Phase IB Terrestrial Archaeological Resources Assessment

Sunrise Wind Onshore Facilities

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INTRODUCTION

On behalf of Sunrise Wind LLC (Sunrise Wind), a 50/50 joint venture between Orsted North America Inc. (Orsted NA) and Eversource Investment LLC (Eversource), Environmental Design & Research, Landscape Architecture, Engineering, & Environmental Services, D.P.C. (EDR) has prepared this Phase IB Terrestrial Archaeological Resources Assessment (TARA) for the proposed Sunrise Wind Farm Project (the Project). The TARA pertains only to terrestrial archaeology, and as such is only concerned with the Onshore Facilities associated with the Project, which are located entirely within the Town of Brookhaven, Suffolk County, New York. Onshore portions of the Project (above mean high water) on Fire Island are on land owned and managed by Suffolk County, within the federal National Park Service (NPS) easement for Fire Island National Seashore. In addition, a portion of the surveys described in this report fell within the Wertheim National Wildlife Refuge owned by the Unites States Fish and Wildlife Service (USFWS), but those locations are no longer part of the Project.

The purpose of this TARA was to determine the presence or absence of previously unidentified terrestrial archaeological resources located within the Project's Preliminary Area of Potential Effect (PAPE). The information and recommendations included in this report are intended to assist the New York State Historic Preservation Office (NYSHPO), the Bureau of Ocean Energy Management (BOEM), and other state and/or federal agencies in their review of the Project's Onshore Facilities under Article VII of the New York State Public Service Law, the New York State Environmental Quality Review Act (SEQRA), Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law, and/or Section 106 of the National Historic Preservation Act, as applicable.

The TARA was conducted under the supervision of an archaeologist who meets the U.S. Secretary of Interior's Standards for Archaeology and Historic Preservation (36 CFR 61) and is a Registered Professional Archaeologist (RPA). The survey was conducted in accordance with the New York Archaeological Council's (NYAC's) Standards for Cultural Resources Investigations and the Curation of Archaeological Collections in New York State (the NYAC Standards; NYAC 1994) and the NYSHPO's Phase I Archaeological Report Format Requirements (NYSHPO 2005), as appropriate.

Archaeological survey conducted for the Sunrise Wind Onshore Facilities resulted in the identification of one archaeological site (EDR-SRW-001) associated with an Off-Route Variation and, therefore, located outside of the PAPE. Based on the results of the completed investigations, no effects to archaeological historic properties are anticipated to result from the construction or operation of the Sunrise Wind onshore facilities. Sunrise Wind has prepared an Unanticipated Discoveries Plan to minimize the risk to any unidentified archaeological resources that could be affected by the Project and will continue to support BOEM's consultations to ensure appropriate protective measures are incorporated in the final Project design and implementation.

This TARA is included as Appendix S2 of the Project's Construction and Operations Plan (COP) and describes the results of Phase IB survey. Previous Phase IA archaeological survey reports including background research and environmental and cultural contexts are included as Appendix S1 of the COP (EDR 2020, 2021a, EDR 2021b). A Marine Archaeological Resources Assessment (MARA) of the proposed offshore Project facilities was prepared under separate cover.

Onshore Facilities Location and Description

The Project's Onshore Facilities, subject of this TARA, are located entirely within the Town of Brookhaven, Suffolk County, New York (see Figure 1). The Onshore Facilities will consist of electrical and ancillary components to connect the offshore Sunrise Wind Farm to the high-voltage electrical transmission network (grid) in New York. For the purposes of this TARA, the PAPE was determined based on the maximum horizontal limits of potential ground disturbance associated with construction of the Onshore Facilities, inclusive of options for facility or workspace siting that have not been finalized. This PAPE serves as the bounds within which the Phase IB archaeological survey was conducted. It is anticipated that the vertical limits of disturbance for construction of the Onshore Facilities will range from approximately 3-ft (0.9-m) to 15-ft (4.6-m) in depth, based on the respective component. BOEM will formally determine the Area of Potential Effects in accordance with 36 CFR 800.4(a).

