Sunrise Wind - Appendix P: USACE 404(b)(1) Analysis

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P-1 USACE 404(b)(1) Analysis

Table P - 1 Summary of the Applicant Preferred Route

Assessment Criteria	Applicant Preferred Route -Smith Point County Park Landfall 1	Notes
Submarine Export Cable (Outside 3 NM)		
Length of SRWEC from Offshore Converter Station to New York Boundary (3nm)	99.4 mi	
Cable corridor width	98 ft	This is the *disturbance* corridor, not the *survey* corridor
Acreage of cable w/o secondary cable protection	15.7 ac	52.7 ac (Total maximum permanent footprint of the SRWEC-OCS with cable protection) - 23.7 ac (secondary protection, Table 3.3.3-5 in the COP) - 13.3 ac (crossing protection, table 3.3.3-5 in the COP) = 15.7 ac.
Acreage of cable w/ secondary cable protection	52.7 ac	
Wrecks and obstructions within cable corridor	0	
Significant Coastal Fish and Wildlife Habitat w/in cable corridor route	N/A	SCFWH does not extend beyond 3nm
Submarine Export Cable (w/in 3 NM)		
Length of SRWEC from New York Boundary (3nm) to HDD Exit Pit	4.8 mi	
Cable corridor width	98 ft	This is the *disturbance* corridor, not the *survey* corridor
Acreage of cable w/o secondary cable protection	0.8 ac	2.3 ac (Total maximum permanent footprint of the SRWEC-NYS with cable protection) - 1.5 ac (secondary protection, Table 3.3.3-5 in the COP) - 0 ac (crossing protection, table 3.3.3-5 in the COP) = 0.8 ac
Acreage of cable w/ secondary cable protection	2.3 ac	
Volume of secondary cable protection	2,346 CY	

Assessment Criteria	Applicant Preferred Route -Smith Point County Park Landfall 1	Notes
Proximity to USACE Borrow Areas	No civil works borrow areas are within the vicinity of the cable corridor	
Wrecks and obstructions within cable corridor	0	
Significant Coastal Fish and Wildlife Habitat w/in cable corridor route	SRWEC–NYS w/in 3 NM: Great South Bay - East, Smith Point County Park, Moriches Bay; Onshore Transmission Cable: Carmans River	No impact to Smith Point County Park or Carmans River
Cable Installation		
Note: Shortly after cable installation is completed, the trench will naturally backfill due to settlement of fluidized sediments, collapse of the trench walls, and/or by natural infill. SRW does not anticipate any activities to actively backfill the trench. Cable installation requires excavation for utility construction and displaced material is incidental fallback. Thus, cable installation not subject to Section 404 review.		
Mechanical Plowing Method		
Volume of discharged material	n/a	n/a, method not intended to be used
Area of discharged material	n/a	n/a, method not intended to be used
Jet Plowing Method		
Volume of discharged material	0 CY	
Area of discharged material	0 sq ft	
Mechanical Cutting Method		
Volume of discharged material	n/a	n/a, method not intended to be used
Area of discharged material	n/a	n/a, method not intended to be used

Assessment Criteria	Applicant Preferred Route -Smith Point County Park Landfall 1	Notes
Controlled Flow Excavation Method		
Volume of discharged material	0 CY	
Area of discharged material	0 sq ft	
Pre-Cut Mechanical Plowing Method		
Volume of discharged material	n/a	n/a, method not intended to be used
Area of discharged material	n/a	n/a, method not intended to be used
Pre-Cut Dredging Method		
Volume of discharged material	n/a	n/a, method not intended to be used
Area of discharged material	n/a	n/a, method not intended to be used
HDD Offshore (Atlantic Ocean)		
Length	3,290 ft	
Excavated Material from HDD Exit Pit	4,300 CY	
Excavated Area at HDD Exit Pit	8,036 sq ft	
Temporary trench box area	1,000 sq ft	
Volume of Temporary Rock Bags	0 CY	No temporary rock bags planned, just the temporary trench box.
HDD Intracoastal Waterway		
Length	2,640 ft	
Excavated Material from HDD Exit Pit	n/a	Not applicable; Exit pit is onshore
Excavated Area at HDD Exit Pit	n/a	Not applicable; Exit pit is onshore
Temporary trench box area	n/a	Not applicable; Exit pit is onshore
HDD Carman River		
Length	36 ft	
Excavated Material from HDD Exit Pit	n/a	Not applicable; Exit pit is onshore
Excavated Area at HDD Exit Pit	n/a	Not applicable; Exit pit is onshore
Temporary trench box area	n/a	Not applicable; Exit pit is onshore

