbodies in instances where minimum staging distances from waterbodies cannot be met (CC V1). Empire will take all necessary precautions to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate, washings from transit mix trucks, mixers, or other devices or any other environmentally deleterious materials associated with the Project. If required, concrete batch plant operations and concrete washout areas shall be located a minimum of one hundred and fifty (150) ft away from any wetland or waterbody.

Additional typical project elements or components that may be stored within these areas include electrical equipment, steel framing, conduit, reels of cable, and portions of the duct bank. Access will typically take place during regular business hours and deliveries will be scheduled between 7:00 a.m. and 6:00 p.m., except for cable or other oversized deliveries or nighttime deliveries needed to comply with NYSDOT restrictions on daytime construction in or along roadways or public access areas or to facilitate construction activities that require a continuous work effort once started. Security will be controlled 24/7 at the construction and staging areas.

To the extent required in connection with the delivery of oversized components, supplies, or equipment for the Project, Empire or its suppliers will obtain any required permits from applicable State or local agencies, including NYSDOT and NYCDOT, subject to the ongoing jurisdiction of the Commission. Oversized delivery of cable and other materials for the Project are expected to be transported primarily via marine transportation, but as applicable, oversized deliveries transported over land shall be coordinated with NYSDOT, NYCDOT, and other local jurisdictions, as appropriate, and will occur in accordance with traffic controls in the Traffic Management Plan to minimize, to the extent practical, disruption of traffic.

Onshore construction activities will primarily utilize diesel-powered equipment. Project-related vehicles, diesel engines, and/or nonroad diesel engines at the staging site will comply with applicable state regulations regarding idling. In New York State, 6 NYCRR § 217-3 prohibits all on-road diesel-fueled and non-diesel-fueled heavy-duty vehicles from idling for more than five minutes.

Equipment that may be used for construction of the Project is included below. Specific equipment used will depend partly on the Contractor(s) and associated construction activity. The list is not exhaustive, but typical equipment would include:

- Crane
- Front-end loader
- Heavy-duty truck
- Pickup truck

- Self-propelled modular transportation
- Bulldozer
- Excavator
- Trencher
- Dump truck
- Bucket truck
- Telescoping forklift
- Generator(s)
- Cable pull-in equipment (winch and cable guidance equipment)
- Grouting equipment (e.g., truck, pump, grout reservoir).

4.2.2 Onshore Construction

4.2.2.1 Onshore Site Preparation, Demolition and Below Grade Utilities

As described above in Section 4.1, onshore site preparation will begin with the establishment of temporary site facilities, security fencing, access roads, parking, and laydown areas. At least 14 days before Commencement of Construction, Empire will delineate both edges of the onshore interconnection cable corridor, as certified, mark, stake and/or flag all access roads and all work pads and pulling pads for the interconnection cable corridor, and will notify DPS Staff, NYSDEC, NYCDEP, and NYCDOT when the above-described field mark-out is complete (CC E7). Empire will not construct, improve, or use any access roads not described in the EM&CP except in the case of emergency situations. A notice of any such emergency shall be promptly filed with the Secretary (CC M4).

Further coordination with 811 Dig Safe will be conducted, and installation of sediment control measures, including fugitive dust prevention measures will be completed prior to beginning any ground disturbing activities. Prior to Commencement of Construction, Contractors will install erosion and sediment control measures as indicated in all applicable plans (SWPPP – **Appendix I**) (CC O1). Installed erosion and sediment control measures shall be inspected daily and promptly repaired, where necessary in areas of active construction. In areas without active construction, where temporary stabilization measures have been applied to all disturbed areas, erosion and sediment control measures shall be inspected weekly and promptly repaired, where necessary, if permanent stabilization has not been achieved. All erosion and sediment control measures shall be designed and installed per the "New York State Standards and Specifications for Erosion and

Sediment Control” and shall be inspected and maintained in accordance with the requirements of the SPDES General Permit in effect at the time of construction.

Due to the nature of the existing Project site, vegetation clearing is not anticipated. Site preparation is also anticipated to include site grading and establishment of drainage systems. All onshore construction activities will be performed in accordance with the Certificate, and in accordance with standard operation procedures, and established best management practices.

Details of the construction schedule are discussed in Section 1.4. Planning and coordination with other entities performing construction in the Project vicinity, as well as plans for emergency access during any local road closures, are discussed in **Appendix M**, the Traffic Management Plan (TMP), and in Section 6. Empire will avoid direct disturbance to properties by accessing the Project from existing roadways or off-ROW access roads as identified in this EM&CP. Parking for Project construction workers will be in designated areas that do not interfere with normal traffic, cause a safety hazard, or interfere with existing land uses, including public access and recreation (CC G10, L3).

Once site preparations are complete, existing utilities will be capped and/or relocated including water lines, electrical lines, and fire hydrants, among others. A complete list of currently confirmed subgrade utilities is outlined in section 4.2.6. Removal of existing asphalt and concrete and grading activities will then commence to abandon utilities where necessary and install new permanent utilities and the tie-in point. Dewatering will be required within the onshore substation and cable landfall footprint for below grade earthwork, and Empire has included a Dewatering Plan outlining dewatering procedures and BMPs in **Appendix P**. Once the new utility infrastructure is installed, construction of foundations will proceed based on the elevations and designs provided in the Plan and Profile Drawings included under **Appendix A**.

Although unlikely, given the nature of the area as developed and previously disturbed, excavation has the potential to uncover archaeological resources. An Unanticipated Discoveries of Cultural Resources Plan is included in **Appendix R** to address the unlikely potential to uncover previously unknown cultural resources.

4.2.2.2 Onshore Interconnection Cable Duct Bank Installation

The onshore interconnection cables will be installed in an underground duct bank consisting of PVC and/or Polyethylene (PE) conduits, utilizing temporary cable pull-in pits and permanent cable vaults for installation and maintenance access. Each vault will be accessible by a manhole cover visible from the surface (CC L2). Traffic control devices will be installed and coordination with NYCDOT will be conducted prior to any groundbreaking work along the 2nd Avenue interconnection cable route. To install the duct bank for the cables using the open-cut method, a trench will be excavated along the onshore cable route. Existing pavement will need to be saw cut and removed. Each of the concrete duct banks will be approximately 2'3" high by 2' wide, with

2'6" to 6'6" separation between the banks. In certain areas, due to crossings, the duct bank profile changes to approximately 1'3" high by 4'1" wide. There may be additional separation between duct banks due to site conditions and spacing constraints. A description of the installation of the cables and cable pulling will be included in EM&CP Part 3. During excavation activities, the excavated material will be stockpiled next to the trench, or in some cases, cut pavement and other materials may be placed immediately in a container or truck for off-site disposal. Stormwater related sediment controls, such as geotextile fabric catch basin inlet protection and temporary filter tubes/socks will be installed adjacent to work areas and around stockpiled material when left within the cable corridor. Any stockpiled material will also be covered with tarps to prevent erosion when raining and fugitive dust when dry. Utility crossings along the onshore cable route will be protected, as needed; applicable safety procedures, and coordination with asset owners are further discussed in Section 4.2.7. Once installation is complete, the trench will be backfilled with stockpiled soils where able, or with clean approved material according to the Soil Management Plan (**Appendix O Attachment 1**). The area will then be restored to according to the elevations identified in the Plan and Profile Drawings (**Appendix A**). Final stabilization will be achieved primarily by re-paving, as applicable. Each vault will be accessible by a manhole cover visible from the surface.

4.2.2.3 Upland Bulkhead Installation

For the purposes of this EM&CP filing, onshore construction upland of the bulkhead will involve initial site preparation and earth works for the export cable that will be located on the upland side of the of the bulkhead. The work for Part 1 includes driving sheet piling for the new bulkhead immediately upland of the existing timber sheet pile bulkhead. Partial demolition of the existing low-level platform in preparation for the upcoming bulkhead replacement will also be performed, which includes demolition of the pavement section and removal of soils from atop the relieving platform. Onshore work conducted during this Part will also include excavation and installation of sheet pile to form the trenches for the installation of the Transition Joint Bay (TJB) for the export cable into the onshore substation. The remainder of cable landfall activities and completion of the bulkhead installation work and demolition of the remaining in-water components will be included in a later EM&CP Part. The bulkhead construction drawings are included in **Appendix C**. Please note these drawings show the entirety of work for the feature represented and only activities defined in these drawings which are not in-water will be performed during this phase.

4.2.2.4 Onshore Substation Piles and Foundations

Once the initial site preparation activities are completed, as outlined in Section 4.2.2.1, the piles and foundations will be installed for the onshore substation. The construction of the foundations involves a combination of vertical and battered steel pipe piles filled with concrete, with reinforced concrete mat foundation above. Reinforced concrete piers will be constructed to support elevated portions of the onshore substation. The selected pile type will be a driven closed end ASTM A252

Grade 3 PP14x0.5 steel pipe pile filled with concrete. The site plan and construction drawings for the onshore substation piles and foundations are included in **Appendix B**.

4.2.3 Building and Structure Removal

Prior to mobilizing for the scope of work described in this EM&CP, Empire will have completed site remediation activities according to the procedures described in Empire's SBMT Interim Remedial Measure (IRM) as part of the Brownfield Cleanup Remediation Plan. The IRM includes excavation of certain areas of concern identified in the Remedial Investigation Report (RIR), as well as engineered caps across the site to restrict access to impacted soils. The engineered caps will be detailed in a future Remedial Action Work Plan (RAWP). Any remedial work prior to receiving the certificate will be approved by DPS.

Building and structural removal described in this EM&CP refers to the site clearing, excavations and grading activities required to begin construction of the onshore substation, cable landfall and onshore interconnection cables for the Project shown in **Figure 1** and in the Plan and Profiles (**Appendix A**). A majority of the surface at the SBMT is paved asphalt with several sections of rail lines, fencing, and building debris on the property. The Project Area is largely vacant and primarily consists of asphalt and concrete pavement, existing above-grade structures, railway spurs, and bulkheads. The topography of the Project Area is relatively flat and ground elevations vary between 2 ft to 10 ft above mean sea level. Existing structure removal will be required to re-grade the site as needed for the construction activities outlined in Section 4. Prior to any demolition work, utilities will be marked out, site security will be established, and stormwater pollution prevention measures will be deployed to prevent sedimentation occurring within on-site catch basins and adjacent water bodies.

4.2.4 Site Security

Empire will provide general security for the SBMT daily. Access to the SBMT and onshore construction areas will be from a designated entrance located on 29th Street. If access to the SBMT and job site is needed outside of normal business hours, this access will be arranged with Empire in advance. Access to other areas of the SBMT that are outside Project Area will be prohibited unless otherwise approved by authorized onsite Empire personnel.

Fencing will be installed around the perimeter of the work area to restrict access to the work zones and potential hazards associated with them. Methods for defining any required exclusion zone may include physical barriers (i.e., sawhorses) and barrier tape. Temporary security and safety lighting will be installed where required.

Empire will maintain the right to require that any person seeking to access the Project be appropriately trained in environmental protection and worksite safety. Empire will provide site inspectors and scheduled visitors with appropriate personal protective equipment (PPE) for Project tours.

A log of all personnel to enter the job site will be maintained. Prior to entry into work or other restricted areas, personnel will require applicable documentation of regulatory, and health and safety required certifications, including training and medical surveillance. In addition, personnel working at the onshore substation site shall have special IDs that will be provided by the Contractor(s).

4.2.5 Night Work

Per Condition I1, The Certificate Holder will conduct onshore construction work outside the walls of buildings whose exterior walls and roof are substantially complete between 7 a.m. and 6 p.m., as required by the New York City Noise Control Code. To the extent that certain construction phases and activities require additional work hours, the Certificate Holder may make arrangements for the extension of additional work hours with appropriate City authorities, and submit to DPS Staff a request to proceed at least 48 hours in advance if planned weekend, evening, or holiday construction becomes necessary. Staff will use appropriate efforts to respond to Certificate Holder's request in a timely manner. Empire will conduct most construction activities between 7 a.m. and 6 p.m. on weekdays to the greatest extent practicable. However, some construction activities may be performed at night or on weekends due to reasons including but not limited to:

- Safety reasons
- To protect life and/or property
- Other activities reasonably necessary to comply with restrictions on daytime construction in or along roadways or public access areas.

If a waiver for after-hours work is granted, the Project would be subject to the provisions of NYC Code Section 24-223.

Empire's Article VII application includes an analysis of existing and anticipated noise sensitive receptors and measurements. To address potential noise-related impacts to the surrounding area during nighttime work, the following provisions will be made:

- For work outside 7 a.m. and 6 p.m., back-up alarms may be replaced with strobes, as allowed within Occupational Safety and Health Administration regulations, to eliminate the impulsive sound.
- Empire will ensure that equipment is functioning properly and equipped with mufflers and other noise-reducing features.
- Especially noisy equipment will be located as far from sensitive receptors as possible.

- Quieter construction equipment and methods will be utilized, as feasible, such as smaller backhoes. Path noise control measures will be used such as portable enclosures for small equipment (e.g., jackhammers and saws) as applicable.
- Communication and public outreach will be maintained with adjacent neighbors. Empire will provide information to abutting owners and residents about the time, duration, and nature of construction activities to help minimize the effects of construction noise, as well as the phone number of the Environmental Monitor to allow abutting owners/residents to issue complaints or ask questions about the construction activities.

When work is required before or after hours with sufficient daylight, temporary auxiliary lighting will be used to illuminate the workspace and maintain visibility for both worker and public safety. All traffic signs related to the Project will be sufficiently visible during early morning or evening work hours to provide adequate traffic safety for the public and construction workers. Temporary lighting, to the extent practical will be focused on the work area to minimize lighting impacts to adjacent properties and comply with applicable specifications for temporary construction lighting.

4.2.6 Third Party Utility and Infrastructure Crossing, Protection and Relocation

In order to allow safe excavation of the job site, select underground utilities, including storm drains will require relocation. Prior to initiating utility trenching activities, appropriate utility mark outs will be performed to protect worker safety and to prevent damage to any underground utilities. Empire and its Contractor(s)'s procedures will be utilized for on-site mark outs; site drawings and utility provided information will be reviewed to identify the presence of utilities. Any nearby utilities will be field marked by Empire or its Contractor(s). Existing utilities and relocation details can be found in **Appendix A Plan and Profile Drawings** and in **Appendix D Onshore Asset Protection Drawings**.

Empire will comply with the requirements for the protection of underground facilities set forth in 16 NYCRR Part 753 "Protection of Underground Facilities" (CC D4).

Empire will engineer and construct the Project in coordination with the operation and maintenance of any nearby electric, gas, telecommunication, water, sewer, and related facilities to be compatible with the operation and maintenance of any nearby facilities (CC D2). The details of facilities in the vicinity of, or crossed by, the Project ROW, the measures to protect the integrity, operation, and maintenance of those facilities is presented in **Appendix A** and **Appendix D**. Within the Project Area (**Figure 1**) nearby utilities include electric, gas, telecommunication, water, wastewater, steam, sewer, and related facilities. Additional infrastructure crossing details for the offshore scope of work and submarine export cable installation will be provided in EM&CP Part 2.

The current list of identified subsurface utilities is below in **Table 4-1**. Empire's coordination efforts and crossing agreements for this list of utilities within the Project vicinity are ongoing.