The Project's offshore components are not considered part of the PAPE for terrestrial archaeological resources given their location in the marine environment. The Project's Onshore Facilities are expected to consist of the following:

- Onshore Transmission Cable;
- Onshore Converter Station [direct current] (OnCS–DC); and
- Onshore Interconnection Cable.

The Onshore Transmission Cable will extend from the landfall site within Smith Point County Park on Fire Island to the proposed OnCS–DC and connect to the Holbrook Substation via an Onshore Interconnection Cable (Figure 1). The Onshore Transmission Cable is proposed to be installed primarily within a trench within public road rights-of-way. Wherever possible, the Onshore Transmission Cable will run underneath existing paved sections of active roadways. Portions of the Onshore Transmission Cable and Onshore Interconnection Cable will be installed via pipe jacking, or other trenchless crossing methods. The approximate footprint of activities associated with these processes have been identified and are represented in Attachment A for Onshore Facilities and Attachment B for temporary laydown yards.

The Onshore Transmission Cable is proposed to follow the **Long Island Expressway (LIE) Service Road Route** (the **Preferred Route**) from Fire Island to the OnCS–DC. The Preferred Route collectively has a PAPE which measures approximately 17.0 mi (27.4 km) long and covers approximately 243.87 acres (98.69 hectares [ha]). The Preferred Route includes a combination of multiple segments of Variations to the

Onshore Transmission Cable routes (Variations) that were evaluated by EDR in the Phase IA Archaeological Survey report and subsequent addenda (EDR 2020, 2021a, 2021b; see Attachment A).

All Variations were included in the Project's Phase IA archaeological evaluations, but some Variations are no longer being considered for the Preferred Route (these are described in this report as **Off-Route Variations**). Project components originally proposed along the Off-Route Variations were moved or redesigned concurrent with and following archaeological survey fieldwork to avoid impacts to archaeological resources, or due to other siting constraints (e.g., engineering concerns, wetland impacts, land-owner preferences). These Off-Route Variations are no longer included as part of the PAPE, as they have been eliminated from consideration for the Preferred Route.

All Variations along the Preferred Route have been subjected to Phase IB survey. However, since the Phase IB archaeological survey fieldwork described in this report occurred concurrent with the Project design process, portions of Off-Route Variations along Ashley Place, Montauk Highway, and Yaphank Avenue were subjected to Phase IB survey before they were removed from consideration. These Off-Route Variations are no longer part of the PAPE.

Sunrise Wind has chosen the **Union Avenue Site** as the location of the **OnCS–DC**, which is located on the south side of Union Avenue and has a PAPE of approximately 7.00 acres (2.84 ha). This site is bound to the north by Union Avenue and woodland; to the east by commercial development; to the south by the Long Island Rail Road (LIRR) and industrial development; and to the west by industrial development (see Attachment A). No Phase IB survey was conducted on the proposed OnCS–DC site as it was determined to be previously disturbed in the Phase IA Archaeological Survey (EDR 2020).

Electricity generated by the offshore wind farm will connect to the grid via the **Onshore Interconnection Cable**, which will connect the OnCS–DC with the Holbrook Substation. Several potential routes for the Onshore Interconnection Cable were evaluated in the Phase IA Archaeological Survey and subsequent addenda (EDR 2020, 2021a, 2021b). The proposed corridor options for the Onshore Interconnection Cable are depicted in Attachment A, to the west of the existing NYPA power plant and Holtsville Gas plant. The PAPE of the Onshore Interconnection Cable measures approximately 163.3 acres (66.1 ha). As of this filing, Phase IB survey of the Onshore Interconnection Cable corridor on Public Service Enterprise Group (PSEG), New York Power Authority (NYPA), National Grid (NatGrid), and LIPA property is complete.

