

Appendix E

Cultural Resources Work Plans and Correspondence



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**letter of
transmittal**

To: Mr. John Bonafide **EDR Project No:** 16015
 New York State Office of Parks,
 Recreation & Historic Preservation
 10 Delaware Avenue
 Cohoes, New York 12047-3722

From: Patrick Heaton, RPA; Grant Johnson (EDR)

Date: June 3, 2016

Reference: NYSOPRHP Consultation Submission
 Galloo Island Wind Energy Facility (NYSOPRHP Project Review # 15PR02730)
 Cultural Resources Work Plan

Dear John,

On behalf of Galloo Island Wind, LLC, Environmental Design & Research, Landscape Architecture, Engineering, & Environmental Services, D.P.C (EDR) has prepared a Cultural Resources Work Plan for the proposed Galloo Island Wind Energy Facility in Jefferson County. We have uploaded an electronic (.PDF) copy of the referenced report via your Cultural Resources Information System (CRIS) website for your review and consideration.

Please contact Patrick Heaton at pheaton@edrdpc.com or (315) 471-0688 if you have any questions.

Sincerely,

Patrick J. Heaton, RPA
 Principal, Director of Cultural Resources

Copies To: N. Habig, D. Fitzgerald (Galloo Island Wind, LLC); G. Liberman (EDR); file.



To: Mr. John Bonafide **EDR Project No:** 16015
 Mr. Anthony Opalka
 Mr. Andrew Ferry
 New York State Office of Parks,
 Recreation & Historic Preservation
 (NYSOPRHP)

From: Grant Johnson, Senior Cultural Resources Specialist (EDR)
 Patrick Heaton, RPA, Director of Cultural Resources (EDR)

Date: June 6, 2016

Reference: Galloo Island Wind
 Cultural Resources Summary and Work Plan

On behalf of Galloo Island Wind, LLC, a wholly-owned subsidiary of Apex Wind Energy, LLC (“the Applicant”), Environmental Design & Research, Landscape Architecture, Engineering, & Environmental Services, D.P.C. (EDR) has prepared this summary of previous cultural resources surveys and consultation (to date) with the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) relative to cultural resources for the proposed Galloo Island Wind Energy Facility (“the Facility”), located in the Town of Hounsfield, Jefferson County, New York (see attached Figure 1). The Applicant is initiating consultation with NYSOPRHP as part of review of the Facility under Article 10 (Certification of Major Electrical Generating Facilities) of the New York State Public Service Law, as well as Section 14.09 of the New York State Historic Preservation Act, and Section 106 of the National Historic Preservation Act, as applicable.

As described in 16 NYCRR § 1001.20 (Exhibit 20: Cultural Resources), an Article 10 application must include:

- (b) A study of the impacts of the construction and operation of the facility and the interconnections and related facilities on historic resources, including the results of field inspections and consultation with local historic preservation groups to identify sites or structures listed or eligible for listing on the State or National Register of Historic Places within the viewshed of the facility and within the study area, including an analysis of potential impact on any standing structures which appear to be at least 50 years old and potentially eligible for listing in the State or National Register of Historic Places, based on an assessment by a person qualified pursuant to federal regulation (36 C.F.R. 61).

The information and recommendations included in this cultural resources summary and work plan are intended to assist NYSOPRHP in their review of the proposed Facility in accordance with Article 10 of the New York State Public Service Law, 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.

Project Description

The Facility is an approximately 110.4 megawatt (MW) wind powered electric generating project located within the Town of Hounsfield, Jefferson County, New York. The Facility location and surrounding area is depicted on Figure 1. The Facility will be located on the approximately 1,966-acre Galloo Island in Lake Ontario. The majority of land on Galloo Island (approximately 1,936 acres) is under option by the Applicant.

The proposal for the Facility consists of all activities necessary for the construction and operation of a commercial-scale wind power project, including the installation and operation of up to 32 wind turbines, together with approximately 14 miles of associated electric collection lines and access roads, collection substation (including the main power transformers), two permanent meteorological (“met”) towers, one operation and maintenance (“O&M”) building along with potable and waste water treatment, a barge landing site, a permanent structure for proposed overnight accommodations, a helicopter landing site, a borrow area, a temporary batch plant, and a temporary construction staging/laydown area, as depicted on Figure 2. All of these components collectively constitute the “Major Electric Generating Facility” as defined in 16 NYCRR 1000.2(v).

To deliver electricity to the New York State power grid, the Applicant proposes to construct a collection substation, an approximately 30-mile AC underwater cable, and a point of interconnection substation (hereafter referred to as “related transmission facility” or “RTF”) near the Mitchell Street Substation in Oswego, New York. Since the design of the AC underwater cable is greater than 100 kilovolts (kV) and the length exceeds 10 miles, these components (i.e., high side of the collection substation, underwater cable, and Point of Interconnect substation) of the Facility are considered a “Major Utility Transmission Facility” and will be regulated under and subject to Article VII of the Public Service Law.

Therefore, the need for, and potential impacts to cultural resources of, the RTF will not be evaluated in the Facility’s Article 10 Application. All information contained within this document related to cultural resources only pertains to the components of the proposed Facility being reviewed under Article 10. Review of potential impacts to cultural resources from construction of the RTF will be submitted to NYSOPRHP for separate review at a later date.