Assessment Criteria	Applicant Preferred Route -Smith Point County Park Landfall 1	Notes
Onshore Transmission Cable		
Length	17.5 mi	
Impacts to Special Aquatic Sites (wetlands, mudflats, vegetated shallows etc.	None	
Temporary Landing		
Dimensions	16' x 242'	
Number of Piles	21	
Diameter of piles	16 in	
Volume of Fill Material	4.35 CY	volume of water column filled
Area of Fill Material	150 sq ft	
Impacts to Submerged Aquatic Vegetation	0 ac	

Table P - 2 Summary of Other Landfall Options Screened by the Applicant and Reasonings for Exclusion

Other Landfalls Screened by Applicant							
Assessment Criteria	Excluded Smith Point County Park Landfall HDD B	Excluded Smith Point County Park Landfall HDD C	Village of Quogue Beach	Coopers Beach	Rogers Beach	Bellport Bay	Bluepoint Marina/Corey Beach
Logistics	Landfall HDD route excluded due to onshore crossing of existing telecommunications cable. SRW prefers to cross the existing telecommunications cable with the HDD drill path.	Landfall HDD route excluded due to offshore crossing of existing telecommunications cable.	Site excluded from further consideration based on limited space available for temporary work areas and the fact that the onshore portion of the transmission cable would be longer than the preferred alternative.	Site excluded from further consideration based on limited space available for temporary work areas, extended requirements for discretionary real estate approvals, and the fact that the onshore portion of the transmission cable would be longer than the preferred alternative.	Site excluded from further consideration based on limited space available for temporary work areas and the fact that the onshore portion of the transmission cable would be longer than the preferred alternative.	Site excluded from further consideration based on private ownership and limited space available for temporary work areas as well as proximity to federally designated wilderness area and federal navigation channels. Access to this site would likely require crossing of Fire Island through the Otis Pike Fire Island High Dunes Wilderness Area. Legislation and regulations associate essentially prohibit the placement of utility lines here (or within any federally designated wilderness area).	Site excluded from further consideration based on limited space available for temporary work areas, as well as proximity to federally designated wilderness area and federal navigation channels. Access to this site would likely require crossing of Fire Island through the Otis Pike Fire Island High Dunes Wilderness Area. Legislation and regulations associate essentially prohibit the placement of utility lines here (or within any federally designated wilderness area).