Portions of Smith Point County Park on both Fire Island and Long Island containing both the Landfall and Intercoastal Waterway (ICW) Work Areas are also part of the Onshore Facilities and have been included as part of the PAPE for terrestrial archaeological resources. Ground disturbance within the Landfall/ICW Work Areas will be associated with the Onshore Transmission Cable and horizontal directional drilling (HDD) activities on both Fire Island and Long Island (see Attachment A). The PAPE for the Landfall and ICW Work Areas measures approximately 6.5 acres (2.6 ha) and 7.3 acres (3.0 ha), respectively. No Phase IB survey was conducted within the Landfall or ICW Work Areas as they were determined to be previously disturbed (EDR 2020).

In addition, to these Onshore Facilities, two temporary laydown yards will support construction activities, including the Northville Laydown Yard (2 acres) and the Zorn Laydown Yard (12.5 acres), both of which are depicted on Figure 1 and in Attachment B. An addendum to the TARA (COP Appendix S3) describes these two sites (EDR 2023). Ground disturbance at these sites is limited to removal of four to six inches of existing topsoil for grading and gravel/hardening. A Cultural Resources Assessment was conducted following the same methodologies outlined in the previously conducted cultural resources investigations of the Onshore Facilities. No terrestrial archaeological sites were identified within the PAPE and therefore no impacts are expected from establishment and use of these two laydown yards.

Figure 1. Regional Onshore Facilities Location

BACKGROUND AND RESEARCH DESIGN

EDR previously prepared the *Phase IA Archaeological Survey Report* with Phase IB survey recommendations and a proposed Phase IB archaeological survey methodology (EDR 2020) which was submitted to NYSHPO via the CRIS website in August 2020. Addenda include the *Phase IA Archaeological Survey Report - Victory Avenue Segment* (EDR 2021a) and *Phase IA Archaeological Survey Report - Onshore Interconnection Cable* (EDR 2021b). Collectively these three reports are included as Appendix S1 of the Project's COP. The purpose of these Phase IA archaeological surveys was to determine whether previously identified terrestrial archaeological resources were located in the PAPE, and to evaluate the potential for previously unidentified terrestrial archaeological resources to be located within the PAPE.

Environmental and Cultural Context

Phase IA background research for the Project can be found in the *Phase IA Archaeological Survey Report* which is included as Appendix S1 of the COP (EDR 2020). The locations of specific sections of background information are listed below.

- Environmental Setting and Soils (EDR 2020, 2021a, 2021b: Section 2.1).
- Pre-European Contact Native American Historic Context (EDR 2020, 2021a, 2021b: Section 2.4).
- Pre-European Contact Historic Context (EDR 2020: Section 2.5; EDR 2021a and 2021b: Section 2.4).

Summary of Previous Phase IA Archaeological Survey

In total, the three Phase IA reports identified the following sites and surveys within the PAPE:

- One previously recorded Native American archaeological site (NYSM 4897) within the Preferred Route PAPE in the ROW of the William Floyd Parkway. Little information is known or recorded about this site in the CRIS database. It should be noted, however, that New York State Museum (NYSM) sites depicted in CRIS typically indicate areas of elevated archaeological sensitivity and should not be considered equivalent to formally tested and delineated archaeological sites. EDR considered "site" NYSM 4897 as an area of elevated sensitivity which informed archaeological analysis and sensitivity assessment of the Project, rather than a discrete site area to be avoided. Additional investigation of two "Potentially Undisturbed" Phase IB Survey Areas was recommended in the *Phase IA Archaeological Survey* (EDR 2020: Section 2.3; COP Appendix S1). STPs excavated in Phase IB Survey Areas within the boundary of NYSM 4897 did not encounter any archaeological sites or isolated archaeological artifacts.
- One previously recorded historic-period site (USN 10302.001130) is mapped immediately adjacent to the PAPE within Highway ROW. The site formerly encompassed a relatively small area adjacent to the PAPE but has since been destroyed by the highway construction and lost all integrity. No additional archaeological survey of the area was recommended in the *Phase IA Archaeological Survey* (EDR 2020: Section 2.3; COP Appendix S1). Onshore Facilities will not disturb the site since it is located outside of the PAPE, and adjacent to a portion of the Project will avoid near

surface disturbance. As such, no mitigation or avoidance measures are proposed, and no further archaeological work is recommended.