Project History

A wind energy project known as the Hounsfield Wind Farm project (NYSOPRHP Project Review #07PR06733) was previously proposed on Galloo Island in 2007 by Upstate NY Power Corporation (Upstate), an unrelated third party. Specifically, an 84 turbine project capable of generating up to 252 megawatts of power was evaluated through the State Environmental Quality Review Act (“SEQRA”) process, with the New York Department of Environmental Conservation (NYSDEC) acting as the lead agency. Cultural resources on Galloo Island and the impacts associated with constructing and operating a wind power project on Galloo Island were thoroughly evaluated through the previous SEQRA process (as more fully described below). Development of the previously proposed project was put on hold in 2011 when the New York Power Authority (NYPA) denied Upstate’s proposal for a power purchase agreement and terminated its Great Lakes Offshore Windfarm (GLOW) initiative. On May 22, 2013 the New York State Department of Public Service (DPS) dismissed Upstate’s Application for lack of progress. It is the Applicant’s understanding that the project was abandoned and is now no longer feasible because Galloo Island Wind Farm, LLC is under option to purchase the majority of land on the island.

The proposed Galloo Island Wind project differs from the Hounsfield Wind Farm in two significant aspects: 1) the proposed Facility includes substantially fewer turbines (32 instead of 84); and 2) proposes an entirely underwater/underground interconnect solution avoiding the need for extensive overhead transmission infrastructure. Both of these differences contribute substantially to reducing the visual impact of the wind plant and associated transmission facilities. A summary of the differences in project component numbers is provided in Table 1. It is worth noting that all figures for the Facility are approximate and subject to change as the layout is refined:

Table 1. Project Component Comparison

Project Element	Hounsfield Wind Farm	Galloo Island Wind (approximate)
Number of Turbines	84	32
Project Size in MW	254	110.4
Height of Turbines (feet)	410	574
Length of Access Road (miles)	20	14
Length of Underwater Power Cable (miles)	14	31
Length of Overhead Transmission Line (miles)	41	0

The attached “Facility Layout” map (Figure 2) is intended to provide NYSOPRHP with an updated understanding of the Facility layout and components as presently envisioned by the Applicant. The “Facility Layout Comparison” map

(Figure 3) provides a comparison of turbine locations included in the 2009 SEQRA layout for the Hounsfield Wind Farm and the 2016 Article 10 layout of the proposed Facility.

A summary of the previous SEQRA process for the Hounsfield Wind Farm is as follows:

Table 2. Summary of SEQRA Process for Hounsfield Wind Farm

Date	Summary of Submittal/Correspondence
November 20, 2007	Town of Hounsfield Planning Board received an Application for Site Plan Approval and SEQRA Environmental Assessment Form (EAF). It was determined by the Planning Board that the Project would be a Type I Action under the SEQRA.
December 5, 2007	The Planning Board circulated Lead Agency Coordination Letters and the EAF Part I to Involved and Interested Parties.
January 4, 2008	NYSDEC, as an Involved Agency, objected to the Town of Hounsfield Planning Board serving as Lead Agency.
April 24, 2008	The Commissioner of the NYSDEC determined that the NYSDEC should act as Lead Agency, in accordance with 6 NYCRR §617.6(b)(5)(v), stating this role <i>“is particularly appropriate given that the anticipated impacts of the action being considered are primarily of statewide and/or regional significance, as opposed to local significance. In addition, given the number and nature of the permits required, DEC has the greatest capability for providing the most thorough environmental assessment.”</i>
May 21, 2008	NYSDEC determined that the Project may have potential for a significant adverse environmental impact and that a Draft Environmental Impact Statement would be required. In accordance with 6 NYCRR §617.8 the NYSDEC required Public Scoping for the Proposed Action and in accordance with 6 NYCRR §618 a Draft Scoping document was prepared.
June 17, 2008	NYSDEC held a Public Scoping Session at the Town of Hounsfield Court Building in Sackets Harbor, to accept verbal and/or written comments on the Draft Scoping document.
September 22, 2008	Final Scoping Document for the DEIS was issued by the NYSDEC.
February 27, 2009	NYSDEC accepted the DEIS as adequate for public review and published the Notice of Completion of the DEIS.
May 18, 2009	Public hearing held in the Town of Hounsfield to allow for public comments to the DEIS.
May 29, 2009	90-day public comment period concludes; December 23, 2009 – NYSDEC, as Lead Agency, issues the Final Environmental Impact Statement (FEIS).
March 3, 2010	NYSDEC issues a SEQRA Findings Statement (NYSDEC, 2010). NYSDEC findings relative to cultural resources are discussed in Table 3.

Historic Architectural Resources

Summary of Previous Agency Consultation to Date

As you are aware, review of the potential environmental impacts of the previously proposed Hounsfield Wind Project included consultation with the NYSOPRHP (under Project Review No. 07PR06733). To support that consultation, the Applicant retained Panamerican Consultants, Inc. (PCI) between 2008 and 2009 to conduct cultural resources investigations to investigate the project’s potential effect on archaeological and historic-architectural resources. As part of the SEQRA permitting and review process, PCI conducted a Phase 1A cultural resources survey (PCI, 2008), Phase 1B archaeological resources survey (PCI, 2009a), Phase II scope of work (PCI, 2009b), and a 10-mile-radius study of historic architectural resources (PCI, 2009c) for the Hounsfield Wind Farm on behalf of the Applicant.

Below is a summary of cultural resources fieldwork, reports, and consultation with the NYSOPRHP (per their role as State Historic Preservation Office [SHPO]) for this project to date.

Table 3. Summary of NYSOPRHP Consultation for the Hounsfield Wind Farm.