Table 4-1. Known Onshore Subsurface Utilities in the Vicinity of EW1 Onshore Project Area

#	Type	Size	Owner	Location	Agreement Status
1	Electric	TBD	CECONY	ONS	<p>Status as of 11/13/23: Once plan and profile drawings are approved by NYCDEP, EW1 will send final crossing design to CECONY for their review.</p> <p>Status as of 11/1/23: Pending Crossing discussions with CECONY</p>
2	Electric	TBD	CECONY	ONS	<p>Status as of 11/13/23: Once plan and profile drawings are approved by NYCDEP, EW1 will send final crossing design to CECONY for their review.</p> <p>Status as of 11/1/23: Pending Crossing discussions with CECONY</p>
3	Gas	3" Black Metal Pipe	National Grid	ONS	<p>Status as of 11/13/23: Once plan and profile drawings are approved by NYCDEP, EW1 will send final crossing design to National Grid for their review.</p> <p>Status as of 11/1/23: Pending Crossing discussions with National Grid</p>
4	Railroad Track	TBD	PANYNJ/EDC	ONS	<p>Status as of 11/13/23: EW1 team has been working with PANYNJ to incorporate as-built information of the existing tracks into crossing design and plans. Plan is to enter a form of agreement with EDC for this crossing.</p>
5	Sewer Force Main	6"	NYCDEP	29th Street	<p>Status as of 11/13/23 Meeting to discuss final crossing design plan and profile is scheduled for 11/16/23.</p> <p>Status as of 11/1/23: Rec'd record data on 11/1, currently reviewing. Met with NYCDEP on 9/12/23 to discuss proposed crossing plans, from that meeting</p>

#	Type	Size	Owner	Location	Agreement Status
					we determined that we needed additional information from NYCDEP and will then propose new crossing design. Will be proposing onshore crossing agreement for NYCDEP's review.
6	2 Fiber Conduits	2-4" Conduits	Verizon	29th Street	<p>Status as of 11/13/23: Once plan and profile drawings are approved by NYCDEP, EW1 will send final crossing design to Verizon for their review.</p> <p>Status as of 11/1/23: On 10/5/23 received as-built information from Verizon and technical team is currently reviewing information to determine proposed crossing design. Working with EW1 technical team to finalize design and propose crossing agreement to Verizon.</p>
7	Water	60"	NYCDEP	29th Street	<p>Status as of 11/13/23 Meeting to discuss final crossing design plan and profile is scheduled for 11/16/23.</p> <p>Status as of 11/1/23: Rec'd record data on 11/1, currently reviewing. Met with NYCDEP on 9/12/23 to discuss proposed crossing plans, from that meeting we determined that we needed additional information from NYCDEP and will then propose new crossing design. Will be proposing onshore crossing agreement for NYCDEP's review.</p>

#	Type	Size	Owner	Location	Agreement Status
8	Gas	4"	National Grid	29th Street	<p>Status as of 11/13/23: Once plan and profile drawings are approved by NYCDEP, EW1 will send final crossing design to National Grid for their review.</p> <p>Status as of 11/1/23: On 10/5/23 received as-built information from National Grid and technical team is currently reviewing information to determine proposed crossing design. Working with EW1 technical team to finalize design and propose crossing agreement to National Grid.</p>
9	Water	12"	NYCDEP	29th Street	<p>Status as of 11/13/23 Meeting to discuss final crossing design plan and profile is scheduled for 11/16/23.</p> <p>Status as of 11/1/23: Rec'd record data on 11/1, currently reviewing. Met with NYCDEP on 9/12/23 to discuss proposed crossing plans, from that meeting we determined that we needed additional information from NYCDEP and will then propose new crossing design. Will be proposing onshore crossing agreement for NYCDEP's review.</p>
10	Telephone Conduits	2-4"	Verizon	2nd Ave.	<p>Status as of 11/13/23: Once plan and profile drawings are approved by NYCDEP, EW1 will send final crossing design to Verizon for their review.</p> <p>Status as of 11/1/23: On 10/5/23 received as-built information from Verizon and technical team is currently reviewing information to determine proposed crossing design. Working with EW1 technical team to finalize design and propose crossing agreement to Verizon.</p>

#	Type	Size	Owner	Location	Agreement Status
11	Sanitary Forced Main	20"	NYCDEP	2nd Ave.	<p>Status as of 11/13/23 Meeting to discuss final crossing design plan and profile is scheduled for 11/16/23.</p> <p>Status as of 11/1/23: Rec'd record data on 11/1, currently reviewing. Met with NYCDEP on 9/12/23 to discuss proposed crossing plans, from that meeting we determined that we needed additional information from NYCDEP and will then propose new crossing design. Will be proposing onshore crossing agreement for NYCDEP's review.</p>
12	Telephone Conduits	2-4"	Verizon	2nd Ave.	<p>Status as of 11/13/23: Once plan and profile drawings are approved by NYCDEP, EW1 will send final crossing design to Verizon for their review.</p> <p>Status as of 11/1/23: On 10/5/23 received as-built information from Verizon and technical team is currently reviewing information to determine proposed crossing design. Working with EW1 technical team to finalize design and propose crossing agreement to Verizon.</p>
13	Sanitary Forced Main	20"	NYCDEP	2nd Ave.	<p>Status as of 11/13/23 Meeting to discuss final crossing design plan and profile is scheduled for 11/16/23.</p> <p>Status as of 11/1/23: Rec'd record data on 11/1, currently reviewing. Met with NYCDEP on 9/12/23 to discuss proposed crossing plans, from that meeting we determined that we needed additional information from NYCDEP and will then propose new crossing design. Will be proposing onshore crossing agreement for NYCDEP's review.</p>

#	Type	Size	Owner	Location	Agreement Status
14	Electric Conduit Metal	6"	CECONY	2nd Ave.	<p>Status as of 11/13/23: Once plan and profile drawings are approved by NYCDEP, EW1 will send final crossing design to CECONY for their review.</p> <p>Status as of 11/1/23: On 9/13/23 EW1 received as-built information from CECONY and technical team is currently reviewing information to determine proposed crossing design. Working with EW1 technical team to finalize design and propose crossing agreement to CECONY.</p>
15	Sanitary Forced Main	20"	NYCDEP	2nd Ave.	<p>Status as of 11/13/23 Meeting to discuss final crossing design plan and profile is scheduled for 11/16/23.</p> <p>Status as of 11/1/23: Rec'd record data on 11/1, currently reviewing. Met with NYCDEP on 9/12/23 to discuss proposed crossing plans, from that meeting we determined that we needed additional information from NYCDEP and will then propose new crossing design. Will be proposing onshore crossing agreement for NYCDEP's review.</p>
16	Telephone Conduits	2-4"	Verizon	2nd Ave.	<p>Status as of 11/13/23: Once plan and profile drawings are approved by NYCDEP, EW1 will send final crossing design to Verizon for their review.</p> <p>Status as of 11/1/23: On 10/5/23 received as-built information from Verizon and technical team is currently reviewing information to determine proposed crossing design. Working with EW1 technical team to finalize design and propose crossing agreement to Verizon.</p>

#	Type	Size	Owner	Location	Agreement Status
17	Electric Conduit Metal	2-6"	CECONY	2nd Ave.	<p>Status as of 11/13/23: Once plan and profile drawings are approved by NYCDEP, EW1 will send final crossing design to CECONY for their review.</p> <p>Status as of 11/1/23: On 9/13/23 EW1 received as-built information from CECONY and technical team is currently reviewing information to determine proposed crossing design. Working with EW1 technical team to finalize design and propose crossing agreement to CECONY.</p>
18	Metal Gas Line	16"	National Grid	2nd Ave.	<p>Status as of 11/13/23: Once plan and profile drawings are approved by NYCDEP, EW1 will send final crossing design to National Grid for their review.</p> <p>Status as of 11/1/23: On 10/5/23 received as-built information from National Grid and technical team is currently reviewing information to determine proposed crossing design. Working with EW1 technical team to finalize design and propose crossing agreement to National Grid.</p>
19	Confidential	Confidential	Confidential	Confidential	<p>Status as of 11/13/23: Once plan and profile drawings are approved by NYCDEP, EW1 will send final crossing design to existing infrastructure owner for their final review.</p> <p>Status as of 11/1/23: EW1 received as-built information and technical team is currently reviewing information to determine proposed crossing design.</p>

#	Type	Size	Owner	Location	Agreement Status
A	Combined Sewer Outfall (CSO)	TBD	NYCDEP	ONS	Status as of 11/13/23: Finalizing plan and profile drawings to present to NYCDEP for their approval.
B	Medium Voltage Duct Bank	TBD	CECONY/EDC	ONS	Status as of 11/13/23 Pending review and discussions with infrastructure owner
C	Water	12"	NYCDEP	ONS	Status as of 11/13/23: Water line relocation, pending final review and submittal to NYCDEP. Will incorporate into onshore crossing agreement.

Empire will use good faith efforts to consult with infrastructure owners to discuss potential impacts arising from the construction and/or operation of the Project on utilities or other infrastructure, including the studies required by the exercise of Good Utility Practice regarding the manner in which the Project will be designed and installed wherever they are expected to cross or come in such proximity to utilities or other infrastructure (CC H2).

For further information on coordination with co-located infrastructure owners listed above, see **Appendix X Third Party Infrastructure Documentation**.

4.2.7 Restoration

Areas disturbed during construction will be restored to a condition that is equal to or better than their pre-construction state. This includes removal of any temporary access roads, restoration of laydown and staging areas, as needed, and the finish grading of any scarified or rutted areas. Debris remaining from construction, installation, or maintenance, such as excess concrete, scrap metals, and surplus or extraneous materials or equipment used will be thoroughly cleared, removed, and disposed of in accordance with applicable regulation. Following construction, the Project Area will be restored to pre-construction states as applicable by final stabilization measures for trenching such as pavement or concrete curbs, and sidewalks. All Project areas shall be restored to pre-construction contours, unless otherwise specified in the EM&CP. Erosion controls will be restored as appropriate for those locations. Disturbed pavement, curbs, and sidewalks (if applicable) shall be restored to their original preconstruction condition or improved (CC L10). Herbicides, pesticides, and fungicides are not anticipated to be used during site restoration activities.

Final restoration of the Project Area may occur in phases in order to comply with required work windows and other restrictions. Where final restoration will not occur until a subsequent construction phase, Empire will stabilize the area until final restoration can be achieved. Within 10 days of the completion of final restoration for any portion of the Project, the Empire will file notice with the Secretary that all restoration portion of the Project has been completed in compliance with this Certificate and the EM&CP. Empire will demonstrate that all other locations have been stabilized until the commencement of the following phase of construction. Empire will periodically monitor the site during the non-construction season to ensure that areas that have not achieved final restoration remain adequately stabilized. Corrective measures will be implemented as soon as practicable for any locations where stabilization is observed to be inadequate (CC E12).

The Certificate Holder will, following restoration, let the temporary construction area revegetate naturally or return to its original land use to the extent that it does not interfere with the inspection, operation, or maintenance of the utility facilities.

4.3 General Procedures

4.3.1 Traffic Management Plan

The onshore interconnection cable route travels from the onshore substation at SBMT to the POI at the existing 345 kV Gowanus Substation. Leaving the onshore substation, the interconnection cable route crosses 29th Street and continues northeast towards the Gowanus Substation via 2nd Avenue. 2nd Avenue is a local, city-owned, two-lane roadway running generally northeast-southwest. The onshore interconnection cable will turn off of 2nd Avenue onto 28th Street before entering the Gowanus Substation. Empire understands that this portion of 28th Street is gated and is not a public right-of-way. Along this interconnection cable route, the Project will require temporary modification of existing traffic patterns and the use of temporary traffic control devices

and measures to provide protection of the traveling public, construction personnel and construction equipment in and through the work zone.

Empire and its Contractor(s) will implement traffic management plans for the Project during construction activities. The TMP for construction activities of this EM&CP is provided in **Appendix M**. Empire will coordinate with the NYCDOT regarding TMPs detailing traffic management of roads under State and municipal jurisdiction. TMPs describe the anticipated traffic impacts associated with the construction of the onshore facilities and the proposed mitigation measures to reduce impacts. Additionally, the TMPs explain the controls that will be implemented to enable the Project to adhere to the safety requirements expected by Empire and its Contractor(s), ROW users, and relevant stakeholders. It should be noted that additional traffic safety activities may be identified as the Project is further evaluated and refined. Empire will periodically consult with the NYCDOT about traffic conditions near the Project site and will make good faith efforts to minimize the impact of the construction of the facilities on area traffic circulation (CC L4).

Empire will consult with the NYC Department of Education prior to the commencement of construction and will include the outcome of that consultation, as well as any traffic-related measures taken by the Certificate Holder based on that consultation, in the TMP (CC M3a).

The TMP (**Appendix M**) includes plan drawings and notes that indicate the measures to be used during construction to promote safety in the work zone. The TMP includes the implementation of safety signage and traffic control personnel (i.e., flagmen) to direct traffic and guide flow, as necessary; this includes directing pedestrians and bicyclists through the work area. The TMP also includes provisions for maintaining access to adjacent properties during construction, such as 2nd Avenue. The TMP outlines, to the extent practicable, estimated lane or street closures for certain Project elements. All work zones will be compliant with the NYSDOT Manual of Uniform Traffic Control Devices ("MUTCD") and the NYS Supplement to the Federal Highway Administration (FHWA) MUTCD. Per the MUTCD, the minimum lane width standard shall be 10 ft on local roads as measured from the near edge of the channelizing devices to the edge of the pavement or the outside edge of the paved shoulder (CC M2). An additional 3 ft of clearance per lane (13 ft total per lane) will be maintained during winter months to allow snowplow access.

Empire and their Contractor(s) will monitor traffic through the work zones. The Contractor will provide weekly updates on construction and advance notice to the NYCDOT regarding lane or street closures and other traffic detours. Emergency vehicle access will be maintained to all roadways during Project construction. Emergency response departments will be advised regularly of active construction zones including time and duration of any road closures. During road closures, provisions will be made to accommodate potential emergency response scenarios. Local emergency departments will be advised of any lane closures and detours throughout construction.

Interference with snow plowing operations by drums, barricades, and other traffic control equipment will be kept to a minimum. Any devices disturbed or damaged by snow and ice control

operations will be replaced and/or reset as necessary and as soon as possible by Empire. Drainage frames, grates and covers, and other castings will not be adjusted in any travel lanes along 2nd Ave unless the final pavement course is to be placed prior to the onset of snow and ice weather. Steel plates, etc. will not protrude above the adjacent pavement. If any protrusions exist in a non-travel lane prior to a snow and ice condition, temporary asphalt ramps will be placed so that for every 1 inch of rise, there is a 6 ft run of ramp (CC M6a-b).

All pavement cuts will be restored to the adjacent pavement grade to eliminate recessed areas where snow cannot be plowed or where the plows may snag. Where the work zone traffic control schemes require installation of single or multiple runs of temporary concrete barrier, Empire will remove any snow remaining along the temporary barrier (CC M6c-d).

Project construction has been designed to avoid direct disturbance to properties by accessing construction sites from existing roadways or access roads, as shown on the Onshore P&P drawings (**Appendix A**). Onsite workers and project staff are expected to park personnel cars onsite during working hours. Parking is anticipated near the laydown areas but may move within the onshore substation as work progresses. Sufficient space is anticipated and will be verified throughout the length of construction. Private vehicles will not be parked within the work zone along the NYC roadway.

