



Cassadaga Wind Project

Case No. 14-F-0490

1001.20 Exhibit 20

Cultural Resources

Table of Contents

EXHIBIT 20 Cultural Resources 1
 (a) Archaeological Resources..... 1
 (b) Historic Resources 8
REFERENCES 37

List of Tables

Table 20-1. Summary of Archaeological Sites Identified During the Phase 1 Survey 2
Table 20-2. Previously Recorded Historic Resources Located in the Vicinity of the Facility 10
Table 20-3. Historic Resources Survey Results and Visual Effects Analysis 17
Table 20-4. Summary of Anticipated Construction Related Traffic 33
Table 20-5. Visual Effects Analysis for Previously Surveyed NRHP-Eligible Properties (Arkwright Summit Wind Farm)
 34

EXHIBIT 20 CULTURAL RESOURCES

Consistent with 16 NYCRR § 1001.20 and the New York State Office of Parks, Recreation, and Historic Preservation's (NYSOPRHP's) *Guidelines for Wind Farm Development Cultural Resources Survey Work* (the SHPO Wind Guidelines; NYSOPRHP, 2006), the Applicant has initiated consultation with the NYSOPRHP to develop the scope and methodology for cultural resources studies for the Facility. To date, formal consultation with NYSOPRHP has included initiating project review and consultation through NYSOPRHP's Cultural Resources Information System (CRIS) website¹ and submission of technical reports. These submissions are described in greater detail below.

(a) Archaeological Resources

(1) Summary of Impacts and Avoidance Measures

The Phase 1B survey resulted in the identification of six prehistoric-period archaeological sites and 10 historic-period archaeological sites: seven historic farmsteads, three prehistoric lithic scatters, two isolated prehistoric flakes, one isolated prehistoric tool, one historic debris scatter, one historic depression/possible foundation, and one historic rubble mound. The sites are summarized in Table 20-1 below.

The archaeological sites identified within the Facility will be avoided during Facility construction, minor modifications will be made as needed to ensure that impacts to significant archaeological resources are avoided. In the event that a potentially significant archaeological resource is located within the APE, and Facility components cannot be relocated to avoid impacts to the resource, then a Phase 2 archaeological site investigation (in consultation with NYSOPRHP) will be conducted. However, the Facility layout is being intentionally sited to avoid archaeological resources so no Phase 2 site investigations are anticipated to be necessary.

The mapped locations of all identified archaeological sites within 100 feet (31 meters) of proposed Facility-related impacts will be identified as "Environmentally Sensitive Areas" or similar on the final Facility construction drawings, and marked in the field by construction fencing with signs that restrict access. These measures should be adequate to ensure that impacts to archaeological resources are avoided.

¹ NYSOPRHP's Cultural Resources Information System is accessible at: <http://www.nysparks.com/shpo/online-tools/>.

With the adoption of these measures, the proposed Facility is not anticipated to adversely affect any significant archaeological resources. Note that for the purposes of avoidance, all NRHP-unevaluated sites are being treated as potentially eligible for listing on the NRHP.

Table 20-1. Summary of Archaeological Sites Identified During the Phase 1 Survey

Site Name	Description	Location	Potential Impacts	Avoidance Measures
Allenbrand Site 1	Historic Farmstead	Adjacent to west side of Andrews Road; approximately 3,700 ft northwest of Mill Creek.	Intersected by Facility APE (collocated Overhead Collection Line and Overhead Transmission Line west of Andrews Road and south of WTG 44).	No poles placed within features. No adverse impacts.
Allenbrand Site 2	Prehistoric Lithic Scatter	Approximately 600 ft west of Andrews Road; approximately 4,200 ft northwest of Mill Creek.	Intersected by Facility APE (collocated Overhead Collection Line and Overhead Transmission Line west of Andrews Road and south of WTG 44).	No poles placed within site boundary. No impacts.
Allenbrand Site 3	Prehistoric Flake	Approximately 900 ft west of Andrews Road; approximately 4,500 ft northwest of Mill Creek.	Intersected by Facility APE (Overhead Transmission Line west of Andrews Road and north of WTG 39).	No poles placed within site boundary. No impacts.
Charrington Creek Site 1	Prehistoric Lithic Scatter	Near summit of Pickup Hill, approximately 4,000 ft east of Chautauqua County Route 85, approximately 4,300 ft north of Risley Rd.	Not impacted by current layout.	Avoided by Facility design.
Chase Site 1	Historic Farmstead	Approximately 1,300 ft south of intersection of Cook and Lewis Roads; approximately 67 ft north of uppermost section of Canadaway Creek drainage.	Not impacted by current layout.	Avoided by Facility design.
Green Highlands Site 1	Prehistoric bifacial tool	Approximately 765 ft north of Engdahl Road; approximately 7,800 ft east of C. Johnson Road.	Not impacted by current layout.	Avoided by Facility design.
Higgs Site 1	Historic Farmstead	Adjacent to northeast side of Mill Creek Rd., approximately 175 ft northeast of Mill Creek.	Not impacted by current layout.	Avoided by Facility design.
Reynolds Site 1	Historic Farmstead	Approximately 3,500 ft south of Dybkas Rd., approximately 3,900 ft west of Plank Rd; approximately 5,200 ft northeast of Chautauqua County Route 85.	Not impacted by current layout.	Avoided by Facility design.
State Site 1	Depression/Possible Historic Foundation	Approximately 55 ft northwest of Boutwell Hill Rd., approximately 150 ft northeast of an unnamed southeast-trending drainage.	Intersected by Facility APE (overhead Collection Line along north side of Boutwell Hill Rd.).	No poles placed within site boundary. No impacts.
State Site 2	Historic Debris Scatter	Approximately 10 ft north of Mill Creek Rd., approximately 1,900 ft northeast of upper Mill Creek drainage.	Intersected by Facility APE (overhead Collection Line along north side of Mill Creek Rd.).	No poles placed within site boundary. No impacts.
State Site 3	Historic Farmstead	Approximately 10 ft north of Mill Creek Rd., Approximately 230 ft west of Overland Trail Rd., approximately 1,000 ft northeast of upper Mill Creek drainage.	Intersected by Facility APE (overhead Collection Line along north side of Mill Creek Rd.).	No poles placed within site boundary. No impacts.

State Site 4	Historic Farmstead	Approximately 10 ft north of Mill Creek Rd., Approximately 1,350 ft west-northwest of Overland Trail Road, approximately 800 ft east-northeast of Mill Creek Rd.	Intersected by Facility APE (overhead Collection Line along north side of Mill Creek Rd.).	No poles placed within site boundary. No impacts.
Tenpas Site 1	Historic Farmstead	Approximately 10 ft southwest of Cleland Rd., approximately 1,150 ft southeast of intersection of Cleland Rd. and Boutwell Hill Rd., approximately 10 ft north of an unnamed east-southeast-trending tributary of Clear Creek.	Not impacted by current layout.	Avoided by Facility design.
Wagner Site 1	Historic/Modern Rubble Mound	Approximately 10 ft west of Chautauqua County Route 77, approximately 2,900 ft north of Mill Creek, approximately 3,450 ft south-southwest of intersection of Route 77 and Cook Rd.	Not impacted by current layout.	Avoided by Facility design.
Williams Site 1	Prehistoric Lithic Scatter	Approximately 275 ft east of Hall Road, approximately 1,550 ft northeast of Mill Creek, approximately 2,400 ft north of intersection of Hall Rd. and Route 77.	Not impacted by current layout.	Avoided by Facility design.
Williams Site 2	Prehistoric Flake	Approximately 150 ft east of Hall Road, approximately 1,900 ft northeast of Mill Creek, approximately 3,200 ft north of intersection of Hall Rd. and Route 77.	Not impacted by current layout.	Avoided by Facility design.

(2) Phase 1A Cultural Resources Study

NYSOPRHP correspondence dated June 24, 2015 requested that a map showing the Area of Potential Effect (or APE) relative to archaeological resources be provided. The APE for archaeological resources includes all areas within the limits of soil disturbance for proposed construction activities. At the time of the request, the layout for the Facility was in the process of being determined, and therefore the precise APE for archaeological resources could not be definitively determined. However, in response to NYSOPRHP's June 24, 2015 request relative to archaeological resources, EDR prepared a *Phase 1A Archaeological Resources Survey & Phase 1B Fieldwork Plan* (see Appendix AA), which was submitted through the CRIS website on August 3, 2015 and is summarized below. The purpose of the Phase 1A archaeological resources survey and work plan was to: 1) define the Facility's area of potential effect (APE) relative to archaeological resources; 2) determine whether previously identified archaeological resources are located in the APE; and, 3) propose a methodology to identify archaeological resources within the APE, evaluate their eligibility for the National Register of Historic Places (NRHP), and assess the potential effect of the Facility on those resources. Following review of this work plan by NYSOPRHP, EDR conducted a Phase 1B archaeological survey, per the methodology described in the work plan. The Phase 1A report was prepared by professionals who satisfy the qualification criteria per the Secretary of the Interior's Standards for archaeology (36 CFR 61) and in accordance with the SHPO Wind Guidelines (NYSOPRHP, 2006)

and applicable portions of NYSOPRHP's *Phase 1 Archaeological Report Format Requirements* (NYSOPRHP, 2005).

Relative to the potential for archaeological sites to be located in the Facility, the results of the Phase 1A archaeological resources survey for the proposed Facility can be summarized as follows:

- There are two previously reported Native American archaeological sites located adjacent to, but outside of, the Facility Site, and more generally there are three additional previously reported Native American archaeological sites located within 1 mile of the Facility. Native American archaeological sites that have been identified in the area typically consist of lithic and ceramic scatters, and villages. In general terms, areas that are not located close to freshwater sources (and associated ecological habitats) are less likely to include pre-contact Native American archaeological sites. Therefore, those portions of the Facility generally located proximate to drainages and/or wetlands should be considered as having a relatively higher potential for the presence of prehistoric Native American archaeological resources.
- One previously reported historic archaeological site is located adjacent to, but outside of, the Facility Site and five previously reported historic archaeological sites occur within 1 mile of the Facility site. Historic maps (see Figures 7-10 of the appended Phase 1A report) identify the locations of farmsteads and other potential historic-period archaeological sites within the Facility site; archaeological resources associated with these sites could include foundations, structural remains, artifact scatters, and/or other features. The sensitivity for historic period archaeological remains is considered to be high within close proximity to these map-documented structures and low for the rest of the Facility site.