Date	Summary of Submittal/Correspondence
February 2008	PCI completed a <i>Phase 1A Cultural Resources Investigation for the Proposed Hounsfield Wind Farm</i> (PCI, 2008) which included background research, a discussion of historic and prehistoric archaeological sensitivity, and recommendations regarding further archaeological survey work. The document also summarized existing architectural resources present on the island. The Phase 1A noted that no previously recorded archaeological sites were located on the island. The Phase 1A survey concluded that prehistoric archaeological sensitivity of the island was low to moderate and historic archaeological sensitivity was limited primarily to areas associated with map-documented structures (MDS), nine of which were identified. The Phase 1A recommended a Phase 1B archaeological survey be conducted to locate and map foundation remains observed during the Phase 1A site visit and identify any additional foundation remains and/or middens associated with map-documented structures. Additionally, they recommended attempting to determine the likely locations of any island-interior refuse disposal areas. With regard to historic architectural resources, the Phase 1A noted existing architectural resources on the island were found at seven locations (the Main Lodge, the Caretaker’s House, the former Coast Guard Station, and the Guest House all on the southeast shore; the Lighthouse on the southwest shore; the Clubhouse on the north shore, and a fisherman’s shack in the west shore of North Pond), the Phase 1A noted that, within the seven areas, there are only six structures on the island that are greater than 50 years old: the Lighthouse and attached Keeper’s House (NRHP-listed; 90NR01133); the Fog Horn House (NRHP-listed; 90NR01133); the Main Lodge (recommended NRHP-ineligible); the Clubhouse (recommended NRHP-ineligible); the former Coast Guard Station Main Structure (recommended NRHP-unevaluated); and, the former Coast Guard Station Boathouse (NRHP-eligibility unevaluated). The Phase 1A report did not make any recommendations regarding additional historic architectural surveys.
February 2009	PCI completed a <i>Phase 1B Cultural Resources Investigation for the Proposed Hounsfield Wind Farm</i> (PCI, 2009a). During the Phase 1B archaeological survey, PCI (2009a) excavated 6,043 shovel tests,

Date	Summary of Submittal/Correspondence
	<p>consisting of 5,901 shovel tests within 35 one-acre survey areas as well as an additional 142 shovel tests at seven locations added to investigate areas of potential interest not included in the original research design. The Phase 1B archaeological survey identified zero prehistoric sites and four historic archaeological sites:</p> <ul style="list-style-type: none"> • PCI/Galloo Island-1 (R. Eveleigh Structure) Historic Site (USN A04510.000050) which included a small stone foundation and 215 artifacts (primarily architectural material) found scattered within a 100-ft diameter area. PCI (2009a) recommended the site as not eligible for listing on the NRHP with not further work. • PCI/Galloo Island-2 (N. Wattam Farmstead) Historic Site (USN A04510.000049) which included a partially intact stone masonry house structure and a collapsed stone masonry sheep/cow barn. A total of 1,376 artifacts (primarily architectural material) were found scattered around the perimeter of the house structure, including a potentially intact artifact cluster/feature in close proximity to the house structure. PCI (2009a) recommended the site as unevaluated with regard to the NRHP and recommended either site avoidance or Phase II investigations. • PCI/Galloo Island-3 (Wattam/Gannett Mill) Historic Site (USN A04510.000048) which included a stone masonry foundation and brick chimney fall with 261 artifacts (primarily architectural material) found in the vicinity. PCI (2009a) recommended the site as not eligible for listing on the NRHP with no further work. • PCI/Galloo Island-4 (B.F. Johnson Mill) Historic Site (USN A04510.000047) which included a partially intact stone masonry foundation with a 94 artifacts found in the vicinity of the foundation. PCI (2009a) recommended the site as not eligible for listing on the NRHP with no further work.
April 8, 2009	<p>NYSOPRHP issued a response letter (Blakemore, 2009) to the <i>Phase 1A</i> and <i>Phase 1B</i> reports prepared by PCI. NYSOPRHP recommended avoidance of each of the four archaeological sites identified by PCI in the <i>Phase 1B</i>, given the small number of sites discovered in archaeological investigations on the island, and that each site may contribute to the ability to interpret the history, habitation and occupants of the island. NYSOPRHP also recommended that if the sites could not be avoided, that a Phase II site examination should be conducted.</p>
April 23, 2009	<p>PCI drafted <i>Phase II Scopes-of-Work for Sites PCI/Galloo Island 1, 2, 3 and 4</i> (PCI, 2009b) to determine if the historic archaeological sites discovered during Phase 1B investigations meet the eligibility requirements for inclusion in the State or National Registers of Historic Places. PCI proposed field testing for each site consisting of a varying number of shovel test and excavation of one-meter-square test units. Proposed testing for each site was as follows: PCI/Galloo Island-1 (R. Everleigh Structure) – approximately 40 shovel tests to delineate the horizontal boundaries of the site and to define the dispersal patterns of artifacts, and approximately 8 to 10 one-meter test units within the artifact concentrations; PCI/Galloo Island-2 (M. Wattam House and Barn Structures) – approximately 80 shovel tests to delineate the horizontal boundaries of the site and to define the dispersal patterns of artifacts (with additional shovel testing around the barn), and approximately 14 to 16 one-meter test units within the artifact concentrations; PCI/Galloo Island-3 (M. Wattam/Gannett Mill Foundation) – approximately 30 shovel tests to delineate the horizontal boundaries of the site and to define the dispersal patterns of artifacts, and approximately 8 to 10 one-meter test units within the artifact concentrations; PCI/Galloo Island-4 (Johnson Mill Foundation) – approximately 25 shovel tests to delineate the horizontal boundaries of the site and to define the dispersal patterns of artifacts, and approximately 6 to 8 one-meter test units within the artifact</p>