- Seven cultural resource reports address areas which overlap with portions of the PAPE. According to the CRIS database, five previous surveys overlap with portions of the PAPE while another two archaeological management plans were conducted on the Fire Island National Seashore near the landfall. Only two of the surveys conducted archaeological testing (i.e., shovel testing), both within a small portion of the Onshore Interconnection Cable corridor south of the LIE.

Phase IB Archaeological Survey Research Design

The results of the Phase IA archaeological surveys indicated the presence of several previously identified Native American archaeological sites within and/or near the Onshore Facilities, as well as the Onshore Facilities' proximity to the coast and freshwater streams (EDR 2020, 2021a, 2021b). As a result, the PAPE should be considered to have an elevated sensitivity for the presence of Native American archaeological resources--in the absence of historic-period and modern ground disturbance. Due to the presence of previously identified historic-period archaeological sites near the Onshore Facilities and the significant number of buildings and structures documented on historical mapping depicting the areas of the Onshore Transmission Cable and Onshore Interconnection Cable, the PAPE should be considered to have an elevated sensitivity for the presence of historic-period archaeological resources in the absence of modern ground disturbance.

The results of the Phase IA archaeological surveys indicate that the large majority of the PAPE has been previously disturbed. An extensive discussion of prior ground disturbance identified within the PAPE can be found within Appendix S1 of the Project's COP (EDR 2020: Section 3.3; EDR 2021a and 2021b: Section 3.2). Prior ground disturbance within the PAPE was recorded by EDR archaeologists, which included walking or driving along/across the proposed locations of the Onshore Transmission Cable routes, the OnCS–DC, and the Landfall (on Fire Island; the onshore area is within the NPS easement for Fire Island National Seashore on land owned and managed by Suffolk County) and ICW Work Areas to record existing conditions, which were documented by photographs, field notes, and GPS data. The primary goal of the reconnaissance was to identify those areas adjacent to the existing roadway along both Onshore Transmission Cable routes where visible prior ground disturbance (e.g., engineered/artificial landforms, grading, cut and fill, and/or buried utility markers) was evident (and therefore would not require archaeological testing), as well as those areas that appear undisturbed (and therefore would require archaeological testing). Existing disturbance within the PAPE was also evaluated via desktop assessment based on a combination of historic and modern aerial imagery, digital elevation model (DEM) data, NRCS soil data, and Google Street View, in conjunction with the field observations.

Based on the results of the Phase IA archaeological surveys, it is the opinion of EDR that the majority of the PAPE does not warrant archaeological testing due to prior ground disturbance. The NYAC Standards (NYAC 1994) state that survey may not be needed in areas of prior ground disturbance, but that 'Where the field testing or literature search reveals areas of disturbance in which no sites could remain intact, documentation of this disturbance via photographs, construction plans, stratigraphic profiles, soil borings, etc. must be included in the report.' Slope is not a significant factor in the archaeological sensitivity of the PAPE as the Onshore Facilities are predominately located across flat to gently sloping terrain. However, portions of the PAPE for the Onshore Transmission Cable and Onshore Interconnection Cable are located on potentially undisturbed terrain. In order to identify any archaeological sites that could be disturbed by

Onshore Facility-related construction, Phase IB archaeological survey was proposed only in those areas which were identified as potentially undisturbed.

EDR recommended that archaeological testing only be conducted within those portions of the PAPE that had been identified as potentially undisturbed and had not been submitted to shovel testing by previous archaeological surveys.