In addition, the Phase 1A report acknowledges that proposed construction of the Facility will include ground disturbing activities that have the potential to impact archaeological resources. The APE for archaeological resources includes all areas of soil disturbance associated with proposed turbine pad and assembly areas, access roads, buried and overhead collection lines, overhead transmission lines, laydown and staging areas, operations and maintenance facilities, and substations. Any archaeological sites located within the Facility site but that are not within the limits of disturbance for the proposed Facility will not be affected by the Facility.

The completed *Phase 1A Archaeological Resources Survey & Phase 1B Fieldwork Plan* was submitted to NYSOPRHP for review on August 3, 2015 and is included as Appendix AA to this Application. NYSOPRHP responded to EDR's *Phase 1A Archaeological Resources Survey & Phase 1B Fieldwork Plan* on September 17, 2015, stating that "the OPRHP concurs with the Phase 1B archaeological work scope and looks forward to reviewing the results of the Phase 1B testing" (Herter, 2015).

(3) Phase 1B Cultural Resources Study

A Phase 1B Archaeological Survey was conducted to determine whether archeological sites were located in the areas of proposed ground disturbance for the Facility. The Phase 1B survey was conducted under the supervision of a RPA in a manner consistent with the *SHPO Wind Guidelines*. The Phase 1B report has been prepared in accordance with NYSOPRHP's *Phase 1 Archeological Report Format Requirements* (NYSOPRHP, 2005).

As indicated above, the scope and methodology for the Phase 1B Archaeological Survey was proposed in the *Phase 1A Archaeological Resources Survey & Phase 1B Fieldwork Plan*, which was submitted to NYSOPRHP on August 3, 2015, and approved on September 17, 2015 (Herter, 2015). The *SHPO Wind Guidelines* suggest following the approach detailed in *Archeological Investigations in the Upper Susquehanna Valley, New York State* (Funk, 1993a, 1993b) in the design of archaeological surveys for wind projects. The approach involves identification of broad environmental zones with local habitat (or landscape class) subdivisions. The archaeological survey subsequently includes intensive sampling of selected areas within each of the identified landscape classes, rather than undertaking an even distribution of sampling throughout the APE. Following this approach, EDR used Geographic Information System (GIS) software to identify landscape classes within the Cassadaga Wind Facility site and proposed an archaeological sampling strategy. The *Phase 1A Archaeological Resources Survey & Phase 1B Fieldwork Plan* summarizes the methodology used for the GIS analysis and presents the landscape classification analysis in tabular and graphical formats.

The primary methods used during the archeological survey included pedestrian surface surveys (in active agricultural settings where ground-surface visibility was greater than 80%); the excavation of shovel tests (in hayfields, forest, and shrubland areas); and pedestrian reconnaissance (in steeply sloped areas). The locations of areas selected for intensive archaeological sampling within the archaeological APE were determined in the field using professional judgment under the direction of a RPA. Areas where proposed Facility components are located in proximity to structures that are depicted on historic maps of the area were prioritized during the selection of areas for shovel testing, as were areas deemed to have high sensitivity for prehistoric archaeological materials. These latter included flat areas of well-drained soils in close proximity to perennial streams or large wetlands.

Based on the current design, the Facility's archaeological APE is 455.6 acres in size. Please note that, at the time the Phase 1B survey was conducted, the archaeological APE was approximately 498 acres.

Based on the Facility design at the time of the Phase 1B survey, the archaeological survey for the Cassadaga Wind Facility included:

- The excavation of 3,853 shovel tests and the pedestrian surface survey of 174.7 acres located within agricultural fields.
- The Phase 1B archaeological survey report submitted to NYSOPRHP via the CRIS website, and prepared in accordance with NYSOPRHP's *Phase 1 Archaeological Report Format Requirements* (NYSOPRHP, 2005). The report is included in this Application as Appendix BB.
- Information pertaining to archaeological resources identified during the Phase 1B survey will be submitted electronically along with the report via the CRIS website.

The completed Phase 1B Archaeological Survey Report is included here as part of the Article 10 Application and was submitted through the NYSOPRHP's online CRIS system on April 22, 2016. NYSOPRHP responded to the Phase 1B Survey Report submission on April 25, 2016 stating:

"the OPRHP has no further archaeology concerns with this project with the condition that the mapped locations of all identified archaeological sites within 100 ft (31 meters) of proposed project related impacts are identified as "Environmentally Sensitive Areas" on project construction maps, and marked in the field by construction fencing with sign [sic] that restrict access." (Herter, 2016)."

As previously noted, the Phase 1B survey resulted in the identification of six prehistoric-period archaeological sites and 10 historic-period archaeological sites. The Facility layout is being intentionally sited to avoid archaeological resources so no Phase 2 site investigations are anticipated to be necessary. The proposed Facility is not currently anticipated to affect any significant archaeological resources.

(4) Phase 2 Study

If recommended avoidance measures (e.g., such as removing or re-locating Facility components away from identified archaeological sites) are insufficient to avoid impacts, a Phase 2 study may be conducted to assess the boundaries, integrity and significance of cultural resources identified during the Phase 1B archaeological survey. If warranted based on Phase 1B study results, as determined in consultation with NYSOPRHP, any necessary Phase 2 studies would be designed to obtain detailed information on the integrity, limits, structure, function, and cultural/historic context of an archaeological site, as feasible, sufficient to evaluate its potential eligibility for listing on the State or National Register of Historic Places (S/NRHP). The need for and scope of work for such

investigations would be determined in consultation with NYSOPRHP and DPS upon completion and review of the Phase 1B survey report.

At this time, no adverse impacts to S/NRHP-eligible archaeological sites are anticipated and, therefore, no Phase 2 Study will be required.

(5) Archaeological Material Recovered During Cultural Resources Studies

EDR collected a total 325 historic-period artifacts during the Phase 1B archaeological survey. Two-hundred and forty-two historic artifacts were collected from shovel tests and 83 were collected from the ground surface. In some cases, isolated non-diagnostic artifacts in shovel tests or on the surface were observed and noted but not collected. At sites with a surface component, all clearly diagnostic artifacts, and a representative sample of other artifacts were collected but the entire surface assemblage was not collected. One-hundred and fifty-four of the historic artifacts collected from STPs occurred at or near MDS locations and 59 of the artifacts collected via surface collection were at or near MDS locations.

Additionally, EDR collected a total of 9 prehistoric (Native American) artifacts during the Phase 1B archaeological survey. Five of the prehistoric artifacts were collected from shovel tests and four were collected from the ground surface. All prehistoric artifacts encountered during the Phase 1B survey were collected.

When artifacts were collected in the field, EDR archaeologists recorded standard provenience information and collected each artifact in sealed plastic bags per standard archaeological field practices. All recovered materials were washed, dried, and cataloged per standard archaeological laboratory procedures. Recovered artifacts were described to a level of detail sufficient to prepare an artifact inventory for inclusion in the Phase 1B archaeological report, which includes descriptions of each artifact's material, temporal or cultural/chronological associations (when possible to ascertain), style, and function. In addition, a selection of representative artifacts was photographed for inclusion in the report. Complete photographic documentation of all the collected artifacts was not conducted. The Applicant understands that all artifacts recovered during this contract are the property of the land owner from which the artifacts were recovered. The Applicant also anticipates that the Facility's cultural resources consultant will curate any recovered artifacts in a manner consistent with professional standards. If appropriate, the consultant may identify local repositories (such as local historical societies or archaeological museums) for disposition of recovered artifacts. Collected artifacts have been processed in a manner consistent with professional standards, such as the New York Archaeological Council's (NYAC) *Standards for Cultural Resource Investigations and Curation of Archaeological Collections in New York State* (NYAC, 1994; the NYAC *Standards*).

A complete listing of all recovered artifacts is included in the Phase 1B Archaeological Survey Report, included with this Application as Appendix BB.

(6) Unanticipated Discovery Plan

The Article 10 Application includes an Unanticipated Discovery Plan (see Appendix CC) that identifies the actions to be taken in the unexpected event that resources of cultural, historical, or archaeological importance are encountered during Facility construction. The plan includes a provision for work stoppage upon the discovery of possible archaeological or human remains. Evaluation of such discoveries, if warranted, will be conducted by a professional archaeologist, qualified according to the NYAC *Standards*. The Unanticipated Discovery Plan specifies the degree to which the methodology used to assess any discoveries follows the NYAC *Standards*.

(b) Historic Resources

(1) A complete Historic Architectural Survey

NYSOPRHP correspondence dated June 24, 2015 requested that a historic architectural resources survey be conducted for the Facility. In response, a *Phase 1A Historic Architectural Resources Survey & Work Plan* (see Appendix DD) was prepared and submitted through the CRIS website on July 10, 2015. The purpose of the Phase 1A Historic Architectural Resources Survey Report and Work Plan was to define the Facility's APE relative to historic architectural resources; determine whether previously identified historic architectural resources were located in the APE; and propose a methodology to identify historic architectural resources within the APE, evaluate their eligibility for the National Register of Historic Places (NRHP), and assess the potential effect of the Facility on those resources. In a letter dated August 10, 2015, the NYSOPRHP concurred with the recommendations set forth in the work plan, stating "Based upon this review, OPRHP concurs with EDR's delineation of the Area of Potential Effect (APE) and Study Area, and with the methodology outlined in the historic resources survey work plan...Please continue your consultation with this office as the project advances." (See Appendix DD for a copy of the OPRHP Letter). On April 20, 2016, EDR submitted a historic architectural resources survey report to NYSOPRHP through the online CRIS system (see Appendix EE for the report). The report is currently under review by NYSOPRHP.

Area of Potential Effect Relative to Historic Architectural Resources

The Facility will have no physical impacts to historic architectural resources (i.e., no historic structures will be damaged or removed). The Facility's potential effect on a given historic property would be a change (resulting from the

introduction of wind turbines) in the property's visual setting. Therefore, the APE for visual effects on historic resources must include those areas where Facility components (including wind turbines) will be visible and where there is a potential for a significant visual effect. Per the requirements set forth in 16 NYCRR § 1000.2(ar), the study area to be used for analysis of major electric generating facilities is defined as:

(ar) Study Area: an area generally related to the nature of the technology and the setting of the proposed site. For large facilities or wind power facilities with components spread across a rural landscape, the study area shall generally include the area within a radius of at least five miles from all generating facility components, interconnections and related facilities and alternative location sites. For facilities in areas of significant resource concerns, the size of a study area shall be configured to address specific features or resource issues.

