SARATOGA ASSOCIATES

UPSTATE NY POWER TRANSMISSION LINE VISUAL RESOURCE ASSESSMENT

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Upstate NY Power Transmission Line – Visual Resource Assessment

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1.0 INTRODUCTION

Upstate NY Power Corp (Upstate Power) is proposing to construct and operate an approximately 50.6 mile single circuit 230kV electric transmission line extending from Galloo Island, located in the Town of Hounsfield (Jefferson County), to the Town of Mexico (Oswego County). The transmission line (hereafter referred to as the "Project" or the "Proposed Transmission Line") will provide the necessary infrastructure to carry the electricity generated by the proposed Hounsfield Wind Farm (Galloo Island), to an existing 345kV transmission line owned and operated by the New York Power Authority (NYPA). Specifically, this Visual Resource Assessment (VRA) analyzes, in detail, approximately 39 miles of the 230kV line that is located on the mainland; the 230kV transmission line located on Galloo Island and the sub-aquatic cable is not analyzed in significant detail within this report.

To address issues of potential visual impact, Upstate Power has retained Saratoga Associates, Landscape Architects, Architects, Engineers, and Planners, P.C. (Saratoga) to conduct a thorough and detailed VRA of the proposed Project. The purpose of this VRA is to identify potential visual and aesthetic impacts and to provide an objective assessment of the visual character of the Project, using standard accepted methodologies of visual assessment, from which agency decision-makers can render a supportable determination of visual significance. The VRA was prepared for inclusion in the Article VII Application.

1.1 METHODOLOGY

Consistent with Visual Resource Assessment (VRA) practice, this report evaluates the potential visibility of the proposed Project and objectively determines the difference between the visual characteristics of the landscape setting with and without the Project in place. The process follows basic New York State Department of Environmental Conservation Program Policy "Assessing and Mitigating Visual Impacts" (NYSDEC 2000) (DEC Visual Policy) and State Environmental Quality Review (SEQR) criteria to minimize impacts on visual resources. This process provides a practical guide so decision makers and the public can understand the potential visual impacts and make an informed judgment about their significance (aesthetic impact).

There are no specific Federal rules, regulations, or policies governing the evaluation of visual resources. However, the methodology employed herein is based on standards and procedures used by the U.S. Department of Agriculture (National Forest Service, 1974, 1995), U.S. Department of the Interior, Bureau of Land Management (USDOI, 1980), U.S. Department of Transportation, Federal Highway Administration (USDOT, 1981), NYS Department of Transportation (NYSDOT, 1988), and the NYS Department of Environmental Conservation (NYSDEC, July 31, 2000).

This evaluation includes both quantitative (how much is seen and from what locations; or visual impact) and qualitative (how it will be perceived; aesthetic impact) aspects of visual assessment.

The visual impact assessment includes the following steps:

- Define the existing landscape character/visual setting to establish the baseline visual condition from which visual change is evaluated;
- Conduct a visibility analysis (viewshed mapping and field investigations) to define the geographic area surrounding the proposed facility from which portions of the Project might be seen;
- Identify sensitive aesthetic resources to establish priority places from which further analysis of potential visual impact is conducted;
- Select key receptors from which detailed impact analysis is conducted;
- Depict the appearance of the facility upon completion of construction;
- Evaluate the aesthetic effects of the visual change (qualitative analysis) resulting from Project construction, completion and operation; and,
- Identify opportunities for effective mitigation.

The visual study area for this VRA extends to a three-mile radius from the centerline of the proposed route between the landfall in the Town of Henderson and the substation located in the Town of Mexico (hereafter referred to as the "three-mile radius study area" or "study area"). Because of the relatively slender profile of the structures, it is assumed that natural conditions of atmospheric and linear perspective will significantly mitigate most visual impacts beyond three-miles. However, site-specific consideration was given to resources of high cultural or scenic importance that are located beyond this study area.

