

South Fork Wind Farm

South Fork Wind Farm Supplemental Project Information

February 1, 2020

Supplemental Project Information

Location Plats

Supplemental Figures

Attachment B Information

Materials Inventory

Chemical Use and Management

Waste and Discharges

Coordination for Cable Crossing

Location Plat and Supplemental Figures

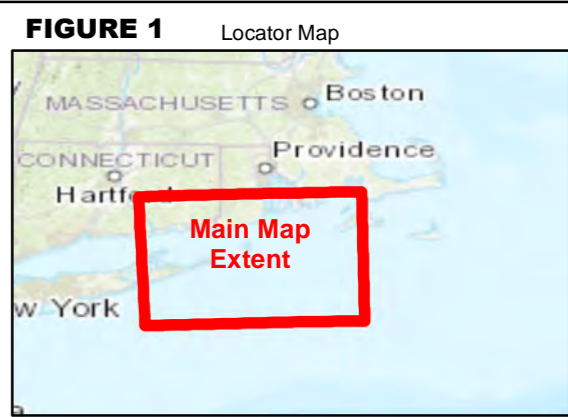
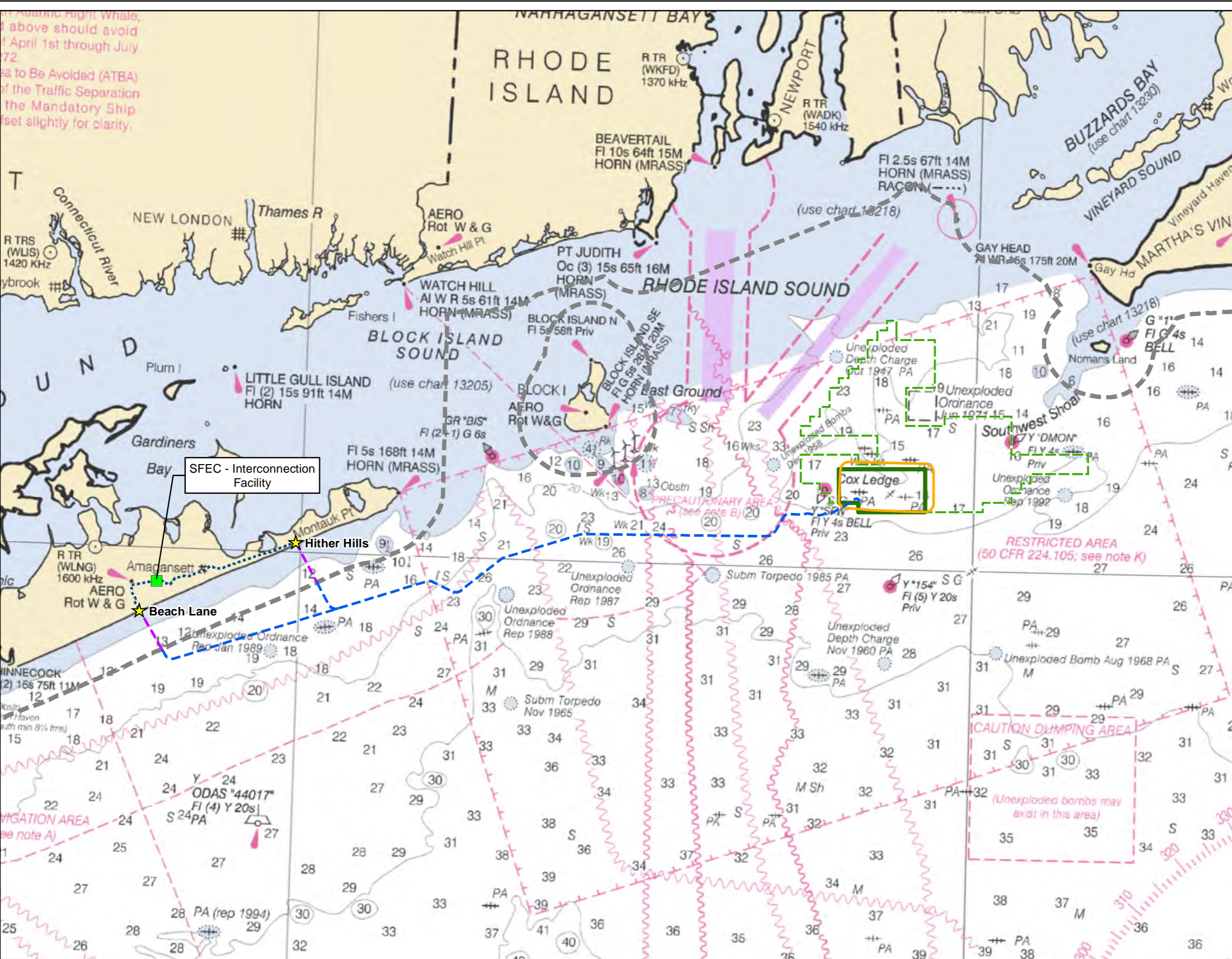
Figure 1 includes a location map for the SFWF and SFEC

Figure 2 includes a location plat for the SFWF

Table 1 provides surface locations and water depths for project components.

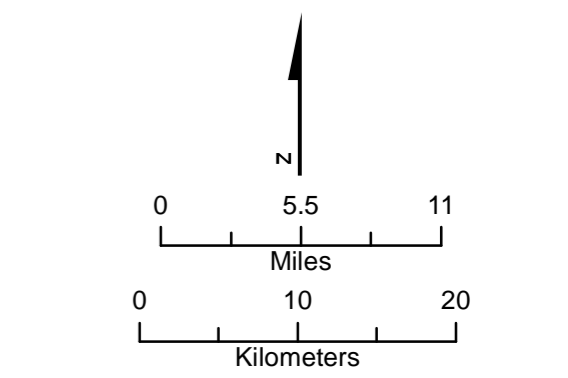
Figure 3 depicts potential locations for boulder relocation and secondary cable protection for the SFEC.

Whale, Atlantic Right Whale, above should avoid (ATBA) of the Traffic Separation the Mandatory Ship set slightly for clarity.



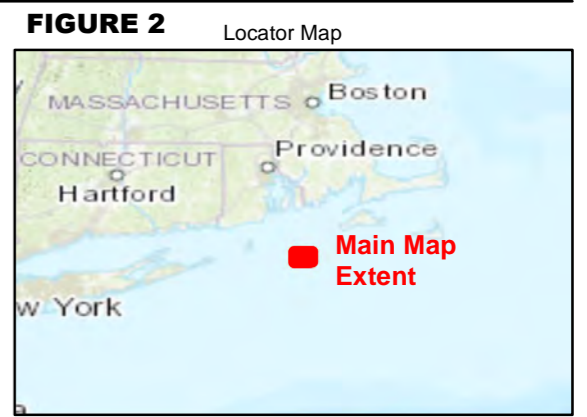
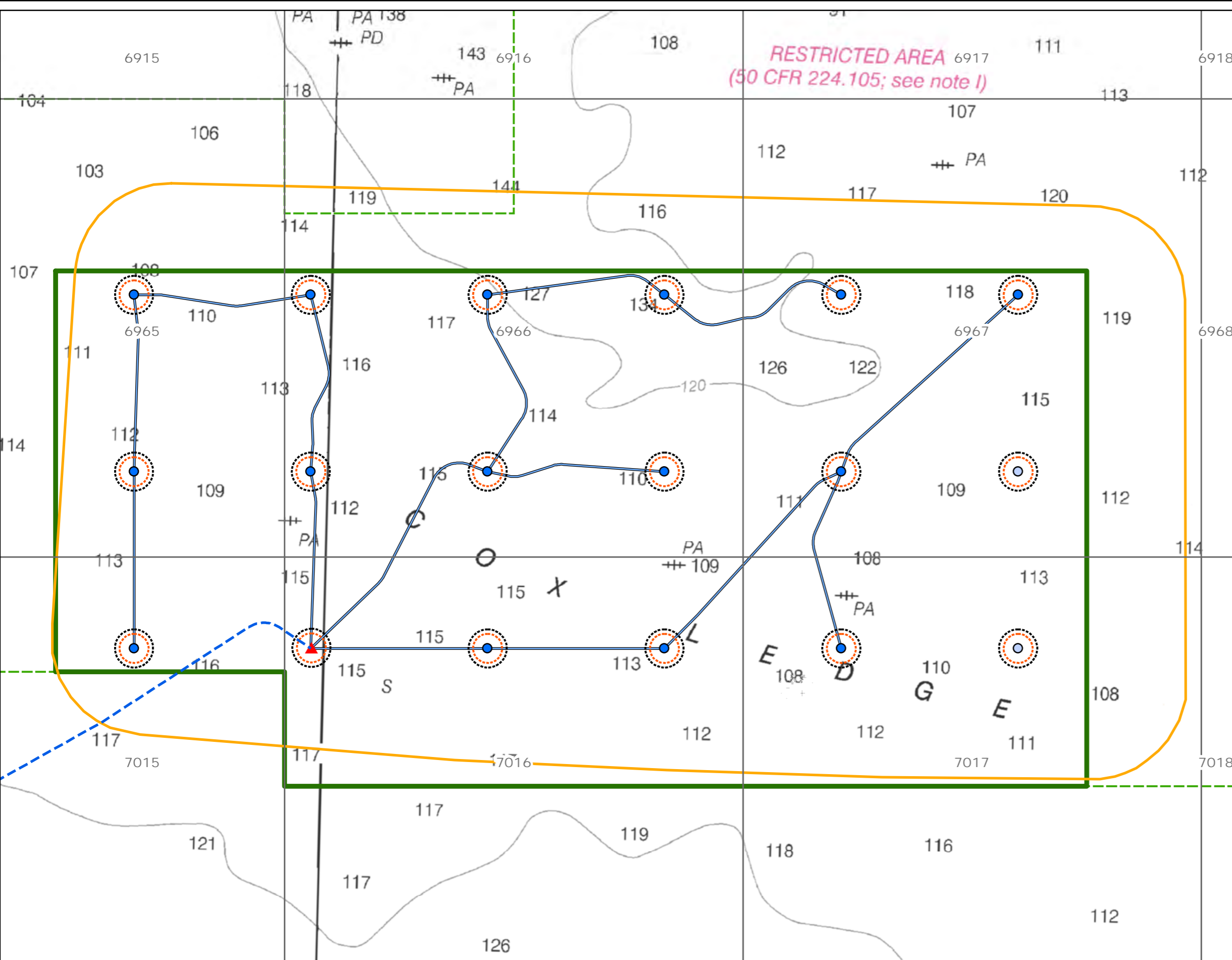
- Legend**
- 3-Nautical Mile State Waters Boundary
 - - - Lease Area (OCS-A 0486)
 - ▭ SFWF Lease Area (OCS-A 0517)
 - ▭ SFWF Maximum Work Area (including all anchor/mooring areas)
 - SFEC New York State Waters (NYS)
 - SFEC Federal Waters (OCS)
 - ⋯ SFEC Onshore (Potential Route)
 - SFEC - Interconnection Facility
 - ★ Potential SFEC Landing Site