Date	Summary of Submittal/Correspondence
	concentrations. The <i>Phase II Scopes-of-Work</i> were submitted to NYSOPRHP and appended to the FEIS for the Hounsfield Wind Farm.
April 2009	PCI completed a <i>Historic Architectural Resources Investigation 5-Mile Ring Study</i> (PCI, 2009c). The survey included identification of all previously determined eligible or listed on the NRHP, as well the evaluation of potential NRHP-eligible historic properties in the ten-mile radius study area, as well as the Village of Sackets Harbor, which is located 13 miles northeast of Galloo Island and was included in the area of potential effect (APE) at the request of NYSOPRHP. The study resulted in identification of 66 properties, including seven NRHP-listed resources, one NRHP-listed historic district, two resources previously determined NRHP-eligible, 37 resources recommended NRHP-eligible, and 19 unevaluated resources. Regarding visual effects on historic properties, the report noted that historic resources located within the APE had views of an average of 69.5 turbines, and that views of all 84 turbines were available from 40 of the 66 properties listed on or recommend eligible for listing on the NRHP. In addition, the report noted that that “based on the available information, it is apparent that the wind farm will change the visible landscape of the region...however, when considering the screening effect of the existing forests, manmade obstructions on the mainland, the significant distances and the atmospheric effects at those distances, it is likely that the wind farm will not be discernable from the vast majority of NRL/NRE properties within the study area” (PCI, 2009c: 6-3 and 6-4). Regarding mitigation, the report noted that Upstate NY Power had proposed to purchase and stabilize the NRHP-listed Galloo Island Lighthouse for \$510,000, and that local historians, town official, and agencies will be contacted by Hounsfield Wind Farm Project to begin the process of determining community needs” (PCI, 2009c: 7-5).
June 23, 2009	NYSOPRHP issued a response letter (Bonafide, 2009a) to the <i>Historic Building Survey of Ten-Mile APE</i> . The letter indicated that NYSOPRHP concurred with eligibility recommendations for 35 of the 39 resources identified as NRHP-eligible by PCI. The letter also indicated of the 19 unevaluated properties included in the survey, 11 properties were located within a potential historic district (Lighthouse Road Historic District), four were individually eligible, and that Robert J. Wehle State Park was also eligible for inclusion on the NRHP. In addition, one unevaluated property did not receive a determination of eligibility from NYSOPRHP. The letter also noted that previously unevaluated resources may be included on Stony Island, Grenadier Island, Little Grenadier Island and Fox Island, which were located within the APE but not surveyed by PCI. NYSOPRHP indicated that they had identified several key receptors where visual impacts should be carefully assessed, including the NRHP-listed Galloo Island Light House Complex, Sackets Harbor Battlefield, Madison Barracks, and Sackets Harbor Village Historic District, and noted that these areas have been identified and assessed in the <i>Hounsfield Wind Farm Visual Resources Assessment</i> (Saratoga, 2009). The letter noted that “unlike previously evaluated wind farm projects, the Hounsfield Wind Farm is sited on an island in the midst of open water. This unique setting in New York creates a much higher visibility potential than mainland-based projects where the undulating topography and landforms in conjunction with a mature intervening landscape help to break up the scale and density of the project. As such, and with the exception of the resources on Galloo Island, this undertaking exposes a significant amount of recreational shoreline vistas and historic resources to the full expanse of the turbine field...The visible turbine field will forever alter what has been a largely intact vista for more than two centuries” (Bonafide, 2009). Regarding historic resources located on Galloo Island, the letter noted that “there is no question that the construction of 84 turbines spread out over the island’s 4.5 mile length of largely undeveloped pasture and grasslands will forever alter the isolated, intact setting of the historic resources that now occupy the island” (Bonafide, 2009). Regarding effects on historic-architectural resources, NYSOPRHP stated: “The New York SHPO believes that sufficient information does exist to determine that under 36CFR Part 800.5 (v), the undertaking will an Adverse Effect on cultural resources.

Date	Summary of Submittal/Correspondence
	The introduction of the sleek, ultramodern, approximately 410 foot tall kinetic wind turbines (up to 84 proposed) concentrated on the roughly 2,000 acres of Galloo Island will significantly alter the historic viewsheds from the mainland, which have remained largely unchanged for centuries and have served as the backdrop for the architectural, cultural recreational, and scenic tourism heritage of these communities” (Bonafide, 2009).
November 12, 2009	In response to a request for a list of potential historic resources mitigation projects, the Town of Hounsfield and Village of Sackets Harbor provided a letter identifying several ongoing projects within those municipalities they proposed for mitigation (Del Signore and Constance, 2009). Projects proposed for potential mitigation included a schoolhouse, library, museum, bank building, hospital, a several cemeteries throughout both municipalities, where work had already begun but stalled due to lack of funding. The letter also noted the significance of the Galloo Island Light, but did not recommend any associated mitigation projects due to a lack of public access.
March 3, 2010	NYSDEC issued a SEQRA Findings Statement (NYSDEC, 2010). Relative to visual impacts to cultural resources, the findings statement noted that “this project will result in a change to the visual setting on the horizon from vantage points along the Lake Ontario shore, including scenic and historic resources of statewide significance,” including several state park facilities and the NRHP-listed Galloo Island Lighthouse (NYSDEC, 2010). Based on visual offset mitigation proposals provided by NYSOPRHP, the Town of Hounsfield and Village of Sackets Harbor, NYSDEC identified preferred mitigation offset projects for the Sackets Harbor Battlefield State Historic Site, Pickering Beach Museum, Robert G. Wehle State Park, Stone Hospital at Madison Barracks, and Westcott Beach State Park, that the Project Sponsor are required to undertake as a condition of receiving construction permits for the project. Relative to historic architectural resources, the findings statement noted that based on NYSOPRHP’s determination that the project would have an adverse effect on historic resources, the Project Sponsor was required to enter into a Memorandum of Agreement (MOA) with NYSOPRHP and the United States Army Corps of Engineers (USACE) under Section 106 of the National Historic Preservation Act (NHPA). Since direct mitigation of visual impacts to historic resources was determined by NYSOPRHP to not be feasible, the Project Sponsor proposed to fund one or more mitigation projects identified by the Town of Hounsfield and Village of Sackets Harbor in their November 12, 2009 letter (Del Signore and Constance, 2009). Relative to archaeological resources, the findings statement noted that three of the four identified archaeological sites be avoided and that a Phase II investigation would be required at the proposed boat slip location prior to construction as a condition of NYSDEC permits for the project. The findings statement also reiterated that the MOA for the project would contain an avoidance plan to ensure protection of archaeologically sensitive resources, including temporary fencing demarcating a 50-foot buffer from archaeological sites, notation on construction plans regarding archaeological avoidance measures, discussion of avoidance measures at the preconstruction meeting for the project, and inclusion of the SHPO Human Remains Discovery Protocol and Plan for Anticipated Discoveries in construction plans.