1.2 Mainland Project Description

The section of the Proposed Transmission Line that runs between its landfall on the mainland and the substation located in the Town of Mexico is the focus of this VRA. Other sections of the line will be further discussed in Section 1.3.

The Proposed Transmission Line makes landfall (near Hovey Tract Road) in the Town of Henderson (also referred to as the "Henderson landfall") northeast of the Robert G. Wehle State Park. From the point of landfall, the Proposed Transmission Line runs underground approximately 0.15 miles to a proposed transition station where the line is converted to an overhead single circuit 230kV electric line. It will then run approximately 38.7 miles in a southerly direction, utilizing existing transmission and railroad corridors where feasible. In the northernmost section, the Proposed Transmission Line crosses NYS Routes 3 and 289 before coming within one (1) mile of Interstate 81. Just north of the Village of Mannsville, the Proposed Transmission Line starts to run roughly parallel to Interstate 81 and US Route 11. As it crosses over from Jefferson County to Oswego County, it continues south, just beyond the western boundary of the Village of Sandy Creek. The Proposed Transmission Line crosses east, over Interstate 81 and US Route 11 within the Village of Pulaski. It then crosses back to the west of both these major roads and continues south toward the Town of Mexico, where the route will terminate at another proposed transition station located 0.19 miles north of the proposed Mexico substation.

The transition station, located just north of the Mexico substation, marks the southernmost end of the aboveground portion of the Proposed Transmission Line. At this point, the overhead line will again transition underground in order to avoid existing overhead cables. The underground line segment will connect to a riser structure inside the proposed Mexico substation, where the voltage will be stepped up from 230kV to 345kV for connection to the regional power grid via a New York Power Authority (NYPA) transmission line.[1]

Along the route, directional changes are strategically placed to minimize environmental impacts (including impacts to wetlands and agricultural land), and to accommodate landowner requests where feasible. The Proposed Transmission Line will generally utilize 384 corten steel monopole single circuit structures (tangent and angle structures), with spans between poles averaging approximately 550-600 feet.[2] Pole height will generally be between 90 and 105 feet in most locations, with less than ten percent of the poles reaching between 110 and 130 feet and two poles reaching 155 feet in height.[3]

The transmission structures will be located within a 150-foot Right of Way (ROW); on private land under property use rights with property owners. The width of the cleared ROW may be less wherever possible to minimize potential environmental impacts. Clearing of vegetation within the new ROW will be necessary for parts of the Proposed Transmission Line. The cleared ROW will be allowed to return to a partial vegetative state (low scrub/shrub or agricultural crops); however, trees along the ROW will be permanently cleared so as not to interfere with the Proposed Transmission Line once it is in operation.

1.3 Additional Transmission Sections

The Proposed Transmission Line that will connect the proposed wind turbines to the Mexico substation is comprised of three (3) sections. The longest section of the line, located on the mainland, is described above and is the focus of this VRA. The other two (2) sections are:

Galloo Island 230kV Transmission Line – This section of the transmission line originates at a proposed substation located in the center of Galloo Island[4]. From the substation, the aboveground line runs approximately 2.6 miles to a transition station at the northeastern edge of the island. Along this route, there are 45 monopole transmission structures, all of which are anticipated to be 85 feet tall[5]. At the shoreline transition station, the transmission line converts from an aboveground cable to a sub-aquatic electrical cable.

Galloo Island, which currently has no year round residents, is over 5.6 miles from the nearest point of the mainland. Visibility of the slender structures will generally be available to less potential viewers, and distance to the mainland and other islands will cause reduced visibility of the structures. The greatest potential for visibility will be from seasonal boaters and transient commercial vessels fishing

[1] Upstate Power may also consider an overhead crossing beneath the existing transmission lines if proper clearances can be maintained and pending discussions with the transmission owners of the existing lines.
[2] Galvanized poles may also be considered.
[3] Final design of the Proposed Transmissions Line will occur during the detailed design phase.
[4] Galloo Island is privately owned property.
[5] Pole heights may become 80 feet or other, based on final design. For the purpose of this report 85 feet was used.

or traveling in close proximity to the island. Since it is anticipated that fewer viewers will view the Galloo Island 230kV transmission line, it is not analyzed in detail within the VRA.