Per the *SHPO Wind Guidelines*, the APE for visual impacts on historic properties for wind projects is defined as those areas within 5 miles of proposed turbines which are within the potential viewshed (based on topography) of a given project (NYSOPRHP, 2006). The five-mile-radius study area for the Facility includes all of the Town of Charlotte and parts of the Towns of Pomfret, Arkwright, Villenova, Stockton, Cherry Creek, Ellery, Gerry, and Ellington in Chautauqua County, and the Towns of Dayton, Leon, and Conewango in Cattaraugus County (see Figure 3 of historic architecture report included as Appendix EE).

The Facility's APE relative to historic-architectural resources includes the areas of potential Facility visibility based on the topographic viewshed located within 5 miles of the Facility, as shown in Figure 4 of the historic architecture report (Appendix EE). This area represents a conservative, "worst case" assessment of potential Facility visibility. It is worth noting that the preliminary viewshed analysis included in the Phase 1A historic architectural survey and work plan was based on a preliminary Facility layout of 70 turbines, which was reduced during the development and permitting of the Facility.

Following the submission of the Phase 1A historic architectural resources survey and work plan, the Facility layout was revised to only include up to 58 turbines. It was noted in the work plan prepared by EDR that the Facility's APE relative to historic-architectural resources may be revised in association with subsequent layout changes during the permitting process, and that Facility changes were likely to result in a reduction in the size of the APE. Therefore, the historic architectural resources survey summarized herein was conducted within the reduced APE for the Facility.

Previously Identified Historic Architectural Resources Located in the Area of Potential Effect

EDR reviewed the CRIS website maintained by NYSOPRHP to identify significant historic buildings and/or districts located within five miles of the Facility. Previously identified historic architectural resources (Figure 3 in the historic architecture report; Appendix EE) are those historic architectural resources identified during the 2009 architectural

survey conducted in support of the Arkwright Summit Wind Farm (Tetra Tech, 2009), as well as those resources identified through review of the Facility APE using the CRIS database. There are no properties listed on the National Register of Historic Places (NRHP), 63 properties determined eligible for listing on the NRHP, and 10 properties whose NRHP eligibility is currently undetermined within five miles of the Facility (see Table 20-2).² Of the NRHP-eligible properties within the Facility study area, 33 were surveyed as part of the 2009 Arkwright Summit *5-Mile Ring Study* (Tetra Tech, 2009), and 30 were identified using the CRIS database. All of the properties within the Facility study area whose NRHP eligibility is currently undetermined were identified using the CRIS database.

Table 20-2. Previously Recorded Historic Resources Located in the Vicinity of the Facility

USN	Name	Address	NRHP Eligibility Determination (NYSOPRHP)	Located Within Cassadaga Wind Facility Study Area
00906.000091	Residence (c. 1930), 27 Cherry Street	27 Cherry St., Dayton, NY	NRHP-Eligible	X
00917.000028	Residence, 6658 West Road	6658 West Rd., Leon, NY	NRHP-Eligible	X
00954.000007	Corkwell's Garage, 107 Pine Street	107 Pine St., South Dayton, NY	NRHP-Eligible	X
00954.000035	Commercial (c. 1877), 1 Park Street	1 Park St., South Dayton, NY	NRHP-Eligible	X
00954.000036	Wilson Hale & Co./ Post Office (c. 1877), 5 Park Street	5 Park St., South Dayton, NY	NRHP-Eligible	X
00954.000037	County Bank (c. 1920), 7 Park Street	7 Park St., South Dayton, NY	NRHP-Eligible	X
00954.000038	Commercial (c. 1900), 9 Park Street	9 Park St., South Dayton, NY	NRHP-Eligible	X
00954.000039	Commercial (c. 1890), 11 Park Street	11 Park St., South Dayton, NY	NRHP-Eligible	X
00954.000040	Commercial (c. 1910), 13 Park Street	13 Park St., South Dayton, NY	NRHP-Eligible	X
00954.000041	Commercial (c. 1900), 15 Park Street	15 Park St., South Dayton, NY	NRHP-Eligible	X
00954.000044	The Valley House/South Dayton Hotel (c. 1877), 203 Pine Street	203 Pine St., South Dayton, NY	NRHP-Eligible	X
00954.000045	Commercial (c. 1930), 205 Pine Street	205 Pine St., South Dayton, NY	NRHP-Eligible	X
00954.000046	Commercial (c. 1900), 207 Pine Street	207 Pine St., South Dayton, NY	NRHP-Eligible	X
00954.000050	Residence (c. 1860), 62 Main Street	62 Main St., South Dayton, NY	NRHP-Eligible	X
00954.000051	Residence (c. 1890), 203 Maple Street	203 Maple, South Dayton, NY	NRHP-Eligible	X
00954.000052	Residence (c. 1910), 212-214 Maple Street	212/214 Maple St., South Dayton, NY	NRHP-Eligible	X

² The Phase 1A Historic Architectural Resources Survey and Work Plan identified two properties listed on the National Register of Historic Places (NRHP), 67 properties determined eligible for listing on the NRHP, and 15 properties whose NRHP eligibility is currently undetermined within five miles of the Project. However, the reduction in the Project APE and study area as described above has resulted in a reduced number of previously identified historic resources within the Project study area.

USN	Name	Address	NRHP Eligibility Determination (NYSOPRHP)	Located Within Cassadaga Wind Facility Study Area
00954.000054	Residence (c. 1860), 227 Oak Street	227 Oak St, South Dayton, NY	NRHP-Eligible	X
00954.000055	Sears Farmhouse & Complex (c. 1920), 8143 Oaks Road	8143 Oaks Rd., South Dayton, NY	NRHP-Eligible	X
00954.000057	Residence (c. 1910), 309 Pine Street	309 Pine St., South Dayton, NY	NRHP-Eligible	X
00954.000059	Residence (c. 1900), 312 Pine Street	312 Pine St., South Dayton, NY	NRHP-Eligible	X
00954.000060	Residence (c. 1890). 319 Pine Street	319 Pine St., South Dayton, NY	NRHP-Eligible	X
00954.000061	Commercial (c. 1920), 413 Pine Street	413 Pine St., South Dayton, NY	NRHP-Eligible	X
01301.000022	Residence (c.1847), 8129 Griswold Road	8129 Griswold Road, Arkwright, NY	NRHP-Eligible	
01301.000023	Rose Farm (c. 1870), 1936 Rutenbur Road	1936 Rutenbur Road, Arkwright, NY	NRHP-Eligible	
01301.000024	Arkwright Grange (c. 1900), 2667 Route 83	2667 Route 83, Arkwright, NY	NRHP-Eligible	
01301.000027	Farm Complex (c. 1870), 2083 NY 83	2083 NY 83 Arkwright, NY	NRHP-Eligible	
01301.000029	Christian Cemetery, Corner of Shumla and Tarbox Roads	Corner of Shumla and Tarbox Roads, Arkwright, NY	NRHP-Eligible	
01301.000030	Residence (c. 1840), 2151 Bard Road	2151 Bard Road, Arkwright, NY	NRHP-Eligible	
01301.000031	Residence (c. 1880), 2391 Bard Road	2391 Bard Road, Arkwright, NY	NRHP-Eligible	
01301.000032	Burnham Hollow Cemetery, Bard Road	Bard Road, Arkwright, NY	NRHP-Eligible	
01301.000033	Farmstead (c. 1850), 8903 Farrington Hollow Road	8903 Farrington Hollow Road, Arkwright, NY	NRHP-Eligible	
01301.000034	Arkwright Summit Cemetery, Farrington Hollow Road	Farrington Hollow Road, Arkwright, NY	NRHP-Eligible	
01301.000037	Cowdens Corner Cemetery, Route 83 and Miller Road	Route 83 and Miller Road, Arkwright, NY	NRHP-Eligible	
01304.002062	Pickett Cemetery, Corner of Smith Road and County Route 75	Smith Road and County Route 75, Arkwright, NY	NRHP-Eligible	
01304.002063	Luce Hill Cemetery, N Hill Road	N Hill Road, Charlotte, NY	NRHP-Eligible	
01304.002064	Residence (c. 1875), 2726 Hooker Road	2726 Hooker Road, Charlotte, NY	NRHP-Eligible	
01304.002065	Charlotte Center Cemetery, Charlotte Center Road	Charlotte Center Road, Charlotte, NY	NRHP-Eligible	
01304.002066	Charlotte Center Church, 6956 Charlotte Center Road	6956 Charlotte Center Road, Charlotte, NY	NRHP-Eligible	
01304.002067	Farmstead (c. 1865-1890), 6749 Charlotte Center Road	6749 Charlotte Center Road, Charlotte, NY	NRHP-Eligible	
01311.000043	Farman Free Library, 760 Thornton Road	760 Thornton Rd., Ellington, NY	NRHP-Eligible	X