4.3.2 Soils Management

The Soil Handling and Erosion Control Plan, Attachment 1 to the SWPPP, was prepared to provide specifications for testing, stockpiling, reuse or removal from site, storage, erosion control, restoration, and compaction of backfill in trenches. Visual, olfactory, and instrument-based (e.g., photoionization detector) soil screening will be performed during excavation and subsurface activities. Soils will be segregated into the following: 1) material that requires off-site disposal; or 2) material that requires testing to determine if the material can be reused on-site as soil beneath a cover; or can be used as cover soil. Drums used for containerization of material, when required, will be NYSDOT-approved steel drums suitable for storage and transportation of soil. The drums will be properly labeled including any applicable non-hazardous/hazardous waste labels. Soil stockpiles will be maintained so as to minimize erosion or migration of the material. Erosion prevention for stockpiles will include appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Any debris or excess construction materials shall be removed to a facility duly authorized to receive such material. No burying or burning of construction debris or excess construction materials will be allowed (CC O3a). Except where required to comply with the design specifications, to restore roadway and shoulder surfaces, and to reuse suitable excavated materials, all fill will consist of clean soil, sand, crushed concrete aggregate (CCA), and/or gravel that is free of asphalt, slag, broken concrete, rebar, demolition debris, garbage, household refuse, tires, woody materials

including tree or landscape debris, and metal objects. Best efforts will be made use fill materials that are visually free of invasive species (CC O3b).

Uncontaminated drill cuttings and drilling muds from drilling processes which utilize only air, water, or water-based drilling fluids are considered construction and demolition debris under 6 NYCRR Part 360 ("Solid Waste") and can be disposed of at either construction and demolition debris landfills or at municipal solid waste (MSW) landfills. Drill cuttings from drilling processes that utilize polymer-based mud containing mineral oil lubricant are considered contaminated and can only be disposed of at MSW landfills. Dewatered drilling muds including polymer-based mud containing mineral oil lubricant can only be disposed of at MSW landfills (CC V2).

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Material excavated and removed from the Project Area will be treated as contaminated and regulated material and will be transported and disposed off-site in a permitted facility in accordance with all local, State, and Federal regulations.

In addition to the Soil Handling and Erosion Control Plan, a Soil Management Plan (SMP) was developed for the Project Area associated with the remedial work activities and serves as the guide for the management of soil generated during subsurface activities (e.g., test pit excavation, test trenching, drilling, development, etc.), and to ensure that State requirements for import and use of backfill are followed. The SMP is included in this EM&CP under **Appendix O**, Attachment 1.

5. ONSHORE ENVIRONMENTAL PROTECTION AND MITIGATION

5.1 Land Use

Existing land uses for the Project were characterized based on a 0.25-mile buffer of the onshore portions of the Project, including the onshore substation, cable landfall and onshore cable routes to the POI (onshore Project Area, see **Figure 1**). This Section describes any sensitive land uses that may be affected by construction and operation of the Project or by construction-related traffic and specifies the measures Empire proposes to minimize impacts to land uses.

5.1.1 Summary of Existing Land Use Conditions and Impacts

Existing land uses in the Project Area were reviewed based on a desktop assessment using aerial photography, the National Land Cover Database (USGS 2019), New York State Coastal Zone Management requirements (NYSDOS 1982) and land use plans, local comprehensive plans, and the New York City Waterfront Revitalization Program (NYCDCP 2021), as well as land use and zoning data from New York City. Zoning maps were obtained from New York City's Zoning and Land Use Map. This data was supplemented with observations during field investigations conducted in 2020.

The onshore project Area is located in a highly developed urban area in Brooklyn, New York. According to the NLCD (2016), almost all land within a 0.25-mi buffer of the onshore Project Area is developed, predominantly classified as "Developed, High Intensity." The onshore Project Area is zoned for manufacturing (District M3-1) with other manufacturing zones adjacent (M2-1, M1-2, NYCDCP 2019).

The Project will make landfall at the SBMT, an industrial marine terminal located on the east side of New York Harbor at the entrance of Gowanus Bay. The onshore substation will occupy approximately 4.8 ac (1.9 ha) within the 88-ac (36-ha) SBMT site, which is owned by the City of New York and leased by the NYCEDC. The Sims Municipal Recycling Facility is located to the west of the Project Area within the SBMT site. SBMT also contains rail spurs, including a rail spur for break-bulk along the 39th Street shed, two new rail sidings for auto rack loading and unloading, and a rail extension from the Bush Terminal to the Sims facility (NYCEDC 2011). The western portion of SBMT is covered by a lease awarded by New York City in 2018 to Sustainable SBMT, L.P., with a stated goal of reactivating SBMT for maritime shipping. The approximately 66-ac (27-ha) lease covers the two southern piers and an upland area of the SBMT parcel to the southwest of the Project Area (NYCEDC 2018).

The Project's 0.2 mi (0.3 km)-long onshore cable route traverses from SBMT, along 2nd Avenue, to the POI adjacent to developed predominantly urban industrial and commercial land use. Sensitive uses adjacent to the Project onshore cable route along 2nd Avenue include a Federal Bureau of Prisons facility located at the intersection of 2nd Avenue and 29th Street. The nearest residential

receptors include residences and the Industry City apartments approximately 400 to 500 ft to the southeast along 2nd Avenue.

The onshore Project Area contains designated floodplains or Special Flood Hazard Areas mapped as Zone AE and Zone X (shaded), per the effective 2007 FEMA Flood Insurance Rate Maps (FIRMs). The majority of the onshore substation is located in Zone AE (the 1-percent-annual-chance floodplain) (FEMA 2016). FEMA's 2015 preliminary FIRMs additionally identify a portion of the 4.8 ac (1.9 ha) onshore substation as within the Coastal A Zone (Coastal A Zone was not mapped prior to the 2015 preliminary FIRMs). Coastal A Zone is the portion of Zone A where wave heights are expected to be between 1.5 ft (0.5 m) and 3 ft (0.9 m) high.

There are no agricultural districts or recreational facilities within the onshore Project Area. Closest to the Project is D'Emic Playground, the only designated recreational area within 0.25 mi of the Project Area. D'Emic Playground is located on the opposite side of the Industry City complex and I-278 (Brooklyn-Queens Expressway), approximately 0.2 mi (0.4 km) from the Project. No impacts to agricultural or recreational lands are anticipated to result from construction or operation of the Project.

Since the Project is consistent with the existing land use and zoning of the area, no impacts are anticipated to land use and zoning during the Project's operations; it is anticipated that the disturbance will be limited to the construction period and there are no permanent impacts upon land uses. The Project's underground cables will utilize existing roads and ROWs to the extent practicable. With the exception of the onshore substation and some minor features of the onshore cables (e.g., link boxes), the Project will be located underground. Empire's onshore substation will include concrete foundations, gravel lots, fencing, and associated structures in special flood hazard areas AE and X. Changes in elevations and grades and the placement of above grade structures are minor relative to the capacity of the adjacent waterway to manage floodwater. Further, the adjacent waterway is tidal. The project would have minimal impact to flood flows and flood storage and mitigated through appropriate facility design consistent with all applicable laws and flood zone requirements.

An increase in Project-related construction, support, and workforce vehicle traffic along the onshore cable route and to the onshore substation is anticipated during construction. As the Project utilizes existing roads, ROWs, and infrastructure, impacts resulting from construction activities will be minimized to the extent practicable and are anticipated to be similar in nature to other utility installations or road improvement works carried out in the area. This increase in vehicle traffic and activity is expected to be temporary and localized to the active construction sites; therefore, the increased traffic will be consistent with the existing uses and within the capacities of the infrastructure in place during previous uses. To further minimize potential construction effects, adjacent landowners will be provided timely information regarding the

planned construction activities and schedule, and work will also be coordinated NYCDOT (Section 1.4.1).

5.1.2 Protection and Mitigation Measures

During construction, Empire will abide by the following measures to minimize potential impacts to existing land uses:

- Confine construction, operation, maintenance, repair, and decommissioning activities to the Project Area and specific activities as detailed in the EM&CP (CC L6).
- Add security measures to monitor and properly mark active construction sites.
- Implement the TMP (**Appendix M**), developed in coordination with the NYCDOT.
- Implement the Complaint Management and Resolution Plan (**Appendix T**).
- Coordinate construction activities with other construction and maintenance activities taking place at the same time and in the same vicinity conducted by entities including but not limited to the federal, State, and City agencies (such as Gowanus Canal dredging), SBMT, other utilities, nearby property owners, and business owners.
- Designate parking areas for Project construction workers that do not interfere with normal traffic, cause a safety hazard, or interfere with existing land uses, including public access and recreation, and minimize vehicles traveling to the Project Area and on-street parking for workers where practicable (CC G10, L3).
- Restore in-kind areas temporarily disturbed during installation of the onshore cables, as applicable (see Section 4.2.7).

5.2 Cultural and Historic Resources

Cultural resources include archaeological sites, historic standing structures, buildings, objects, districts, and traditional cultural properties that illustrate or represent important aspects of prehistory (before circa anno Domini 1600), history (after circa anno Domini 1600), or that have important and long-standing cultural associations with established communities or social groups. Significant archaeological and architectural properties are generally defined by the eligibility criteria for listing on the NRHP and/or New York State Register of Historic Places (SRHP). NRHP-listed and -eligible resources are defined as historic properties.

5.2.1 Summary of Existing Cultural and Historic Resources and Potential Impacts

Empire assessed potential impacts to archaeological resources and visual effects to historic and architectural resources in the Phase I Terrestrial Archaeological Survey Report and Analysis of

Visual Effects to Historic and Architectural Properties (AVEHAP) filed as Appendices G, and H of the Application, respectively. Empire also provided a supplemental Marine Archaeological Resources Assessment (SEARCH 2021, filed January 18, 2022). Any updated review and correspondence with agencies regarding the Project's review under the National Historic Preservation Act Section 106 will be provided prior to construction. This Section provides a summary of existing conditions and potential impacts for each of these cultural and historic resources that may be affected by construction and operation of the Project.

5.2.1.1 Terrestrial Archaeological Resources

For known and potential archaeological resources, the direct effects terrestrial archaeological area of potential effects (APE) is the area of ground disturbance associated with the Project's construction, operations, and maintenance. Indirect effects to archaeological resources are less common but could include visual or auditory impacts that would adversely affect the character and setting of a significant archaeological site.

Following concurrence of the terrestrial archaeological resources survey methodology from NY SHPO, site file review was undertaken via Cultural Resource Information System (CRIS), an online database maintained by the NY SHPO (NYSOPRHP 2019). The review identified recorded archaeological resources within the terrestrial archaeological resources study area (Terrestrial Archaeological Study Area), which included a 0.25-mile buffer of areas where ground-disturbing activity may take place, including the onshore substation, onshore cable corridor, and cable landfall area. In addition, information regarding previously conducted archaeological surveys within the Terrestrial Archaeological Study Area was gathered via CRIS and the New York City Landmarks Preservation Commission's online archives (LPC 2019).

Archaeological surveys previously conducted in the Terrestrial Archaeological Study Area concluded that Gowanus Bay waterfront lots possess low archaeological sensitivity. A review of nineteenth century maps of the Brooklyn shoreline indicates that the Terrestrial Archaeological Study Area occurs on filled land constructed into Gowanus Bay in the late nineteenth and early twentieth centuries (NYPL 2019). Pedestrian reconnaissance was conducted by registered professional archaeologists on October 30, 2018, as part of Phase I archaeological investigations for the Project, to assess the archaeological sensitivity of the Terrestrial Archaeological Study Area. Based on the site file review and pedestrian reconnaissance, the archaeological consultant concluded that no further archaeological investigations were warranted for the landfall and onshore export and interconnection cable routes. In a response dated August 30, 2019, NY SHPO concurred with the Applicant's archaeological consultant that a Phase IB field survey would not be necessary. Based on the investigations conducted, no archaeological resources have been identified within the proposed preliminary APE of the Project; therefore, no impacts to significant archaeological resources are anticipated.

5.2.1.2 Historic and Architectural Properties

The identification of historic architectural resources was based on standard practices such as review of high-resolution digital photographs, and review of historic properties in the New York CRIS application and engagement through meetings and correspondence with relevant federal and state agencies. Based on this analysis and outreach with regulatory agencies, the Project's onshore Historic and Architectural Properties Study Area (AVEHAP Study Area) and APE were defined based on: 1) a desktop analysis to identify known/listed sites in the vicinity of the Project, utilizing resources from National Park Service (NPS) and the NY SHPO (New York CRIS) in 2018 and 2019; 2) The completion of a viewshed analysis computer model to allow for refinement of the proposed preliminary APE; 3) Preliminary fieldwork and desktop research to ground-truth and refine the proposed AVEHAP preliminary APEs, based on local topography and landscape features (i.e., intervening vegetation, visual screening by existing buildings, the alignment of view corridors along streets, and other factors), including an initial field visit to the AVEHAP Study Area between November 4 and November 13, 2018; and 4) An additional field visit between June 3 and June 6, 2019, for the proposed onshore cable corridor. The onshore AVEHAP APE is the area, on land or sea, where views of the Project's components will be visible. Since submarine export cables will be entirely subsea, and the onshore cable route would be entirely underground, except at the onshore substation at SBMT, and because visual impacts to historic resources would be temporary during the construction phase, the proposed submarine export and onshore cable routes were not included in this analysis.

Research identified one NRHP-listed individual property, one NRHP-listed historic district, and one NRHP eligible historic district within the AVEHAP Study Area and preliminary APE. The Bush Terminal Historic District (NRHP-eligible) and Storehouse #2 (NRHP-listed) are both located near the proposed onshore substation. The onshore substation will be an industrial style building commensurate with the existing local industrial built environment. Because the Bush Terminal Historic District and Storehouse #2 are already located in an active, modern waterfront, the introduction of an additional modern component to this setting will not adversely affect either resource because their significance does not derive from their historic maritime setting being preserved.

Green-Wood Cemetery (NRHP-listed) is located at the outer margin of the 0.5-mile (0.8-km) APE, 0.47 miles (0.75 km) east-southeast of the onshore substation. Green-Wood Cemetery, in addition to being NRHP-listed, is a National Historic Landmark. The cemetery's 25th Street gates, Weir Greenhouse, Fort Hamilton Parkway Gate, and chapel are separately NYC-Landmarked. There will be an expected partial view of the onshore substation from the ridge (glacial moraine summit) within Green-Wood Cemetery. The onshore substation will appear between existing multi-story warehouses at approximately 0.9 mi (1.4 km). The addition of new structures to the viewshed outside the cemetery limits does not diminish the feeling, association or craftsmanship of the

cemetery itself. There are expected to be no adverse effects to Green-Wood Cemetery by the introduction of the onshore substation.

In a letter dated January 6, 2022, which has been filed on the record with the Commission, the NYSHPO concurred with the conclusions of Empire's AVEHAP and indicated no concerns with the Project's potential visual impacts on historic cultural resources.

During construction, the potential impacts to historic properties will be limited to short-term visual impacts during offshore and onshore construction activities. Direct impacts to historic resources during construction are not expected. Visual effects to historic and architectural properties during construction will be short-term from vessels, construction activities, the presence of construction equipment and work crews, and lights necessary to perform construction activities. These impacts will not be present once construction is complete. Construction of the Project will not require demolition or physical alteration of any NRHP-listed or eligible buildings.

5.2.2 Protection and Mitigation Measures

Ground-disturbing activities, including the construction and installation of underground features (e.g., joint vaults, onshore cables, site grading) and the onshore substation, have the potential to uncover and impact buried terrestrial archaeological resources. However, the likelihood of unanticipated discoveries is low because the area occurs entirely on artificially filled land constructed into Gowanus Bay in the late nineteenth and early twentieth centuries. Empire will not undertake construction in previously undisturbed areas where archeological surveys have not been completed until such time as the appropriate authorities, including OPRHP, and DPS Staff, have reviewed the results of any historic properties and archeological surveys that are required (CC Q1). Empire will also implement its Unanticipated Discoveries Plan (**Appendix R**), which outlines the procedures to follow if archaeological materials or human remains are discovered during construction activities, including contact information and reporting protocols if unanticipated discoveries occur.