Sub-aquatic Cable – From the Galloo Island transition station, the cable exits the shoreline in an easterly direction. Water depths range from a minimum of 2 feet to 30 feet within approximately 4,500 feet of the island. Upon entering deep waters (≥45 feet deep)[6], the cable turns northeast into the Stony Basin of Lake Ontario. The cable continues northeast to the Stony Island buoy (Red Buoy No. 2), where it turns southeast and enters the Black River Channel extending where it makes landfall in Henderson, New York near Hovey Tract Road. The total length of the sub-aquatic cable is approximately 9 miles.

Because the cable is sub-aquatic, it is anticipated that it will not be visible. Therefore, it has been excluded from this report.

[6] All water depths provided by ESS Group.

2.0 LANDSCAPE CHARACTER/VISUAL SETTING

Landscape character is defined by the basic pattern of landform, land use, vegetation, water features, and human development. This descriptive section offers an overview of the intrinsic visual condition of the study area and establishes the baseline condition from which to evaluate visual change.

The study area is predominately rural and largely undeveloped. The Town of Henderson, with a population of only 1,377, is the smallest town in the study area, while the Town of Richland has the largest population with 5,824 residents. Throughout the study area, broad tracts of agricultural land are either actively maintained or brush-covered due to inactivity (fallow fields). Mature deciduous woodlands typically cover steeper slopes, hilltops, ravines, stream corridors, and other areas historically unsuitable for agricultural use. Other land cover includes yards, hedgerows, streams/rivers, lakes, and ponds. Undulating hills and hillocks intersperse with the relatively flat and open agricultural land. Most of the study area consists of an elevation that generally ranges between 200 and 550 feet above Lake Ontario.

With the exception of the more developed Villages (e.g. Pulaski and Mexico) and hamlets (e.g. Henderson Harbor, Henderson and Pierrepont Manor), built features typically include low to medium-density single-family residential structures and farmsteads. A moderate amount of commercial and industrial development is scattered throughout the study area, but is generally located within or in close proximity to community centers. Development outside downtown areas of community centers such as the Villages of Pulaski and Mexico varies in size from smaller uses (e.g. gas station) to larger freestanding stores (e.g., P&C Food & Pharmacy) and plazas (WiseBuys Plaza). Associated with commercial development are parking lots of varying sizes adjacent to the major thoroughfares.

2.1 TOPOGRAPHY

The study area is within the Eastern Ontario Plain subdivision of the Great Lakes Plain. The region is characterized by low-lying relief with shallow hills comprised of glacial till typical of the eastern shore of Lake Ontario.[7] The landscape generally appears relatively flat or gently sloping with elevations increasing further away from Lake Ontario. Elevations within the study area average between 100 and 200 feet above Lake level, with some select areas reaching roughly 450 to 550 feet above Lake level.

Elevation change above Lake Ontario is generally mild to moderate in slope with the exception of the area surrounding the point of landfall (near Robert G. Wehle State Park), where cliffs abruptly rise up to roughly 65 feet above Lake Ontario.

2.2 VEGETATION

A large portion of the study area has historically been cleared for agricultural use. The northern portion of the study area, particularly within Jefferson County, is heavily cleared for cultivated crops. There is also a great deal of forested land interspersed throughout the study area, which is made up primarily of deciduous forest and wooded wetlands, with some evergreen forest mixed in as well. Dominant tree species are representative of the beech-maple climax community found throughout

[7] Thompson, p.40

much of the Eastern Ontario Plain region. These species include oak, beech, maple, ash, elm and hemlock. In addition to these deciduous climax species, isolated plantings of red and white pine are scattered throughout the study area. Coinciding with the mix of open field and woodlots is a significant area of secondary growth edge habitat. For the most part, this secondary growth takes the form of hedgerows, wood borders, and old fields. Much of the landscape further inland shows evidence of the strong farming presence in the region.