Results of Previous Historic-Architectural Survey

The *Historic Building Survey of Ten-Mile APE for the Proposed Hounsfield Wind Farm, Galloo Island, Town of Hounsfield, Jefferson County, New York* (PCI, 2009c) conducted for the project resulted in identification of a total of 66 resources previously listed in or determined eligible for the NRHP:

- Nine resources previously listed in or determined eligible for the NRHP
- One historic district (Sackets Harbor Village Historic District) previously listed in or determined eligible for the NRHP
- 37 newly surveyed resources determined to be potentially eligible for the NRHP
- 19 properties surveyed but assigned an “Unevaluated” status due to a lack of access

Based on the survey results included within the *Historic Building Survey of Ten-Mile APE*, NYSOPRHP determined that a total of 238 resources are previously listed in or determined eligible for the NRHP within the ten-mile APE for the project, including 156 contributing resources located within the NRHP-Listed Sackets Harbor Village Historic District, as well as numerous contributing resources included within NRHP listings for the Galloo Island Light House Complex, and Sackets Harbor Battlefield and Madison Barracks, 13 properties within the NRHP-eligible Association Island Historic District, and 11 properties within the NRHP-eligible Lighthouse Road Historic District (Bonafide, 2009).

Historic Architectural Survey Work Plan

To evaluate the Facility’s potential visual effect on historic properties, three tasks are proposed: 1) consult with NYSOPRHP to confirm the Area of Potential Effect (APE) for visual impacts to historic properties; 2) digitize (map) previous historic architectural survey results; and, 3) prepare a visual effects analysis of historic resources determined by NYSOPRHP to be NRHP-eligible (or that have been previously listed on the NRHP) within the APE. Based on the Applicant’s consultation with NYSOPRHP for the Facility (to date) and EDR’s consultation with NYSOPRHP for previous wind projects in New York¹, the Applicant assumes that no additional historic-architectural resources survey will be necessary within the areas of the APE previously surveyed in 2009².

Task 1: Consult with NYSOPRHP to Confirm the Area of Potential Effect

The *SHPO Wind Guidelines* request that the consultant participate in a meeting to verify the Area of Potential Effect (APE) for visual impacts to historic resources prior to undertaking the historic resources survey. In EDR’s experience,

¹ See NYSOPRHP correspondence for the Crown City Wind Farm in Cortland County (09PR00027) and Arkwright Summit Wind Farm in Chautauqua County (08PR00564).

² Due to the dynamic nature of wind projects, future changes in the proposed layout of the Facility may affect visibility within the ten-mile indirect APE for visual effects. If the APE changes in such a way that the Facility may be visible from a portion of the study area has not previously been surveyed, EDR will conduct a survey of these portions of the study area for NRHP-eligible resources. The historic resources survey will identify and document those buildings within the study area that, in the opinion of EDR’s architectural historian, appear to satisfy National Register of Historic Places (NRHP) eligibility criteria. If sites that appear to satisfy NRHP-eligibility criteria are identified, the existing conditions of the property will be documented by EDR’s architectural historian. This will include photographs of the building(s) (and property) and field notes describing the style, physical characteristics and materials (e.g., number of stories, plan, external siding, roof, foundation, and sash), condition, physical integrity, and other noteworthy characteristics for each resource.

the APE for indirect (visual) effects on historic architectural resources is typically defined as those areas within five miles of the proposed turbines where the turbines are potentially visible based solely on topography. However, due to the high visibility created by the “unobstructed expanses of open water between the island and the mainland” (Bonafide, 2009), the visual APE for indirect effects for the Hounsfield Wind Farm was recommended to be ten miles, with a portion extended to 13 miles to include the Village of Sackets Harbor per the recommendation of NYSOPRHP (PCI, 2009c; Bonafide, 2009).

The Applicant and EDR met with NYSOPRHP staff at their offices in Albany, New York on March 8, 2016, and had a subsequent discussion with John Bonafide on March 31, 2016, to review and discuss the previous historic architectural survey, as well as the proposed evaluation of the current Facility’s effects on historic architectural resources. During this discussion, it will be suggested by EDR that due to the recent (2009) historic resources survey that has occurred within the visual APE for indirect effects, no additional survey of buildings located within the APE would be required as part of the current review of Galloo Island Wind. It was agreed that in general terms, it is anticipated that the identification of historic resources conducted as part of the SEQRA review for the Hounsfield Wind Farm was adequate for the purpose of identifying historic architectural resources within the APE for indirect effects for Galloo Island Wind.