Source: NOAA Chart Tiles Service.
Soundings in fathoms at mean lower low water.



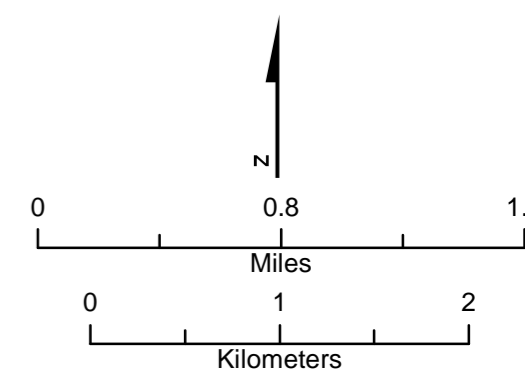
South Fork Wind Farm

South Fork Wind Farm Project Location
Deepwater Wind South Fork LLC
New York/Rhode Island, US



- Legend**
- Lease Area (OCS-A 0486)
 - Lease Block
- South Fork Wind Farm (SFWF)**
- SFWF Lease Area (OCS-A 0517)
 - SFWF Maximum Work Area (including all anchor/mooring areas)
 - ▲ Offshore Substation
 - SFWF WTG (1 nm X 1 nm)
 - SFWF WTG (Alternate Location)
 - SFWF Inter-array Cable
 - Foundation Installation Activities (400 m diameter circle) (1,312.34 ft)
 - Foundation Micro-siting (152.4 m radius) (500 ft)
- South Fork Export Cable (SFEC)**
- SFEC Federal Waters (OCS)

Source:
NOAA Chart Tiles Service.
Soundings in feet at mean lower low water.



South Fork Wind Farm

South Fork Wind Farm (1 nm X 1 nm)
Location Plat
Deepwater Wind
New York/Rhode Island, US

Table 1 Locations and Water Depth for Layout (WTG spacing 1.15 miles)

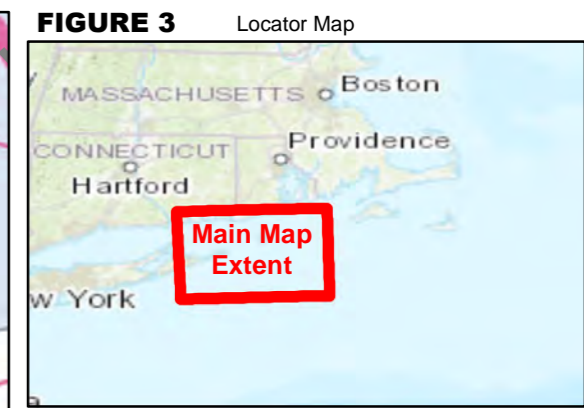
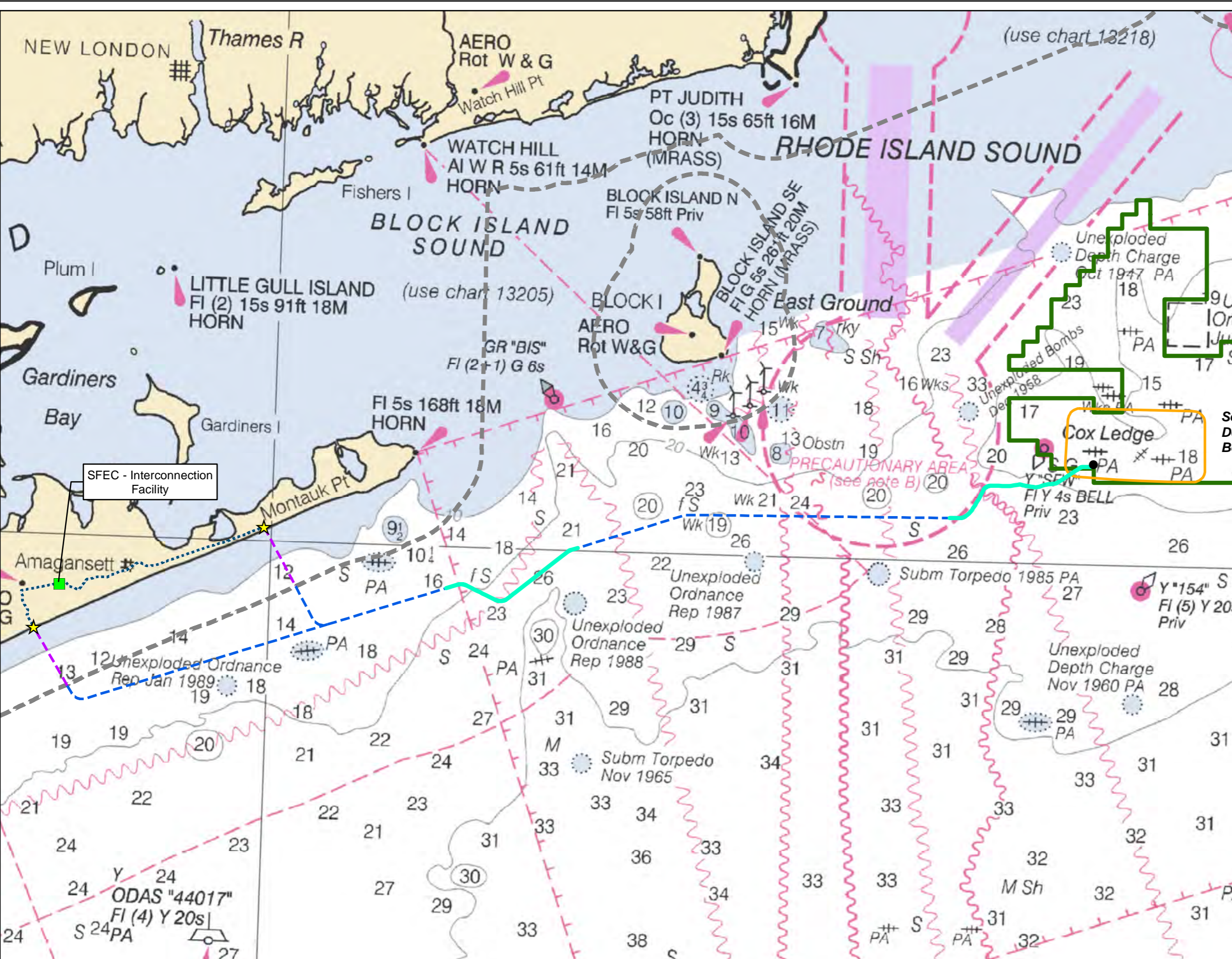
Label		Spatial Reference: NAD83 (2011) UTM Zone 19N – EPSG 6348						Depth (m; MLLW)*
OSS_ID	OSS_RDSPP	Easting (m)	Northing (m)	Longitude	Latitude	Longitude (DD MM SS, SSS)	Latitude (DD MM SS, SSS)	
OSS1		317874	4549444	-71.167965	41.07587	-71° 10' 4.676"	41° 4' 33.133"	-34.94