2.3 Water Features

Water features are an important and scenic component of the visual landscape. The study area is bordered by Lake Ontario to the north and west, and includes numerous rivers throughout the study area. The shore of Lake Ontario is irregular and is characterized by a series of large bays, peninsulas and islands. Islands just beyond the study area include Galloo Island and Stony Island, both of which are visible from select vantage points along the coastline.

There are a number of waterways throughout the study area that drain westerly to Lake Ontario. These include Alder Creek, Bear Creek, Big Deerlick Creek, Black Creek, Deer Creek, Grindstone Creek, Lindsey Creek, Little Deer Creek, Little Grindstone Creek, Little Salmon River, Little Sandy Creek, Little Stony Creek, Mud Creek, Sage Creek, Salmon River, Sandy Creek, Skinner Creek, Snake Creek, South Sandy Creek and Stony Creek and their tributaries.

In addition to Lake Ontario and the numerous waterways, several inland lakes and larger ponds are present within the study area. These include Crystal Lake and Henderson Pond in the Town of Henderson, Lakeview Pond and Black Pond in the Town of Ellisburg, and North Pond in the Town of Sandy Creek.

Numerous private farm ponds, scattered wetlands, and small streams are also found in the study area.

2.4 Transportation

The primary transportation routes through the study area are Interstate 81, US Route 11, and NYS Route 3. These roads generally bisect the study area in a north to south direction, with the exception of NYS Route 3, which weaves in and out of the study area. Other major routes that intersect a section of the study area include NYS Routes 69, 69A, 178, 189, and 193.

In addition to those routes noted above, there are numerous county routes that intersect the study area. Among these are County Routes 41, 48, 62, 78, and 121. County routes and local roads are both typically two-lane with asphalt pavement, however some gravel surfaced seasonal roads exist.

2.5 Population Centers

Community Centers – Within the study area are seven (7) Villages that may be considered the larger community centers within the study area. These larger community centers include:

Village of Mannsville – The Village of Mannsville is located in the Town of Ellisburg, approximately 0.86 miles east of the Proposed Transmission Line. The Village has 400 residents[8] and is focused around the intersection of US Route 11 (North and South Main Street) and County Route 90 (Lilac Park Drive and Lorraine Street). A limited number of small businesses are generally situated at, or in close vicinity of the US Route 11 and CR 90 intersection. Residences are predominately located along CR 90, Lincoln Avenue, and Douglas Street. Streets are lined with mature trees and a mixture of older buildings exhibiting a variety of architectural styles. Residential dwellings within this community tend to be older and well maintained with mature vegetation lining the roadways. Central School No. 1 is located along US Route 11, north of the Village center. Development density drops sharply outside the Village center.

Activities within the Village of Mannsville are generally related to education, small business, transportation, and residential uses.

Village of Sandy Creek – The Village of Sandy Creek is located in the Town of Sandy Creek, approximately 0.36 miles east of the Proposed Transmission Line. The Village has 789 residents and is focused around the intersection of US Route 11 (North and South Main Street) and County Route 15 (Lake Street and Harwood Drive). Small businesses are generally situated on Main Street (US Route 11) and CR 15, with residences predominately located along US Route 11, CR 15, Salisbury Street, Ellisburg Street, Hadley Street, Park Street, and East 1st Street. Main Street is lined with mature trees and a mixture of older buildings in a variety of architectural styles. Residential dwellings within this community tend to be older and well maintained with mature vegetation lining the roadways. The Sandy Creek Elementary, Middle and High Schools are located north of Salisbury Street and east of Interstate 81. The Oswego County Fairgrounds is located off of Ellisburg Street. Development density drops sharply outside the Village center.