Other Landfalls Screened by Applicant							
Assessment Criteria	**Excluded Smith Point County Park Landfall HDD B**	**Excluded Smith Point County Park Landfall HDD C**	**Village of Quogue Beach**	**Coopers Beach**	**Rogers Beach**	**Bellport Bay**	**Bluepoint Marina/Corey Beach**
Cost	Similar costs to the preferred landfall HDD route.	Would have required additional logistics, secondary cable protection, and a longer route to cross the existing telecommunications cable, which would have cost more than the preferred Landfall HDD route. The additional cable protection at the location of the cable crossing would have also required a more costly and complicated solution due to the shallow water and high energy at the location.	This landfall option would result in a longer onshore transmission cable route when compared to the preferred alternative; therefore, would result in higher overall costs.	This landfall option would result in a longer onshore transmission cable route when compared to the preferred alternative; therefore, would result in higher overall costs.	This landfall option would result in a longer onshore transmission cable route when compared to the preferred alternative; therefore, would result in higher overall costs.	Due to management policies and regulation prohibiting NPS from granting permission for installation of a marine utility cable at any location within the Otis Pike Fire Island High Dune Wilderness Area, this landing was deemed infeasible; therefore, costs for this alternative landing were not evaluated.	Due to management policies and regulation prohibiting NPS from granting permission for installation of a marine utility cable at any location within the Otis Pike Fire Island High Dune Wilderness Area, this landing was deemed infeasible; therefore, costs for this alternative landing were not evaluated.
Technology	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Other Landfalls Screened by Applicant							
Assessment Criteria	**Excluded Smith Point County Park Landfall HDD B**	**Excluded Smith Point County Park Landfall HDD C**	**Village of Quogue Beach**	**Coopers Beach**	**Rogers Beach**	**Bellport Bay**	**Bluepoint Marina/Corey Beach**
Impacts to Aquatic Environment	Similar impacts as preferred Landfall HDD.	The additional length of export cable and additional cable protection measures would have resulted in increased impacts to the aquatic environment.	Site excluded due to the fact this route would result in greater terrestrial disturbance due to the increased length of the transmission route and/or potential conflicts with existing aquatic resources and anthropogenic uses.	Site excluded due to the fact this route would result in greater terrestrial disturbance due to the increased length of the transmission route and/or potential conflicts with existing aquatic resources and anthropogenic uses.	Site excluded due to the fact this route would result in greater terrestrial disturbance due to the increased length of the transmission route and/or potential conflicts with existing aquatic resources and anthropogenic uses.	Site excluded due to the fact this route would result in greater seabed disturbance due to the increased length of the export cable in NYS waters and the OCS and due to conflicts with existing anthropogenic constraints and uses including several additional existing able crossings and recreational boating activity in Great South Bay. Crossing of the Great South Bay would likely exceed feasible HDD length and would require trenching, and crossing of the barrier island in NPS lands.	Site excluded due to the fact this route would result in greater seabed disturbance due to the increased length of the export cable in NYS waters and the OCS due to conflicts with existing anthropogenic constraints and uses including several additional existing able crossings and commercial recreational boating activity in Great South Bay. Crossing of the Great South Bay would likely exceed feasible HDD length and would require trenching, and crossing of the barrier island in NPS lands.

Other Landfalls Screened by Applicant							
Assessment Criteria	**Excluded Smith Point County Park Landfall HDD B**	**Excluded Smith Point County Park Landfall HDD C**	**Village of Quogue Beach**	**Coopers Beach**	**Rogers Beach**	**Bellport Bay**	**Bluepoint Marina/Corey Beach**
Impacts to USACE Civil Works Projects	Similar proximity to FIMP as preferred Landfall HDD.	Similar proximity to FIMP as preferred Landfall HDD.	The proposed landfall at Quogue Beach would not impact any Civil Works Borrow Areas, however, will potentially impact civil works beach renourishment projects such as FIMP.	The proposed landfall at Coopers Beach has the potential to impact existing sand borrow areas, as well as civil works beach renourishment projects such as FIMP.	The proposed landfall at Rogers Beach has the potential to impact existing sand borrow areas, as well as civil works beach renourishment projects such as FIMP.	The proposed landfall at Bellport Bay would likely require trenching across the ICW, and would also potentially impact civil works beach renourishment projects such as FIMP.	The proposed landfall at Bluepoint Marina/Corey Beach would likely require trenching across the ICW, and would also potentially impact civil works beach renourishment projects such as FIMP.
Impacts to Special Aquatic Sites	Similar impacts as preferred Landfall HDD.	Similar impacts as preferred Landfall HDD.	Route would potentially have higher impacts to floodplains and have significant coastal fish and wildlife habitat impacts in comparison to the preferred route.	In the offshore vicinity of Cooper's Beach there are constraints that limit potential cable placement including mapped shipwrecks and a scuba-diving area.		Site proximal to federally designated wilderness area and in Great South Bay East where there is increased concentration of submerged aquatic vegetation in the SE portion of the bay.	Site in close proximity to federally designated wilderness area and mapped submerged aquatic vegetation.