Label		Spatial Reference: NAD83 (2011) UTM Zone 19N – EPSG 6348						Depth (m; MLLW)*	Depth (m; MLLW)**
WTG_ID	WTG_RDSPP	Easting (m)	Northing (m)	Longitude (DD)	Latitude (DD)	Longitude (DD MM SS, SSS)	Latitude (DD MM SS, SSS)		
L013_1		316022	4553148	-71.191104	41.108795	-71° 11' 27.973"	41° 6' 31.662"	no data	-33.575
L013_2		317874	4553148	-71.169062	41.109212	-71° 10' 8.624"	41° 6' 33.164"	no data	-34.64
L013_3		319726	4553148	-71.147021	41.109625	-71° 8' 49.274"	41° 6' 34.651"	-36.49	-36.273
L013_4		321578	4553148	-71.124978	41.110034	-71° 7' 29.922"	41° 6' 36.123"	-40.74	-40.538
L013_5		323430	4553148	-71.102935	41.110439	-71° 6' 10.568"	41° 6' 37.579"	-35.77	-35.662
L013_6		325282	4553148	-71.080892	41.110839	-71° 4' 51.212"	41° 6' 39.021"	-37.79	no data
L013_7		316022	4551296	-71.19055	41.092124	-71° 11' 25.978"	41° 5' 31.647"	no data	-34.034
L013_8		317874	4551296	-71.168514	41.092541	-71° 10' 6.649"	41° 5' 33.148"	no data	-34.995
L013_9		319726	4551296	-71.146477	41.092954	-71° 8' 47.319"	41° 5' 34.634"	-35.39	-35.205
L013_10		321578	4551296	-71.124441	41.093363	-71° 7' 27.986"	41° 5' 36.105"	-34.51	-34.302
L013_11		323430	4551296	-71.102403	41.093767	-71° 6' 8.653"	41° 5' 37.561"	-34.43	-34.103
L013_12		316022	4549444	-71.189996	41.075453	-71° 11' 23.985"	41° 4' 31.632"	no data	-35.729
L013_13		319726	4549444	-71.145935	41.076283	-71° 8' 45.365"	41° 4' 34.618"	-35.79	-35.589
L013_14		321578	4549444	-71.123904	41.076691	-71° 7' 26.053"	41° 4' 36.088"	-35.02	-34.766
L013_15		323430	4549444	-71.101872	41.077095	-71° 6' 6.739"	41° 4' 37.543"	-33.39	-33.221
L013_16A**		325282	4551296	-71.080366	41.094167	-71° 4' 49.317"	41° 5' 39.002"	-34.24	no data
L013_17A**		325282	4549444	-71.07984	41.077495	-71° 4' 47.424"	41° 4' 38.983"	-33.64	no data

* Based on 2018 Fugro MBES survey data

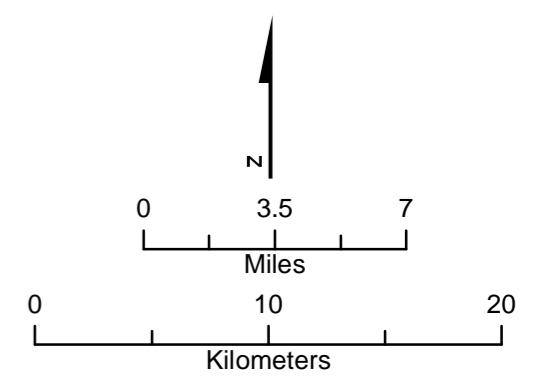
** Preliminary contingency positions

*** Based on 2017 Fugro MBES survey data



- Legend**
- 3-Nautical Mile State Waters Boundary
 - ▭ Lease Area
- South Fork Wind Farm (SFWF)**
- Offshore Substation
 - ▭ SFWF Maximum Work Area (including all anchor/mooring areas)
- South Fork Export Cable (SFEC)**
- SFEC New York State Waters (NYS)
 - SFEC Federal Waters (OCS)
 - ⋯ SFEC Onshore (Potential Route)
 - ~ SFEC Areas That May Require Boulder Relocation
 - SFEC - Interconnection Facility
 - ★ Potential SFEC Landing Site

Source: NOAA Chart Tiles Service.
Soundings in fathoms at mean low water.



South Fork Wind Farm

South Fork Wind Farm Export Cable and Potential Boulder Relocation Areas
Deepwater Wind South Fork LLC
New York/Rhode Island, US

Attachment B Information

Table 2 provides a summary of the relevant information for SFWF and SFEC identified in Attachment B of the BOEM's Guidelines for Information Requirements for a Renewable Energy COP.

Attachment B Information

Table 2. Information Identified in Attachment B of COP Guidelines			
Device Elements or System	Construction	Operation	Conceptual Decommissioning
Overall Project Description			
Device configuration and how it operates	n/a	See Sections 3.1.5 and 3.2.5	n/a
Management system and structure	See Section 1.6.5		
Remote monitoring system	See Section 3.1.2.4		n/a
Transformer platform	See Section 3.1.3.5	See Section 3.1.5.5	See Sections 3.1.6 and 3.2.6
Shore connections and sea-bottom appurtenances	See Section 3.2.2.2	n/a	See Sections 3.1.6 and 3.2.6
Shore facilities	See Section 3.1.3	See Section 3.1.5	See Section 3.1.6
Markings, lighting, and proximity warnings	Construction activities will include all necessary OSHA and US Coast Guard markings, lighting, and proximity warnings to ensure a safe construction execution. All markings, lighting, and proximity warning requirements will be reviewed with the USGC.	All markings, lighting, and proximity warning requirements will be reviewed with the USGC.	n/a
Materials inventory by quantity and physical properties	See Table XX.		n/a
Description of Operational Concept			
General concept for construction, operation, and decommissioning	For SFWF, see Section 3.1.3 For SFEC, see Section 3.2.3	For SFWF, see Section 3.1.5 For SFEC, see Section 3.2.5	See Sections 3.1.6 and 3.2.6
Means of access to offshore structures	For SFWF, see Section 3.1.3 For SFEC, see Section 3.2.3	For SFWF, see Section 3.1.5 For SFEC, see Section 3.2.5	n/a
Maintenance schedule and procedures	For SFWF, see Section 3.1.3 For SFEC, see Section 3.2.3	For SFWF, see Section 3.1.5 For SFEC, see Section 3.2.5	n/a
Vessel and aircraft support needed for environmental monitoring and research activities, construction, operations, maintenance, and decommissioning	See Section 3.1.3.1		
Noise and vibration levels	See Section 4.1		
Chemical use and management	See Appendix F, Chemical Use and Management		
Potential discharges to the sea and air	See Section 4.1		
Accidental events or scenarios, including non-routine conditions	See Section 1.6.4 and Section 1.6.5		
Electrical Systems			
Electrical systems (AC and DC)	For SFWF, see Section 3.1.3 For SFEC, see Section 3.2.3	For SFWF, see Section 3.1.5 For SFEC, see Section 3.2.5	For SFWF, see Section 3.1.3 For SFEC, see Section 3.2.3
Heating and cooling systems	Temporary fans, heaters, and air-handling units will be installed to provide suitable working conditions during construction.	Heating, ventilation, and air conditioning will be provided by integral HVAC systems that are supplied within the offshore substation and WTGs.	n/a
Power requirements	For the SFWF, each support vessel will run a generator to power any equipment needed. Portable generators may be utilized on the foundations to power all tools and equipment needed. For the SFEC, onsite construction power will be supplied by mobile diesel generators (HDD, cable pulling) or vessel diesel generators during cable lay and burial operation offshore.	Power for operation will normally be supplied by the WTG. During periods in which wind power is not available, minimal shore power will be supplied to each WTG and the OSS.	The power requirements for decommissioning will be the same as for construction.