Activities within the Village of Sandy Creek are generally related to small business, local shopping, transportation, recreation, and residential uses.

Village of Lacona – The Village of Lacona is located in the Town of Sandy Creek, approximately 1.45 miles east of the Proposed Transmission Line. The Village has 590 residents and is located east of Interstate 81 along County Route 15 (Harwood Drive). The Village includes several residential roads that mostly connect back to CRs 15 and 48 (Ridge Road), and Salisbury Street. Residential dwellings within this community tend to be older and well maintained with mature vegetation lining the roadways. Small businesses are generally situated along or adjacent to Main Street (CR 23) and Park Avenue. Main Street is lined with mature trees and a mixture of older buildings in a variety of architectural styles. Industrial uses may be found south of Demott Street. Development density drops sharply as one travels to the north, east, and south of the Village center.

Activities within the Village of Lacona are generally related to small business, industrial, local shopping, transportation, and residential uses.

[8] All population data identified in Section 2.5 is presented in Table 2.

Village of Pulaski – The Village of Pulaski is located in the Town of Richland, and contains approximately 2.3 miles of the Proposed Transmission Line within its boundary. With a population of 2,398, it is the most populated municipality within the study area. The Village consists of a downtown area with a modest grid street pattern lined with residential houses, churches, and an assortment of commercial establishments (service facilities and offices) and industrial facilities. Moderate density single-family housing may be found throughout the Village. Residential dwellings within the Village tend to be older and well maintained with mature vegetation lining the roadways. The Pulaski Elementary School and Pulaski Junior/Senior High School are located along Hinman Road and Salina Street, respectively.

Within the Village's downtown center, the active main street (US Route 11 or Jefferson Street) is lined with a variety of retail stores. Most storefronts are occupied with regional or locally owned tenants. The center of the Village also contains North and South Park as well as the Salmon River located along Jefferson Street. Buildings or vegetation generally screen views of the river and it appears that limited to no access to the river is available. Outside the downtown area along NYS Route 13, between US Route 11 and Interstate 81 there is a mixture of national/regional stores (e.g. McDonalds, Arbys, Buger King, Kinney Drugs, Aldi Supermarket, and P&C Food and Pharmacy) and locally owned businesses. Also along this stretch of NYS Route 13 are a few hotels (e.g. Super 8) and a mobile home park. Most of these establishments have large parking lots located adjacent to the roadway. Generally, development density drops sharply as one travels beyond the Village's boundary in any direction.

Fishing is a major contributor to the tourism industry in the Village of Pulaski and Town of Richland. The Salmon River crosses through the Village of Pulaski and is commonly recognized by fishing enthusiasts throughout the region as a prime river for salmon fishing. The River is stocked each year by the Salmon River Fish Hatchery (in the Village of Altmar) with steelhead, chinook, coho and landlocked salmon among various other types of fish. The fishing season culminates each year with the Salmon River Festival, within the Village of Pulaski.

Activities within the Village of Pulaski are generally related to education, small business, local shopping, transportation, recreational/tourism, and residential uses.

Village of Parish – The Village of Parish is located in the Town of Parish, approximately 2.2 miles east of the Proposed Transmission Line. The Village has 512 residents and is located west of Interstate 81 at the crossroads of NYS Route 69 (East and West Main Street) and NYS Route 69A (Railroad Street).[9] Small businesses are generally situated on Main Street (NYS Route 69), with residences predominately located along NYS Route 69, Railroad Street, Montgomery Street, and CR 38 (Rider Street). Residential dwellings within this community tend to be older and well maintained with mature vegetation lining the roadways. The Parish Elementary School is located on Union Street. Industrial uses are evident north of South Railroad Street. Development density drops sharply outside the Village center.

[9] Only a portion of the Village of Parish, as well as Mexico, is located within the study area.

Activities within the Village of Parish are generally related to education, small business, local shopping, transportation, and residential uses.