USN	Name	Address	NRHP Eligibility Determination (NYSOPRHP)	Located Within Cassadaga Wind Facility Study Area
01311.000057	Residence, 812 West Main Street	812 West Main St., Ellington, NY	NRHP-Eligible	X
01311.000089	Residence, 4980 Route 62	4980 Rte. 62, Ellington, NY	NRHP-Eligible	X
01325.000087	Residence, 7255 CR 380	7255 CR 380, Stockton, NY	NRHP-Eligible	X
01326.000041	Residence (c. 1840), 1141 NY 83	1141 NY 83, Villenova, NY	NRHP-Eligible	
01326.000067	Farm Complex (c. 1920), 8025 NY 83	8025 NY 83, Villenova, NY	NRHP-Eligible	
01326.000068	Farm Complex (c. 1860), 8562 NY 83	8562 NY 83, Villenova, NY	NRHP-Eligible	
01326.000070	Farm Complex (c. 1830), 307 Philips Road	307 Philips Rd., Villenova	NRHP-Eligible	
01326.000075	Villenova Grange Hall/South Dayton Grange Hall, 1150 NY 83	1150 NY 83, Villenova, NY	NRHP-Eligible	
01326.000080	Residence (c. 1865-1890), 1394 Route 83	1394 Route 83, Villenova, NY	NRHP-Eligible	
01326.000081	Hamlet Cemetery, South side of Route 83	South side of Route 83, Villenova, NY	NRHP-Eligible	
01326.000083	Independent Order of Odd Fellows Lodge (c. 1890), 1112 Route 83	1112 Route 83, Villenova, NY	NRHP-Eligible	
01326.000084	Hamlet United Methodist Church (c. 1875), 1119 Route 83	1119 Route 83, Villenova, NY	NRHP-Eligible	
01326.000085	School/Residence (c. 1881), 8520 School Street	8520 School Street, Villenova, NY	NRHP-Eligible	
01326.000086	Residence (c. 1840-1865), 691 Route 83	691 Route 83, Villenova, NY	NRHP-Eligible	
01326.000087	Villenova Cemetery, Cemetery Road	Cemetery Road, Villenova, NY	NRHP-Eligible	
01349.000015	Residence (c. 1910), 8999 Glasgow Road	8999 Glasgow Road, Pomfret, NY	NRHP-Eligible	
01349.000016	Residence (c. 1865), 60 North Main Street	60 North Main Street, Cassadaga, NY	NRHP-Eligible	X
01349.000017	Residence (c. 1890-1920), 31 North Main Street	31 North Main Street, Cassadaga, NY	NRHP-Eligible	X
01349.000018	Residence (c. 1860), 35 North Main Street	35 North Main Street, Cassadaga, NY	NRHP-Eligible	X
01349.000019	Residence (c. 1900), 60 High Street	60 High Street, Cassadaga, NY	NRHP-Eligible	
01351.000004	Bungalow, 6689 Main Street	6689 Main Street, Cherry Creek, NY	NRHP-Eligible	X
01351.000005	Bungalow, 6687 Main Street	6687 Main Street, Cherry Creek, NY	NRHP-Eligible	X
01351.000006	Former Electric Light Station, 6676 Main Street	6676 Main Street, Cherry Creek, NY	NRHP-Eligible	X
00905.000009	Conewango Bridge No. 6, Cowens Corners Road	Cowens Corners Rd, Conewango, NY	NRHP-Undetermined	X
01311.000015	Residence, 25 Elm Street	25 Elm St., Ellington, NY	NRHP-Undetermined	X

USN	Name	Address	NRHP Eligibility Determination (NYSOPRHP)	Located Within Cassadaga Wind Facility Study Area
01311.000039	Legacy Farms, 5274 North Hill Road	5274 North Hill Rd, Ellington, NY	NRHP-Undetermined	X
01311.000040	Champlin Farmstead, 5469 North Hill Road	5469 North Hill Rd., Ellington, NY	NRHP-Undetermined	X
01313.000027	Residence, 3058 Terry Road	3058 Terry Rd., Gerry, NY	NRHP-Undetermined	X
01320.000020	Chautauqua County Bridge #993 (BIN 3325430)	Dale Drive, Pomfret, NY	NRHP-Undetermined	X
01325.000081	Rowley Residence, 4194 Bruyer Road	4194 Bruyer Road., Stockton, NY	NRHP-Undetermined	X
01349.000001	Denny Mansion, 91 Frisbee Road	91 Frisbee Rd., Cassadaga, NY	NRHP-Undetermined	X
01349.000002	Sahloff Residence, 114 Dale Drive	114 Dale Drive, Cassadaga, NY	NRHP-Undetermined	X
01349.000003	Fern Island House, 209 Dale Drive	209 Dale Drive, Cassadaga, NY	NRHP-Undetermined	X

The NRHP-Eligible properties within the historic architectural study area include residences, churches, cemeteries, fraternal and agricultural society buildings, and commercial structures. Numerous nineteenth- and early-twentieth-century structures (primarily residences and farmsteads) are located within the study area that have not been previously evaluated by NYSOPRHP to determine if they are NRHP-eligible. These types of resources are typically determined NRHP-eligible under NRHP Criterion C (i.e., they “embody the distinctive characteristics of a type, period, or method of construction” [CFR, 2004]), and often derive their significance from being representative examples of vernacular nineteenth-century architectural styles that retain their overall integrity of design and materials. Within the study area, many nineteenth-century farmhouses were originally Greek Revival or Italianate-inspired vernacular interpretations of these styles with modest details or ornamentation, with some pockets of Gothic Revival-inspired houses. The architectural integrity of historic resources throughout the five-mile radius study area is highly variable, with many showing noticeable alteration, or deterioration due to the elements.

Methodology to Identify Historic Architectural Resources and Assess Potential Effects of the Facility

Historically significant properties are defined herein to include buildings, districts, objects, structures and/or sites that have been listed on the NRHP, as well as those properties that NYSOPRHP has formally determined are eligible for listing on the NRHP. Criteria set forth by the National Park Service for evaluating historic properties (36 CFR 60.4) state that (per CFR, 2004; NPS, 1990):

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- (A) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (B) that are associated with the lives of persons significant in our past; or
- (C) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (D) that have yielded, or may be likely to yield, information important in prehistory or history.

Although a review of CRIS has identified the presence of a number of properties previously determined NRHP-eligible, several nineteenth- and early-twentieth-century structures (primarily residences and farmsteads) are located within and immediately adjacent to the study area that have not been previously evaluated by NYSOPRHP to determine if they are NRHP-eligible. These types of resources are typically determined NRHP-eligible under NRHP Criterion C (i.e., they “embody the distinctive characteristics of a type, period, or method of construction” [CFR, 2004]), and often derive their significance from being representative examples of vernacular nineteenth-century architectural styles that retain their overall integrity of design and materials. The architectural integrity of historic resources throughout the five-mile radius study area is highly variable, with many showing noticeable alteration to materials and form, therefore compromising their potential historic integrity and NRHP eligibility.

The historic resources survey included review of previous historic-architectural surveys within the study area (described above in Section 2.2 of the appended report), consultation with NYSOPRHP (described above in Section 1.3 of the appended report), site visits to identify and evaluate potential historic resources within the study area, and supplemental research on specific historic properties (as necessary) (see Appendix EE).

Historic resources survey fieldwork included systematically driving all public roads within the study area to photograph and evaluate the NRHP-eligibility of previously surveyed structures and properties within the study area. When sites that were not previously surveyed and that appeared to satisfy NRHP-eligibility criteria were identified, the existing conditions of the property were documented by EDR’s architectural historian. This included 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. EDR’s evaluation of historic resources within the study area focused on the physical condition and integrity (with respect to design, materials, feeling, and association) to assess the potential architectural significance of each resource. Note that all properties included in the historic resources survey were photographed and assessed from public rights of way. The condition and integrity of all resources were evaluated based solely on

the visible exterior of the structures. No inspections or evaluations requiring access to the interior of buildings, or any portion of private property, were conducted as part of this assessment.

In accordance with the *SHPO Wind Guidelines*, and based on consultation with NYSOPRHP (described in Section 1.3 of the historic architecture report; Appendix EE), buildings that are not sufficiently old (i.e., are less than 50 years in age), that lack architectural integrity, or otherwise were evaluated by EDR's architectural historian as lacking historical or architectural significance were *not* included in or documented during the survey. In addition, NYSOPRHP confirmed in its August 10, 2015 correspondence (Pierpont, 2015) that no additional documentation of properties located within the area previously surveyed for the Arkwright Summit Wind Farm would be necessary.

The completed Historic Architectural Survey Report is being submitted as part of this Article 10 Application and will be uploaded to NYSOPRHP through the CRIS system.

- (2) A summary of the nature of the probable impact of Facility construction and operation on any historic resources.

Construction of the Facility will not require the demolition or physical alteration of any buildings or other potential historic resources. No direct physical impacts to historic-architectural resources will occur as a result of the Facility.

The Facility's potential effect on historic resources would be a change (resulting from the introduction of wind turbines) in the visual setting associated with a given historic resource. The potential effect of the Facility on the visual setting associated with historic resources is highly variable, and is dependent on a number of factors including the distance to the project, the number of visible turbines, the extent to which the Facility is screened or partially screened by buildings, trees, or other objects, and the amount of existing visual clutter and/or modern intrusions in the view. It is also worth noting that visual setting may or may not be an important factor contributing to a given property's historical significance. Scenic views and/or association with the landscape are not specifically identified as contributing to the significance of any of the historic resources in the study area.

In general, the scale and character of the wind turbines will result in a more significant effect on the setting associated with historic resources located in close proximity to the Project (i.e., within approximately two miles) and will generally result in less significant effects on properties where the turbines are features in the distant mid-ground or background of the view. Visual simulations included in Section 3.4 of the historic architecture report (Appendix EE) illustrate the potential visual effect of the turbines at various distances and from representative visual settings within the APE.

Consideration of the screening effects of both topography and mapped forest vegetation in the viewshed analyses (i.e., the vegetation viewshed analysis) indicates that views of the Project will be completely screened from 67 of the 154 properties within the APE recommended by EDR to be NRHP-eligible. However, the vegetation viewshed analysis does not take into account screening that would be provided by buildings, street trees, yard vegetation, or other objects that could screen views of the Facility from many locations (especially in urban, village, and hamlet settings). In addition, characteristics of the proposed turbines that influence visibility (color, narrow profile, distance from viewer, etc.), are not taken consideration in the viewshed analyses, so actual visibility of the Facility is expected to be significantly less than indicated by viewshed mapping.

There are 44 properties that EDR is recommending are NRHP-eligible located between 0.5-mile and two miles from the Facility (i.e., where the Facility, if visible, would be a feature in the near mid-ground of the view of and from these resources). Views of the turbines will be completely screened from ten of these historic resources. The potential visual effect of the Facility on the setting associated with these properties is greater relative to other resources in the APE due to the proximity and perceived scale of the turbines. However, the actual visibility of the Facility from these resources varies in terms of the number of turbines potentially visible and the extent of existing screening present at each site. In general, the visual effect of the Facility will be more significant from locations with open views of the Facility. In general, open views towards the Facility are less frequent in developed areas due to the extent of screening provided by existing buildings, vegetation, and other objects. In these areas, views of the Facility will be limited to occasional, partially screened view where portions of single (or relatively few) turbines (or turbine blades) will be visible in the gaps between existing buildings and yard vegetation.