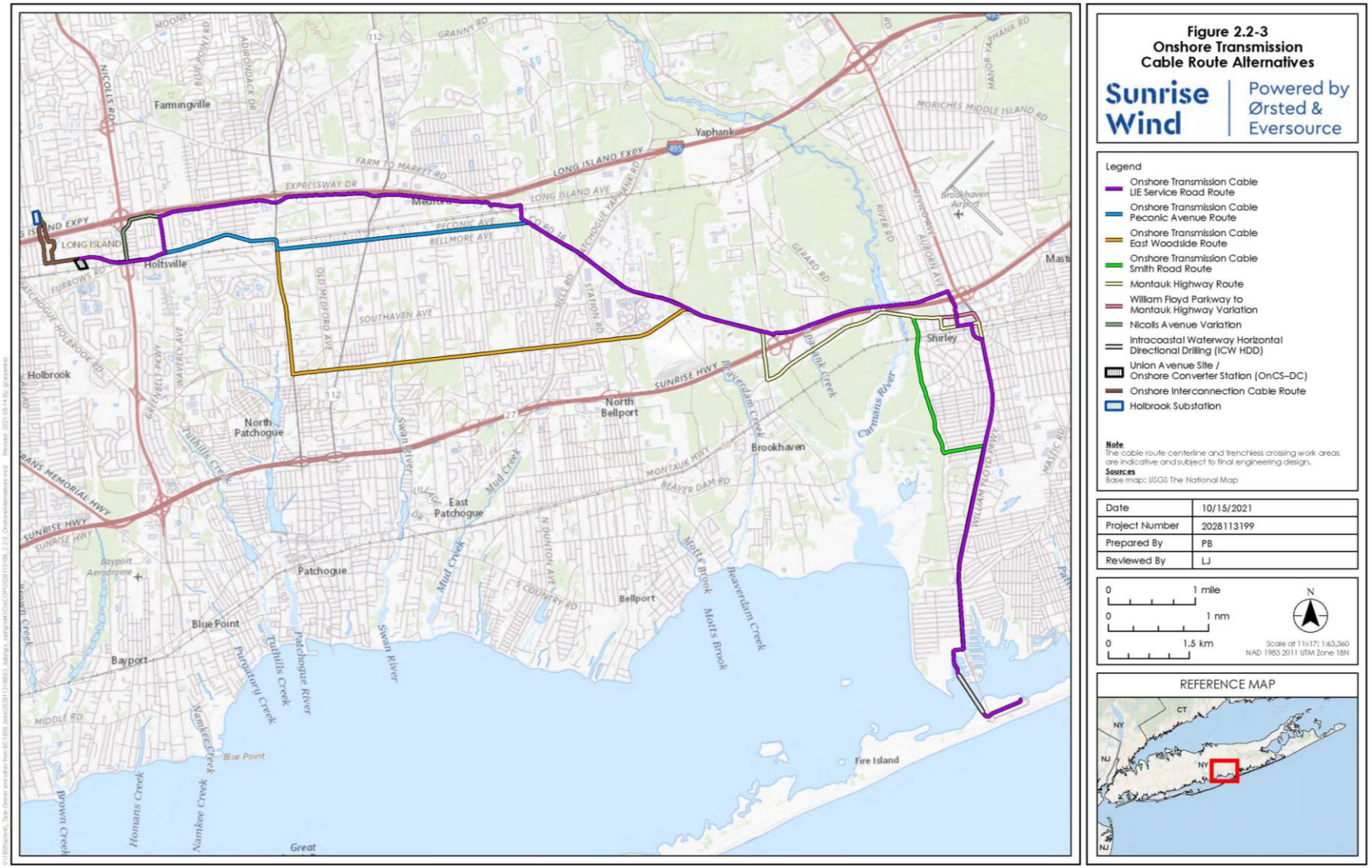

Figure P - 1 Alternative Onshore Transmission Cable Routes (COP Figure 2.2-3; Sunrise Wind 2022)