Should archeological materials be encountered during construction, and continuing construction in the immediate vicinity (within 50 ft) would be incompatible with the objective of preserving the quality and integrity of the resource, Empire will stabilize the area and cease all ground-disturbing activities in the immediate vicinity (within 50 ft) of the find and protect the find from further damage. The restricted areas would extend from the maximum discernable limit of the archaeological resource. The only earth-moving activities that may occur within the restricted areas prior to notifications are those necessary for immediate stabilization of the exposed archaeological feature or deposit. Empire will flag, fence off, or securely cover with steel plates the archaeological discovery location and take reasonable measures to ensure site security. Within twenty-four (24) hours of such discovery of archaeological materials, Empire will notify and consult with DPS Staff and OPRHP to determine the best course of action. Any discovery made on a

weekend (from 5 pm on Friday to 9 am on Monday) or state holiday will be protected until DPS Staff and OPRHP are notified of the discovery. No construction activities shall be permitted in the vicinity of the find until such time as the significance of the resource has been evaluated by OPRHP and the need for and scope of impact mitigation has been determined by DPS Staff in consultation with OPRHP and Empire. Empire may engage qualified archaeologists to assist in preliminary visual assessments and documentation, consultations with OPRHP and DPS Staff, and development of appropriate treatment/mitigation measures (CC Q2).

Should human remains or evidence of human burials be encountered during the conduct of archeological data recovery fieldwork or during construction, all work in the immediate vicinity (within 50 ft) of the find shall be halted immediately for the remains to be protected from further disturbance. Immediately upon any such discovery, Empire will notify and consult with DPS Staff and OPRHP. Empire will ensure that treatment of human remains is done in accordance with the OPRHP's Human Remains Discovery Protocol (dated August 2018) (CC Q3).

During construction, Empire will respond promptly (within 72 hours) to any complaints of negative archeological impacts from New York State agencies or the public and, if necessary, to mitigate any actual impacts through on-site design modifications and off-site mitigation techniques in accordance with the Unanticipated Discoveries Plan (**Appendix R**) (CC Q5). Empire further will ensure that all archaeological or remains-related encounters and their handling are reported in the status reports summarizing construction activities (CC Q4).

Although there is one NRHP-listed individual property, one NRHP-listed historic district, and one NRHP-eligible district within the AVEHAP preliminary APE, impacts from the presence of the onshore substation during Project operation have been minimized by the Project's siting, and no adverse effects are expected to these resources. Additional measures to minimize impacts to visual resources generally are described in Section 5.9.

5.3 Topography/Geology/Soils/Groundwater

Existing topography, geology, soils, and groundwater conditions were studied within the Project Area, including the onshore substation, and onshore cable corridor. This Section describes geological, topographical, soils, and groundwater resources that may be affected by construction or operation of the Project and measures to minimize impacts on these resources. This Section also describes the procedures that were followed to identify geological, topographical, soils, and groundwater resources and the measures that will be taken to protect or preserve these resources.

5.3.1 Summary of Existing Topography/Geology/Soils/Groundwater and Potential Impacts

Topography, geology, soils, and groundwater in and surrounding the Project Area, including the submarine export cable corridor, onshore substation, and onshore cable corridor, were initially assessed by reviewing desktop resources, including USGS Mapping (1995a); USGS topographic 7.5-minute quadrangles for New York (Upper Bay, The Narrows, Coney Island, Far Rockaway); NOAA's Continually Updated Digital Elevation Model (Cooperative Institute for Research in Environmental Sciences 2014); NOAA nautical charts; Geologic mapping (NYS Museum 1999); and Soil survey mapping (SoilWeb 2019; USDA 2020). This information was supplemented with Empire's field surveys and onshore and offshore geophysical and geotechnical assessment campaigns. Empire's Geotechnical Site Investigation Report for the onshore Project Area is provided in **Appendix U**. Any inspections during construction mentioned in this appendix will be shared with DPS Staff.

The geology and geomorphology in the New York Bight region are diverse, resulting from the deposition and reworking of glacial and marine deposits resulting from a series of sea level changes of the Pleistocene Epoch, and more recent Flandrian transgression of sea level (Messina and Stoffer 1996). The submarine export cable route is located in a boundary region between glaciated and proglacial areas. The most recent glacial period in the U.S., called the Wisconsinan glaciation, stretched from approximately 30,000 to 12,000 years ago. During this time, the Laurentide Ice Sheet covered most of northern North America, its margin terminating just north of Long Island. This is evident in a series of glacial end moraines located on the north side of Long Island, Martha's Vineyard, and Nantucket. To the north of the moraines are dense basal tills (deposited beneath the glacier) overlying the bedrock. The moraines consist of sandy till with variable sorting and drainage, at times mixed with stratified sands (Cadwell et al 1999).

The onshore portion of the Project is underlain by Precambrian crystalline bedrock. On Manhattan, bedrock outcrops are at the surface, but they rapidly slope to the south and are overlain by a massive wedge of semi consolidated to unconsolidated sediments underlying the Project Area. The geological units underlying the marine portions of the Project Area are generally composed of Cretaceous to Quaternary age sediments, consisting of sand, gravel, silt, and clay that have deposited during cycles of sea level fluctuations commonly known as coastal plain deposits. Pleistocene deposits unconformably overlie the Coastal Plain deposits and are characterized by layers of chaotic beds created by erosional and depositional glacial cycles. Holocene deposits are interpreted as gravel, sand, silt and clay with organic deposits overlaying the Pleistocene deposits in most of the area. Holocene sediments were deposited in a combination of marine shelf, shoreface, estuarine and fluvial environments due to sea level variations. Channels frequently incise into the underlying Pleistocene and Coastal Plain deposits during fluvial episodes, and incisions were later filled with estuarine and transgressive marine sediments as sea level rose to modern levels.

The onshore Project Area, which includes the onshore substation site and the onshore cable corridor, ranges in elevation from 4.8 ft (1.5 m) to 11.5 ft (3.5 m) elevation NAVD88 (CIRES 2014).

Topographic relief is characterized as flat, and slopes are minimal. The onshore Project Area is heavily urbanized and composed of filled land, and any previously existing topographic grades have been leveled for the construction of the many structures in the area. The onshore cable route and onshore substation are located in an area heavily influenced by human development, including the basin-ward extension and stabilization of the shoreline for historic waterfront development purposes. The onshore Project Area is underlain by glacial till that overlies the bedrock to depths of up to 200 ft (60 m). This till consists of unsorted variable texture of clay, silt, sand, and bolder clay of low permeability.

The onshore cable route and the onshore substation overlay the Long Island Aquifer, one of the most prolific aquifers in the country. Groundwater was historically pumped from this aquifer for drinking water and industrial uses, but impervious coverage throughout the county reduced recharge, and water demand caused freshwater water tables to drop (USGS 1995b). After saltwater intrusion occurred, pumping for public supply ceased in 1947 in Kings and Queens County on western Long Island; the area has since recovered, with water tables now at pre-pumping levels (USGS 1995b). Areas around the cable landfall in Brooklyn receive their drinking water from the Catskills, located approximately 125 mi (201 km) north; therefore, there are no drinking water supplies in the vicinity of the Project.

Groundwater elevations along the eastern and southern shorelines of Long Island range from 1.71 ft (0.52 m) below mean sea level (MSL) to 5.83 ft (1.78 m) below MSL, with the wells closest to the cable landfall measuring depths of 4.69 ft (1.43 m) below MSL and 5.83 ft (1.78 m) below MSL (USGS 1997). Based on more recent groundwater elevation mapping conducted as part of Empire's Remedial Investigation (RI), groundwater elevations in the vicinity of the onshore and cable landfall measure between 1.95 ft above MSL and 3.1 ft above MSL. Groundwater was encountered while performing the RI work at depths ranging between 5 and 9 ft below grade. However, groundwater elevations in this area are tidally influenced. Based on a tidal study conducted as part of the SBMT RI, the degree of tidal influence on groundwater elevations is related to the location of the monitoring well in the vicinity of the Project Area. A groundwater elevation map and plots of water levels over time is included under **Appendix P, Attachment 1 RIR**. Regional groundwater flow is generally to the west and northwest (G.C. Environmental 2013; USGS 1999).

Nineteenth century maps of the Brooklyn shoreline indicate that the onshore Project Area occurs on fill constructed into Gowanus Bay in the late nineteenth and early twentieth centuries (NYPL 2019). The area has undergone significant human and construction-related modifications. Artificial fills and rip-rap seawalls have been utilized to modify the original topography to accommodate significant amounts of anthropogenic activities in these locations. The NRCS identifies the area soils as Urban or Udorthents, which are defined as made land over loose sandy and gravelly glaciofluvial deposits and/or firm coarse-loamy basal till derived from granite and gneiss (SoilWeb 2019).

No permanent or significant impacts related to topography, geology, soils or groundwater are anticipated from construction or operation of the Project. Throughout the construction phase of the Project, temporary impacts to natural conditions may occur, as disruptions to surface soils and geology are unavoidable. During the construction of onshore infrastructure, there will be short-term disturbance of the upper layers of soil along the onshore cable route, and for preparation of the onshore substation site.

The onshore substation site is relatively flat and previously filled land. Construction activities at the onshore substation will include site preparation, excavation and removal of existing belowground and aboveground infrastructure, bulkhead replacement, grading, and installation of foundations and supports. Empire will also conduct site preparation and excavation for installation of duct banks for the onshore interconnection cables at SBMT and along 2nd Avenue. Following installation of the onshore cables, all trenches will be backfilled, and surface grades will be returned to pre-construction conditions to the extent practicable. Since the Project is not anticipated to encounter bedrock, no blasting has been proposed for the Project.

5.3.2 Protection and Mitigation Measures

Empire has prepared a Soil Handling and Erosion Control Plan (included as Attachment 1 to the Stormwater Pollution Prevention Plan (**Appendix I**) for the Project. The Soil Handling and Erosion Control Plan includes the specifications for testing, stockpiling, reuse or removal from site, storage, erosion control, restoration, and compaction of backfill in trenches, and will be consistent with the acknowledged SPDES General Permit (SPDES General Permit), when obtained, and the Stormwater Pollution Prevention Plan (SWPPP) (**Appendix I**). Empire's Soil Handling and Erosion Control Plan and SWPPP were developed in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (Blue Book). The SWPPP identifies temporary erosion control devices and soil stabilization measures to be implemented during construction.

Soil and sediment control measures will be implemented early in the construction process and be installed prior to and maintained in acceptable condition for the duration from any clearing or earthmoving operations through to the permanent stabilization of the soil. Erosion and sediment control devices will be installed in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, the approved EM&CP, the SWPPP, permit conditions, regulatory approvals, and as otherwise necessary or directed by the Environmental Monitor to prevent adverse impacts to environmentally sensitive areas (CC O5).

Empire will evaluate the suitability of excavated soils to be reused onsite, and if soil reuse is not possible, excess soils will be disposed of at a licensed facility. Following installation, areas temporarily disturbed for installation of the onshore cables and onshore substation will be backfilled, stabilized, and restored to pre-construction conditions to the extent practicable. To the extent available, all erosion control fabric or netting used for slope or soil stabilization will be 100

percent biodegradable natural product (not photodegradable fabric), excluding geotextiles used for road construction and temporary erosion control devices such as silt fence and silt sock.

Empire's SWPPP was developed to be consistent with the requirements in the effective SPDES General Permit for Construction Activity, GP-0-20-001. The SWPPP includes a schedule for necessary inspections at all control measure locations. Empire is in the process of obtaining MS4 approval and will have such prior to starting construction.

Empire will also implement a Hazardous Waste and Petroleum Work Plan (**Appendix O**) for the entire onshore facilities for testing and treatment and/or disposal of soil and groundwater, unless such work has already completed as part of remediation activities under the Brownfield Cleanup Agreement, RAWP. The Hazardous Waste and Petroleum Work Plan includes the Soil Management Plan for the Project Area and is consistent with NYSDEC guidance as set forth in the Division of Environmental Remediation's Technical Guidance for Site Investigation and Remediation (DER-10). The Hazardous Waste and Petroleum Work Plan includes sampling to be completed during construction, including sampling if visibly contaminated material is encountered or if groundwater is encountered in areas that were not previously sampled. The Hazardous Waste and Petroleum Work Plan specifies that any soils exceeding NYSDEC standards criteria, or guidance values, which cannot be used as backfill onsite will be disposed of and provides source(s) of clean backfill (clean sand, recycled concrete aggregate, gravel, or soil) to be used wherever contaminated material is encountered and removed.

A Dewatering Plan (**Appendix P**) will be implemented for the management of groundwater, including testing, treatment, baseline sampling, and/or disposal practices. Dewatering operations involving water withdrawal from dewatering wells with a total capacity in excess of 45 gallons per minute (gpm) or 64,800 gallons per day (gpd), are designed to be conducted in compliance with the substantive requirements of 6 NYCRR Part 602, as detailed in the Dewatering Plan. Any water generated from dewatering operations that exceeds NYSDEC standards, criteria, or guidance values, or more stringent applicable levels of other authorities or agencies in effect at the time of dewatering operations, will be treated and disposed of in compliance with the approved Dewatering Plan.

Following construction, the onshore Project Area will be restored as described in Section 4.2.7. The final grading and stormwater management plan for the Project are designed to preserve the existing pre-development drainage patterns to the maximum extent possible. Empire will implement Stormwater Management Practice to comply with the NYCDEP requirements. This plan will be provided in EM&CP Part 3.

5.4 Pollution Prevention

This section addresses onshore spill prevention, control, and countermeasures (Section 5.4.1) and the hazardous waste and petroleum work plan (Section 5.4.2). Stormwater pollution is discussed in Section 5.5.

5.4.1 Onshore Spill Prevention, Control, and Countermeasures

The onshore construction Spill Prevention, Control, and Countermeasure (SPCC) Plan (**Appendix N**) for this EM&CP Part 1 applies to the storage, handling, transportation, and disposal of petroleum, fuels, oil, chemicals, hazardous substances, and other potentially harmful substances that may be used or stored during the construction of onshore facilities. The onshore construction SPCC describes measures to avoid and minimize spills and improper storage or application of hazardous substances in proximity to environmentally sensitive resources within the Project site or along the ROW, access roads, and onshore substation. The onshore construction SPCC also describes the measures for responding to and remediating the effects of hazardous substances in the event of a release. Offshore and operational SPCC will be addressed in subsequent EM&CPs.

5.4.1.1 Storage, Handling, and Transport of Materials

The onshore construction SPCC Plan (**Appendix N**) explains how petroleum and hazardous substances will be stored, handled, and transported. The Contractor(s) will take precautions during the storage, handling, and transporting of fuels, oils, chemicals, and other potentially hazardous substances to avoid releases in the work area. Hazardous substances will be transported, stored, and handled as recommended by suppliers and/or manufacturers and in compliance with applicable state and federal regulations.

It is anticipated that limited, if any, hazardous wastes will be generated during construction of the facilities. To reduce the risks associated with generating hazardous wastes, the Contractor(s) will conform to the requirements of the NYSDEC Hazardous Waste Rules and Regulations and the Hazardous Waste and Petroleum Work Plan (**Appendix O**). The Contractor(s) will designate an on-site Spill Coordinator to handle management and reporting of spills.

The onshore construction SPCC Plan, included in this EM&CP (**Appendix N**), lays out the steps beginning with hazard recognition through spill cleanup and reporting. It provides detailed instructions for general employees reporting a release/spill of oil or any other chemical to the environment. General requirements for SPCC include:

- The Contractor(s) will identify hazards or activities with spill/release risk and include them in a risk assessment.
- The Contractor(s) will identify and document containers and process equipment with higher spill/release risk.