More distant mid-ground views of the Facility (i.e., between two and 3.5 miles) will be potentially available from eight NRHP-eligible historic resources. Views of the Facility will be completely screened from three of these eight properties. The potential effect of the Facility on the visual setting associated with the other five resources located between two and 3.5 miles from the turbines resources will generally be less than for resources located closer to the Facility.

Table 20-3. Historic Resources Survey Results and Visual Effects Analysis

Survey ID	Address, Property Name and/or Description	Municipality	County	USN	NRHP-Eligibility Recommendation (EDR)	Distance to Nearest Turbine	Number of Turbines Potentially Visible
1	Chautauqua County Bridge #993 - Glasgow Road Over Cassadaga Lake	Town of Pomfret	Chautauqua County	1320.000020	EDR Recommended Not NRHP-Eligible	4.2	0
2	Leolyn Inn - 4065 Dale Road (Lily Dale Spiritualist Assembly)	Town of Pomfret	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.1	0
3	Gate and Gatehouse - Dale Drive (Lily Dale Spiritualist Assembly)	Town of Pomfret	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.1	0
4	Marion Skidmore Library - Cottage Row (Lily Dale Spiritualist Assembly)	Town of Pomfret	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.2	0
5	Lily Dale Auditorium - Cottage Row (Lily Dale Spiritualist Assembly)	Town of Pomfret	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.1	0
6	Maplewood Inn - Cleveland Avenue (Lily Dale Spiritualist Assembly)	Town of Pomfret	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.1	0
7	Assembly Hall - Cleveland Avenue (Lily Dale Spiritualist Assembly)	Town of Pomfret	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.1	0
8	Forest Temple - East side of Boulevard (Lily Dale Spiritualist Assembly)	Town of Pomfret	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.0	0
9	Pomfret School #6 - Library Street (Lily Dale Spiritualist Assembly)	Town of Pomfret	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.0	0
10	Spiritualist Church - East Street (Lily Dale Spiritualist Assembly)	Town of Pomfret	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.0	0
11	A.J. Davis Memorial Lyceum - East Street (Lily Dale Spiritualist Assembly)	Town of Pomfret	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.0	0
12	Morris Pratt Institute - Cleveland Avenue (Lily Dale Spiritualist Assembly)	Town of Pomfret	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.1	0
13	Inspiration Stump - Leolyn Woods (Lily Dale Spiritualist Assembly)	Town of Pomfret	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.9	0
14	Denny Mansion - 91 Frisbee Road	Village of Cassadaga	Chautauqua County	1349.000001	EDR Recommended NRHP-Eligible	4.3	0
15	71 Frisbee Road	Village of Cassadaga	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.3	31

Survey ID	Address, Property Name and/or Description	Municipality	County	USN	NRHP-Eligibility Recommendation (EDR)	Distance to Nearest Turbine	Number of Turbines Potentially Visible
16	Fern Island House - 209 Dale Drive	Village of Cassadaga	Chautauqua County	1349.000003	EDR Recommended Not NRHP-Eligible	3.9	0
17	Sahloff Residence - 114 Dale Drive	Village of Cassadaga	Chautauqua County	1349.000002	EDR Recommended NRHP-Eligible	3.7	13
18	121 Maple Avenue	Village of Cassadaga	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.6	0
19	72 Lakeview Avenue	Village of Cassadaga	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.7	0
20	170 Maple Avenue	Village of Cassadaga	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.7	18
21	Cassadaga Cemetery - 201 Maple Avenue	Village of Cassadaga	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.7	11
22	255 Maple Avenue	Village of Cassadaga	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.7	0
23	7561 Bowen Road	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	5.7	0
24	7350 North Main Street/County Route 380	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.6	0
25	Memorial Free Library - 7344 North Main Street/County Route 380	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.6	0
26	7343 North Main Street/County Route 380	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.6	0
27	7340 North Main Street/County Route 380	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.6	0
28	7325 North Main Street/County Route 380	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.5	0
29	7326 North Main Street/County Route 380	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.5	0
30	7293 North Main Street/County Route 380	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.5	0
31	4499 West Railroad Avenue/County Route 58	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.4	0

Survey ID	Address, Property Name and/or Description	Municipality	County	USN	NRHP-Eligibility Recommendation (EDR)	Distance to Nearest Turbine	Number of Turbines Potentially Visible
32	4513 West Railroad Avenue/County Route 58	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.5	0
33	7255 North Main Street/County Route 380	Town of Stockton	Chautauqua County	1325.000087	EDR Recommended NRHP-Eligible	4.4	0
34	7333 Mill Street	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.8	0
35	4604 West Railroad Avenue/County Route 58	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.7	0
36	Evergreen Cemetery - South side of West Railroad Avenue/County Route 58	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.7	0
37	4630 West Railroad Avenue/County Route 58	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.7	0
38	Stockton Greenwood Cemetery - South side of Cemetery Road	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.6	0
39	7031 Barnes Road	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.8	7
40	Rowley Residence - 4194 Bruyer Road	Town of Stockton	Chautauqua County	1325.000081	EDR Recommended not NRHP-Eligible	3.2	0
41	Charlotte District No. 10 Schoolhouse - North side of Moon Road	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.1	0
42	3607 Moon Road	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.1	0
43	4784 County Route 54	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	5.4	0
44	Union Cemetery - South side of County Route 54	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.4	0
45	5592 County Route 380	Town of Stockton	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.4	0
46	5395 Harvey Road	Town of Ellery	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.6	33
47	Redbird Cemetery - East side of County Route 380	Town of Ellery	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.7	11

Survey ID	Address, Property Name and/or Description	Municipality	County	USN	NRHP-Eligibility Recommendation (EDR)	Distance to Nearest Turbine	Number of Turbines Potentially Visible
48	5332 County Route 66	Town of Ellery	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.8	34
49	Hemenger Cemetery - West side of State Route 60	Town of Gerry	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.7	8
50	3058 Terry Road	Town of Gerry	Chautauqua County	1313.000027	EDR Recommended Not NRHP-Eligible	3.7	6
51	5088 Damon Hill Road	Town of Gerry	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.3	0
52	Gerry Hill Cemetery - South side of County Route 50	Town of Gerry	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.9	0
53	Chautauqua-Applegreen Cemetery - North side of Old Chautauqua Road	Town of Gerry	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.7	0
54	3016 Old Chautauqua Road	Town of Gerry	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	2.4	12
55	50 Sinclair Drive	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.8	1
56	52 Sinclair Drive	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.8	6
57	Cassadaga Valley Middle & High School - 5935 State Route 60	Town of Gerry	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.9	9
58	6866 Nelson Hill Road/County Route 75	Town of Charlotte	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	0.4	18
59	Evergreen Cemetery - West side of Park Street/County Route 77	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.1	2
60	17 Water Street/County Route 75	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.0	0
61	2 Sinclair Drive	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.3	0
62	17 Jamestown Street/County Route 77	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.4	5
63	18 Maple Street	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.4	2

Survey ID	Address, Property Name and/or Description	Municipality	County	USN	NRHP-Eligibility Recommendation (EDR)	Distance to Nearest Turbine	Number of Turbines Potentially Visible
64	34 Main Street/County Route 49	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.3	10
65	Valley Historical Society - 36 Main Street/County Route 49	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.3	9
66	Samaritan House - 2 East Avenue	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.4	15
67	4 Parkway Drive	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.4	14
68	8 Parkway Drive	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.3	14
69	Village of Sinclairville Park	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.3	14
70	17 East Avenue/County Route 64	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.4	0
71	22 East Avenue/County Route 64	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.5	0
72	26 East Avenue/County Route 64	Village of Sinclairville	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.5	1
73	Richmond Cemetery - South side of Edson Road/County Route 64	Town of Charlotte	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	2.1	8
74	John Luce Cemetery - North side of Thornton Road/County Route 66	Town of Charlotte	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	2.0	5
75	307 Phillips Road	Town of Villenova	Chautauqua County	1326.000070	EDR Recommended NRHP-Eligible	4.2	47
76	8606 South Dayton-Silver Creek Road	Town of Villenova	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.6	47
77	8474 South Dayton-Silver Creek Road	Town of Villenova	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.4	46
78	7037 North Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.6	10
79	6956 North Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.6	20

Survey ID	Address, Property Name and/or Description	Municipality	County	USN	NRHP-Eligibility Recommendation (EDR)	Distance to Nearest Turbine	Number of Turbines Potentially Visible
80	6860 North Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.7	6
81	6853 North Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.7	3
82	6820 North Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.8	11
83	United Methodist Church - 6813 North Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.8	12
84	Cherry Creek Depot - 6816 Depot Street	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	2.0	9
85	Cold Storage Building - 6816 Depot Street Rear	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	2.0	0
86	Cherry Creek Roller Mill - 590 Southside Avenue	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.9	23
87	6749 South Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.8	18
88	Wilcox-Benton Block - 6767 South Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.8	15
89	6788 South Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.8	18
90	First Baptist Church - 6790 Union Street	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.7	10
91	Cherry Creek Central Cemetery - Center Street/County Route 68	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.6	5
92	685 Southside Avenue	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.7	0
93	6763 Union Street	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.7	8
94	6695 South Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.7	0
95	6689 South Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	1351.000004	EDR Recommended NRHP-Eligible	1.7	3

Survey ID	Address, Property Name and/or Description	Municipality	County	USN	NRHP-Eligibility Recommendation (EDR)	Distance to Nearest Turbine	Number of Turbines Potentially Visible
96	6687 South Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	1351.000005	EDR Recommended NRHP-Eligible	1.7	8
97	6678 South Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.7	11
98	Former Electric Light Station - 6676 South Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	1351.000006	EDR Recommended Not NRHP-Eligible	1.7	11
99	6629 South Main Street/State Route 83	Village of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.7	7
100	North side of Thornton Road/County Route 66	Town of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.4	4
101	The Grainery - Intersection of Thornton Road and Erwin Road	Town of Cherry Creek	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.3	13
102	Clapp Cemetery - Southeast corner of Bentley Hill and Mutton Hill Roads	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	1.6	0
103	932 Harris Hollow Road	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.1	2
104	Valley View Cemetery - North side of Harris Hollow Road	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.1	0
105	1002 West Hill Road/County Route 50	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.8	17
106	1214 28th Creek Road	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.8	0
107	1045 28th Creek Road	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.6	0
108	4644 U.S. Route 62	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.7	3
109	4980 U.S. Route 62	Town of Ellington	Chautauqua County	1311.000089	EDR Recommended Not NRHP-Eligible	3.9	0
110	5002 Mill Street	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.8	0
111	742 Park Street	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.8	0