Attachment B Information

Table 2. Information Identified in Attachment B of COP Guidelines			
Device Elements or System	Construction	Operation	Conceptual Decommissioning
Grounding and Lightning Protection	Grounding will be provided by the site grounding grid. All equipment will be connected by bonding conductors to the ground grid.	Main grounding will be the platform structure. All equipment will be grounded to the platform with bonding conductors. Lightning protection of WTG may vary depending on the WTG selected, and will be reviewed by the CVA as part of the FDR.	n/a
Power conversion system	The power conversion devices and gearboxes may vary depending on the WTG selected, and will be reviewed by the CVA as part of the FDR.		n/a
Energy storage and/or emergency power	Installation vessels will provide energy storage in the form of fuel. Some vessels may have generators for emergency power.	See Section 3.1.5	The energy storage and emergency power for decommissioning will be the same as for construction.
Subsea cables	For SFWF, see Section 3.1.3.3. For SFEC, see Section 3.2.3.2	n/a	See Sections 3.1.6 and 3.2.6
Mechanical Systems			
Power conversion devices and gearboxes	n/a	The power conversion devices and gearboxes may vary depending on the WTG selected, and will be reviewed by the CVA as part of the FDR.	n/a
Hydraulic systems	See Section 3.1.3.2 for details.	No hydraulic systems used during operation. Equipment on the platforms will be electric.	The hydraulics systems for decommissioning will be the same as for construction.
Foundation and/or Mooring Systems			
Installation and removal procedures for all bottom-founded and installed structures	For SFWF, will vary based on foundation type - See Section 3.1.3.2 for details. For SFEC, see Section 3.2.3.2.	n/a	See Sections 3.1.6 and 3.2.6
Corrosion protection system	For the SFWF, exterior corrosion protection will vary depending on the WTG selected for the project. Corrosion protection may take the form of cathodic protection, marine coatings, or corrosion resistant materials selection in compliance with industry standards and best practices. For the SFEC, the cable will be constructed of corrosion resistant materials, including sealants, coatings, and armoring.		n/a
Antifouling system	These structures are designed for the offshore environment and it is not anticipated that antifouling chemicals will be used.		n/a

Sample Materials Inventory

Table 3 provides a sample inventory of materials for 15 turbines, similar to what would be expected for this Project. This inventory will be refined and updated in the FDR.

Table 3. Sample Materials Inventory for 15 Turbine Project		
Potential Use	Material	Estimated Quantity (Metric Tons, unless otherwise indicated)
SFWF - Foundation	High Carbon Steel (API Spec 2H, 5L, ASTM A992, A572, A36)	22,500
	Stainless Steel (A316)	15
	Fiberglass Grating	75 (30,000 sqft)
	~95/5 Aluminum/Zinc	450
SFWF – Turbine	Tower: 3 sections of Steel/Electronic Equipment (tower 1)	2,250 to 3,750
	Nacelle: Steel/PVC/Electronic Equipment/gearbox/Permanent Magnets (rare Earth material)	7,500
	Blades: Steel/Fiber Glass/PVC/Wood	1,575
SFWF - Offshore Substation	Power Transformer	< 50 tonnes
	Reactors	< 60 tonnes
	Switchgear (138 kV or 230 kV)	1 lineup
	Switchgear (34.5 kV or 66 kV)	1 lineup
	Enclosure module	<1,500 tonnes
	Emergency Diesel Generator	1
	Corrosion Protection Al/Zn	<50 tonnes
SFWF - Inter Array Cable	3-conductor, armored and shielded cable with fiber optic cable	<26 miles
	Subsea cable protection cover	<120,000 tonnes
	HDPE cable bend restrictors	< 32
SFEC - Offshore	3-conductor, armored and shielded cable and fiber optic cable	<60 miles
	Subsea cable protection cover	<500,000 tonnes
	Horizontal Directional Drill (HDD) HDPE conduit	<3,600 feet
	Onshore concrete cable vault	<100 tonnes
SFEC - Onshore	2x3 single conductor shielded power cable and fiber optic cable	<10 miles
	Concrete cable vaults	<100 vaults
	Concrete duct bank (3' x 4')	<47,000 cubic yards
	2x3 single conductor 69kV shielded power cable and fiber optic cable	<1 mile
SFEC – Onshore Substation	Power Transformer	< 50 tonnes
	Reactors	< 120 tonnes
	Switchgear (138 kV or 230 kV)	1 lineup
	Switchgear (69 kV)	1 lineup
	Enclosure module	<1,500 tonnes
	Emergency Diesel Generator	1
	Concrete Foundations	<7,000 cubic yards

Chemical Use and Management

The inventory of chemicals will be typical of that used in onshore and maritime construction activities. Table 4 provides a sample inventory and volume of chemicals to be stored on location during construction, operation and decommissioning activities for the Project. This inventory will be refined and updated in the FDR.

The majority of vessels that will support Project activities are large enough to be subject to United States Coast Guard regulations about chemical use and management, and chemical use aboard those vessels is not described here.

Additional information about chemical use and management during construction, operations and decommissioning is described further below.

Construction

During construction, all chemicals will be brought to site aboard vessels and be transported in manufacturer's original packaging or in National Transportation Safety Council (NTSC) approved tote containers. During operations, any chemicals transported on location will be determined by operational requirements, and will be transported in compliance with all local, state, and federal regulations. It is anticipated that any chemicals to be stored on site will be integral with associated equipment and will not be transported independently from this equipment.

During construction, chemicals transfers may take place daily depending on operational requirements of the various contractors. Chemical transfers will be executed in accordance with industry best practices considering health, safety, and environment, and will be in compliance with local, state, and federal regulations. Chemical transfer volumes will be determined by operational requirements of the various contractors, and will be in compliance with all local, state, and federal regulations. Chemical transfer requirements are expected to be consistent with the quantities in Table 4.

Any chemicals to be treated or disposed of will be transported to typical onshore waste receiving sites within the area that conform to safe and environmentally friendly methods in accordance with local, state, and federal regulations. The receiving site would be an approved facility operating consistently with 6 NYCRR: 374-2 Standards for the Management of Used Oil; and 360-14 Used Oil. Subpart 374-2.

Operations

During operations, all chemicals will be initial fills and will be handled on site in original manufactures packaging or in NTSC tote containers. With exception of diesel fuel and engine lubricants, all chemicals normally remain on-site for the life of the project.

Because any anticipated chemicals to be stored on site will be integral to equipment packages, it is anticipated that chemical transfers will only take place in the form of equipment installation and/or replacement which will take place only as required throughout the life of the installation. The quantities expected to be transferred are considered minimal. If disposal is required, transfer and transportation would be carried out by a licensed transporter operating consistent with the standards of NYCRR: Section 374-2.5.

Chemical Use and Management

Any chemicals to be treated or disposed of will be transported to typical onshore waste receiving sites within the area that conform to safe and environmentally friendly methods in accordance with local, state, and federal regulations. The receiving site would be an approved facility operating consistently with 6 NYCRR: 374-2 Standards for the Management of Used Oil; and 360-14 Used Oil. Subpart 374-2.

Decommissioning

During decommissioning, any chemicals stored on location will be either removed for disposal or removed together with the equipment with which they are associated. Method determined will be made at the time of decommissioning by operational requirements of the various contractors, and will be in compliance with local, state, and federal regulations at the time of decommissioning.

Any chemicals transported on location or any chemical transfers will be determined by operational requirements of the various contractors, and will be in compliance with local, state, and federal regulations at the time of decommissioning. Chemical transfer requirements are expected to be minimal.

Table 4. Chemical Use and Management

Summary of Maximum Potential Volumes Oils, Fuels and Lubricants per WTG

WTG System/Component	Oil/Fuel Type	Oil/Fuel Volume
WTG Bearings and yaw pinions	Grease a/	343 gal (1,300 L)
Hydraulic Pumping Unit, Hydraulic Pitch Actuators, Hydraulic Pitch Accumulators	Hydraulic Oil	528 gal (2,000 L)
Drive Train Gearbox (if applicable), Yaw Drives Gearbox	Gear Oil	5,283 gal (20,000 L)
Blades and Generator Accumulators	Nitrogen	21,134 gal (80,000 L)
High-Voltage Transformer	Transformer Silicon/Ester Oil	58,418 lb/gal (7,000 L/kg)
Emergency Generator	Diesel Fuel	793 gal (3,000 L)
Switchgear	Sulfur Hexafluoride (SF6)	13 lb (6 kg)
Tower Damper and Cooling System	Glycol/Coolants	3,434 gal (13,000 L)
a/ Approximately 26 gal to 40 gal (100 L to 150 L) per large bearing.		

It should be noted that both the WTGs and OSSs have been designed with a minimum of 110% of secondary containment of all identified oils, grease, and lubricants. The nacelle canopy is designed to contain 1030 gallons (3900 liters) of liquid.

Summary of Maximum Potential Volumes Oils, Fuels and Lubricants per OSS

OSS Equipment	Oil/Fuel Type	Oil/Fuel Volume
Transformers and Reactors	Transformer oil	79,252 gal (300,000 L)
Generators	Diesel Fuel	52,834 gal (20,000 L)
High-Voltage & Medium-Voltage Gas-insulated Switchgear	Sulfur Hexafluoride (SF6)	793 gal (3,000 L)
Crane	Hydraulic Oil	317 gal (1,200 L)

Waste and Discharges

The inventory of waste and discharges will be typical of that used in maritime construction activities. Table 5 provides a sample inventory and volume of waste and discharge expected during construction, operation and decommissioning activities for the Project. These volumes will be refined and updated in the FDR.