PHASE IB ARCHAEOLOGICAL SURVEY SUMMARY

Phase IB Archaeological Survey Fieldwork Organization and Methods

Because the Onshore Transmission Cable is proposed to be buried underneath active and public roadways, archaeological testing was conducted within unpaved portions of the road rights-of-way along shoulder areas adjacent to the pavement. Phase IB archaeological survey was comprised of shovel testing as no portions of the PAPE were suitable for pedestrian surface survey. The excavation of shovel tests (STPs) was only proposed for those areas identified during the archaeological reconnaissance and desktop assessment as potentially undisturbed. No Phase IB archaeological survey was recommended for those portions of the PAPE that overlap with Phase IB archaeological testing conducted for prior surveys.

For the purposes of organization, survey areas were given an alphanumeric designation where each street was assigned a letter or letters, and each consecutive survey area along that street was numbered sequentially beginning from "1" (e.g., Survey Area A1, A2, B1, B2). Survey areas along the Onshore Interconnection Cable route were designated as "North Interconnect" or "South Interconnect (both East and West)"and numbered sequentially (e.g., Survey Area NI01, NI02, SI-E, SI-W) based on their location either north or south of the Long Island Expressway or on NYPA/NatGrid parcels. Phase IB survey areas identified as potentially undisturbed within the PAPE were classified as either "Linear" or "Block." Portions of the PAPE classified as "Linear" consist of narrow (50 ft [15 m] or less) areas while portions of the PAPE classified as "Block" consist of wider (more than 50 ft [15 m]) and/or irregular areas. "Linear" areas were surveyed via a single transect of STPs spaced every 50 ft (15 m) while "Block" areas were surveyed via a grid of STPs at 50-ft (15-m) intervals, or 16 STPs per acre. Per U.S. Fish & Wildlife Service (USFWS) standards, STPs within Survey Area F (located within the Wertheim National Wildlife Refuge, in an area no longer part of the Project) were excavated at a 26.2 ft (8.0 m) staggered interval, or approximately 32 STPs per acre, and were 1.6 by 1.6 ft (0.5 by 0.5 m) in size (USFWS 2020).

Each STP was identified with standard provenience information consisting of a survey area designation followed by a period and sequential shovel test number (e.g., STP A1.01, A1.02). STPs were typically 12-20 inches (in) (30-50 cm) in diameter and excavated to sterile subsoil or the practical limits of hand excavation (per the *NYAC Standards*). Field notes for each STP were recorded on standardized digital forms that described soil stratigraphy, recorded whether any artifacts were recovered, and noted any other relevant observations. All soils excavated from STPs were screened through 0.25-inch hardware cloth. All STPs were backfilled upon completion.

The presence of clearly modern materials such as plastic fragments, modern bottle glass fragments, twenty-first-century architectural materials, and other assorted refuse in roadside STPs was noted on digital field forms but not collected for subsequent analysis. Any potentially significant artifacts not obviously of modern origin recovered from STPs were placed in plastic bags labeled with standard Project and provenience information. Following completion of the archaeological fieldwork, all recovered materials were washed, identified, inventoried, and re-bagged in labeled clean 4-mil archival quality plastic bags. All artifacts recovered were identified and described based on material type and standard descriptive characteristics and included in an artifact inventory.

As per the stipulations outlined in the archaeological survey permits acquired by EDR, all recovered artifacts are currently being processed by EDR prior to permanent curation at the Public Archaeology Laboratory, and copies of the Phase IB TARA were provided to the New York State Museum and USFWS.

Phase IB Archaeological Fieldwork Results Summary

EDR conducted Phase IB archaeological survey fieldwork for the project across multiple mobilizations between November 2020 and May 2022. Fieldwork was supervised by a combination of Joseph Kwiatek, Matthew Weiss, and Moira Magni, who were assisted by a crew of up to seven archaeological field technicians throughout the process. EDR personnel excavated a total of 1,470 STPs across 67 survey areas throughout all mobilizations, covering a total of 39,036 ft (11,898 m) of Linear PAPE and 40.05 acres (16.21 ha) of Block PAPE.

Subsequent fieldwork associated with a laydown yard was conducted in March 2023. That fieldwork was supervised by Matthew Weiss who was assisted by a crew of three archaeoligcal field technicians. EDR personnel completed excavation of 12 STP at this site.