Village of Mexico – The Village of Mexico is located in the Town of Mexico, approximately 2.5 miles west of the Proposed Transmission Line. With a population of 1,572, the Village is the second largest community in the study area. The Village consists of a downtown area with a modest grid street pattern lined with residential houses, churches, and an assortment of commercial establishments (service facilities and offices). Moderate density single-family housing may be found through much of the Village. Residential dwellings within the Village tend to be older and well maintained with mature vegetation lining the roadways. Generally, development density drops sharply as one travels beyond the Village's boundary.

Within the Village boundary, retail and commercial development of varying sizes may be found along NYS Route 104. Within the Village's downtown center, NYS Route 104 is lined with many 2-story brick buildings. Many of these buildings contain active businesses, however, empty storefronts are noticeable.

Activities within the Village of Mexico are generally related to education, small business, local shopping, transportation, and residential uses.

Village of Ellisburg – The Village of Ellisburg is located in the Town of Ellisburg, approximately 1.4 miles west of the Proposed Transmission Line. The Village has 269 residents and is located at the crossroads of NYS Routes 193 and 289. The Village lacks the typical downtown setting visible in Villages such as Pulaski, Mexico, and Parish. Low building density may be found throughout the Village. Small businesses and services are limited and scattered throughout the Village. Residential dwellings may be found along many of the streets within the Village boundary; they tend to be older and well maintained with mature vegetation lining the roadways.

Within the Village boundaries, South Sandy Creek runs parallel to NYS Route 289 and South Main Street. Vegetation generally screens views of the river and it appears that access to the river is not available. Buildings or vegetation generally screen publicly available views of South Sandy Creek, with the exception of where the Creek intersects with NYS Route 189 and Joslyn Road. Development density drops sharply outside the Village center.

Activities within the Village of Ellisburg are generally related to small business, transportation, and residential uses.

Hamlets – Outside of those communities identified above, homes, agricultural support buildings, and businesses may also be clustered at crossroad hamlets (varying in size). Residences (a mix of old and new) and accessory structures (barns, garages, etc.) are often found in roadside locations and range in quality from well-maintained single-family frame construction to older housing stock in need of repair.

There are over 10 hamlets scattered throughout the study area. Some of the larger hamlets include, Henderson Harbor, Henderson, Pierrepont Manor, and Belleville. Generally, the larger hamlets will

include a higher concentration of residential uses (e.g. dwellings, school, recreation) and small businesses (services), similarly to some of the smaller Villages located in the study area.

Generally, activities within the hamlets are related to residential uses, transportation, and small businesses.

Rural Residential Areas – Low-density rural homes (a mix of old and new) and accessory structures (e.g. garages and barns) are often found in roadside locations or are located on isolated lots out of view from local roads. Rural homes range in quality from well-maintained single-family frame construction to older housing stock in need of repair. Mobile housing of varying vintage, located on isolated lots and within parks is also a common residence type.

The northern portion of the study area also contains many waterfront homes that may include estate homes that are setback from roadways and adjacent properties, small frame homes, seasonal camps, and mobile homes of varying vintage and quality. Boathouses and docks for recreational vessels are also common throughout the coastal area. Shoreline properties are often cleared of vegetation to provide unencumbered views of the waterway from residences.

Seasonal homes, camps and cabins also appear to be scattered throughout the study area. Most such structures are typically found in remote locations off of local roads and range in quality from well-maintained off-season residences to hunting cabins, mobile homes and recreational trailers.

2.6 Existing Utility and Railway Corridors

There are a number of existing utility and railway corridors scattered throughout the study area, some of which will be utilized for the proposed Project. Specifically, the Proposed Transmission Line parallels an existing and operating railway for approximately 5.8 miles, an existing gas line for 3.9 miles, and will occupy a currently abandoned railway and abandoned low voltage electric line for 9.9 miles. Along the proposed 38.7 mile route of the Proposed Transmission Line on the mainland, it parallels or utilizes approximately 19.6 miles of existing ROWs (50.8%).[10]

[10] Additional information regarding the existing ROW's may be found in Exhibit 4 of the Article VII Application.