- The Contractor will identify potential hazards based on the frequency of hazard or activity and the potential consequence of the spill/release event which may be influenced by the volume of substance handled or stored and the hazard classification of the substance. During defense identification and implementation, the hierarchy of controls shall be considered, evaluated, validated, and identified.
- All non-passenger vehicles must be equipped with a spill kit that is appropriate for the volume of fuel carried by the vehicle. Any leaks must be stopped and cleaned up immediately, provided that it is safe to do so.
- Crews will have sufficient spill containment equipment on hand at secondary containment locations and will use such equipment to provide prompt control and cleanup in the event of a release. Absorbent pads or portable basins will be deployed under the refueling operation.
- Restrictions on storage, mixing, loading and refueling within certain wetland and waterbody buffers to protect sensitive resources discussed in Section 4.2.1.

5.4.1.2 Spill Reporting

In the event of a release, the Contractor(s) and Empire employees will follow the State and federal reporting requirements for hazardous substance spills, leaks, and discharges and 40 CFR Part 117 and Part 302. Notification and response measures will be recorded properly, and a spill report will be prepared. In accordance with NYSDEC regulations and guidance, the Contractor or any general employee with knowledge of any release of hazardous substances will immediately notify the Environmental Monitor and the Contractor(s) Spill Coordinator, as applicable. All spills meeting the NYSDEC spill reporting criteria, regardless of whether it is the spiller, will be reported to both the NYSDEC Spill Hotline (1-800-457-7362) and DPS Staff, in accordance with all federal and State regulations. Empire will provide a copy of such notification contemporaneously to the NYCDEP (and via the NYC311 program as required by 15 RCNY 19-03 (d)(2)) and affected property owner.

Releases of fuels, waste oils, other petroleum products hazardous materials will be reported to the NYS Spill Hotline within 2 hours, in accordance with the NYSDEC Spill Reporting and Initial Notification Requirements Technical Field Guidance. In addition, oil spills to water will be reported immediately to the National Response Center at 1-800-424-8802.

5.4.1.3 Responsibilities

Field personnel or Contractor(s) who detects a spill of petroleum product or hazardous substances are responsible for notifying the Contractor(s) Spill Coordinator and/or the Environmental Monitor. The Contractor(s) designated on-site Spill Coordinator will handle management and reporting of spills. The Spill Coordinator will have a thorough understanding of applicable

regulations regarding spill procedures and will be able to implement the SPCC Plan and appropriate reporting requirements.

Any spill, regardless of quantity, will be reported to the Environmental Monitor. Personnel at the site will be responsible for gathering as much information as possible about the location, time, type, cause, and estimated quantity of the spill, size of the area, any affected resources or properties, and other pertinent information for reporting and clean up. If necessary, field personnel will request assistance from the Environmental Monitor in arranging spill clean-up for spills that are large, contain hazardous material, or have reached a waterbody and require clean up by qualified hazardous materials personnel.

The Environmental Monitor will inspect storage, handling, sampling and transportation of petroleum products and hazardous substances to ensure that requirements of the onshore construction SPCC Plan are being followed. Following immediate notifications detailed in Section 5.4.1.2, the Environmental Monitor will be responsible for coordinating with the Contractor Spill Coordinator, gathering information, and preparing a spill report. If requested by field personnel, the Environmental Monitor be responsible for assisting in obtaining clean up help from qualified hazardous materials personnel, if necessary.

5.4.1.4 Spill Clean Up

Attempts will be made to immediately contain any spills. Non-passenger vehicles will be equipped with a spill kit that is appropriate for the volume of fuel carried by the vehicle. Any leaks will be stopped and cleaned up immediately, provided that it is safe to do so.

Upon discovery of a spill, personnel will attempt to contain and clean up the spill, if possible, to safely do so. The personnel immediately on site will stop the spill at its source, evacuate personnel that are present, and visibly mark and/or erect physical barriers to the area of the spill, as necessary, to prevent unauthorized access while not preventing spill clean-up activities. Field personnel will be responsible for wearing appropriate personal protective equipment in accordance with the Safety Data Sheet information. If possible, personnel will deploy spill containment equipment and absorbent booms. Persons should only attempt to clean-up or control a spill if they have received proper training and possess the appropriate protective clothing and clean-up materials. Any contaminated materials removed will be properly contained and labeled.

The onshore construction SPCC Plan addresses the measures for controlling and cleaning up releases of hazardous substances. Spills that are large, contain hazardous material, or have reached a waterbody will be cleaned up by qualified hazardous materials personnel.

5.4.2 Hazardous Waste and Petroleum Work Plan

Empire will implement a Hazardous Waste and Petroleum Work Plan (HWPWP; **Appendix O**) for the onshore Project site and ROW to address testing and treatment and/or disposal of soil and

groundwater, and handling of petroleum products, consistent with requirements of NYSDEC Division of Environmental Remediation's Technical Guidance for Site Investigation and Remediation (DER-10). The HWPWP also includes procedures for the storage and handling of any hazardous chemicals and waste, proactive measures to avoid spills, and a plan for responding to and remediating spills during construction.

Sampling will be completed during construction, including sampling if visibly contaminated material or groundwater is encountered in areas that were not previously identified in the Remedial Investigation Report (RIR) included in the Dewatering Plan (**Appendix P**, Attachment 1). If existing contaminants are unexpectedly encountered in either groundwater or soils, the procedures outlined in the Soil Management Plan (Attachment 1 of the HWPWP (**Appendix O**)) will be followed.

The HWPWP lists those locations where material exceeding NYSDEC standards, criteria, or guidance values will be disposed. Clean sand, gravel, or soil will be used to replace the contaminated material removed.

Empire will keep the FDNY, NYCEM, and DPS Staff apprised of the presence of on-site hazardous chemicals and waste (CC D3).

5.5 Stormwater Pollution

Erosion and pollution prevention and sediment control measures will be implemented during onshore construction activities. The SWPPP, including an implementation and maintenance schedule for each best management practice, is provided in **Appendix I**. Empire will apply for coverage under the State Pollutant Discharge Elimination System (SPDES) System General Permit for Stormwater Discharges from Construction Activity. The Municipal Separate Storm Sewer (MS4) approval(s), 5-acre waiver (if necessary), and NYSDEC's letter of acknowledgement of the Notice of Intent for coverage under the SPDES General Permit will be filed with the Secretary when obtained.

A SWPPP (**Appendix I**) was prepared in conjunction with this EM&CP in accordance with the criteria presented in the SPDES General Permit for Construction Activities (GP-0-20-001). A copy of the SWPPP and proof of coverage under the SPDES general permit will be available on-site at all times during construction and available to the public upon 5 days written notice.

5.5.1 Topography and Site Soils

A summary of the soils in the Project Area are listed and described in the SWPPP included in **Appendix I** of this EM&CP. They are also discussed in Section 5.3 of this EM&CP.

5.5.2 Construction Sequencing

The sequence of construction is summarized in Section 4.1 of this EM&CP and the SWPPP in **Appendix I**.

5.5.3 Erosion and Sediment Control

Soil erosion and sediment control measures will be implemented early in the construction process and will be installed prior to and maintained in acceptable condition for the duration from any clearing or earthmoving operations through to the permanent stabilization of the soil. The SWPPP identifies the measures that will be employed at the site to prevent erosion, control sediment and prevent pollutants from entering wetlands and waterways. Erosion and sediment control plans are included in the SWPPP (**Appendix I**).

5.5.3.1 Fugitive Dust Control

Fugitive dust generated during construction of the onshore components of the Project will be managed in accordance with the Project's onshore Fugitive Dust Control Plan provided in **Appendix S**. If particulate levels at the site exceed the thresholds listed in the Community Air Monitoring Plan (CAMP), or if airborne dust is observed on the site or leaving the site, the dust suppression techniques listed below will be employed. The Contractor(s) will also take measures listed below to prevent dust production on the site. The details of the Fugitive Dust Plan are consistent with Title 15, Chapter 13 of the Rules of the City of New York. Under the NYSDEC BCP Program (DEC Site No. C224360) at the onshore substation site, Empire will conform to practices and procedures described in the DER-10/Technical Guidance for Site Investigation and Remediation and the New York State Department of Health Generic Community Air Monitoring Plan, to the extent applicable.

The Fugitive Dust Control Plan that addresses dust management during invasive on-site work includes the following items:

- Dust suppression will be achieved using a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Construction fences will be equipped with wind screen to prevent migration of fugitive dust.
- Onsite roads will be limited in total area to minimize the area required for water truck sprinkling.

5.5.3.2 Dewatering Methods

Empire's Dewatering Plan for onshore construction activities is provided in **Appendix P**. The Dewatering Plan provides the requirements and specifications for Empire's Contractors to properly identify, characterize, and manage groundwater and/or stormwater (water) removed from excavations during onshore construction activities. Dewatering during onshore construction will be required in certain portions of the Project to control surface and subsurface water. Any dewatering that is required in excavated and/or trenched areas will be properly managed by appropriate control measures and Empire will ensure that the appropriate dewatering measures will be implemented during construction.

Empire's Dewatering Plan details the groundwater baseline sampling prior to the start of construction activities, and provides procedures for groundwater testing, treatment, baseline sampling, and/or disposal practices. The Dewatering Plan includes preliminary information regarding the locations and types of anticipated dewatering activities and their resulting geohydrologic influences; sampling, treatment, and disposal protocols for areas of identified or potential groundwater contamination; and Best Management Practices (BMPs) for erosion and sediment control during dewatering activities. Due to precipitation events, snowmelt, and/or changes in depth to groundwater, which may be seasonally or tidally influenced, precise dewatering locations will be refined throughout construction and may be subject to change in accordance with observed field conditions. A summary report of findings of groundwater sample results is provided under **Appendix P**.

Water discharges will be controlled with BMPs to prevent erosion and sedimentation from the discharge operations. Water generated from dewatering operations that exceeds NYSDEC standards, criteria, or guidance values, or more stringent applicable levels of other authorities or agencies in effect at the time of dewatering operations must be treated and disposed of in compliance with the approved Dewatering Plan.

The Dewatering Plan identifies water withdrawal activities that Empire anticipates will be regulated pursuant to 6 NYCRR §§ 601.3 and 601.6, including dewatering directly from the excavation not meeting the exemption criteria pursuant to 6 NYCRR §§ 601.9(o).

Due to the expected volumes of groundwater at the Project site, Empire anticipates that one or more dewatering wells will be necessary, and that operations are likely to involve water withdrawal with a total capacity in excess of 45 gpm or 64,800 gpd within the SBMT property. Such dewatering operations will be conducted in compliance with the substantive requirements of 6 NYCRR Part 602. The Dewatering Plan identifies the property locations, where Empire anticipates that it will install wells to conduct temporary dewatering activity for the Project at a total withdrawal capacity in excess of 45 gpm (with capacity based on the capacity of the pumps to be installed, not on the contemplated draft) and provides the substantive information outlined in 6 NYCRR § 602.31-(d)

(CC Y10). Dewatering operations conducted using wells are carried out by a well driller duly registered in accordance with ECL § 15-1525.

Empire anticipates that dewatering from onshore construction activities will be discharged under one or more SPDES permits, if approved. Empire's Contractor has filed an application with NYSDEC for SPDES authorization to discharge water from dewatering operations. Except in accordance with an approved SPDES permit, water resulting from dewatering operations will not be directly discharged into any wetland or waterbody.

If dewatering operations are to be discharged into the sewer system, Empire will provide advance notice to NYCDEP, including the timing and expected amount of effluent to be discharged. In the event NYCDEP seeks additional information regarding such discharges, the Empire will provide timely respond to such requests. Empire may discharge effluent from dewatering operations into the sewer system only during construction, and only during periods when there is no precipitation occurring or forecast to occur within 24 hours.

5.5.4 MS4 Coordination

New York City operates a Municipal Separate Storm Sewer System (MS4) and therefore requires an MS4 permit to implement measures to reduce pollution in stormwater runoff. The Project falls within an MS4 area. The Certificate Holder will obtain the required approval from the City prior to construction.

Prior to the approval of this Part 1 EM&CP, Empire will file with the Secretary upon receipt: the Municipal Separate Storm Sewer (MS4) approval(s), 5-acre waiver (if necessary), and NYSDEC's letter of acknowledgement of the Notice of Intent for coverage under the SPDES General Permit. If any of the aforementioned documents require modification of the EM&CP, such modifications will be filed with the Secretary prior to EM&CP approval (CC Y5).

5.5.5 Maintenance, Inspection, and Recordkeeping

The SWPPP includes a schedule for necessary inspections at all control measure locations. The SWPPP will be available at the construction site and available to the public upon five (5) days written notice (CC Y4).

Inspections of all non-structural and structural best management measures proposed and implemented as part of the SWPPP must be conducted at least once every 7 calendar days, or in compliance with Part II.C and Part IV.C of the GP and the requirements of the New York State Standards and Specifications for Erosion and Sediment Control, latest edition. In addition, an inspection report must be prepared if any deficiencies are noted during the daily inspections. Inspections should also be performed prior to storm events anticipated to result in substantial stormwater runoff. These inspections will include areas used for storage of materials that are exposed to rainfall, structural control measures, locations where vehicles enter or exit the site, and

all disturbed areas. Written records of these inspections must be kept on file for the duration of the project and be available for review. Further information is detailed in the SWPPP in **Appendix I** Section 4.1.

5.5.6 Post-Construction Stormwater Management Plan

Two drainage pipe systems are designed to collect runoff from the onshore substation area, the north system and south system. For the north drainage system, before the runoff discharges to the city sewer, a Contech hydrodynamic separator, CS-4, is proposed to meet the quality control requirements. For the south drainage system, before the runoff discharges into Gowanus Bay, a Contech hydrodynamic separator, CS-8, is proposed to meet the quality control requirements. For more information, see Section 5 of the SWPPP in **Appendix I**.

5.6 Terrestrial Vegetation

This Section describes existing terrestrial vegetation that may be affected by construction or operation of the Project and measures to minimize impacts to vegetation. This Section also describes the measures that will be taken to protect or preserve vegetation, and vegetation clearing and disposal methods, as applicable.

5.6.1 Summary of Existing Vegetation and Potential Impacts

The onshore portions of the Project will be located within the urbanized landscape of New York City. Terrestrial vegetation was assessed at SBMT and the onshore substation site during Tetra Tech's 2022–2023 Remedial Investigation (RI), which was conducted on behalf of SBMT Asset LLC and Empire Offshore Wind LLC (Tetra Tech 2023). During the referenced assessment, minimal vegetation was observed at SBMT, which was mostly covered by asphalt, concrete pavement, existing above-grade structures, railway spurs, building debris, and bulkheads. Vegetation is scarce, with scattered areas of compromised asphalt or concrete where opportunistic vegetation has dominated and established. This is limited to only the widely scattered depressions or sink holes area and along the pier rip rap perimeter areas (which are outside of the Project Area). Field observations indicated that vegetation is limited due to shallow soils overlaying impervious cover or rip rap.

Representative opportunistic vegetation at SBMT overall, including the Project Area, included a mixture of native and invasive species including goldenrods (*Solidago* sp.), common reed (*Phragmites australis*), reed canary grass (*Phalaris arundinacea*) and scattered tree saplings of aspen (*Populus* sp.) and tree of heaven (*Ailanthus altissima*).

There are no specimen tree stands of desirable vegetation, rare, threatened and endangered species, important screening trees, or hedgerows in the Project Area.