Survey ID	Address, Property Name and/or Description	Municipality	County	USN	NRHP-Eligibility Recommendation (EDR)	Distance to Nearest Turbine	Number of Turbines Potentially Visible
112	Ellington General Store - 748 Park Street	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.8	0
113	Farman Free Library - 760 Park Street	Town of Ellington	Chautauqua County	1311.000043	EDR Recommended NRHP-Eligible	3.8	4
114	Ellington Village Green - Park Street, Mill Street and Main Street	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.8	0
115	Ellington Justice Court - 766 West Main Street	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.8	14
116	770 West Main Street	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.8	14
117	812 West Main Street	Town of Ellington	Chautauqua County	1311.000057	EDR Recommended NRHP-Eligible	3.8	0
118	831 West Main Street	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.8	0
119	830 West Main Street	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.8	0
120	5024 Thornton Road/County Route 66	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.7	10
121	5063 Thornton Road/County Route 66	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.6	9
122	Pioneer Cemetery - North side of Thornton Road/County Route 66	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.5	7
123	576 Wade Hill Road	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	2.9	0
124	314 Bentley Hill Road	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	2.8	16
125	Champlin Farmstead - 5469 North Hill Road	Town of Ellington	Chautauqua County	1311.000040	EDR Recommended Not NRHP-Eligible	3.1	4
126	Legacy Farms - 5274 North Hill Road	Town of Ellington	Chautauqua County	1311.000039	EDR Recommended Not NRHP-Eligible	3.6	9
127	336 U.S. Route 62	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.3	0

Survey ID	Address, Property Name and/or Description	Municipality	County	USN	NRHP-Eligibility Recommendation (EDR)	Distance to Nearest Turbine	Number of Turbines Potentially Visible
128	4770 Leach Hill Road	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.9	0
129	191 Watkins Road	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.7	0
130	200 U.S. Route 62	Town of Ellington	Cattaraugus County	N/A	EDR Recommended NRHP-Eligible	4.4	0
131	148 U.S. Route 62	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	4.5	0
132	5489 U.S. Route 62	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.9	5
133	5515 U.S. Route 62	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.9	22
134	25 Elm Street	Town of Ellington	Chautauqua County	1311.000015	EDR Recommended Not NRHP-Eligible	3.8	10
135	5567 Church Street	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.7	25
136	2 East U.S. Route 62	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.8	9
137	19 Maple Street	Town of Ellington	Chautauqua County	N/A	EDR Recommended NRHP-Eligible	3.8	17
138	13000 U.S. Route 62	Town of Conewango	Cattaraugus County	N/A	EDR Recommended NRHP-Eligible	3.9	10
139	Little Clear Creek Cemetery - East side of U.S. Route 62	Town of Conewango	Cattaraugus County	N/A	EDR Recommended NRHP-Eligible	4.4	0
140	Conewango Bridge No. 6 - Cowens Corners Road Over 28th Creek	Town of Conewango	Chautauqua County	0905.000009	EDR Recommended Not NRHP-Eligible	5.0	13
141	5861 Flat Iron Road/County Route 44	Town of Conewango	Cattaraugus County	N/A	EDR Recommended NRHP-Eligible	4.1	0
142	12449 Youngs Road	Town of Conewango	Cattaraugus County	N/A	EDR Recommended NRHP-Eligible	5.0	44
143	6173 Flat Iron Road/County Route 44	Town of Leon	Cattaraugus County	N/A	EDR Recommended NRHP-Eligible	4.0	39

Survey ID	Address, Property Name and/or Description	Municipality	County	USN	NRHP-Eligibility Recommendation (EDR)	Distance to Nearest Turbine	Number of Turbines Potentially Visible
144	12745 Flat Iron Road/County Route 44	Town of Leon	Cattaraugus County	N/A	EDR Recommended NRHP-Eligible	4.0	38
145	Leon Hollow Cemetery - West side of Riga Road	Town of Leon	Cattaraugus County	N/A	EDR Recommended NRHP-Eligible	4.7	0
146	12539 Leon-New Albion Road/County Route 6	Town of Leon	Cattaraugus County	N/A	EDR Recommended NRHP-Eligible	4.7	0
147	6658 West Road	Town of Leon	Cattaraugus County	0917.000028	EDR Recommended NRHP-Eligible	4.2	44
148	6793 West Road	Town of Leon	Cattaraugus County	N/A	EDR Recommended NRHP-Eligible	4.1	35
149	8143 Oaks Road	Town of Dayton	Cattaraugus County	0954.000055	EDR Recommended NRHP-Eligible	4.1	13
150	62 Main Street	Village of South Dayton	Cattaraugus County	0954.000050	EDR Recommended NRHP-Eligible	4.5	48
151	3 Third Street	Village of South Dayton	Cattaraugus County	N/A	EDR Recommended NRHP-Eligible	4.7	43
152	27 Cherry Street	Village of South Dayton	Cattaraugus County	0906.000091	EDR Recommended NRHP-Eligible	4.7	48
153	212 Maple Street	Village of South Dayton	Cattaraugus County	0954.000052	EDR Recommended Not NRHP-Eligible	4.6	43
154	203 Maple Street	Village of South Dayton	Cattaraugus County	0954.000051	EDR Recommended Not NRHP-Eligible	4.6	33
155	413 Pine Street	Village of South Dayton	Cattaraugus County	0954.000061	EDR Recommended NRHP-Eligible	4.5	15
156	227 Oak Street	Village of South Dayton	Cattaraugus County	0954.000054	EDR Recommended NRHP-Eligible	4.5	0
157	319 Pine Street	Village of South Dayton	Cattaraugus County	0954.000060	EDR Recommended Not NRHP-Eligible	4.6	17
158	312 Pine Street	Village of South Dayton	Cattaraugus County	0954.000059	EDR Recommended NRHP-Eligible	4.6	31
159	309 Pine Street	Village of South Dayton	Cattaraugus County	0954.000057	EDR Recommended Not Eligible	4.6	36

Survey ID	Address, Property Name and/or Description	Municipality	County	USN	NRHP-Eligibility Recommendation (EDR)	Distance to Nearest Turbine	Number of Turbines Potentially Visible
160	207 Pine Street (Ewing Park Historic District)	Village of South Dayton	Cattaraugus County	0954.000046	EDR Recommended Not NRHP-Eligible	4.6	48
161	205 Pine Street (Ewing Park Historic District)	Village of South Dayton	Cattaraugus County	0954.000045	EDR Recommended Not NRHP-Eligible	4.6	48
162	203 Pine Street (Ewing Park Historic District)	Village of South Dayton	Cattaraugus County	0954.000044	EDR Recommended NRHP-Eligible	4.7	47
163	3 Park Street (Ewing Park Historic District)	Village of South Dayton	Cattaraugus County	0954.000035	EDR Recommended NRHP-Eligible	4.7	48
164	5 Park Street (Ewing Park Historic District)	Village of South Dayton	Cattaraugus County	0954.000036	EDR Recommended NRHP-Eligible	4.7	48
165	7 Park Street (Ewing Park Historic District)	Village of South Dayton	Cattaraugus County	0954.000037	EDR Recommended NRHP-Eligible	4.7	48
166	9 Park Street (Ewing Park Historic District)	Village of South Dayton	Cattaraugus County	0954.000038	EDR Recommended Not NRHP-Eligible	4.7	48
167	11 Park Street (Ewing Park Historic District)	Village of South Dayton	Cattaraugus County	0954.000039	EDR Recommended NRHP-Eligible	4.7	48
168	13 Park Street (Ewing Park Historic District)	Village of South Dayton	Cattaraugus County	0954.000040	EDR Recommended Not NRHP-Eligible	4.7	48
169	15 Park Street (Ewing Park Historic District)	Village of South Dayton	Cattaraugus County	0954.000041	EDR Recommended Not NRHP-Eligible	4.7	48
170	South Dayton Village Hall - 17 Park Street (Ewing Park Historic District)	Village of South Dayton	Cattaraugus County	0954.000042	EDR Recommended Not NRHP-Eligible	4.7	48
171	30 Maple Street (Ewing Park Historic District)	Village of South Dayton	Cattaraugus County	0954.000012	EDR Recommended NRHP-Eligible	4.7	48
172	Ewing Park (Ewing Park Historic District)	Village of South Dayton	Cattaraugus County	0954.000043	EDR Recommended NRHP-Eligible	4.7	48
173	South Dayton Depot - Railroad Street (Ewing Park Historic District)	Village of South Dayton	Cattaraugus County	0954.000047	EDR Recommended NRHP-Eligible	4.7	48
174	108 Pine Street	Village of South Dayton	Cattaraugus County	N/A	EDR Recommended NRHP-Eligible	4.7	47
175	107 Pine Street	Village of South Dayton	Cattaraugus County	0954.000007	EDR Recommended Not NRHP-Eligible	4.7	47

The remaining 101 sites that EDR is recommending NRHP-eligible within the study area are located greater than 3.5 miles from the Facility, where proposed turbines would be features in the background of the view from these resources. Views of the turbines will be completely screened from 56 of these historic resources. Although the Facility will be visible from the remaining 45 resources, because of the effect of distance the proposed turbines are not anticipated to be prominent features in the view from these areas and will not significantly affect the visual setting associated with historic resources located more than 3.5 miles from the Project.