Phase IB survey was conducted in accessible, potentially undisturbed areas of the PAPE along the proposed Onshore Transmission Cable Preferred Route and the proposed corridor options for the Onshore Interconnection Cable that Sunrise Wind plans to utilize during construction/installation of the Onshore Facilities, as well as at a laydown yard. Some areas along the Preferred Route which were identified as potentially undisturbed during the Phase IA surveys are not planned to be utilized for Onshore Facilities activities resulting in ground disturbance and therefore were not tested during the Phase IB survey. If future refinement to the Onshore Facilities design results in the citing of workspaces or Project facilities on potentially undisturbed portions of the PAPE that have not been subjected to Phase IB survey, those areas will be subjected to Phase IB survey following the same methodology outlined in this report.

Similarly, since the Phase IB archaeological survey fieldwork described in this report occurred concurrent with the Project design process, only portions of Off-Route Variations along Ashley Place, Montauk Highway, and Yaphank Avenue were subjected to Phase IB survey before those areas were eliminated from the PAPE along the Preferred Route. Table 1 summarizes the Phase IB survey areas by Onshore Facility and Street/Area and includes approximate Linear and Block PAPE totals, as well as the number of STPs excavated in each area.

Table 1. Summary of Phase IB Fieldwork for Onshore Facilities

Phase IB Survey Area by Street	Linear Feet (Meters)	Block Acres (Hectares)	STP Total
Onshore Transmission Cable	39,036 (11,898)	3.92 (1.59)	863
Preferred Route	**37,820 (11,528)**	**1.09 (0.44)**	**722**
William Floyd Parkway	*4,508 (1,374)*	-	*88*
Surrey Circle	*546 (166)*	-	*11*
Mastic Boulevard West	*1,058 (322)*	-	*20*
Francine Place	*342 (104)*	-	*7*
Revilo Avenue	1,632 (497)	-	*32*

Phase IB Survey Area by Street	Linear Feet (Meters)	Block Acres (Hectares)	STP Total
Victory Avenue	*6,694 (2,040)*	*0.27 (0.11)*	*135*
Horseblock Road	6,639 (2,024)	-	*117*
Manor Road	*913 (278)*	*0.21 (0.08)*	*22*
North Horseblock Road	*1,334 (407)*	-	*24*
LIE Service Road/Express Drive South	*9,610 (2,927)*	-	*172*
Waverly Avenue	*976 (297)*	-	*19*
Long Island Avenue	*3,568 (1087)*	0.61 (0.25)	*75*
Off-Route Variations	**1,216 (371)**	**2.83 (1.15)**	**141**
Ashley Place	*110 (34)*	-	*2*
Montauk Highway	*557 (170)*	*2.56 (1.04)*	*124*
Yaphank Avenue	*549 (167)*	*0.27 (0.11)*	*15*
Onshore Interconnection Cable	-	36.13 (14.62)	607
North Interconnect	-	*18.66 (7.55)*	*330*
South Interconnect - West	-	*8.13 (3.29)*	*128*
South Interconnect - East	-	*9.34 (3.78)*	*149*
Phase IB Survey Total[1]	**39,036 (11,898)**	**40.05 (16.21)**	**1,470**

[1] An additional 12 STP were conducted at one laydown yard and are included within the TARA Addendum.

Identified Archaeological Resources

In total, the Phase IB archaeological survey conducted for the Sunrise Wind Onshore Facilities resulted in the identification of one archaeological site (EDR-SRW-001) associated with an Off-Route Variation and, therefore, located outside of the PAPE. The EDR-SRW-001 site is a medium density Native American lithic scatter consisting of 52 artifacts. Following preliminary identification of the site, the Variation along which it was located was removed from the Onshore Transmission Cable Preferred Route so that the site would be avoided. As such, no ground disturbance or other potential Project-related effects to EDR-SRW-001 are anticipated. No mitigation or avoidance measures are proposed, no additional archaeological investigations are recommended, and the site is not evaluated for its inclusion in the State/National Register of Historic Places (S/NRHP).