Vessels that will support Project activities are large enough to be subject to United States Coast Guard (USCG) regulations about waste and discharge. All Project vessels will comply with USCG standards in US-territorial waters to legally discharge uncontaminated ballast and bilge water, and standards regarding ballast water management.

While outside of the 3nm state-border / No-Discharge Zone (NDZ), vessels will deploy a USCG-certified MSD (Marine Sanitation Device) with certifications displayed. While inside of the 3nm state-border / NDZ, vessels will take normal vessel procedures to close off MSD-effluence discharge piping and redirect it to onboard 'Zero-Discharge Tanks' for the appropriate disposal either at dock or outside of a NDZ.

Waste and Discharges

Type of Waste or Discharge	Approximate Total Amount Discharged			Maximum Discharge Rate			Means of Treatment, Storage or Discharge
	Construction	Operations	Decommissioning	Construction	Operations	Decommissioning	
1. Sewage from vessels (gallons)	434250	140000	96500	19300	1400	19300	Discharged overboard after treatment
2. Domestic water (gallons)	434250	140000	96500	19300	1400	19300	Discharged overboard after treatment
3. Drillings cuttings, mud, or borehole treatment chemicals (m ³)	4000	0	0	1000	0	0	Discharged overboard
4. Uncontaminated bilge water (m ³)	100	0	0	4	0	0	Discharged overboard
5. Deck drainage and sumps (m ³)	Not applicable						
6. Uncontaminated ballast water (m ³)	400000	50000	50000	17778	500	10000	Discharged overboard after treatment
7. Uncontaminated fresh or seawater (m ³)	200000	100000	40000	8889	1000	8000	Discharged overboard
8. Solid trash or debris (10-foot containers)	19	14	4	1	0	1	Onshore landfill
9. Contaminated bilge water (m ³)	0	0	0	0	0	0	Not allowed
10. Chemicals, solvents, oils, greases	Types, volumes, and means are provided in Table 4.						

Coordination for Cable Crossings

Several known active and inactive submarine cable systems on the seabed are located in the general vicinity of the SFWF and SFEC. No submarine cables are located within the SFWF Lease Area and no submarine cables are located in the general vicinity of the SFEC – NYS.

The proposed route for the SFEC – OCS will cross seven submarine cables, as described in Table 5. The coordinates for these locations are included in Table 3.2 of the Site Characterization Report (Appendix H) and depicted on the Offshore Plan Set (Appendix G).

DWSF has consulted with the cable owners to develop a mutually agreeable crossing process for these four crossing locations, and copies of that correspondence are included after Table 5.

Name of Existing Cable	Facility Owner	Status	OCS Block of Crossing Location
TAT – 6 Transatlantic Cable	AT&T	Inactive	7014
CB – 1 Transatlantic Cable	Cable Co.	Inactive	7014
TAT – 12 Transatlantic Cable	AT&T	Active	7062
TAT – 5 Transatlantic Cable	AT&T	Inactive	7061
TAT – 10 Transatlantic Cable	AT&T	Inactive	7060
FA – 1 Transatlantic Cable	Global Cloud Xchange	Active	7057
TAT – 12/13 Interlink Cable	AT&T	Active	7105

Coordination for Cable Crossings

Correspondence with Facility Owners for Cable Crossings

Bermuda Challenger
AT&T
Global Cloud Exchange

Bermuda Challenger (CB-1)

RE: South Fork Wind Farm Export Power Cable - Scope of Work to initiate a cable crossing agreement for CB-1



jeffrey.fleisher@verizon.com

Today, 8:08 AM

Dave Grassbaugh; RECharlton@cableco.bm ↕



Reply all | ↕

To help protect your privacy, some content in this message has been blocked. To re-enable the blocked features, [click here](#).

To always show content from this sender, [click here](#).

You forwarded this message on 3/30/2018 8:31 AM

Dave,

Thank you. I'll review and get back to you. Also, on our call a few weeks ago, you mentioned that you expected to have a project KMZ that you could share with us. If that is available now, can you forward?

[I am out of the office today but will be in all of next week.](#)

Regards,

Jeff

Re: Challenger Cable Crossing - United States



Dave Grassbaugh

Wed 1/17, 4:12 PM

jeffrey.fleisher@verizon.com; Robert Billington; Corey Kelkenberg



Reply all | v

Are you available late Friday afternoon...if not then we can set up something for Monday morning.

David Grassbaugh

Transmission Manager - DWW

(936) 525 8752

From: jeffrey.fleisher@verizon.com <jeffrey.fleisher@verizon.com>

Sent: Wednesday, January 17, 2018 2:59 PM

To: Dave Grassbaugh

Subject: RE: Challenger Cable Crossing - United States

Dave,

I am available to discuss this Friday or Monday. Feel free to call my mobile.

Thanks,

Jeff

verizon

Jeff Fleisher
Network Infrastructure Planner
Submarine Cables

O (908) 559-5270 | M (908) 297-7805

jeffrey.fleisher@verizon.com

From: Dave Grassbaugh [mailto:dgrassbaugh_contractor@dwwind.com]

Sent: Tuesday, January 16, 2018 11:00 AM

To: Fleisher, Jeffrey R (Jeff) <jeffrey.fleisher@one.verizon.com>

Cc: Robert Billington <rbillington@dwwind.com>; Corey Kelkenberg <ckelkenberg@dwwind.com>; John O'Keeffe <jokeeffe@dwwind.com>

Subject: [E] Challenger Cable Crossing - United States

Jeff:

As promised last week, please find attached preliminary results of the South Fork Wind Farm - Export electric cable route survey in the area of the proposed crossing of the Bermuda Challenger (CB-1) telecommunications cable.

A brief description of the attachments:

1. 17021080_CB 1 Crossing (1).pdf - A map of the proposed cable crossing and magnetic "hits" showing placement of the CB-1 cable
2. CB1ASFOUND TABLES (2).pdf - A table of the magnetic hit coordinates that are shown on the map
3. Subsea Cable Crossing Drawing - Typical.pdf - a typical cable crossing illustration (used for crossing CB-1 during the Sea-to-Shore cable project)

Let's have a call at your convenience and see what steps we should take, short term, to initiate the cable crossing agreement process.

David Grassbaugh

Transmission Manager - DWW

(936) 525-8752

Note: Irina Gumennik has left Deepwater Wind, I have removed her from this email and any further correspondence. We will advise of her replacement shortly.

From: jeffrey.fleisher@verizon.com <jeffrey.fleisher@verizon.com>

Sent: Wednesday, January 10, 2018 12:00 PM

To: Dave Grassbaugh

Cc: Irina Gumennik; Robert Billington

Subject: RE: Challenger Cable Crossing - United States

Dave,

Just checking in to see if there have been any further developments or activity.

Thanks,

Jeff

verizon^v

Jeff Fleisher
Network Infrastructure Planner
Submarine Cables

O (908) 559-5270 | M (908) 297-7805

jeffrey.fleisher@verizon.com

From: Dave Grassbaugh [mailto:dgrassbaugh_contractor@dwwind.com]
Sent: Thursday, July 27, 2017 8:18 AM
To: Fleisher, Jeffrey R (Jeff) <jeffrey.fleisher@one.verizon.com>
Cc: Irina Gumennik <lgumennik@dwwind.com>; Robert Billington <bbillington@dwwind.com>
Subject: [E] Re: Challenger Cable Crossing - United States

Jeffrey:

Your email came through perfect. I have also copied the Deepwater Wind Program Manager - Bob Billington and Survey Manager - Irina Gumennik with this email. Currently we have been experiencing weather delays, but have been able to get some centerline side scan data across the CB-1 cable to show bottom surface conditions.

David Grassbaugh
Transmission Manager - DWW
(936)525 8752

From: Fleisher, Jeffrey R (Jeff) <jeffrey.fleisher@verizon.com>

Sent: Wednesday, July 26, 2017 11:29 PM

To: Dave Grassbaugh

Subject: RE: Challenger Cable Crossing - United States

Dave,

Just checking in to make sure you received this email?

Thanks,

Jeff

verizon[✓]

Jeff Fleisher
Network Infrastructure Planner
Submarine Cables

O (908) 559-5270 | M (908) 297-7805

jeffrey.fleisher@verizon.com

From: Fleisher, Jeffrey R (Jeff)

Sent: Friday, July 21, 2017 8:38 AM

To: 'Dave Grassbaugh'

Cc: Irina Gumennik; Richard Lau; Christopher Pepper; Frank Amaral; Cilfone, Idillio; Rooney, Edward J; Michael Tanglao; Raymond Charlton; Robert Billington; Corey Kelkenberg

Subject: RE: Challenger Cable Crossing - United States

Hi Dave,

Please find attached the latest RPL and SLD workbook for CB-1. I am available to speak today and next week so please feel free to contact my mobile number below.