3.0 VISUAL IMPACT ASSESSMENT

3.1 VIEWSHED MAPPING (ZONE OF VISUAL INFLUENCE)

3.1.1 Viewshed Methodology

The first step in identifying potentially affected visual resources is to determine whether or not the proposed Project would likely be visible from a given location. Viewshed maps are prepared for this purpose. Also known as defining the zone of visual influence, viewshed mapping identifies the geographic area within which there is a relatively high probability that some portion of the proposed Project would be visible.

The overall accuracy of viewshed mapping is dependent on the number and location of control points (study points representing proposed transmission structures) used in the viewshed calculation. To calculate the maximum range of potential visibility, one control point was established at the high point for each of the 384 structures being evaluated (located between the Henderson landfall and the Mexico substation). The heights of the structures generally range from 90 to 105 feet; with 14 structures up to 155 feet. The resulting composite viewshed identifies the geographic area within the study area where some portion of the Proposed Transmission Line is theoretically visible.

One viewshed map was prepared defining the area within which there would be no visibility of the Project because of the screening effect caused by intervening topography (See Figure 1). This treeless condition analysis is used to identify the maximum potential geographic area within which further investigation is appropriate. A second map was prepared illustrating the probable screening effect of existing mature vegetation. This vegetated condition viewshed, although not considered absolutely definitive, acceptably identifies the geographic area within which one would expect to be substantially screened by intervening forest vegetation (See Figure 2).

Identified viewshed areas are further quantified to illustrate the number of transmission structures that may be visible from any given area. This cumulative degree of visibility is summarized on each map using the following groupings:

- 1-5 structures visible;
- 6-10 structures visible;
- 11-20 structures visible;
- 21-35 structures visible;
- 36-50 structures visible;
- 51-100 structures visible;
- 101-200 structures visible; and
- 201-365 structure visible (based on vegetated viewshed); or
- 201-384 structure visible (based on topographic viewshed).

In this evaluation, ArcGIS 9.2 and ArcGIS Spatial Analyst software were used to generate viewshed areas based on publicly available digital topographic and land cover datasets. Viewshed maps were created by first importing a digital elevation model (DEM) of the Study Area. This DEM, obtained through the United States Geological Survey from its National Elevation Dataset, represents the best

publicly available digital elevation data and is sampled at a 10-meter grid cell resolution. In order to run viewshed analyses, this dataset was projected to the Universal Transverse Mercator (UTM) coordinate system with a nominal resolution of 10 meters. The computer then scanned from each control point to all cells within this DEM, distinguishing between grid cells that would be hidden from view and those that would be visible based solely on topography. A conservative offset of 2 meters was applied to each DEM cell to simulate the height of a human observer. All grid cells within the study area were coded based on the number of proposed transmission line structures that would be visible to a theoretical observer whose eye height is two meters above ground level.

Vegetation data was extracted from the National Land Cover Data Set 2001. The NLCD dataset, produced by the Multi-Resolution Land Characteristics Consortium, was developed from a multi-spectral classification of LANDSAT 7 Thematic Mapper (TM) imagery (2001 is the nominal year of image acquisition) sampled to a 30-meter grid cell resolution.[11] The screening effect of vegetation was incorporated by including an additional 40 feet (12.2 meters) of height for those DEM grid cells that are completely forested (according to NLCD dataset) and then repeating the viewshed calculation procedure. Forested areas were then removed from the viewshed to account for areas located within a full forest canopy (where visibility would have been based on an observer two meters above the canopy height). Based on field observation, most trees in forested portions of the study area appear to be taller than 40 feet. This height therefore represents a conservative estimate of the efficacy of vegetative screening.