Task 2: Digitization of Previous Historic Architectural Surveys

The locations of all resources previously determined NRHP-eligible as part of the above-listed historic architectural resources survey will be digitized and mapped using ArcGIS. The NYSOPRHP Cultural Resources Information System (CRIS) website will also be reviewed to identify any additional NRHP-eligible resources not included as part of these surveys, which will also be digitized and mapped. It is worth noting that the locations of historic architectural resources previously determined not NRHP-eligible will not be digitized as part of this task. A GIS shapefile of all previously surveyed historic architectural resources, including name (if applicable), address, and Unique Site Number (USN) will be provided to NYSOPRHP via the CRIS website.

Task 3: Historic Resources Visual Effects Analysis

EDR will prepare an analysis of the potential visual effect of the Facility on properties determined by NYSOPRHP to be NRHP-eligible, including consideration of distance and the effect of vegetation and other landscape features that may screen or minimize views of the Facility from historic resources. The visual effects analysis will specifically address impacts from the NRHP-listed key receptors previously identified by NYSOPRHP in the June 23, 2009 letter (Galloo Island Light House Complex, Sackets Harbor Battlefield, Madison Barracks, and Sackets Harbor Village Historic District), and include visual simulations where appropriate in response to NYSOPRHP concerns regarding impacts to

these concentrations of historic resources. The report will also include a discussion of mitigation efforts based on a review of previous recommendations for mitigation of visual impacts to historic resources found in the SEQRA Findings Statement (NYSDEC, 2010). The historic resources visual effects analysis will be provided to NYSOPRHP via the CRIS website and provide the basis for the evaluation of potential visual effects on historic resources included in Exhibit 24 of the Article 10 Application. The completed Historic Architectural Resources Visual Effects Analysis will be submitted as part of the Article 10 Application.

In addition, consideration of the Facility's potential effects on cultural resources will include evaluation of the potential for noise-related impacts to the NRHP-listed Galloo Island Light House Complex. These effects will be considered in Exhibit 19 of the Application, as well as Exhibit 24.

Archaeological Resources

Previous Cultural Resources Surveys Pertaining to Archaeological Resources

PCI's Phase 1A report (PCI, 2008) included background research, a discussion of historic and prehistoric archaeological sensitivity, and recommendations regarding further archaeological survey work. The document also summarized existing architectural resources and made recommendations for additional historic architectural survey work. PCI (2008) concluded that prehistoric archaeological sensitivity of the island was low to moderate and historic archaeological sensitivity was limited primarily to areas associated with map-documented structures, nine of which were identified.

Previous Phase 1A Cultural Resources Survey

In conclusion to the Phase 1A report, PCI (2008) recommended:

1. A Phase 1B survey to locate and map foundation remains observed during the Phase 1A site visit and identify any additional foundation remains and/or middens associated with map documented structures. Additionally, they recommended attempting to determine the likely locations of any island-interior refuse disposal areas.
2. An 8-10% sample of the approximately 300 acres of the island which had been identified as sensitive for prehistoric archaeology.

Previous Phase 1B Archaeological Survey

The Phase 1B archaeological survey report (PCI, 2009a) included an archaeological survey research design which proposed:

1. Testing 35 one-acre blocks with 5-meter interval shovel tests (169 shovel tests per acre; or a total of 5,915 proposed shovel tests).
2. Excluding areas of exposed bedrock and mapped wetlands from archaeological survey.
3. Focusing nine one-acre survey areas on locations of map-documented structures and placing the remaining 26 one-acre survey areas arbitrarily across the testable portions of the island (i.e., non-bedrock, non-wetland).

During the Phase 1B archaeological survey, PCI (2009a) excavated 6,043 shovel tests, consisting of 5,901 shovel tests within 35 one-acre survey areas, as well as an additional 142 shovel tests at seven locations added to investigate areas of potential interest not included in the original research design. The Phase 1B archaeological survey identified four historic archaeological sites (Unique Site Numbers [USNs] A04510.000047, A04510.000048, A04510.000049, and A04510.000050). PCI (2009) recommended three of the archaeological sites as not eligible for listing on the NRHP with no further work and one of the sites as potentially eligible for listing on the NRHP. PCI (2009a) recommended site avoidance or Phase II investigations for this last site. No prehistoric/pre-contact Native American archaeological resources were identified on Galloo Island.

NYSOPRHP reviewed the Phase 1A and Phase 1B reports concurrently and issued a response on April 8, 2009 (Blakemore, 2009) which recommended that the Hounsfield Wind Project design be revised to avoid impacts to the four archaeological sites identified during the Phase 1B survey, or, if avoidance was not feasible, that Phase 2 archaeological investigations of these sites would be necessary. In response, PCI drafted Phase 2 work plans for the four historic archaeological sites identified during the Phase 1B archaeological survey (PCI, 2009b). However, these Phase 2 investigations were not conducted.

Previous Commitments Regarding Archaeological Resources

The following is a summary of commitments made throughout the SEQRA process for the previously proposed Hounsfield Wind project regarding archaeological resources:

- In the review of the Phase 1B, NYSOPRHP recommended avoidance of all four sites and noted that if avoidance was not possible, Phase II investigations should be conducted (Blakemore, 2009).