Regards,

Jeff

verizon

Jeff Fleisher

Network Infrastructure Planner

Submarine Cables

O (908) 559-5270 | M (908) 297-7805



Sent: Thursday, July 20, 2017 2:24 PM

To: Fleisher, Jeffrey R (Jeff)

Cc: Irina Gumennik; Richard Lau; Christopher Pepper; Frank Amaral; Cilfone, Idillio; Rooney, Edward J; Michael Tanglao; Raymond Charlton; Robert Billington; Corey Kelkenberg

Subject: [E] Challenger Cable Crossing - United States

Jeffery:

By way of this email, let me introduce myself and the South Fork (offshore) Wind Farm project that is being developed by Deepwater Wind LLC within the United States. I am the Offshore Transmission Manager for the Project and have responsibilities for design and installation of subsea cables. The South Fork Wind Farm is a new project that is expected to produce power from an offshore license area known as D1 which is in the vicinity of Martha's Vineyard (south east of Block Island, Rhode Island). The project is planned to produce a peak of 98 megawatts that will be delivered to the East Hampton area of Long Island, New York via a 65 mile, 138kV AC subsea cable. FUGRO has been contracted by Deepwater Wind to perform route surveys together with G&G and shore landing studies of the cable route starting in July and ending in October of this year. We plan to conduct the vibra-core and CPT sampling portion starting on or about September.

We would like to coordinate these activities with you in a manner similar to that which was done for the Block Island Wind Farm crossing of the CB-1 cable earlier.

Our immediate interests are:

1. Location of repeaters in the proposed crossing point together with any changes in bottom location from that which appears on the NOAA charts. For reference, we have attached a chart showing the approximate coordinates (WGS-84) at which the export cable is expected to cross the Bermuda Challenger (CB-1) along it's route to Long Island. (NOTE: CB-1 is the cable nearest the green D1 lease location).
2. Contacts for communicating our activities as they progress.

Subsequently we will be interested in:

1. Data, timeline and contacts to initiate a cable crossing agreement for the project.

It may be helpful if we were to have a short telecom sometime next week to answer any immediate questions and open a line of communication. My contact information appears below.

Best regards,

David Grassbaugh
Transmission Manager - DWW
Mobile: (936) 525 8752

From: Raymond Charlton <RECharlton@cableco.bm>

Sent: Monday, July 17, 2017 2:48 PM

To: Dave Grassbaugh; jeffrey.fleisher@verizon.com

Cc: Robert Billington; Corey Kelkenberg; Irina Gumennik; Chris van Beek; Richard Lau; Christopher Pepper; Frank Amaral; Cilfone, Idillio; Rooney, Edward J; Michael Tanglao

Subject: RE: Challenger Cable Crossing - United States

Good day Dave,

Thank you for your phone call this morning. I have cc'ed Mr. Jeffrey Fleisher of Verizon on this email thread as he deals with these matters for the CB-1 cable within 200 nautical miles of the USA.

Jeffrey will be the point person and will keep me apprised of the discussions regarding this proposed crossing.

Thanks and regards,

Ray Charlton

vice president



CABLE CO. LTD.

**30 Victoria Street
Hamilton HM 12
Bermuda**

Phone +441-296-1148

Mobile +441-300-7292

From: Dave Grassbaugh [mailto:dgrassbaugh_contractor@dwwind.com]

Sent: Monday, July 17, 2017 3:09 PM

To: Raymond Charlton <RECharlton@cablco.bm>

Cc: Robert Billington <rbbillington@dwwind.com>; Corey Kelkenberg <ckelkenberg@dwwind.com>; Irina Gumennik <lgumennik@dwwind.com>; Chris van Beek <cvanbeek@dwwind.com>

Subject: Challenger Cable Crossing - United States

Email received from outside of the ATN domain. Use caution before using links/attachments.

Ray:

Thank you for taking my call this afternoon regarding the planned subsea cable route survey for a proposed 138,000 volt alternating current power cable between the South Fork Wind Farm and Long Island, New York within the United States. The attached chart shows two simplified routes for the proposed subsea power cable and the point at which the survey will cross the Bermuda Challenger telecommunications cable. We believe the Challenger cable crossing will occur near 41deg.05'N and 70deg.25'W (WGS-84).

By this message Deepwater Wind LLC requests from Cable Co. LTD (VERIZON):

1. An agent or contact for the Bermuda Challenger cable in U.S. waters (VERIZON) that would be responsible for matters such as securing a cable crossing agreement. Recall that a similar crossing of this cable was made by the Block Island Wind Farm project.
2. An accurate location of the cable and repeaters within the target survey area. The survey program will involve VibraCore and Cone Penetration Testing (CPT) during the September 2017 timeframe, therefore, we wish to have accurate location data in order to remain free of the cable during this operation and avoid locations which would interfere with operation of the cable

Thank you again for the telecom this morning and we look forward to your reply,

David Grassbaugh

Transmission Manager - Deepwater Wind LLC

+1 (936) 525 8752

TAT 5,6,10, 12 12/13 Interconnector

South Fork Wind Farm Export Power Cable - Scope of Work to initiate a cable crossing agreement for TAT-5, 6, 10, 12 & TAT-12/13 Interconnector



Dave Grassbaugh

Yesterday, 8:14 PM

nw1791@att.com



Reply all

You replied on 3/29/2018 8:16 PM.



2018-03-01-SFWF Pr...

2 MB



Download Save to OneDrive - Deepwater Wind

Bob **Wargo**,

As we discussed much earlier Deepwater Wind South Fork desired to inter into a cable crossing agreement for the **TAT-5, 6, 10, 12 & TAT-12/13 Interconnector** cables in an area east of Block Island, Rhode Island USA. A description of the project is attached with specifics regarding location, timing and methodology that we would propose to accomplish the crossing in a manner that was recently done for the Sea2Shore cable project.

I will follow up with you on Friday the 30th (or earliest successful contact date) to coordinate next steps.

Best regards,

David Grassbaugh

Transmission Manager - DWW

(936) 525 8752

Wargo

1 of 1



RE: TAT-5, 6, 10, 2 and 12-13 Cable Crossings - United States



WARGO, BOB <rw1791@att.com>

Fri 7/21/2017, 12:34 PM

Dave Grassbaugh; Paul Murphy; Corey Kelkenberg; Robert Billington; Jeff Fleisher <jeffrey.fleisher@verizon.com>; +1 more

Reply all

You replied on 7/21/2017 1:08 PM.

TAT-12 RPL.xls
48 KB

TAT 5, 6 and 10.xls
90 KB

TAT13 and interlink.xls
64 KB

20170719_SFWF_Cabl...
560 KB

4 attachments (763 KB) Download all Save all to OneDrive - Deepwater Wind

Action Items

David,

This and my voicemail today should start you off with most of what you need. Route Position Lists are included in the Excel spreadsheets attached; apologies for the multiple files but I grabbed what I had from various previous projects. Please note that TAT-5, TAT-6 and TAT-10 are out of service.

Contacts for communicating activities - me. I have copied Jeff Fleisher from Verizon and Nirendra Seemangal of Global Cloud Exchange as it appears you will be crossing their cables as well.

If your upcoming survey activities will require AT&T to inject a tone on our cables for you to positively identify them please let me know as soon as possible as the Rhode Island cable station is not staffed 24/7 and we will need to coordinate that.

Moving forward on crossing agreements your contact will also be me and I will bring in legal support here as needed.

I think that's all for now; let me know if there are any further questions. Feel free to give a shout next week, looks like I am in every day except Wednesday.

Regards,
Bob

Bob Wargo

Principal – Technical Consulting Engineer
Undersea Cable Operations & Maintenance

AT&T

3D 151 F, [1 AT&T Way, Bedminster, NJ 07921](#)
O 908 234 3280 | rw1791@att.com

MOBILIZING YOUR WORLD

Re: TAT-5, 6, 10, 2 and 12-13 Cable Crossings - United States



Dave Grassbaugh

Fri 7/21/2017, 1:08 PM

WARGO, BOB <rw1791@att.com>; Paul Murphy; Corey Kelkenberg; Robert Billington; Jeff Fleisher <jeffrey.fleisher@verizon.com>; +1 more ↕



Bob:

Thank you for your prompt reply. We have been in contact with VERIZON and Global Cloud Exchange. FUGRO is running bathymetry surveys that will cross all lines by the end of today.