Regarding overall Facility visibility from the 154 historic properties that EDR is recommending are NRHP-eligible, it is important to note that:

- Views of the Facility will be completely screened from 67 of the 154 properties within the APE recommended by EDR to be NRHP-eligible.
- Only one of the 44 properties that EDR is recommending are NRHP-eligible located between 0.5-mile and two miles from the Facility will have potential views of more than 24 wind turbines.
- No properties that EDR is recommending are NRHP-eligible located between two miles and 3.5 miles from the Facility will have potential views of more than 24 wind turbines.
- No properties that EDR is recommending are NRHP-eligible located greater than 3.5 miles from the Facility will have potential views of more than 48 wind turbines. However, because of the effect of distance the proposed turbines are not anticipated to be prominent features in the view from these areas and will not significantly affect the visual setting associated with historic resources located more than 3.5 miles from the Facility.

To conclude, the construction and operation of the proposed Facility will not physically impact any NRHP-eligible historic properties, and scenic views and/or association with the landscape are not specifically identified as contributing to the significance of any of the historic resources in the study area. Impacts are considered to be more severe to historic properties in close proximity to turbines and only 44 eligible properties (10 of which are completely screened from all views of turbines) occur between 0.5 and 2.0 miles of the nearest turbine and only 8 eligible properties (three of which are completely screened from all views of turbines) occur between 2.0 and 3.5 miles of the nearest turbine. The remaining 101 eligible properties (56 of which are completely screened from all views of turbines) are more than 3.5 miles from the nearest turbine. Overall, the visual impacts of the Facility on NRHP-eligible historic properties have been reduced by siting the Facility in rural areas (i.e., away from town/village centers where the majority of eligible properties occur). Furthermore, the majority of proposed turbines are located in wooded areas where forest vegetation provides additional visual screening and the diffuse nature of the proposed turbine layout (small groups of turbines

widely scattered across the landscape) helps to minimize the number of turbines visible and/or in close proximity to any individual historic property.

Cumulative Impacts

It should be noted that two other wind projects are proposed in the vicinity of the Cassadaga Wind Facility: the Arkwright Summit and Ball Hill wind projects. Arkwright Summit is located immediately north of the proposed Cassadaga Wind Facility and Ball Hill is located immediately northeast of the proposed Cassadaga Wind Facility. The 5-mile study areas of all three projects overlap. When developed, the Arkwright Summit and Ball Hill wind projects may impact the visual setting of some historic resources within the Cassadaga 5-mile study area. Likewise, the Cassadaga Wind Facility, when developed, may impact the visual setting of some historic resources within the 5-mile study areas for the Arkwright Summit and Ball Hill wind projects.

As described in Exhibit 24 (Visual Impacts) the 10-mile radius vegetation viewshed analysis for the Cassadaga Wind Facility (based on maximum blade tip height) was overlaid on viewshed analyses prepared using the same methodology for the proposed Arkwright Summit and Ball Hill Wind Projects (based on publically available layout data included in each Project's respective SEQRA documentation). The viewsheds for the three projects were then plotted on a base map, and areas of viewshed overlap identified. The cumulative viewshed analysis of the proposed Cassadaga, Arkwright Summit, and Ball Hill Wind Farms is presented in Figure 24-12 and Table 24-3 of Exhibit 24.

Areas within the 10-mile study area indicated as having potential views of all three projects on the cumulative viewshed map (see Figure 24-12 in Exhibit 24) are limited primarily to open field areas located along NYS Route 83 and on the eastern slopes and valley floor of the Conewango Creek valley (east of the Facility site). Additionally, some large areas within with Village of Fredonia (where there is no mapped forest vegetation) are indicated as having potential visibility of all three facilities. However, buildings and street/yard trees (which are not accounted for in the viewshed analysis) will likely screen much of this visibility. Such views could also be available in elevated areas within or adjacent to each project site on ridgetops where panoramic views of nearby ridges are available, such as adjacent to the intersection of Cassadaga and Rood Roads (south of the hamlet of Griswold), east of the intersection of Palmer Road and Center Road (west of the hamlet of Chicken Tavern Corners), and in the vicinity of Pope Hill and Round Top Roads in the Town of Villenova. Areas of potential cumulative visibility of all three projects amount to approximately 5.5% of the 10-mile study area (see Table 24-3 in Exhibit 24).

The visibility and visual effect of the Project will be highly variable based on viewing distance, viewer orientation, and the number of turbines visible, as well as the potential screening effects of topography and vegetation. If turbines from the Arkwright Summit or Ball Hill Projects are visible from a vantage point within the Cassadaga Wind Facility site, they

will typically be background features in any foreground or mid-ground view that includes the Cassadaga turbines. From larger distances, the three Projects may appear to be a single larger Project. However, the visual effect of all three Projects at longer distances will be relatively minimal due to the effects of distance.

With respect to eligible historic properties, as previously discussed, the scale and character of the wind turbines will result in a more significant effect on the setting associated with properties located in close proximity to a given project (i.e., within approximately two miles) and will generally result in less significant effects to properties where the turbines are features in the distant mid-ground or background of the view. Therefore, although the wind turbines associated with the Arkwright Summit and Ball Hill wind projects have the potential to cause adverse impacts to the setting of some historic properties identified within the Cassadaga 5-mile study area, these impacts are not anticipated to be significant. As previously discussed, scenic views and/or association with the landscape are not specifically identified as contributing to the significance of any of the historic resources within the 5-mile study area. Therefore, the concentration of wind farms in this area of Chautauqua and Cattaraugus Counties is not considered to pose a significantly greater cumulative impact to a given historic architectural resource than the construction of single wind project in the area.

Visual impacts of the Cassadaga Wind Facility to historic resources located within the 5-mile study area for the Arkwright Summit Wind Farm are discussed below.

Noise/Vibration (see Exhibit 19)

The noise impacts assessment is discussed in detail in Exhibit 19, and the full report is included as Appendix Z. Wind turbine sound may be perceived as more intrusive than other environmental sound sources. This is due to the amplitude modulated character of the sound, tonal content, and low frequency content. This subsection focuses on potential noise/vibration impacts to NRHP-eligible historic properties within the 5-mile historic architectural Study Area.

Relevant to noise and vibration impacts to NRHP-eligible cultural resources, the implementing regulations for New York State Parks, Recreation and Historic Preservation Law, Section 14.09 (9NYCRR §428.7) state:

- a. In determining whether an undertaking will have an adverse impact on eligible or register property, the commissioner shall consider whether the undertaking is likely to cause:
 1. destruction or alteration of all or part of the property;
 2. isolation or alteration of the property's environment;
 3. *introduction of visual, audible or atmospheric elements which are out of character with the property or alter its setting;*
 4. neglect of the property resulting in its deterioration or destruction. [emphasis added]

In addition, the Federal Regulations entitled "Protection of Historic Resources" (36 CFR 800) include in Section 800.5(2) a discussion of potential adverse effects on historic resources:

"Adverse effects on historic properties include, but are not limited to: [items i-iii do not apply]; (iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance; (v) *Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features*; [items vi-vii do not apply]" (CFR, 2004b). [emphasis added]

It should be noted that noise impacts are not of concern for any of the archaeological sites identified within or near the Facility site. Due to the nature of the archaeological sites (primarily small prehistoric lithic scatters and historic farmsteads), integrity of setting and feeling are not considered significant aspects of integrity for any unevaluated/potentially NRHP-eligible archaeological sites within the Facility site. Therefore, there will be no effect to archaeological sites from noise and/or vibration associated with the operation of the proposed Facility.

Although turbine noise and vibrations may be considered more intrusive than other environmental sound sources, noise impacts to NRHP-eligible historic properties within the Cassadaga 5-mile historic architectural study area are anticipated to be relatively insignificant. Noise and vibration impacts would typically be considered to impact the integrity of Setting and Feeling of a particular historic resource. As previously noted, scenic views and/or association with the landscape are not specifically identified as contributing to the significance of any of the historic resources in the study area, and this can be extended to the audible elements of setting and feeling. The assessment of potential NRHP-eligibility of historic properties within the Cassadaga study area privileged integrity of design, location, workmanship, materials, and association over integrity of setting and feeling. Therefore, although increased ambient noise at times from the operation of the Facility may produce a slight negative impact the integrity of setting and feeling of NRHP-eligible properties, this will not constitute a significant adverse impact with regard to their NRHP eligibility.

Similar to visual impacts to historic properties, noise and vibration impacts are most severe to properties in close proximity to turbines. As previously noted, only 44 eligible properties (approximately 30%) occur between 0.5 and 2.0 miles from the nearest turbine. All properties located outside of 0.5 miles from the nearest turbine (100% of eligible properties) will experience noise levels below 50 dBA (less than a typical idling car at 50 feet) with noise levels decreasing with distance from turbines. Approximately 70% of historic resources within the 5-mile Study Area (i.e., those properties greater than 2.0 miles from the nearest turbine) are expected to experience noise levels of less than 35 dBA from the operation of the proposed Facility. Noise levels of 35 dBA and below are considered indistinguishable from ambient natural noise levels in a quiet rural area. Therefore, NRHP-eligible properties greater than 2.0 miles from the nearest turbine location will experience no perceivable change in the level of background ambient noise.

Land within the 5-mile Study Area is predominantly rural in character, with some agricultural land use. The majority of NRHP-eligible historic properties are located within a small number of areas of concentrated settlement (e.g. the Villages of Sinclairville and Cherry Creek and hamlets of Stockton, Ellington, and Conewango Valley). The Facility has been sited with turbines located primarily in undeveloped areas away from population centers such as villages and town centers, in order to minimize visual and audio impacts to area residences and historic properties. Furthermore, ambient noise levels are expected to be slightly higher in more developed areas (i.e., villages and town centers) due to increased vehicle traffic and other noises associated with greater population density. Therefore, any potential noise impacts from the proposed turbines are not expected to be significant in these areas.

Low frequency sound emissions from the project are below the ANSI 12.2 2008 Section 6 threshold for "Moderately Perceptible Building Vibrations" and the ANSI 12.9 Part 4 Annex D threshold for "Sound Level Below Which Annoyance is Minimal." Extrapolated infrasound levels from the Facility are below established perception thresholds. Therefore, the operation of the Facility will not result in low frequency vibration/infrasound impacts to eligible properties.

Using background sound level monitoring data and long-term average sound propagation modeling results, a Composite Noise Rating (CNR) analysis was performed. When typical background (L_{50}) and typical project-only (L_{50}) sound levels are compared, 90 percent of receptors show a "C" rating. In a CNR analysis, a "C" rating means that sporadic complaints may be received. This level of impacts is not anticipated to constitute a significant adverse effect to NRHP-eligible properties.