- The SEQRA Findings Statement (NYSDEC, 2010) noted that three of the archaeological sites were being avoided by Facility layout but that one of the sites (USN A04510.000048) was located at the proposed location for the permanent boat slip and could not be avoided. Therefore, the Applicant committed to a Phase II investigation at Site A04510.000048, per NYSOPRHP recommendations (Blakemore, 2009).
- The SEQRA Findings Statement (NYSDEC, 2010: 30-31) further states:

“In addition to providing the basis for historical off-set projects, the MOA will contain an Avoidance Plan which will include a number of measures to ensure protection of archaeologically sensitive resources such as:

 1. Temporary fencing will be installed demarking a 50-foot buffer from the archaeological sites and marked with signs indicating “Sensitive Area/No Access”.
 2. Final construction plans will include a notation regarding the avoidance measures for the archaeological areas.
 3. The preconstruction meeting will include a discussion regarding the avoidance measures for the archaeological areas.
 4. The SHPO Human Remains Discovery Protocol will be included in the construction plans for the Engineer-in-Charge in the unlikely event that human remains are encountered during construction.
 5. The SHPO plan for Unanticipated Discoveries will be included in the construction plans for the Engineer-in-Charge.”

Current Recommendations for Additional Work

EDR currently recommends that, given significant reductions in the scope (and corresponding ground disturbance) of the proposed Facility relative to the previously proposed Hounsfield Wind Project, the results of PCI's (2009a) Phase 1B archaeological survey provide an adequate basis to evaluate the potential for archaeological resources to be located within the Facility's Direct APE. The *SHPO Wind Guidelines* (NYSOPRHP, 2006) are based on the assumption that additional archaeological survey work is not necessary if project components move around during the project development process, as long as the total area of ground disturbance for the project does not increase. As mentioned previously, the number of proposed turbines for the Galloo Island Wind Energy Facility (32) is significantly fewer than the number of turbines in the previously studied Hounsfield Wind Farm (84). In addition, the current Facility layout includes a corresponding reduction in ground disturbance associated with access roads, buried interconnects, and other project components relative the Hounsfield Wind Project layout that was surveyed in 2008/2009. Based on the reduced size of the direct APE, and the scope of the previously conducted Phase 1B archaeological survey (PCI, 2009), additional archaeological survey is not warranted or necessary for the proposed Facility.

The Applicant will design the proposed Facility layout with the intent to avoid impacts to the four previously identified archaeological sites. If any archaeological resources cannot be avoided by Facility design, the Applicant will review the commitments made in the SEQRA Findings Statement (see above) with NYSOPRHP (including the proposed scopes for Phase 2 investigations, if applicable), and continue to consult with NYSOPRHP to minimize or mitigate impacts to archaeological resources.

Potential for Phase 2 Archaeological Investigations

If avoidance is not possible for one or more of the archaeological sites, then it is anticipated that Phase 2 investigations would be required. If Phase 2 investigations become necessary, PCI's *Phase II Scopes-of-Work* (2009b) will be reviewed and revised (in consultation with NYSOPRHP) to reflect the current circumstances. Revised Phase 2 scopes of work will then be provided to NYSOPRHP for review prior to initiating any additional archaeological investigations. The goal of Phase 2 investigations is to evaluate a site's eligibility for listing on the NRHP. If Phase 2 investigations determine one or more of the previously identified archaeological sites to be eligible for listing on the NRHP, Phase 3 data recovery investigations may be warranted if the site(s) cannot be avoided by Facility design at that time. If the Phase 2 investigations determine the site(s) to be ineligible for listing on the NRHP, then no further archaeological work will be required.

NYSOPRHP Concurrence with Work Plan

EDR has provided this cultural resources work plan to NYSOPRHP to confirm the direct APE (for any potential impacts to archaeological resources) and indirect visual APE (for any potential impacts to historic architectural resources) for the project and to confirm that the proposed evaluation of the Galloo Island Wind's potential effects on cultural resources is consistent with NYSOPRHP's expectations. Please provide a formal response indicating NYSOPRHP's concurrence with and/or comments on the work plan described herein.

All cultural resources studies undertaken by EDR in association with the Facility will be conducted by professionals who satisfy the qualifications criteria per the Secretary of the Interior's Standards for Historic Preservation (36 CFR 61). Cultural resources surveys will be prepared in accordance with the *New York State Historic Preservation Office Guidelines for Wind Farm Development Cultural Resources Survey Work* (the *SHPO Wind Guidelines*; NYSOPRHP, 2006) and applicable portions of NYSOPRHP's *Phase 1 Archeological Report Format Requirements* (NYSOPRHP, 2005).

If you have any questions about the information presented herein or would like to discuss the Facility further, please contact Grant Johnson at gjohnson@edrdpc.com or Patrick Heaton at pheaton@edrdpc.com – both of whom are also reachable at (315) 471-0688.

Attachments:

List of References
Public Involvement Plan (PIP)

Figure 1. Facility Location
Figure 2. Preliminary Facility Layout
Figure 3. Facility Layout Comparison

List of References:

Blakemore, Cynthia. 2009. Re: CORPS PERMITS, DEC, PSC, Galloo Island/Hounsfield Wind Farm/77 Turbine/280 MW, Galloo Island, Town of Hounsfield, Jefferson County, 07PR06733. Correspondence from Cynthia Blakemore (NYSOPRHP) to Thomas Hagner (Upstate Power Corp.). New York State Office of Parks, Recreation, and Historic Preservation, Waterford, New York. April 8, 2009.

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NYSOPRHP. 2009. Re: Suggested New York State Parks Projects for Hounsfield Wind Farm. Review correspondence from New York State Parks. New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. December 18, 2009.

