

**Cultural Resource Investigation  
For  
Lighthouse Wind Project  
Towns of Somerset and Yates, New York  
Apex Clean Energy**

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Panamerican Consultants, Inc. (Panamerican) is pleased to submit a proposal to conduct cultural resource investigations for the proposed Lighthouse Wind project in the Town of Somerset, Niagara County, and the Town of Yates, Orleans County. The preparation of Phase 1A/1B cultural resources studies will be consistent with the requirements of Article X, Section 1001.20, Exhibit 20 Cultural Resources; including the impacts on historic structures. The cultural resource investigation also will comply with the New York State Historic Preservation Office (SHPO) *Guidelines for Wind Farm Development Cultural Resources Survey Work* (2006), New York Department of Environmental Conservation (NYSDEC) guidelines, and any other appropriate federal and state guidelines for cultural resource investigations.

The following document includes a proposal to conduct a Phase 1A investigation (including a field-testing plan/model for the Phase 1B field-testing strategy), a Phase 1B investigation of the proposed study area (totaling an estimated 363 acres), an historic structure survey within a five-mile radius of project components, provide supplemental support to agency inquiries or discovery requests, and provide expert witness testimony.

**1) Project Components**

The following are estimated project components that our bid is based on. When the project design is finalized, a revised proposal can be prepared to address the actual project layout.

Preliminary Determination of Phase 1B Archaeological Survey Extent

<b>Turbines</b>	
70 turbines @ 3 acres per turbine pad	<b>210 Acres</b>
<b>Access Roads @ 0.25 miles per turbine</b>	
17.5 miles by 35 ft. wide	<b>74.24 Acres</b>
<b>Interconnects/all underground@ 0.5 miles per turbine</b>	
35 miles by 15 ft. wide	<b>64 Acres</b>
<b>One Staging area</b>	<b>10 Acres</b>
<b>One Substation</b>	<b>5 Acres</b>
<b>Total Acres (ground disturbance)</b>	<b>363 Acres</b>

## **2) Phase 1A Investigation**

The Phase 1A survey will evaluate the sensitivity for archaeological resources and historic structures within the proposed project area/APE and recommend the level of effort for any additional archaeological investigations and historic structures inventories based the sensitivity of the project area. This will include historic background and archival research, site file check to identify known Native American and historic archaeological sites, historic structures, National Register of Historic Places (NRHP) sites and districts, and positive and negative viewsheds for historic structures. Field work includes a windshield survey with photographs, verification of the presence of existing NRHP-listed or eligible structures and assessment of previous disturbance within the direct APE. The Phase 1A will also include preparation of the Field Testing Plan outlining the Phase 1B field-testing strategy. The Field Testing Plan will identify environmental zones within the APE based on Robert E. Funk's 1993 work, *Archaeological Investigations in the Upper Susquehanna Valley, New York State* (Chapter 5). The Field Testing Plan will require New York SHPO approval before implementation.

## **3) Phase 1B Survey Archaeological Investigation**

In addition to the Field Testing Plan described above, the Phase 1B investigation will comply with the New York SHPO *Guidelines for Wind Farm Development Cultural Resources Survey Work* outlined below.

- A Phase 1B archaeological survey will be prepared for all wind farm project areas. This will include only the area of the actual project components (e.g., turbine site location, access roads, etc.) that require earth movement or associated with project construction.
- Archaeological survey will be limited to the Archaeological APE associated with the construction of the project. This smaller core of the project APE consists of areas that will experience ground-disturbing activity during the construction phase of the project. These areas include but are not limited to:
  - Turbine sites
  - Construction staging areas
  - Borrow pits
  - New/Access Roads
  - Substations
  - Utility corridors
  - New building locations
  - Other areas where the current ground surface may be modified as a result of the project.
- Any previously identified archaeological site(s) or map-documented structure (MDS) locations must be included in the Phase 1B testing.
- Prior to implementing a proposed testing methodology Panamerican will call the SHPO staff to inform them and ask them to review the proposal in a timely manner. Any requested meetings will be conducted by phone unless requested otherwise by the SHPO staff.

- Sites, identified as part of the survey process will be documented using standard practices (such as site forms or approved databases) and will all be located using a single GPS point.
- Once the Phase 1 survey is completed a report will be provided to the SHPO using the established *New York SHPO Phase 1 Archaeological Report Format Requirements and the Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State*.

#### **4) Historic Structure Five-mile Radius Survey**

The investigation will comply with New York SHPO *Guidelines for Wind Farm Development Cultural Resources Survey Work* (2006) unless otherwise stated. The scope is based on previous discussions with the NY SHPO staff on numerous past windfarm projects conducted by Panamerican. Future discussions with SHPO staff should be initiated to clarify specifics of this project during the Phase 1A level of investigation.

Panamerican will conduct a five-mile radius historic structures survey. The scope of the project will consist of the following tasks.

- Conduct historic structures field survey within the positive visual APE as defined by a topographic viewshed analysis (zone of visual influence) study
- The architectural survey will evaluate all buildings 50 years old or older within the study area and locate and document all NRE (National Register Eligible) and NRL (National Register Listed) resources listed in the CRIS database (where possible) within the study area
- The architectural survey will anticipate identification of additional NRE properties not previously identified by SHPO
- All NRL/NRE properties will be marked by a single GPS point
- The architectural survey will anticipate identification of potential historic districts
- Local sources/references/historical maps will need to be consulted to supplement NRE evaluations
- Regional historians and/or other interested individuals will be contacted to help identify specific mitigation options
- Farm complexes will be documented as a group with multiple photographs to convey the setting/relationship of farmhouses, outbuildings and the other farm elements
- Clusters of buildings (villages/hamlets) will be presented together in the final reports
- Historic districts and cemeteries will be presented in separate sections of the final reports
- The final report will not include properties outside of the viewshed unless required for the general summary of resources
- The final report will include an architectural summary and analysis which includes brief historic contexts
- The final report will include mitigation recommendations. The plan will focus on the mitigation process of indirect mitigation options and choices rather than direct mitigation.

A team of two professionals, consisting of Panamerican's Senior Architectural Historian Ms. Christine Longiaru and an assistant, will be conducting the surveys

The five-mile radius investigation field and report preparation will be prepared as a stand-alone report. To complete the project in a timely manner, this study will be conducted concurrently with the Phase 1B archaeological survey.

## **5) Supplemental support to respond to agency inquiries or discovery requests**

Panamerican's staff has conducted cultural resource investigations on more than 25 windfarm projects and prepared more than 50 archaeological and historic structure reports and MOAs for these projects. Panamerican's staff also has extensive experience interfacing with state and federal agencies on windfarm projects. Our staff will be available to respond to any agency requests in a professional and timely manner.