Maximum simulated 1-second L_{EQ} construction sound levels near a typical turbine site were 57 dBA. Maximum simulated construction sound levels near the laydown yard/batch plant were calculated to be 53 dBA. These are maximum levels and are not anticipated to occur with any consistency. Construction noise impacts will also be of relatively short duration, and limited primarily to areas near turbine sites. All construction-related noise and vibration impacts will be temporary in nature and therefore, do not pose permanent impacts to historic properties.

Based on the above analysis, and that contained in Exhibit 19, potential noise and/or vibrations caused by the operation of the proposed Facility are not expected to significantly alter the character of or setting of NRHP-eligible historic properties within the 5-mile Study Area. Vibrations are not anticipated to impact any NRHP-eligible properties and noise-related impacts are anticipated to be relatively minimal, due in large part to the Facility's siting in remote rural areas away from areas of higher historic and modern population density. Elevated noise and vibration levels related to Facility construction will be temporary in nature. Therefore, there will be no permanent noise-related adverse impacts

to NRHP-eligible properties. Additionally, there will be no permanent noise-related adverse impacts to any of the archaeological sites identified within or near to the Facility site.

Traffic Impacts (see Exhibit 25)

As summarized in Exhibit 25, the primary traffic-related impacts associated with the Facility will occur during Facility construction and will therefore be temporary.

The following table (excerpted from the transportation effect and route evaluation study; Appendix WW) represents an order-of-magnitude estimate of the total number of loaded truck trips entering the Facility site associated with construction of the towers. Table 20-4 summarizes the increased traffic anticipated to occur on area roadways during Facility construction. Note that the table does not include passenger vehicles used to transport work crews to and from construction sites.

Table 20-4. Summary of Anticipated Construction Related Traffic.

Component/Truck Type	Assumption	Trips
Blades	One blade per truck	186
Towers	4 tower sections per tower	248
Nacelle and Hub	7 truck trips per tower (3 oversized trucks and 4 standard trucks)	434
Road Construction	Gravel trucks 10 cubic yards per truck, plus other construction equipment.	7,040
Crane	Several trips per access point depending on the degree of disassembly.	124
Concrete	250 to 450 cubic yards per foundation, 8 cubic yards per truck. Assume 50 trips per tower.	3,100
Total Heavy Vehicle Trips		11,132

Note: trips should be doubled to account for existing

After construction, the Facility will employ approximately 8 to 10 individuals, all of whom may drive separately to the O&M building. Some of these personnel will need to visit each turbine location, as well as the Facility sub-station and return to the O&M building. Each turbine and the sub-station typically requires routine maintenance visits once every 3 months, but certain turbines or other Facility improvements may require periods of more frequent service visits should a problem arise. Such service visits typically involve 1 to 2 pick-up trucks. The post-construction traffic will not have a significant impact on the highway system or require special transportation considerations such as building new roads. In conclusion, there are no long term impacts and, therefore, no permanent traffic-related effects to historic architectural resources. Any adverse effect caused by construction-related traffic will be temporary.

Visual Impacts from the proposed Cassadaga Wind Facility on historic resources within the Arkwright Summit 5-mile Study Area.

Although historic properties identified as part of the *5-Mile Ring Study* (Tetra Tech, 2009) conducted for the Arkwright Summit Wind Farm were not surveyed as a part of the historic architectural resources survey for the Cassadaga Wind Facility, the visual effect on historic properties identified in association with the Arkwright Summit study is summarized in Table 4 and depicted on Figure 4 of the appended historic architecture report (Appendix EE) and Table 20-5 in this Exhibit.

Table 20-5. Visual Effects Analysis for Previously Surveyed NRHP-Eligible Properties (Arkwright Summit Wind Farm)

USN	Address, Property Name and/or Description	Municipality	County	Distance to Nearest Turbine	Number of Turbines Visible
01304.002063	Luce Hill Cemetery, N Hill Road	Town of Charlotte	Chautauqua County	0.4	14
01301.000022	Residence (c.1847), 8129 Griswold Road	Town of Arkwright	Chautauqua County	0.8	0
01304.002065	Charlotte Center Cemetery, Charlotte Center Road	Town of Charlotte	Chautauqua County	1.1	0
01304.002066	Charlotte Center Church, 6956 Charlotte Center Road	Town of Charlotte	Chautauqua County	1.1	0
01304.002064	Residence (c. 1875), 2726 Hooker Road	Town of Charlotte	Chautauqua County	1.2	26
01304.002067	Farmstead (c. 1865-1890), 6749 Charlotte Center Road	Town of Charlotte	Chautauqua County	1.2	24
01301.000023	Rose Farm (c. 1870), 1936 Rутtenbur Road	Town of Arkwright	Chautauqua County	1.3	0
01301.000030	Residence (c. 1840), 2151 Bard Road	Town of Arkwright	Chautauqua County	1.6	0
01301.000032	Burnham Hollow Cemetery, Bard Road	Town of Arkwright	Chautauqua County	1.6	8
01301.000031	Residence (c. 1880), 2391 Bard Road	Town of Arkwright	Chautauqua County	1.7	0
01304.002062	Pickett Cemetery, Corner of Smith Road and County Route 75	Town of Arkwright	Chautauqua County	2.1	10
01326.000067	Farm Complex (c. 1920), 8025 NY 83	Town of Villenova	Chautauqua County	2.1	18
01326.000041	Residence (c. 1840), 1141 NY 83	Town of Villenova	Chautauqua County	2.2	30
01326.000075	Villenova Grange Hall/South Dayton Grange Hall, 1150 NY 83	Town of Villenova	Chautauqua County	2.2	4
01326.000083	Independent Order of Odd Fellows Lodge (c. 1890-1920), 1112 Route 83	Town of Villenova	Chautauqua County	2.2	27
01326.000084	Hamlet United Methodist Church (c. 1875), 1119 Route 83	Town of Villenova	Chautauqua County	2.2	25

USN	Address, Property Name and/or Description	Municipality	County	Distance to Nearest Turbine	Number of Turbines Visible
01326.000080	Residence (c. 1865-1890), 1394 Route 83	Town of Villenova	Chautauqua County	2.3	36
01326.000081	Hamlet Cemetery, South side of Route 83	Town of Villenova	Chautauqua County	2.3	0
01326.000085	School/Residence (c. 1881), 8520 School Street	Town of Villenova	Chautauqua County	2.3	0
01301.000029	Christian Cemetery, Corner of Shumla and Tarbox Roads	Town of Arkwright	Chautauqua County	2.6	7
01326.000068	Farm Complex (c. 1860), 8562 NY 83	Town of Villenova	Chautauqua County	2.9	20
01349.000019	Residence (c. 1900), 60 High Street	Village of Cassadaga	Chautauqua County	3.0	17
01326.000086	Residence (c. 1840-1865), 691 Route 83	Town of Villenova	Chautauqua County	3.1	15
01349.000016	Residence (c. 1865), 60 North Main Street	Village of Cassadaga	Chautauqua County	3.3	0
01349.000017	Residence (c. 1890-1920), 31 North Main Street	Village of Cassadaga	Chautauqua County	3.3	0
01349.000018	Residence (c. 1860), 35 North Main Street	Village of Cassadaga	Chautauqua County	3.3	4
01301.000033	Farmstead (c. 1850), 8903 Farrington Hollow Road	Town of Arkwright	Chautauqua County	3.5	16
01301.000034	Arkwright Summit Cemetery, Farrington Hollow Road	Town of Arkwright	Chautauqua County	3.6	16
01326.000087	Villenova Cemetery, Cemetery Road	Town of Villenova	Chautauqua County	3.7	45
01301.000027	Farm Complex (c. 1870), 2083 NY 83	Town of Arkwright	Chautauqua County	3.8	25
01301.000024	Arkwright Grange (c. 1900), 2667 Route 83	Town of Arkwright	Chautauqua County	3.9	0
01301.000037	Cowdens Corner Cemetery, Route 83 and Miller Road	Town of Arkwright	Chautauqua County	4.3	0
01349.000015	Residence (c. 1910), 8999 Glasgow Road	Town of Pomfret	Chautauqua County	5.1	43

Recommendations

The historic architectural resources survey was conducted in accordance the Article 10 stipulations set forth in 16 NYCRR § 1001.20 (Exhibit 20: Cultural Resources):

- (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 historic resources survey conducted in support of the Facility and the results described herein were conducted in accordance with the *Phase 1A Historic Architectural Survey Report and Work Plan*, which was reviewed and approved by NYSOPRHP in correspondence dated August 10, 2015 (Pierpont, 2015). This historic resources survey report is intended satisfy DPS and NYSOPRHP review of the proposed Facility in accordance with Article 10. No additional historic architectural resources surveys are recommended in support of the Facility.

Mitigation

As has been recognized by NYSOPRHP in the past, mitigation options for wind projects are limited, given the nature of the Facility and its siting criteria (very tall structures some of which are located in open fields at the highest locally available elevations). Thus NYSOPRHP has accepted mitigation for impacts to historic properties consisting of “off-set” projects that provide benefits to the overall community’s cultural resources and/or historic properties and/or the public’s appreciation of historic resources to offset potential visual impacts to historic properties resulting from the introduction of wind turbines into their visual setting. In this case, none of the historic resources identified in this Exhibit rely exclusively on their visual components for their historic or cultural significance, thus, potential visual impact is more limited than if the Facility had the potential to impact a historic resource whose viewshed and landscape was more intrinsically incorporated into its historic value. Mitigation projects that have been proposed for other wind energy projects in New York State have included activities such as additional historic resources surveys, NRHP nominations, monetary contributions to historic property restoration causes, development of heritage tourism promotional materials, development of educational materials and lesson plans, and development of public history materials, such as roadside markers. Ultimately, the Applicant will consult and enter into an agreement with the Towns of Charlotte, Cherry Creek and Arkwright, to fund potential mitigation projects that will benefit historic resources within the Project’s APE. Once a list of proposed mitigation projects is defined in coordination with the Towns, the Applicant will seek concurrence with NYSOPRHP in order to satisfy their review of the proposed Project under Section 14.09 of the New York State Parks, Recreation and Historic Preservation Act or Section 106 of the National Historic Preservation Act.

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