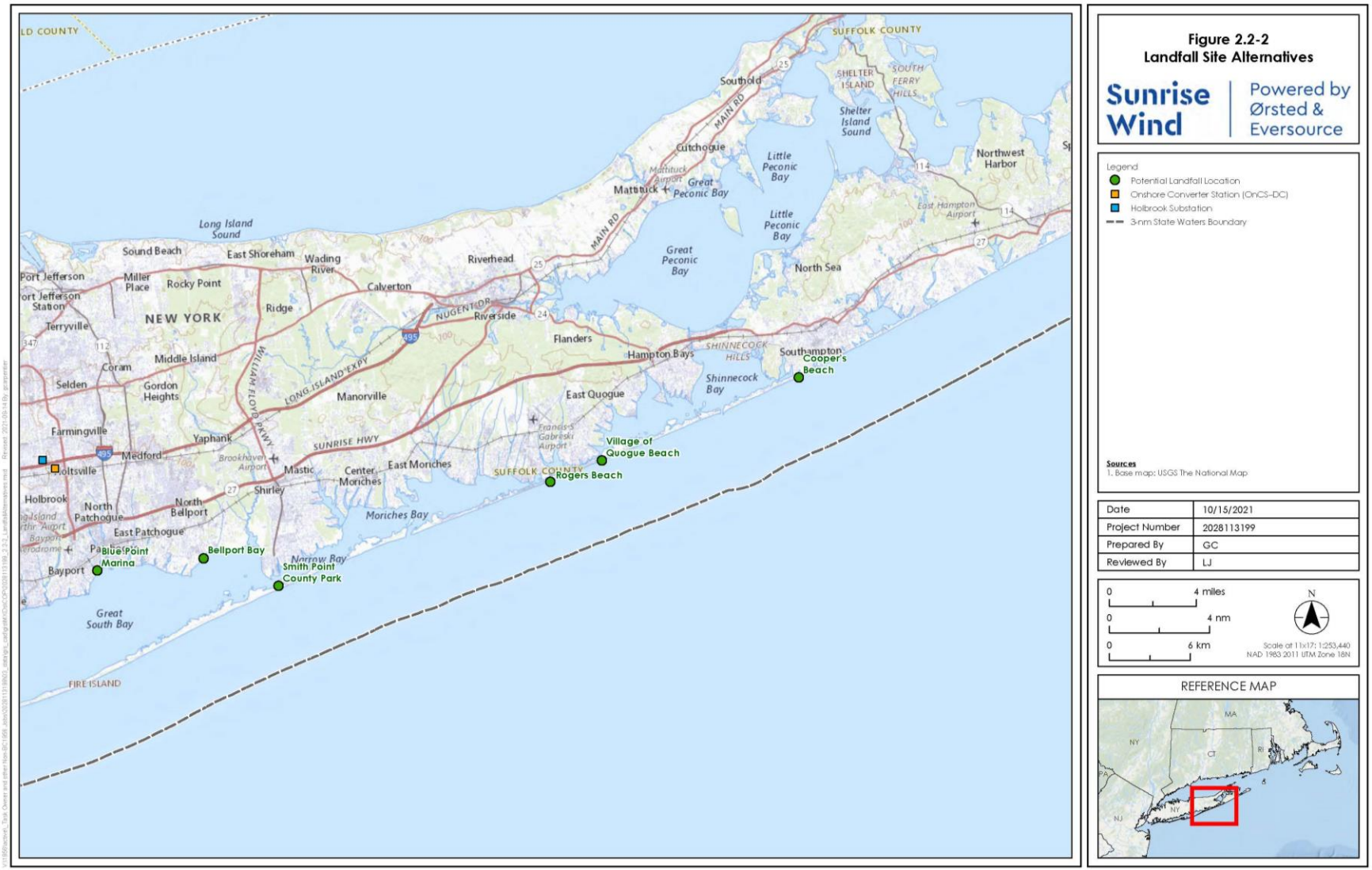

Figure P - 2 Alternative Landfall Sites (COP Figure 2.2-2; Sunrise Wind 2022)