5.6.2 Protection and Mitigation Measures

Due to the relative absence of terrestrial vegetation and the developed nature of the property, construction-related impacts to terrestrial vegetation are presumed to be negligible. Protection and mitigation measures that will be implemented with regards to wetlands and waterbodies and invasive species are discussed below in Sections 5.7 and 5.11, respectively and detailed in the associated Wetland Impact Minimization and Mitigation Plan (**Appendix V**) and Invasive Species Control and Management Plan (**Appendix W**).

Within the Project Area it is anticipated that little or no vegetation will need to be cleared prior to construction activities. In the situation that any incidental, opportunistic woody vegetation must be removed, Empire anticipates that it will be chipped. Woody vegetation may be mulched and used for stabilization on the property or left on-site with agreement between Empire and the landowner. Trees can only be transported off the property if they are inspected by a trained forester and confirmed to be free of signs of invasive insect species. Root material and mulch may be transported off-site without inspection. Empire anticipates that any incidental woody vegetation would be removed for off-site disposal, and such activities would be conducted in compliance with 6 NYCRR Part 192 – Forest Insect and Disease Control, applicable New York State Department of Environmental Conservation (NYSDEC) quarantine orders, 6 NYCRR Part 575 Invasive Species Spread Prevention and New York State Department of Agriculture and Markets (NYSAGM) regulations. If invasive species must be cut or uprooted during construction, the material will either remain within the same infested area, provided that no filling of any wetlands or NYSDEC regulated adjacent area occurs, or be disposed of off-site. If disposed off-site, the plant and soil material will be transported in a secure manner. Any off-site disposal will occur at either a landfill-incinerator or a DPS and DEC approved disposal site.

5.7 Wetlands, Waterbodies, and Floodplains

This Section describes existing wetlands and waterbodies that may be affected by construction or operation of the Project, describes activities that will occur within State-regulated wetlands or adjacent areas (e.g., construction, filling, grading, vegetation clearing, and excavation) and measures to minimize impacts to wetlands and waterbodies. This Section also describes the precautions or measures to be taken to protect all other wetlands (e.g., federal wetlands), associated drainage patterns, and wetland functions, as well as identification of existing floodplains and measures to minimize impacts to floodplains.

5.7.1 Summary of Existing Wetlands, Waterbodies, and Floodplains and Potential Impacts

Existing wetland and waterbody resources in the vicinity of the Project Area were reviewed using a combination of desktop analysis of publicly available data and targeted field surveys. The submarine export cables make landfall from the marine environment of Upper Bay (10-digit Hydrologic Unit Code [HUC 10] 0203010402). Upper Bay, together with Lower Bay (HUC

0203010404), is included in the Sandy Hook/Staten Island Sub-Basin. According to the NYSDEC Environmental Resource Mapper (ERM) and the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI), the shoreline of the SBMT property and Gowanus Bay are classified as an estuarine and marine deep-water, subtidal habitat with an unconsolidated bottom type (classified as E1UBL). The area of Upper Bay/Gowanus Bay adjacent to the onshore Project Area is mapped as tidal wetland, classified by NYSDEC as a Class I estuary water, and it is the only resource on NYSDEC tidal wetlands maps within 1 mi (1.6 km) of the onshore Project facilities.

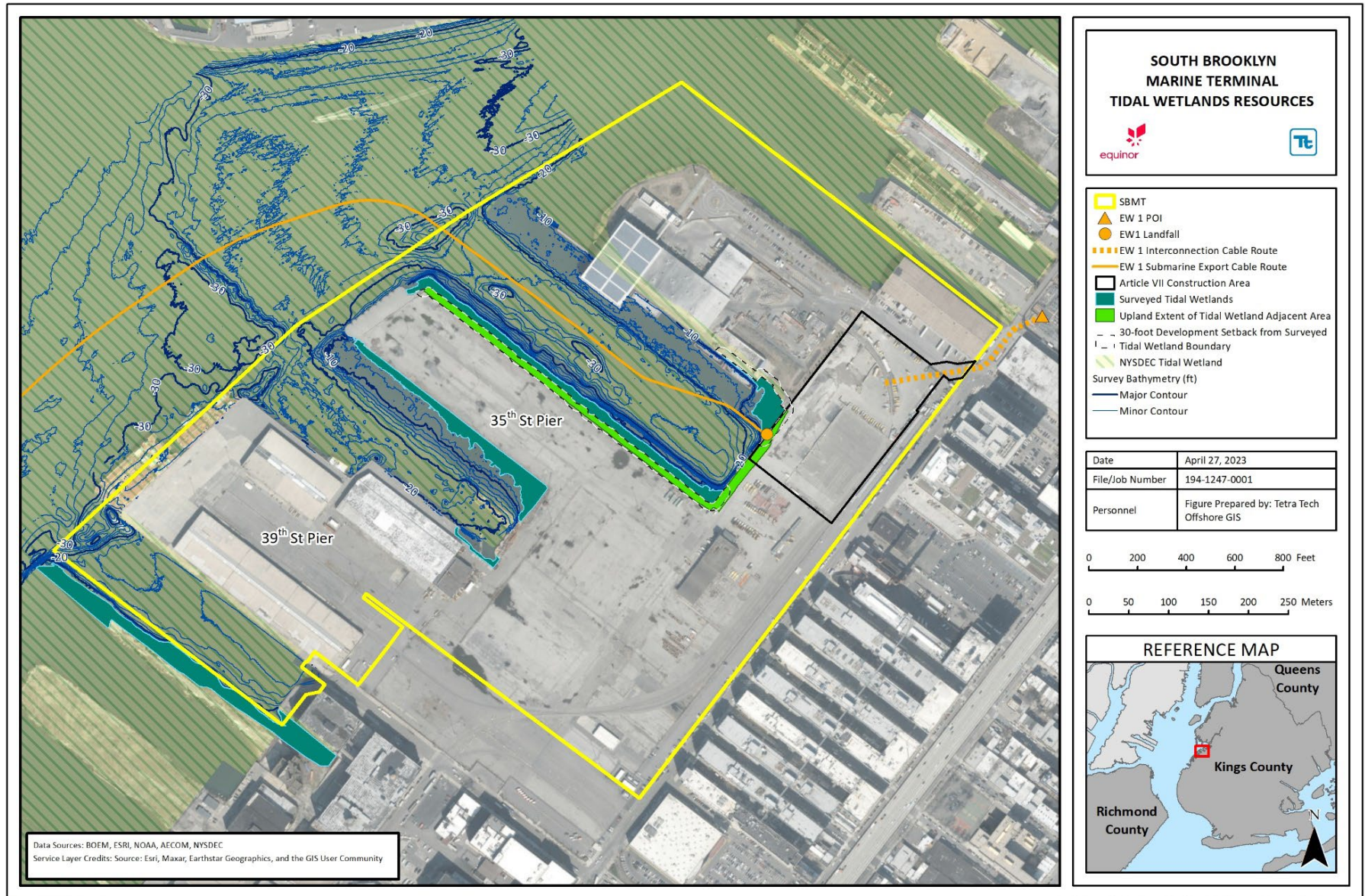
Tidal wetlands were field delineated at the SBMT by AECOM on January 31, 2022. Based on the most recent Raster Navigational Charts (NOAA 2021a) and Electronic Navigational Charts (NOAA 2021b) from the NOAA Office of Coast Survey, the submarine export cable route within the mapped tidal wetland area is located entirely within areas of water depth greater than 6 ft (1.8 m) at MLLW. At the cable landfall along the shoreline of SBMT, the NOAA Raster Navigational Chart indicates the bathymetry is between the 12 ft (3.7 m) and 18 ft (5.5 m) contours. This is consistent with the Empire's data, which suggests that water depth at landfall is approximately 17 ft (5.2 m) at MLLW. Since the water depth is greater than 6 ft (1.8 m) on NOAA charts, in accordance with 6 NYCRR §661.4, the presumption is that the area mapped as Littoral Zone does not fall under the protection of the Tidal Wetlands Act.

Historic aerial imagery demonstrates that the bulkheads associated with SBMT are fully contiguous, in excess of 100 ft (30 m) in length, and have been in place since prior to the 1960s (Aerial Archives 2020a, 2020b). However, based on discussions with NYSDEC, a portion of the Project Area underneath the existing bulkhead at the shoreline, where voids are present, may be considered jurisdictional tidal wetland, and due to the condition of the bulkhead. In addition, state-jurisdictional adjacent area may exist in the portion of the site between the bulkhead and the existing jersey barriers/road on the SBMT site. These areas are depicted in **Figure 2**. Approximately 0.16 acres of adjacent area, northwest of the jersey barriers, is located within the Project Area. Past that point, the adjacent area associated with the Gowanus/Upper Bay is truncated by the roadway on site, pursuant to 6 NYCRR § 661.4. Though the areas under and above the existing bulkhead may be considered regulated, they are unvegetated and their function to support wetland functions is extremely compromised.

Mapped freshwater wetlands were not identified in the Project Area by either the NYSDEC ERM or USFWS NWI; there are no freshwater wetlands in the Project Area.

Impacts to tidal wetlands and tidal wetland adjacent area will be limited to replacement of the existing bulkhead/relieving platform structures already present. Upland bulkhead activities, within the adjacent area, that are included in this EM&CP Part 1 include temporary impacts from the following: the trench excavation for export cable duct bank from the landward side of the cable landfall to the transition joint bay; installation of the upland sheet pile wall behind the existing timber sheet pile; and demolition of the existing low-level platform at the top of the bulkhead.

Related to floodplain, proposed elevations of the new wharf deck platform are the same as existing. Proposed final elevations of pavement of roadways and parking areas are shown in **Appendix B**, grading plan drawings. Upon completion of construction, the onshore cables will be located subsurface (i.e., buried), and the new bulkhead/relieving platform structure will occupy approximately the same footprint as the existing shoreline. Approximately 0.16 acre of the tidal wetland adjacent area will be temporarily disturbed as a result of the bulkhead work and the installation of the onshore cable landfall. It is noted that the adjacent area in this area is currently paved/developed and will be restored according to the elevations shown in **Appendix C**, Bulkhead Drawings. No seeding or re-vegetation is anticipated. Based on FEMA firm maps, the Project Area is within Zone AE.



5.7.2 Protection and Mitigation Measures

In accordance with the Certificate conditions, a Wetland Impact Minimization and Mitigation Plan (**Appendix V**) was developed to mitigate any unexpected temporary impacts to wetlands that may occur during construction of the Project. The referenced Wetland Impact Minimization and Mitigation Plan details protection and mitigation measures that will be implemented during construction to minimize any adverse impacts to wetlands and waterbodies reported in the same appendix.

Equipment or machinery will not be washed in any regulated wetland or adjacent area, and runoff resulting from washing operations or other construction activities will not be permitted to directly enter any wetland or waterbody (CC P11).

5.8 Important Habitats and Rare, Threatened, and Endangered Species

Existing important habitats and State and federal listed Threatened and Endangered (T&E) species in the vicinity of the Project were reviewed using a combination of desktop analyses of publicly available data, technical reports, and scientific literature; targeted field surveys; and agency correspondence. Natural Heritage Database inquiries were submitted to NYSDEC Division of Fish and Wildlife on January 16, 2019; June 26, 2019; July 10, 2020 and April 20, 2021 to determine potential New York State and federally protected wildlife species likely to be present in or near the Project Area, with responses received on February 14, 2019; July 30, 2019; and August 21, 2020, respectively. An official Species List was also obtained from the USFWS IPaC project planning tool to identify threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitats that may be present within or in the immediate vicinity of the Project Area. T&E species initially identified as potentially occurring in the onshore Project Area include the following:

- Seabeach amaranth (*Amaranthus pumilus*); plant, federally threatened and NYS threatened
- Peregrine falcon (*Falco peregrinus*); bird, NYS endangered
- Piping plover (*Charadrius melodus*); bird, federally threatened and NYS endangered
- Red knot (*Calidris canutus rufa*); bird, federally threatened and NYS threatened
- Roseate tern (*Sterna dougallii dougallii*); bird, federally endangered and NYS endangered.

Due to the highly developed nature of the shoreline at the cable landfall and in the onshore Project Area, species associated with coastal dunes and beaches, such as seabeach amaranth, piping plovers, red knots and roseate terns, are not expected to use habitats in the onshore Project Area and are unlikely to be present. The onshore Project Area lacks breeding habitat for coastal

shorebirds. Peregrine falcons nest in urban environments and have the potential to be present in the vicinity of the submarine export cable route and the onshore Project facilities; however, falcons nesting in urban environments adjacent to the Project would be expected to be habituated to human activity and noise, and are unlikely to be affected by the Project. No known nests are present on the Project Site. Sea turtle nesting habitat is also absent in the onshore Project Area.

T&E species initially identified as potentially occurring in the offshore Project Area include three species of whales, four species of sea turtles, and two species of sturgeon. Potential impacts and protection and mitigation measures for offshore T&E species will be further detailed in the EM&CP Segment for offshore construction.

To determine the important habitats potentially present in the Project Area, Empire assessed the potential presence of designated critical habitats, New York State Wildlife Management Areas, NYSDEC Critical Environmental Areas, New York State Areas of Concern, National Estuarine Research Reserves, Important Bird Areas (IBAs), NYSDEC-designated Significant Coastal Fish and Wildlife Habitat (SCFWH), New York Natural Heritage Program (NYNHP) Significant Natural Communities, and NOAA Fisheries-designated EFH. There are no important habitats within the onshore Project Area. The offshore Project Area crosses designated EFH for managed species, and the Gravesend Bay Recognized Ecological Complex.

During the preparation of this EM&CP, Empire additionally contacted NYSDEC, NYS Natural Heritage Program, NYSDOS, NOAA, and USFWS to check for any updates or changes of known T&E species or habitat, NYS Significant Coastal Fish and Wildlife Habitats, Recognized Ecological Complexes, or Significant Natural Communities in the Project Area (see **Appendix E**) (CC Y3). No updates have been identified.

5.8.1 Protection and Mitigation Measures

Due to the placement of the onshore portion of the Project within a highly developed area, potential impacts to protected species and important habitat associated with onshore Project construction and operation are anticipated to be negligible. Although not anticipated to occur in the onshore Project Area, an area at least 660 ft in radius with a visual buffer, or 0.25 mile with no visual buffer, around an active bald eagle (*Haliaeetus leucocephalus*) nest or roost shall be posted and avoided until notice to continue construction, ground clearing, grading, maintenance, or restoration activities are granted by DPS Staff and NYSDEC. Active bald eagle nest(s) or nest tree(s) or roost(s) will not be approached under any circumstances unless authorized by DPS Staff and NYSDEC (CC R6).

Empire will refer to 6 NYCRR Part 182 and <http://www.dec.ny.gov/animals/7494.html> for the current list of New York State T&E animal species and with 6 NYCRR Part 193 for New York State T&E plant species. Prior to the Commencement of Construction of the onshore Project, Empire will provide all workers with pertinent information on potential T&E species in the Project Area.

During construction, the on-site Environmental Monitor will be responsible for recording all occurrences of T&E species within the Project Area (CC R4).

In the unexpected situation that any T&E animal or plant species, or associated habitat, are incidentally observed from the onshore Project Area, including the construction corridor, access roads, laydown yards, staging areas, and any other areas where Project activities are authorized, Empire or its Contractor(s) will be required to immediately notify the on-site Environmental Monitor to determine the appropriate actions, if any, to protect the identified species or its potentially occupied habitat from immediate harm. In such case, Empire will also notify DPS Staff and NYSDEC within 24 hours (CC R2). To protect such T&E species or its habitat from immediate harm from construction activities, the Certificate Holder will secure the area where access rights exist and safely cease construction in that area until DPS Staff, in consultation with NYSDEC authorizes recommencement of activities. Prior to the recommencement of construction in the secured area, the Certificate Holder will provide all workers with pertinent information on the species encountered and indicate measures to minimize risks to the T&E species during construction (CC R3).