The EDR-SRW-001 Native American lithic scatter includes a total of 52 artifacts, consisting of 39 pieces of quartz debitage, 12 pieces of thermally-altered quartz, and one quartz cobble core, all recovered from shovel tests. These artifacts are summarized in Table 2 below. The large majority of the assemblage consists of quartz debitage (n=39; 75.0 percent) including angular debris/shatter (n=14; 26.9 percent), primary flakes (n=1; 1.9 percent), secondary flakes (n=7; 13.5 percent), and tertiary flakes (n=17; 32.7 percent). Cortex-bearing debitage indicates that small, rounded quartz cobbles were sourced for tool production. Quartz cobbles, deposited with till from the retreating glacier, represent a locally abundant source of stone tool raw material. Thermally-altered quartz fragments (n=12; 23.1 percent) were also recovered from the site and identified by their fractured, red/pink/yellow discolored, and clouded appearance. These rock fragments were not associated with *in situ* burning. Similar to the debitage, thermally-altered rock with cortex indicates that they derive from small, rounded quartz cobbles. The remaining artifact included in the EDR-SRW-001 assemblage consists of an unbroken quartz cobble core (n=1; 1.9 percent). Opposite sides of the cobble bear evidence of micro-fracturing and battering (knocked off flakes/shatter), suggesting that attempts were made to reduce the core into smaller pieces via anvil and/or bipolar technique.

Table 2. Artifacts Collected at Site EDR-SRW-001

	Northern Locus				Southern Locus					
Artifacts	**F3.10**	**F4.05**	**F4.10**	**F5.07**	**F7.05**	**F7.06**	**F8.06**	**F8.07**	**F8.08**	**Total**
Core				**1**						**1**
Amorphous				1						1
Debitage	**2**	**1**	**33**	**1**	**1**			**1**		**39**
Angular Debris / Shatter	1		6							7
Angular Debris / Shatter with Cortex	1		6							7
Primary Flake			1							1
Secondary Flake		1	5					1		7
Tertiary Flake			15	1	1					17
Thermally-Altered Rock						**1**	**5**	**5**	**1**	**12**
Total	**2**	**1**	**33**	**2**	**1**	**1**	**5**	**6**	**1**	**52**

Although no diagnostic artifacts indicative of temporal association were identified at the site, the spatial patterning of artifact classes suggests that different activities were occurring across the site. The northern locus contains 37 of the 39 pieces (94.9 percent) of quartz debitage present at the site, including the quartz cobble core, while the southern locus contains all 12 pieces (100 percent) of thermally-altered quartz recovered from the site. This artifact distribution indicates that although some minor stone tool production was occurring in the southern locus, knapping activities predominately occurred within the northern locus. Conversely, activities within the southern locus were primarily focused on the production and/or use of thermally-altered quartz. The recovery of one tertiary flake from the southern locus bearing evidence of thermal alteration suggests that quartz cobbles may have been heat-treated to improve their knapping quality. The lack of burn features or charcoal within or near the site suggests that heat-treatment occurred elsewhere, possibly to the south outside the PAPE.

All cultural material was recovered during shovel testing; no artifacts were noted on the ground surface, which was covered in snow and heavy leaf litter. All artifacts were recovered from intact subsoil horizons, predominately the Bw1 horizon below the E horizon, although some were recovered from the Bw2 horizon above the C horizon. Soils encountered at the site were undisturbed and found to be generally uniform. Several shovel tests were hand-augered at their bases to glacial till or stream channel lag deposits to confirm the absence of deeply buried strata (beyond 3.28 ft [1.0 m]) with the potential to contain cultural material (e.g., paleosols).