David Grassbaugh
Transmission Manager - DWW
(936) 525 8752

From: Dave Grassbaugh [mailto:dgrassbaugh_contractor@dwwind.com]

Sent: Thursday, July 20, 2017 3:52 PM

To: WARGO, BOB <rw1791@att.com>

Cc: Paul Murphy <pmurphy@dwwind.com>; Corey Kelkenberg <ckelkenberg@dwwind.com>; Robert Billington <rbillington@dwwind.com>

Subject: TAT-5, 6, 10, 2 and 12-13 Cable Crossings - United States

Bob:

I was given your email from Paul Murphy of Deepwater Wind and am sending this note in addition to the message left on your phone in order to introduce myself and the South Fork (offshore) Wind Farm (SFWF) project that is being developed by Deepwater Wind LLC within the United States. I am the Offshore Transmission Manager for the SFWF project and have responsibilities for design and installation of the project's subsea cables. The SFWF is a new project that is expected to produce power from an offshore license area known as D1 which is located in the vicinity of Martha's Vineyard (south east of Block Island, Rhode Island). The project is planned to produce a peak of 98 megawatts, starting in 2022 which will be delivered to the East Hampton area of Long Island, New York via a 65 mile, 138kV AC subsea cable. FUGRO has been contracted by Deepwater Wind to perform route surveys together with G&G and shore landing studies of the cable route starting in July and ending by October of this year. We plan to conduct the vibra-core and CPT sampling portion of the surveys starting on or about September.

We would like to coordinate these activities with you in a manner similar to that which was done for the Block Island Wind Farm crossings of the TAT-5, 6, 10 and 12 Segment 1 cables earlier.

Our immediate interests are:

1. Location of repeaters in the proposed crossing points together with any changes in bottom location from that which might appear on the NOAA charts for your cables. For reference, we have attached a chart showing the approximate coordinates (WGS-84) at which the export cable is expected to cross the TAT-5, TAT-6, TAT-10, TAT-12 seg 1 and TAT 12-13 interlink cables along it's route to Long Island.
2. Contacts for communicating our activities as they progress.

Subsequently we will be interested in:

1. Data, timeline and contacts to initiate a cable crossing agreement for the project.

It may be helpful if we were to have a short telecom sometime next week to answer any immediate questions and open a line of communication. My contact information appears below. Please advise if there is convenient time.

regards,

David Grassbaugh

Transmission Manager - DWW

(936) 525 8752

FLAG-1 (FA-1) – Global Cloud Exchange

From: Kevin Biddulph <KBiddulph@GlobalCloudXchange.com>

Sent: Tuesday, April 10, 2018 4:48 AM

To: Dave Grassbaugh

Cc: z.Marine; David Schwartz; Robert Billington; Corey Kelkenberg

Subject: RE: South Fork Wind Farm Export Power Cable - Scope of Work to initiate a cable crossing agreement for FLAG (FA-1) cable

Hi Dave,

Thanks for the clarification.

I have reviewed the proposal and have no issues with the proposed crossing at the co-ordinates provided below. I have already provided relevant extract of our latest RPL which shows that the FA-1 cable at the proposed crossing is OALC4-SA and is buried to ~1.1m.

Please be aware that we are not in the habit of entering into legal agreements with regard to cable crossings, unless there is a requirement by the government of the country whose territorial waters might be transited at the site of the crossing, or if there were cable installation permit requirements for such future agreements. Our normal practice is to review the crossing location and methodology, exchange comments and finally to hopefully agree the details via email after discussion.

I have already plotted the proposed crossing co-ordinates, and have verified that there are no repeaters or equalizers nearby that will be affected by the crossing (nearest repeater >6.5km away). With regards to future repairs in the vicinity I do not foresee any problems caused by the crossing. Thus by way of this e-mail we give our approval of the cable crossing as proposed.

- 48 & 24 hour pre and 24 hour post crossing notifications should be sent to:-

Gnoc@GlobalCloudXchange.com
z.facsusea@globalcloudxchange.com

- As-laid crossing co-ordinates should be sent to:-

z.marine@globalcloudxchange.com
charting@globalmarine.group

Kind Regards,

Kevin

KEVIN J BIDDULPH

Marine Operations Mgr

D: +44 (0)20 8636 6584

M: +44 (0)774 747 4819

kbiddulph@globalcloudxchange.com

www.globalcloudxchange.com

From: Dave Grassbaugh [mailto:dgrassbaugh_contractor@dwwind.com]
Sent: 09 April 2018 19:26
To: Kevin Biddulph <KBiddulph@GlobalCloudXchange.com>
Cc: z.Marine <z.Marine@GlobalCloudXchange.com>; David Schwartz <dschwartz@dwwind.com>; Robert Billington <rbillington@dwwind.com>; Corey Kelkenberg <ckelkenberg@dwwind.com>
Subject: South Fork Wind Farm Export Power Cable - Scope of Work to initiate a cable crossing agreement for FLAG (FA-1) cable

Kevin:

Thank you for your reply last week with regards to coordinates of the proposed South Fork Wind Farm Export cable crossing location with the FLAG (FA-1) telecommunications cable in US waters. As requested please find attached maps produced by FUGRO which show the proposed crossing points in WGS-84 format. Please advise if this format is not acceptable, assuming that there are no issues, I will reach out to Nirendra Seemangal (copy you) to discuss the next steps in advancing an agreement.

best regards,

David Grassbaugh
Transmission Manager - DWW
+1 (936) 525 8752

=====
Global Cloud Exchange message follows
=====

Dave,

Grateful if you would please provide crossing co-ordinates in WGS-84 degrees, minutes, seconds so we can plot on our software to aid in our review of your SoW.

As requested in my e-mail of July last year, please send crossing correspondence to z.marine@globalcloudxchange.com which will reach myself and my colleagues in the marine team.

Should you wish to talk, noting that you are across the pond, it may be easier for you to speak with my colleague, Nirendra, who works out of Northport, NY.

Nirendra Seemangal
GlobalCloudXchange
Cell: 1-347-804-4708
Office: 1-516-897-9885
Fax: 1-516-897-9689

From: Kevin Biddulph <KBiddulph@GlobalCloudXchange.com>

Sent: Wednesday, April 4, 2018 9:45 AM

To: Dave Grassbaugh

Cc: z.Marine

Subject: RE: South Fork Wind Farm Export Power Cable - Scope of Work to initiate a cable crossing agreement for FLAG (FA-1) cable

Dave,

Grateful if you would please provide crossing co-ordinates in WGS-84 degrees, minutes, seconds so we can plot on our software to aid in our review of your SoW.

As requested in my e-mail of July last year, please send crossing correspondence to z.marine@globalcloudxchange.com which will reach myself and my colleagues in the marine team.

Should you wish to talk, noting that you are across the pond, it may be easier for you to speak with my colleague, Nirendra, who works out of Northport, NY.

Nirendra Seemangal

GlobalCloudXchange

Cell: 1-347-804-4708

Office: 1-516-897-9885

Fax: 1-516-897-9689

nseemangal@globalcloudxchange.com

Kind Regards,

Kevin

KEVIN J BIDDULPH

Marine Operations Mgr

D: +44 (0)20 8636 6584

M: +44 (0)774 747 4819

kbiddulph@globalcloudxchange.com

www.globalcloudxchange.com



From: Dave Grassbaugh [mailto:dgrassbaugh_contractor@dwwind.com]

Sent: 30 March 2018 01:17

To: Kevin Biddulph <KBiddulph@GlobalcloudXchange.com>

Subject: South Fork Wind Farm Export Power Cable - Scope of Work to initiate a cable crossing agreement for FLAG (FA-1) cable

Kevin

As we discussed much earlier Deepwater Wind South Fork desires to enter into a cable crossing agreement for the **FLAG FA-1** cable in an area east of Block Island, Rhode Island USA. A description of the project is attached with specifics regarding location, timing and methodology that we would propose to accomplish the crossing in a manner that was recently done for the Sea2Shore cable project.

I will follow up with you on Friday the 30th (or earliest successful contact date) to coordinate next steps.

Best regards,

David Grassbaugh
Transmission Manager - DWW
(936) 525 8752

Re: South Fork Wind Farm Export Power Cable - Scope of Work to initiate a cable crossing agreement for FLAG (FA-1) cable



Dave Grassbaugh

Today, 8:10 AM

Kevin Biddulph <KBiddulph@GlobalcloudXchange.com>



Reply all | v

Enjoy the Good Friday and Easter break.

David Grassbaugh

Transmission Manager DWW

(936) 525 8752

From: Kevin Biddulph <KBiddulph@GlobalcloudXchange.com>

Sent: Friday, March 30, 2018 2:20 AM

To: Dave Grassbaugh

Subject: Re: South Fork Wind Farm Export Power Cable - Scope of Work to initiate a cable crossing agreement for FLAG (FA-1) cable

Hi David,

Please note today and Monday are National holidays in UK.

Please contact me middle of next week.

THanks & Regards,

Kevin

KEVIN J BIDDULPH

Marine Operations Mgr

D: +44 (0)20 8636 6584

M: +44 (0)774 747 4819

kbiddulph@globalcloudxchange.com

www.globalcloudxchange.com

Social media:

[LinkedIn](#) | [Facebook](#) | [Twitter](#) | [Google +](#)



South Fork Wind Farm Export Power Cable - Scope of Work to initiate a cable crossing agreement for FLAG (FA-1) cable



Dave Grassbaugh

Yesterday, 8:16 PM

kbiddulph@globalcloudxchange.com



Reply all



2018-03-01-SFWF Pr...