If an NYS T&E bird species is demonstrating breeding or roosting behavior, it shall be reported to the DPS Staff and NYSDEC within twenty-four (24) hours (or as soon as possible, in the event that more than 24 hours are needed to compile the required details for such reports/notifications). To protect a T&E species or its habitat from immediate harm from construction activities, the Empire will secure the area, as possible based on Empire's access rights to the area and will safely cease construction in that area until DPS Staff, in consultation with NYSDEC authorizes recommencement of activities. Prior to the recommencement of construction in the secured area, Empire will provide all workers with pertinent information on the species encountered and measures to minimize risks to the T&E species during construction. All occurrences will also be reported in a biweekly monitoring report submitted to the DPS Staff and NYSDEC (CC R4a).

After construction is complete, incidental observations of T&E species will be documented and reported to the DPS Staff and NYSDEC. All reports of T&E species shall include the following information: species; number of individuals; age and sex of individuals (if known); observation date(s) and time(s); Global Positioning System (GPS) coordinates of each individual observed (if operation and maintenance staff do not have GPS available, the report shall specify the nearest road or cross roads location); behavior(s) observed; identification and contact information of the observer(s); and the nature of and distance to any Project construction, maintenance or restoration activity (CC R4b&c).

If any work results in or is likely to result in an incidental take of a T&E species as defined in ECL § 11-0535 and 6 NYCRR Part 182, Empire will stop work where the take occurred or is likely to occur (Stop Work Area) and must submit an Endangered or Threatened Species Mitigation Plan and Implementation Agreement (T&E Plan/Agreement) demonstrating proposed mitigation measures

that will result in a Net Conservation Benefit to that species. Such T&E Plan/Agreement will be prepared in accordance with ECL § 11-0535 and 6 NYCRR Part 182. Work will not recommence in the Stop Work Area until the T&E Plan/Agreement is developed in consultation with and accepted by NYSDEC and such T&E Plan/Agreement is implemented (CC R5).

5.9 Visual Resources

A Visual Impact Assessment (VIA) was prepared and filed as Appendix I to Empire's Application. This section summarizes potential impacts to visual resources from construction and operation of the Project and specifies the measures Empire proposes to minimize impacts to land uses. Since this EM&CP does not include the construction of the aboveground facilities, details of screening or landscape plans prescribed at onshore substation will be provided within a future EM&CP Segment. Vegetation is limited in and adjacent to the Project Area and includes scattered green grasses and bushy shrubs along the shore of the bay and weeds that have grown up through cracks in the pavement. Minimal or no vegetation removal is anticipated for construction for the Project; any incidental vegetation removal that may occur is not relevant to project screening. Therefore, requirements to address screening or landscape plans where vegetation is to be removed for construction are not applicable to the Project.

The visual resources study area (Visual Study Area) for the Project was defined based on locations from which the onshore Project facilities are potentially visible and noticeable to the casual observer. A 4-mi (6.4-km) Visual Study Area was established, within which potential effects to visual and aesthetic resources were evaluated. The use of a 4-mi (6.4-km) Visual Study Area for the onshore Project Area was determined by the location of the onshore substation within a heavily developed area but adjacent to open water (i.e., Upper Bay). For onshore substations in a relatively flat area that is heavily developed and/or wooded, such as the ones proposed for the Project, a smaller visual study area of 2 mi (3.2 km) would typically be used to assess potential visibility. The use of the larger Visual Study Area captures the western shore of the bay, where visual receptors may have unobstructed views toward the Project across open water. This means a greater number of sites were identified; however, this area is heavily developed, and views are likely to be blocked in most areas by existing development. The submarine export and onshore cables will be entirely underwater or underground and therefore will not be visible once installed. The Visual Study Area therefore focused on the onshore substation, but visual impacts related to construction of the submarine export and onshore cables were included.

5.9.1 Summary of Existing Visual Resources Conditions and Impacts

In general, the types of viewers present within the Visual Study Area are classified as local residents, travelers, tourists and recreational users. Distinctions among user groups and their expected sensitivity to landscape changes based on activity types and viewing characteristics were also analyzed. The Visual Study Area for the onshore substation predominantly covers Brooklyn, New York, but includes portions of Manhattan and Staten Island, as well as the shores of Bayonne

and Jersey City in New Jersey. The Visual Study Area incorporates the majority of New York Upper Bay as well as the river mouths of the Hudson and East Rivers where they join at the tip of Manhattan, the mouth of the Kill Van Kull, and a small piece of New York Lower Bay south of the Verrazzano-Narrows Bridge. U.S. Environmental Protection Agency Level IV ecoregions of New York were used to develop a description of the existing landscape character within the Visual Study Area. The Level IV ecoregions of New York and New Jersey that cross the Visual Study Area include: New England Coastal Plains and Hills, Long Island Sound Coastal Lowlands, and Glaciated Triassic Lowlands. Visual Study Area in all three of these ecoregions is characterized as heavily developed with small pockets of dispersed natural areas and parks.

Empire reviewed the presence of visually sensitive and aesthetic resources in the Visual Study Area for the purposes of assessing the visual impacts and identifying Key Observation Points (KOPs). Significant aesthetic resources were identified in accordance with the NYSDEC's Program Policy DEP -00-2 (NYSDEC 2019). The majority of the types of aesthetic resources of statewide significance listed in NYSDEC's Program Policy DEP-00-2 are not found within the highly urban and developed Visual Study Area. However, there are properties on or eligible for inclusion in the National Register of Historical Places (NRHP) within the Visual Study Area, as well as one state park, seven National Parks, Recreation Areas/Seashores/Forests, two resources of statewide or regional significance, and eight locally important resources.

A viewshed analysis was completed for the onshore substation to identify areas within the Visual Study Area where it may be visible. An inventory of visual resources was conducted considering the existing landscape and scenery and the viewers and KOPs within the Visual Study Area. A field visit to the Visual Study Area was conducted to properly assess the existing visual character of the landscape and to inventory current conditions at a set of sensitive viewing locations. Details on these analyses are provided in the VIA.

Long-term visual effects during operation of the onshore substation will result from the visibility of the aboveground components associated with the onshore substation buildings, outside electrical equipment, static masts, and perimeter security fence. The onshore substation will introduce tall, rectangular forms and vertical and geometric structures into the landscape setting already highly developed with similar forms and structures. The onshore interconnection cables will be placed under an existing roadway and will therefore have no significant long-term effects. Maintenance workers may also be required to work at the onshore substation infrequently, which could cause some minor temporary visual effects from the presence of equipment and disturbance of ground and/or pavement during work activities.

The onshore substation site is located within a landscape setting that has been heavily modified by commercial and industrial development. Furthermore, the site on which the proposed onshore substation will be located has also been modified. Based on the results of the viewshed analysis and subsequent field visit, potential views of the onshore substation will be primarily from the

northwest, west and southwest. Areas to the north, east and south of the onshore substation will be screened by dense development associated with Brooklyn. Viewers along 2nd Avenue adjacent to the onshore substation and in buildings to the east will have views that are mostly unobstructed. The onshore substation will be seen in the context of other existing development including a recycling center, parking lot, warehouse, an onshore wind turbine adjacent to the parking lot, and lighting associated with parking areas. The surrounding area is heavily developed, and the area within SBMT where the onshore substation is located primarily includes paved areas with a warehouse located just south of the onshore substation. The proposed buildings associated with the onshore substation will be larger than the existing warehouse to the south. Furthermore, the proposed onshore substation will be located in front of the recycling center and closer to 2nd Avenue and potential viewers. Due to the proximity of the proposed onshore substation to the road (approximately 100 ft [30.5 m]) and the size of the proposed buildings, the onshore substation will attract attention and dominate the view. As such, the Project will introduce strong visual contrast in views from the east.

Viewers located to the west, within the Upper Bay and along the western side of the Upper Bay on the coast of New Jersey, will have views that range from unobstructed to partially screened by development. The light beige color and large, rectangular form of the buildings within the onshore substation will be similar in form, color, and scale to other warehouses and commercial buildings along the coast. The outdoor electrical equipment, which will consist of transformers and shunt reactors, will most likely be surrounded by fire walls that will mostly screen views of the equipment itself. Due to the distance of the onshore substation to the New Jersey coastline (approximately 3.0 mi [4.8 km] or more) and the densely developed industrial/commercial coastline, an onshore substation at SBMT would appear as a subordinate feature in the heavily developed landscape setting and will not change the characteristic of the view. As such, the Project will introduce weak visual contrast.

Short-term visual effects will occur during construction of the onshore substation and along the onshore cable corridor and will result from visual evidence of construction activities and the presence of construction equipment and work crews. Construction activities will include surveying; preparation of the construction site (e.g., removal of pavement, existing buildings, grading); forming and construction of the foundations for the buildings and outdoor electrical equipment; placement and erection of buildings and electrical equipment; placement of perimeter security fencing; and restoration. It is anticipated that contrast will be introduced during Project construction primarily for viewers adjacent to the onshore substation site and interconnection cable corridor, where the presence of construction equipment, materials, and crews will be dominant in the foreground.

Along the onshore cable corridor, short-term impacts are anticipated during construction. The roadway will be repaired and repaved post-construction. Unless paving of the entire roadway occurs, contrast in color (new vs. old paving) may be noticeable; however, contrast is expected to

be minimal, and viewers are unlikely to notice such changes in an urban environment. For the onshore substation, short-term visual effects during construction may be noticeable by viewers associated with commercial and industrial buildings along the east side of 2nd Avenue, Columbia Street Esplanade, and marine vessels in Gowanus Bay. However, these visual effects will be short-term because construction equipment and crews will be removed once construction is complete. Views of Project construction from areas not immediately adjacent to the onshore substation will be mostly screened by residential, commercial or industrial buildings, vegetation and/or topography.

5.9.2 Protection and Mitigation Measures

The undergrounding of the onshore cables will mitigate many of the potential visual effects of the Project. For the onshore aboveground Project components (the onshore substation), in accordance with the NYSDEC's Program Policy DEP -00-2, proper siting and design are the best ways to mitigate potential impacts to visual resources. The onshore substation has been sited in a setting that is already highly developed with similar forms and structures. The Project has also been sited to avoid vegetation clearing. Additional measures that will be implemented to minimize impacts to visual resources include:

- The onshore cables and joint bays will be located underground primarily under roadways and will not be visible during Project operation and maintenance, except that newly paved roadway areas may be differently colored than previously paved areas.
- There will be minimal operations impact resulting from the presence of crews and equipment conducting maintenance activities.
- The onshore substation site is located within the jurisdiction of the New York City's Waterfront Revitalization Program; therefore, a pre-engineered building system with prescribed architectural elements incorporated into the design will be used to ensure the Project meets the Waterfront Revitalization Program policies.
- Lighting at the onshore substation will be designed to reduce light pollution where feasible (e.g., downward lighting, motion-detecting sensors).

Empire will include a Lighting Plan as part of the EM&CP Part 3 that includes the construction of the aboveground facilities. The Lighting Plan will include information on security lighting needs, plan and profiles of the lighting area needs, proposed lighting arrangements, and specifications that the lighting must be designed to provide safe working conditions and that exterior lighting will avoid off-site lighting effects. This plan will include specifications that Empire use task lighting only as needed and as appropriate to perform specific installation, maintenance, repair, or emergency-response tasks; that task lighting shall be designed to be capable of manual or auto-shut off switch activation rather than motion detection; and requiring full cutoff fixtures, with no

drop-down optical elements (that can spread illumination and create glare) for permanent exterior security lighting.

Due to the urban setting of the facility, Empire anticipates that minimal landscaping will be needed; however, following construction of the onshore substation, Empire will conduct an assessment of the need for additional restoration work and landscape improvements, including vegetation planting, earthwork or installed features to minimize visual impacts of the Project. Empire will consult with NYCDOT regarding any restoration work and landscape improvement assessments involving streets, sidewalks, and other public rights-of-way, and it should consult with affected landowners regarding such assessments, where applicable (CC L11a). Empire will prepare plans for any visual mitigation found necessary, and, in connection therewith, removal, rearrangement and supplementation of existing landscape improvements or plantings should be considered, as appropriate (CC L11b). Following preparation of any applicable plans, Empire will present draft assessments and visual mitigation plans to DPS Staff for review and acceptance and file a final plan with the Secretary within one year after the date the Project is placed in service. Any assessments and plans that pertain to streets, sidewalks, and other public rights-of-way should also be presented to NYCDOT for review and input (CC L11c). Installation will follow in accordance with approved applicable plans (CC L11d).

5.10 Noise

Empire completed an In-Air Acoustic Assessment for the Project, which was included as **Appendix J** of Empire's Application. This section summarizes the existing conditions and discusses procedures to be followed to minimize noise impacts related to construction and operation of the Project.

5.10.1 Summary of Existing Noise Conditions and Potential Impacts

Baseline ambient measurement locations were pre-selected to be representative of the surrounding community and other potential noise sensitive areas (NSAs) near the proposed onshore substation and export cable landfall. Baseline sound measurements were conducted with an operator present for a minimum of thirty minutes during daytime and nighttime periods in accordance with American National Standards Institute "Quantities and Procedures for Description and Measurement of Environmental Sound – Part 3: Short-Term Measurements with an Observer Present" (ANSI 2013) and ANSI S12.100, "Methods to Define and Measure the Residual Sound in Protected Natural and Quiet Residential Areas" (ANSI 2014), which is a conservative measurement approach within the urban setting. In addition to the short-term measurements, a long-term (3 days) ambient sound measurement, also collected onsite at the SBMT site.

The ambient acoustic environment in the vicinity of the Project is largely influenced by vehicular traffic. Localized traffic is steady during the daytime hours, with fewer cars traversing local roads at night. Noise from trains and planes is also present during both daytime and nighttime. Natural

sounds from birds, trees and other wildlife are also minor sound sources in the area, as are waves in the harbor. Consistent with the location in an urban, industrial setting, measurements showed existing daytime and nighttime L_{90} (noise level exceeded 10 percent of the time) levels in the range of 46 to 66 decibel, A scale (dBA). The time history data from the long-term ambient measures supports the results that ambient sound levels (both L_{90} and L_{eq} [equivalent sound level] metrics) essentially remain above 50 dBA.

Acoustical modeling for the construction and operation of the Project was conducted with the Cadna-A® sound model from DataKustik GmbH (Version 2019 MR1). The outdoor sound propagation model is based on the International Organization for Standardization (ISO) 9613, Part 1: "Calculation of the absorption of sound by the atmosphere," (1993) and Part 2: "General method of calculation," (1996).

The onshore substation construction generally will consist of 1) equipment mobilization, site clearing and demolition work to prepare the site; 2) earth work and ground compaction; 3) building foundation and structure construction and 4) electrical equipment installation and testing. Installation of the onshore cables involves site preparation, duct bank installation, restoration, cable installation, cable jointing/termination, and final testing to ensure proper cable transmission has been established. The construction of the onshore substation and the onshore cables will result in a temporary increase in sound levels near the activities, resulting from the use of construction equipment. The noise levels resulting from construction activities will vary greatly depending on factors such as the type of equipment and the operations being performed, and could be periodically audible from off-site locations at certain times. Results show that construction noise levels of 85 dBA and greater are in close proximity to the substation property. Received sound levels (other than pile driving) at the closest noise sensitive areas range from 63 to 77 dBA. Received sound levels for construction activities (other than pile driving) at property boundary locations range from 77 to 89 dBA.

Pile driving will also be required to install the pipe piles or H-piles, install the equipment and building foundations, and install the bulkhead. Final noise modeling for the onshore substation equipment is not part of EM&CP Part 1.