Recommendations for Site EDR-SRW-001: EDR-SRW-001 is a medium density Native American lithic scatter consisting of quartz debitage, thermally-altered quartz, and one quartz cobble core. The artifacts, along with the absence of any features, suggests that the site represents the location of a short-term camp where stone tools were being produced, at least in part by heat-treatment and anvil and/or bipolar lithic reduction. Onshore Facilities will not disturb the site as it is located along an Off-Route Variation. As such, no mitigation or avoidance measures are proposed, no further archaeological work is recommended, and the site is unevaluated for its inclusion in the S/NRHP.

As per the stipulations outlined in the archaeological survey permits acquired by EDR, all artifacts from EDR-SRW-001 are currently being processed by EDR prior to permanent curation at the Public Archaeology Laboratory, and copies of the Phase IB TARA were provided to the New York State Museum and USFWS.

SUMMARY AND CONCLUSIONS

The results of the prior Phase IA archaeological surveys indicate that the large majority of the PAPE has been previously disturbed, including all of the Landfall on Fire Island (within the easement for Fire Island National Seashore, but on land owned and managed by Suffolk County). Prior ground disturbance within the PAPE was further recorded by EDR archaeologists during archaeological reconnaissance, which included walking or driving along/across the PAPE to record existing conditions via photographs, field notes, and GPS data. Furthermore, only one previously recorded NYSM site (NYSM 4897, in the ROW of the William Floyd Parkway), was identified within the PAPE (which was treated as an area of elevated archaeological sensitivity). No other previously recorded archaeological sites were identified within the Landfall on Fire Island (within the easement for Fire Island National Seashore, but on land owned and managed by Suffolk County), the Preferred Route for the Onshore Transmission Cable, the OnCS–DC, and the Onshore Interconnection Cable.

This TARA was completed in accordance with the proposed Phase IB archaeological survey methodology submitted to NYSHPO in the Phase IA Archaeological Survey report (EDR 2020). Fieldwork described in this report occurred across multiple mobilizations between November 2020 and May 2022, with a subsequent mobilization in March 2023.EDR personnel excavated a total of 1,482 STPs across 68 survey areas[1] covering a total of 39,036 ft (11,898 m) of Linear PAPE and 40.05 acres (16.21 ha) of Block PAPE. All accessible, potentially undisturbed areas along the PAPE for the LIE Service Road Route (the Preferred Route) were subjected to Phase IB survey, with the exception of those areas not currently planned for Project activities resulting in ground disturbance. Phase IB archaeological survey was also conducted on some portions of Off-Route Variations, which are no longer under consideration for Project facilities, including a portion within the USFWS's Wertheim National Wildlife Refuge.

Recommendations

As identified above, one archaeological resource, Native American site EDR-SRW-001, was identified within the Off-Route Variations, no longer part of the Preferred Route and thus outside of the PAPE. No other archaeological sites or isolated archaeological artifacts were recovered from any of the other Project locations assessed as part of the Phase IB survey. As such, no mitigation or avoidance measures are proposed, and no further archaeological work is recommended.

If potential refinement to the Onshore Facilities design results in the siting of Project facilities on potentially undisturbed portions of the PAPE that have not been subjected to Phase IB survey, those areas will be subjected to Phase IB survey following the same methodology outlined in this report and the previous Phase IA surveys for the Project. Those results will be provided in an addendum to this report.

If unanticipated archaeological resources are encountered during construction, the Project's Monitoring Plan and Post Review Discovery Plan (MPRDP) includes provisions to stop all work in the vicinity of the archaeological finds until those resources can be evaluated and documented by an archaeologist. Per Sunrise Wind's consultations with Native American tribes, the MPRDP includes provisions and procedures allowing for qualified professional archaeologists and/or Tribal representatives to monitor the installation of the Onshore Transmission Cable in areas of heightened archaeological sensitivity (such as at the ICW Work Area and Carmans River Crossing). With the adoption of these measures and based on continued consultation with the NYSHPO, the proposed Sunrise Wind Project is not anticipated to result in any adverse effects to any potentially S/NRHP-eligible terrestrial archaeological resources.

[1] This total includes 12 STP conducted at a laydown yard in March 2023.

REFERENCES

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Attachment A. Proposed Onshore Facilities