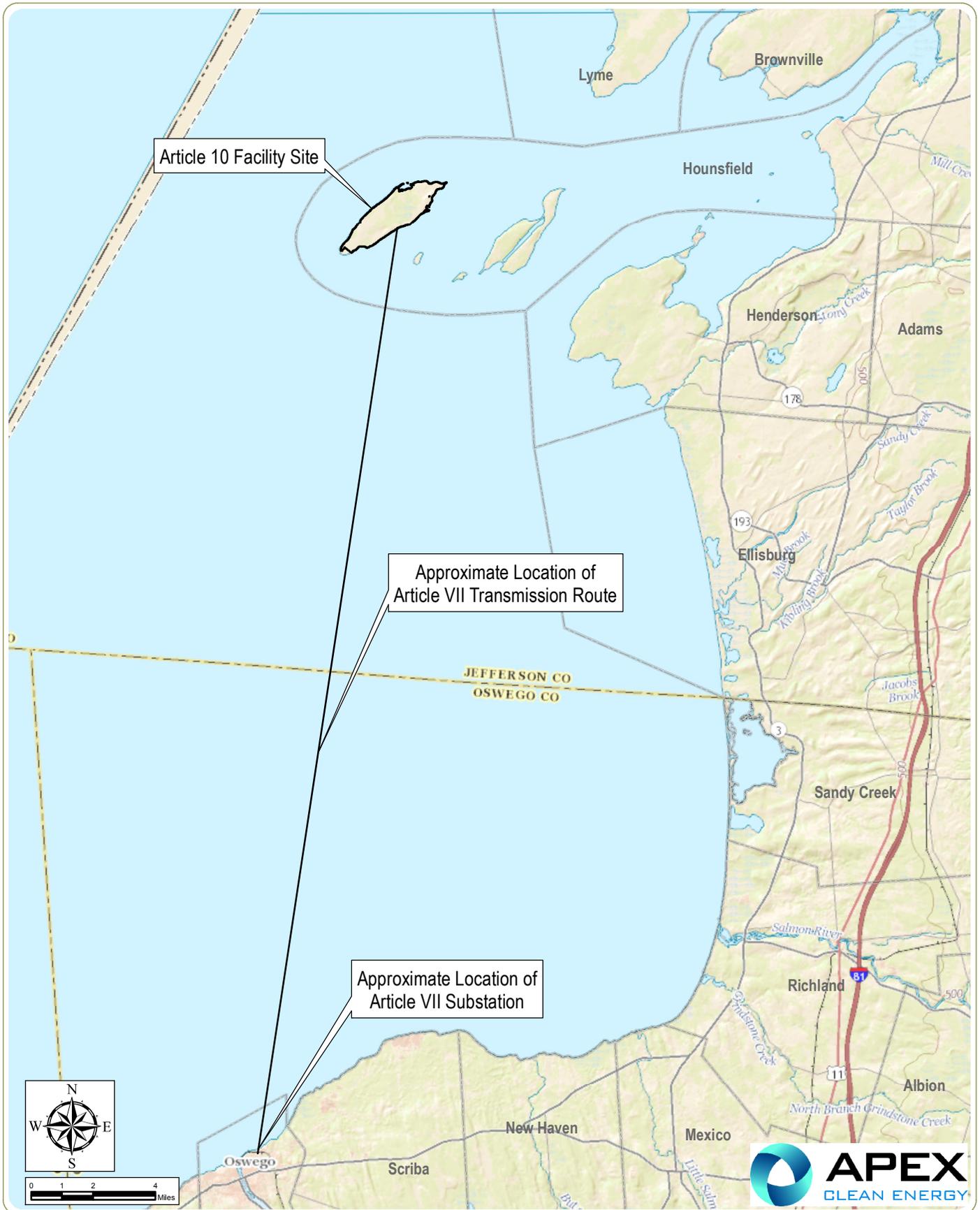
Panamerican Consultants, Inc. (PCI). 2008. *Phase 1A Cultural Resources Investigation for the Proposed Hounsfield Wind Farm, Galloo Island Project Area, Town of Hounsfield, Jefferson County, New York (OPRHP #07PR6733)*. Prepared for Upstate NY Power Corp. Panamerican Consultants, Inc., Buffalo, New York. February 2008.

PCI. 2009a. *Phase 1B Phase 1A Cultural Resources Investigation for the Proposed Hounsfield Wind Farm, Galloo Island, Town of Hounsfield, Jefferson County, New York (OPRHP #07PR6733)*. Prepared for Upstate NY Power Corp. Panamerican Consultants, Inc., Buffalo, New York. February 2009.

PCI. 2009b. *Phase II Scopes-of-Work for Sites PCI/Galloo Island 1, 2, 3 and 4. Hounsfield Wind Farm, Galloo Island, Town of Hounsfield, Jefferson County, New York*. Prepared for New York State Office of Parks, Recreation, and Historic Preservation. Panamerican Consultants, Inc., Buffalo, New York. April 23, 2009.

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Galloo Island Wind Energy Facility

Town of Hounsfield, Jefferson County, NY

Figure 1: Facility Location

June 2016

- Notes:**
1. This Figure depicts a preliminary layout, which is subject to change.
 2. Basemap: ESRI ArcGIS "USGS Topo" Map Service.
 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.



Galloo Island Wind Energy Facility

Town of Hounsfield,
Jefferson County, NY

Figure 2: Preliminary Facility Layout

June 2016

-  Wind Turbine
-  Met Tower
-  Helicopter Landing
-  Access Road
-  Collection Line
-  Collection Substation
-  O&M Building
-  Permanent Structure with Overnight Accommodations
-  Borrow Area
-  Laydown Yard
-  Batch Plant
-  Barge Landing
-  Facility Site

Notes:

1. This Figure depicts a preliminary layout, which is subject to change.
2. Basemap: USDA FSA NAIP "2015 New York 0.5m" Map Service Layer.
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Galloo Island Wind Energy Facility

Town of Hounsfield,
Jefferson County, NY

Figure 3: Facility Turbine Layout Comparison

June 2016

-  Wind Turbine (Galloo Island Wind)
-  Wind Turbine (Hounsfield Wind Farm)
-  Facility Site

Notes:

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