5.10.2 Protection and Mitigation Measures

To minimize noise during onshore construction activities, construction equipment will be well-maintained and vehicles using internal combustion engines will be equipped with mufflers, which will be routinely checked to ensure that they are in good working order. Where feasible, Empire will employ quieter adjustable back up alarms, and locate noisy equipment as far as possible from Noise Sensitive Areas (NSAs). Additionally, the Empire will set up and monitor a complaint hotline in accordance with the Complaint Management and Resolution Plan (**Appendix T**) for the public and will actively address noise-related issues.

Construction work outside the walls of buildings whose exterior walls and roof are substantially complete will take place between 7:00 a.m. and 6:00 p.m. on weekdays, in accordance with Title 24, Chapter 2 § 24-222. To the extent that certain construction phases and activities require additional work hours, the Empire may make arrangements for the extension of additional work hours with appropriate City authorities, and submit to DPS Staff a request to proceed at least 48 hours in advance if planned weekend, evening, or holiday construction becomes necessary. Staff will use appropriate efforts to respond to Empire's request in a timely manner (CC I1). This work window will not prohibit nighttime construction reasonably necessary to comply with restrictions on daytime construction on or along roadways or public access areas or to require the cessation of construction activities that require a continuous work effort once started. Construction vehicles used in New York City will be outfitted with smart back up alarms.

Empire will use the following BMPs to reduce noise impacts on site personnel and the surrounding community, and ensure noise levels maintained below the applicable action levels, so far as is reasonably practicable:

- Design and install silencers and soundproof enclosures on equipment generating noise likely to expose personnel to levels higher than the second action level.
- Direct vents and pressure release valves as far away from site personnel or areas likely to have personnel as possible.
- Schedule particularly noisy activities (e.g. piling) at times where it is likely to expose a smaller number of persons.
- Provide "silent havens", closed rooms well insulated or sound-proof where personnel exposed to high noise levels can rest.

If the noise levels exceed the applicable action levels in any work area, that work area shall be specifically marked with a warning of the excessive noise. In addition, access to areas where noise levels may be higher than applicable action levels must be physically restricted. Should construction operations and/or the project infrastructure emit a noise level higher than the action level in normal operating conditions, it must be specifically marked in a way that is visible by its operator(s), and that requires them to use hearing protection while operating the equipment.

To protect the onsite worker from excessive noise levels the following is required by the Construction Contractor:

- Complete onsite worker training in Health and Safety practices including hearing and hearing protection.

- If noise levels exceed the first action level, exposed employees must be made aware of the risks and associated control measures. Appropriate PPE must be made available to all exposed persons.
- If noise levels exceed the Second Action Level, the use of hearing protection shall be obligatory.
- Beyond the maximum exposure level, double protection must be used, i.e. ear plugs combined with ear muffs.

Empire's Contractor(s) will implement their Noise Monitoring Plan and Construction Noise Monitoring Plan, in consultation with New York City, where required for onshore construction activities.

5.11 Invasive Species

This Section describes existing invasive species conditions in the Project Area, and impacts that may occur as a result of construction or operation of the Project. This Section also discusses methods that will be used to control the spread and/or eradicate the identified species.

5.11.1 Summary of Existing Invasive Species Conditions and Potential Impacts

As identified above in Section 5.6, limited quantities of invasive plant species including common reed and tree of heaven were identified at the SBMT property during Tetra Tech's 2022 – 2023 RI. Within the Project, limited or no vegetation currently exists, and Empire will re-pave or restore to existing conditions the disturbed areas that are not within the footprint of the onshore substation infrastructure. Due to the nature of the Project site, there are very limited locations where the spread of invasive species could occur following construction.

5.11.2 Protection and Mitigation Measures

In accordance with the Certificate Conditions, an Invasive Species Control and Management Plan (ISCMP) was developed to achieve no net increase of invasive species at the SBMT property due to construction-related activities associated with the Project (CC S1). A copy of the referenced ISCMP is provided as **Appendix W**. The ISCMP describes the procedures that will be implemented to help prevent the introduction of new and spread of existing invasive plant species within the limits of disturbance (LOD) due to construction of the Project. The ISCMP includes the following:

- Baseline invasive species survey methodology and reporting protocol
- BMPs that will be employed to prevent the spread of all prohibited invasive species identified in 6 NYCRR Part 575
- Construction and post construction monitoring methodology

- Adaptive Management.

Appendix W of this EM&CP provides additional information on ISCMP. To minimize the risk of introducing invasive species, use of hay will be strictly prohibited (CC S2).

5.12 Electric- and Magnetic-Fields

Empire completed an Electric- and Magnetic-Field (EMF) Assessment for the Project, which was included as Appendix F of Empire's Application. This Section summarizes the existing conditions and discusses procedures to be followed to minimize EMF impacts related to construction and operation of the Project.

5.12.1 Summary of Existing EMF Conditions and Potential Impacts

Existing EMF along the submarine export or onshore cable routes could be associated with natural conditions, or with existing electrical infrastructure along the cable corridors. Existing submarine and overhead electric and telecommunications cables occur within and near the Project Area. Empire will be installing new submarine export cables subsea, and onshore cables in developed lands and along an existing roadway corridor, which have been previously disturbed for construction of structures, roads, and sidewalks.

Empire's EMF Assessment included calculation of the 60-Hz magnetic fields levels anticipated to be produced during operation of the underground transmission lines onshore and the submarine export cables offshore. EMF from the Project will not be generated until the transmission lines are energized and in operation; therefore, there are no EMF impacts anticipated during construction of the Project.

Calculations of the magnetic field during operation at winter normal conductor (WNC) ratings show that the magnetic field at ± 15 ft (± 4.6 m) from the submarine export cable and ± 12.5 ft (± 3.8 m) from the onshore interconnection cable centerline (i.e., the ROW edge) at 3 ft (1 m) above ground is below 200 mG for all evaluated configurations of the Project. At ± 15 ft (± 4.6 m) from the submarine export cable, and ± 12.5 ft (± 3.8 m) from the onshore interconnection cable route centerline (i.e., the ROW edge) the magnetic-field level is 40 mG or less. Moreover, the maximum calculated magnetic field level is 170 mG for the onshore interconnection cable in the flat configuration; other configurations for the onshore interconnection cables and the submarine export cables have magnetic field values less than 80 mG. Thus, calculations of the magnetic field performed in accordance with the Commission's magnetic-field standard demonstrate compliance of the Project with the Commission's limit.

The Project will not be a direct source of electric fields above ground or at the seabed, due to shielding of the electric field by the cable components (CSA Ocean Sciences Inc. and Exponent 2019). Additionally, the electric field from the cables will be blocked by the earth (soil, sediment or other material) due to the burial depth, or cable protection measures to be applied in areas

where target burial depth may not be achieved. As such, an electric field was not calculated for the submarine export cables or the onshore cables.

5.12.2 Protection and Mitigation Measures

Empire will design, engineer, and construct the Project such that its operation will comply with the EMF guidelines and standards established by the Commission in Opinion No. 78-13, issued June 19, 1978, and the Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities, issued September 11, 1990, or the Commission's most recent electric and magnetic field guidelines and standards in effect at the time the Commission grants the Certificate (CC D1).

After the Project has achieved full Commercial Operation (when all turbines are available for commercial operation), Empire will conduct an AC Magnetic Field Study of the 60-Hertz (Hz) alternating current (AC) magnetic field associated with the operation of both onshore and offshore cables to establish the relationship between the wind farm-generated electrical current measured in amperes on the export cables and AC magnetic field levels, and to compare results to the pre-construction EMF Assessment. The AC Magnetic Field Study Plan will be included as part of the EM&CP for the applicable Segment (Parts 2 and 3).

6. STAKEHOLDER AND COMMUNITY RELATIONS

Empire has coordinated with applicable regulatory agencies, municipal officials, landowners, and subject matter experts (SMEs) during development of this EM&CP, in accordance with the Certificate Conditions. Empire will continue to coordinate with DPS Staff, NYSDEC, NYSDOS, USCG, the City of New York, emergency personnel, and landowners with abutting properties for the life of the Project. Coordination will include consultation and notifications, facilitation of comments and complaint resolution, and outreach programs, as described in this Section.

6.1 Consultation and Public Notice

Once Empire has filed a copy of this EM&CP with the Secretary for approval by the Commission in accordance with CC C2, Empire will serve copies of the EM&CP Filing Notice on all parties to this proceeding and on persons who own (or reside at, if different from owners) properties that are crossed by or abut against the Project Area in accordance with CC C3. Empire will contemporaneously publish the EM&CP Filing Notice in a newspaper of general circulation in the vicinity of the Project in accordance with CC C4. A hard copy of this EM&CP will be available for inspection during normal business hours at the Project's document repositories, which include the Red Hook, Flatbush, Bay Ridge, Park Slope, and Sunset Park Branches of the Brooklyn Public Library.

In accordance with CC E4a, Empire will provide a Notice of Intent to commence work (Construction NOI), no less than 14 days before Commencement of Construction, to:

- DPS Staff, the NYSDEC, NYSDOS, NYCDEP, NYCSBS, NYCEM, and NYCDOT.
- Brooklyn Borough President, State and local legislators, and Community Boards which represent the communities in which construction will occur.
- Provide the Construction NOI to Con Edison and any other affected utilities.
- Local media, including newspaper or newspapers of general circulation in the vicinity of the Project and a free publication or publications in the vicinity of the Project.
- Display in public places, including but not limited to the Brooklyn Public Library; Red Hook Branch, Flatbush Branch, Sunset Park Interim Branch, Park Slope Branch, and Bay Ridge Branch.
- Others as set forth in the Mariner Notification and Public Input Process.

Empire will provide the Construction NOI to persons who own properties (or reside at such properties, if different from owners) that are crossed by or abut against the Project Area. The Certificate Holder will give such notices by affixing them to the doors of residences or by mailing the notices via United States Postal Service Mail. Empire will file a copy of the generic form of the

Construction NOI to the Secretary prior to the Commencement of Construction and will post the same to the Project website (CC E4b).

The Construction NOI will contain (in accordance with CC E4c):

- A map, including nautical maps with coordinates, and a description of the Project.
- The anticipated date for start of construction.
- The name, address, local or toll-free telephone number, and e-mail address of an employee or agent of the Empire, who will be available to receive complaints, if any, from the public about construction of the Project.
- A description of where to get more information about the Project including the Project website address and the location of document repositories.
- A statement that construction of the Project is under the jurisdiction of the Commission, which is responsible for enforcing compliance with environmental and construction conditions, and which may be contacted at an address and telephone number to be provided in the NOI.

Empire will submit to the Secretary a certificate of service with supporting affidavit indicating upon whom all EM&CP documents and EM&CP Filing Notices were served along with a copy of the EM&CP Filing Notice within 5 business days after the proposed EM&CP is filed. When available, Empire will file with the Secretary proof of newspaper publication of a copy of the EM&CP Filing Notice (CC C5).

Empire will hold a pre-construction meeting at least 14 days prior to the start of construction for this EM&CP Part. The date of the pre-construction meeting will be finalized in consultation with the NYSDEC. An agenda, location, and invitation list will be agreed upon among DPS Staff, the City, and Empire. Empire will provide notice of the meeting to all invitees at least 10 days prior to the meeting date. The invitation list will include at a minimum the Contractor(s), DPS Staff, NYSDEC, NYSAGM, NYSDOS, LICFA, New York City, and Con Edison representatives. Maps showing designated travel routes, construction worker parking and access road locations and a general Project schedule will be available at the meeting for the attendees. Empire will supply draft minutes from this meeting to all attendees. The attendees may offer corrections or comments, which Empire will consider in good faith, and Empire will issue the finalized meeting minutes to all attendees and invitees (CC E5).

If, for any reason, the construction Contractor(s) at this meeting cannot finish the construction of the Project, and a new construction Contractor is needed, Empire shall hold another pre-construction meeting using the same format as outlined above.

During construction, Empire will provide DPS Staff and NYSDEC with bi-weekly status reports transmitted by electronic mail summarizing construction and indicating construction activities and locations scheduled for the following 30 days (CC E9). Empire will inform the USACE and NYSDOS of any changes in the design of the Project that have the potential to impact the individual USACE-issued permit and will file a copy of such correspondence with the Secretary (CC P10).

Within 10 days of the completion of final restoration (see Section 4.2.7), Empire will file with the Secretary that all restoration has been completed in compliance with the Certificate and this EM&CP. Additionally, Empire will file with the Secretary notice of Commercial Operation no later than 10 days after the date on which the Project has achieved Commercial Operation, defined as the date on which energy is sold in commercial quantities, excluding test energy, and is transmitted through the Project (Commercial Operation) (CC E11).

6.1.1 Con Edison

As the interconnecting party, Empire will coordinate with Con Edison prior to and during construction of the Project. During preparation of the EM&CP, the Certificate Holder will consult Con Edison regarding the substation it owns that needs upgrading in order to interconnect the Project facilities. Notwithstanding that any necessary substation upgrade work may be authorized to be performed under the Certificate and the EM&CP, such substation shall not thereafter become subject to Article VII jurisdiction post construction of the Project solely as a result of such Article VII authorization. Where any portion of the Project will impact any facilities, property and/or equipment owned by Con Edison, the Project must be designed, engineered, and constructed in accordance with Con Edison's standards, specifications, guidance, and practices. Empire will consult with and coordinate with Con Edison to minimize outages (CC L7).

6.1.2 Transportation

6.1.2.1 Objections by Federal, State, or Local Transportation

No objections have been raised by federal, state, or local transportation (highways, waterways, or aviation) officials regarding the final location or manner of installation of, or access to, the certified Project.

6.1.2.2 NYCDOT

Empire will coordinate with NYCDOT on traffic conditions and street work in 2nd Avenue prior to and during construction of the Project. Empire has consulted with the NYCDOT on its TMP (**Appendix M**), which details traffic management of roads under State and municipal jurisdiction, prior to filing this EM&CP.

Empire will coordinate with NYCDOT with respect to all work it performs on the onshore Project. Empire will consult, not less than weekly, with the NYCDOT about traffic conditions near the Project site and will implement appropriate modifications to traffic management protocols as

necessary to minimize disruption to traffic circulation during construction (CC M3). Oversized deliveries transported over land shall be coordinated with NYSDOT, NYCDOT, and other local jurisdictions, as appropriate.

Empire continues to consult with NYCDOT regarding any restoration work and landscape improvement assessments involving streets, sidewalks, and other public rights-of-way. Assessments and plans that pertain to streets, sidewalks, and other public rights-of-way will be presented to NYCDOT for review and input.

6.2 Complaint Management and Resolution Plan

Empire's Complaint Management and Resolution Plan is included under **Appendix T**.

7. DECOMMISSIONING

Decommissioning for Part 1 is discussed in **Appendix Y – Decommissioning Plan**.

If applicable, prior to exercising the right to draw on a letter of credit, the beneficiaries thereof shall provide the Certificate Holder with written notice by certified mail of their intent to draw on a letter of credit. If within 90 days of the date of such written notice Certificate Holder has documented to the beneficiaries' reasonable satisfaction that Certificate Holder is, as applicable:

- I. diligently implementing the Decommissioning Plan
- II. diligently acting to restore commercial operations; or
- III. diligently addressing the subject cable exposure, then the letter of credit shall not be drawn upon.

If, after 90 days, the beneficiaries thereof determine that the Certificate Holder has not met the requirements set forth in (i) through (iii), above, the beneficiaries shall, at their sole individual discretion, draw on the letter of credit. In the event that a letter of credit is drawn upon, Certificate Holder shall have no further liability relating to the activities for which the letter of credit was drawn (CC Z3).

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