2 MB

Download Save to OneDrive - Deepwater Wind

Kevin

As we discussed much earlier Deepwater Wind South Fork desires to enter into a cable crossing agreement for the **FLAG FA-1** cable in an area east of Block Island, Rhode Island USA. A description of the project is attached with specifics regarding location, timing and methodology that we would propose to accomplish the crossing in a manner that was recently done for the Sea2Shore cable project.

I will follow up with you on Friday the 30th (or earliest successful contact date) to coordinate next steps.

Best regards,

David Grassbaugh
Transmission Manager - DWW
(936) 525 8752

kbiddulph@gl...

1 of 2

Re: FLAG Atlantic (FLAG FA-1) cable survey crossing - United States



Dave Grassbaugh

Tue 7/18/2017, 8:29 AM

[Kevin Biddulph](#) <KBiddulph@GlobalcloudXchange.com>; [z.Marine](#) <z.Marine@GlobalcloudXchange.com>; [z.TAC subsea](#) <z.TACsubsea@GlobalcloudXchange.com>; +5 more



Reply all | v

Kevin:

Thank you for your quick reply and information regarding the FLAG FA-1 cable position and the apparent charting anomaly. I will take the charting information back to survey team at FUGRO for their information and comment. We will advise as the survey program gets underway.

regards,

David Grassbaugh

Transmission Manager - DWW

(936) 525 8752

From: Kevin Biddulph <KBiddulph@GlobalcloudXchange.com>

Sent: Tuesday, July 18, 2017 4:15 AM

To: Dave Grassbaugh

Cc: z.Marine; z.TAC subsea; Robert Billington; Irina Gumennik; Corey Kelkenberg; Chris van Beek; Eric Alvarez

Subject: Re: FLAG Atlantic (FLAG FA-1) cable survey crossing - United States

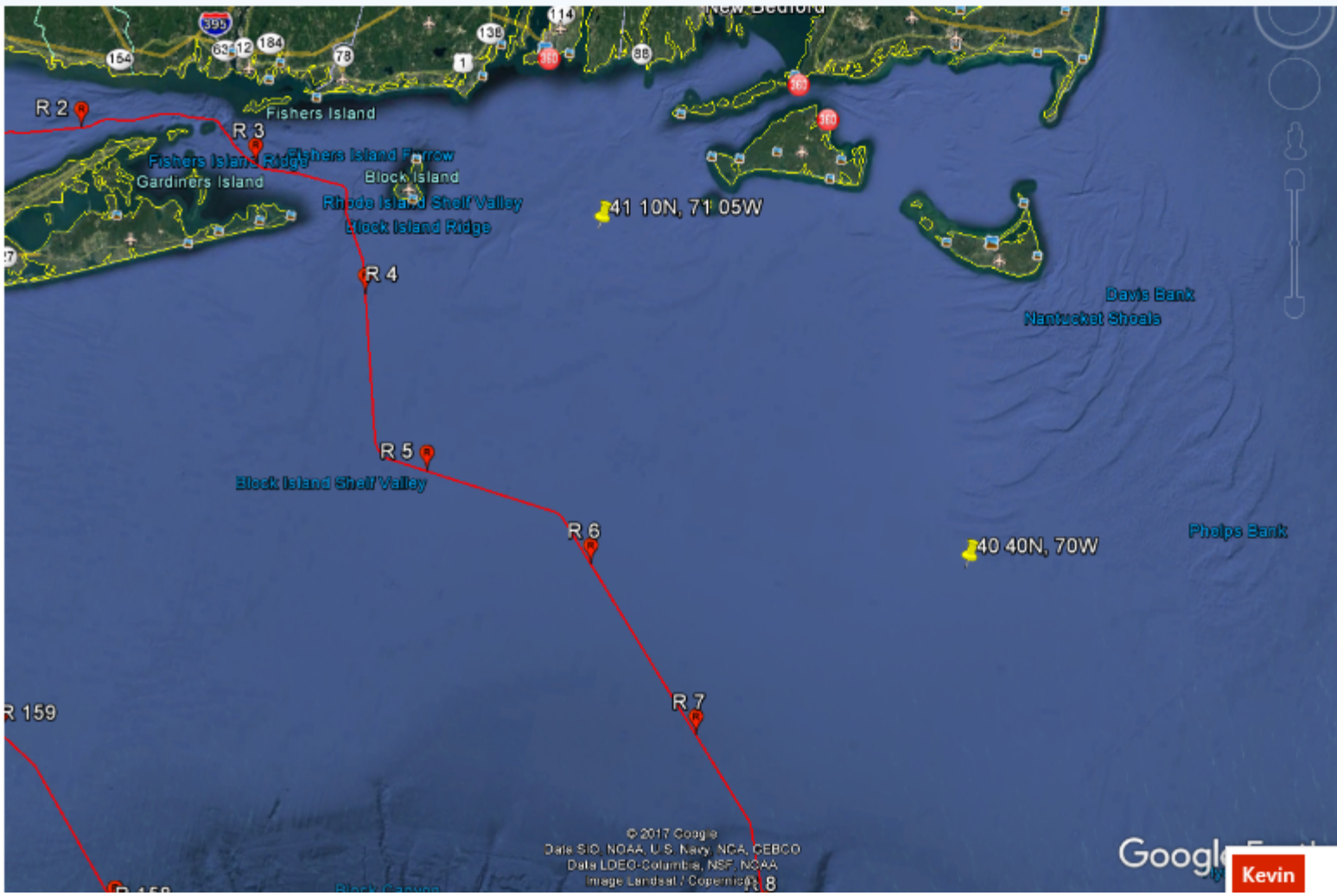
Dear Mr Grassbaugh,

In response to your mail below

1. Please use z.marine@globalcloudxchange.com for all correspondence relating to the crossing of our cable. This will reach my colleagues and myself in the marine team who will respond to your queries.
2. Please find attached relevant extract of the route position list for our FA-1(N) cable.

In addition:

- Please note that the co-ordinates given do not fall on our cable as per the below Google Earth screenshot.
- I have also attached, fyi, a copy of the ICPC recommendation relating to cable crossings.
- So as to minimise any possible interference on our cables caused by induced voltages/currents we would wish to see a 90° crossing angle.
- Please note the position of our repeaters. We would ask that you endeavour to engineer the crossings such that they are not within 500m of the repeaters so as not to impede our ability to undertake recovery/repair of them.
- Should your cable(s) run parallel to our cable please note we require a minimum corridor of 3x water depth to allow for cable recovery during a repair.
- We request that no Vibracore or CPT is undertaken within 500m of our cable position as the cable was laid some 16 years ago.



Yours Sincerely

KEVIN J BIDDULPH

Marine Operations Mgr

D: +44 (0)20 8636 6584

M: +44 (0)774 747 4819

kbiddulph@globalcloudxchange.com

www.globalcloudxchange.com

Social media:

[LinkedIn](#) | [Facebook](#) | [Twitter](#) | [Google +](#)



From: Dave Grassbaugh [mailto:dgrassbaugh_contractor@dwwind.com]

Sent: Monday, July 17, 2017 4:33 PM

To: GNOC Global Cloud Xchange <Gnoc@GlobalcloudXchange.com>

Cc: Robert Billington <rbillington@dwwind.com>; Irina Gumennik <lgumennik@dwwind.com>; Corey Kelkenberg <ckelkenberg@dwwind.com>; Chris van Beek <cvanbeek@dwwind.com>

Subject: FLAG Atlantic (FLAG FA-1) cable survey crossing - United States

Gentlemen:

This message is in response to the telephone conversation between Mr. Sachil Hin of Global Cloud Exchange and Mr. David Grassbaugh of Deepwater Wind LLC regard the planned subsea cable route survey for a proposed 138,000 volt alternating current power cable between the South Fork Wind Farm and Long Island, New York within the United States. The attached chart shows two simplified routes for the proposed subsea power cable and the two points at which the survey will cross the Flag Atlantic (FLAG FA-1) cable. Both crossings will occur within the general coordinate range of: 40deg.40'N / 70deg.00'W and 41deg.10'N / 71deg.05'W (WGS-84).

By this message Deepwater Wind LLC requests from Global Cloud Exchange:

1. An agent or contact for the FLAG FA-1 cable in U.S. waters that would be responsible for matters such as securing a cable crossing agreement.
2. An accurate location of the FLAG FA-1 cable within the target survey area. The survey program will involve VibraCore and Cone Penetration Testing (CPT) during the September 2017 timeframe, therefore, we wish accurate location data in order to remain free of the cable during this operation.

We look forward to your reply,

David Grassbaugh

Transmission Manager - Deepwater Wind LLC

+1 (936) 525 8752