It is important to note that the NLCD dataset is based on interpretation of forest areas that are clearly distinguishable using multi-spectral satellite imagery. As such, the potential screening value of site-specific vegetative cover such as small hedgerows, street trees and individual trees and other areas of non-forest tree cover may not be represented in the viewshed analysis. Furthermore, the NLCD dataset does not include the screening value of existing structures. This is a particularly important distinction in the populated areas such as the Villages of Pulaski and Mexico, and other commercial and residential areas where existing structures are likely to provide significant screening of distant views. With these conditions, the viewshed map conservatively overestimates potential Project visibility in areas where the Project may be substantially screened from view.

It is noteworthy that untrained reviewers often misinterpret treeless condition viewshed maps to represent wintertime, or leafless condition visibility (Figure 1). In fact, deciduous woodlands provide a substantial visual barrier in all seasons. Since the NLCD dataset generally identifies only larger stands of woodland vegetation that is clearly distinguishable from multispectral satellite imagery, viewshed maps that include the screening value of existing vegetation are equally representative of both leaf-on and leaf-off seasons (Figure 2). Treeless condition analysis is provided only to assist experienced visual analysts identify the maximum potential geographic area within which further investigation is appropriate. Such topography-only viewshed maps are not generally intended or appropriate for public interpretation of presentation.

[11] Thirty-meter resolution is the smallest vegetative grid cell increment commonly available for the proposed Project region. This resolution provides an appropriate degree of accuracy for development of five-mile viewshed maps given the fairly broad patterns of existing land use in the area, as well as the accuracy of mapped topographic data (i.e., 1:24,000-scale USGS topographic maps with 10-foot contour intervals)

Finally, the viewshed maps indicate locations in the surrounding landscape in which one or more transmission structures might be visible. These maps do not imply the magnitude of visibility (i.e., how much of each structure is visible), the viewer's distance from each visible structure or the aesthetic character of what may be seen. Interpretation along these lines is the subject of the next phase of analysis (see section 3.4 below).

3.1.2 Verification of Viewshed Accuracy

Because the viewshed map identifies the geographic area within which one or more of the proposed transmission structures could theoretically be visible, but does not specify which of the 384 structures evaluated would be within view, it is not readily feasible to field confirm viewshed accuracy. While it is common practice to field confirm viewshed maps prepared for a single study point through the use of balloon study or more intuitive means, the inability to field confirm viewshed accuracy is unique to analysis of multiple point projects covering a large geographic area, such as transmission line projects.

To help determine the accuracy of the vegetation data used for viewshed development, the NLCD data set was overlaid on color aerial images (2004) of the study area and reviewed for consistency. While minor inconsistencies were noted, including areas of recently cleared lands, areas of inactive/abandoned agricultural land showing a degree of pioneer species growth, and areas of non-forest vegetative cover (e.g. Village of Pulaski), the vast majority of woodland areas visible on the satellite image were consistent with the NLCD overlay.

3.1.3 Viewshed Interpretation

Table 1 indicates the degree of theoretical visibility illustrated on the viewshed maps within the 3-mile radius study area.

Table 1 Viewshed Coverage Summary

	Topography Only Viewshed (See Figure 1 *)		Vegetation and Topography Viewshed (See Figure 2)	
	Acres	**Percent Cover**	**Acres**	**Percent cover**
No Structures Visible	8,228	5.2%	93,609	59.0%
1 – 5 Structures Visible	4,986	3.0%	14,312	9.0%
6 – 10 Structures Visible	6,556	4.0%	12,682	8.0%
11 – 20 Structures Visible	14,899	9.0%	14,718	9.2%
21 – 35 Structures Visible	23,269	14.0%	11,338	7.1%
36 – 50 Structures Visible	18,350	11.8%	4,606	2.9%
51 – 100 Structures Visible	32,092	21.0%	6,129	3.8%
101 – 200 Structures Visible	30,842	20.0%	1,352	0.7%
201 – 365 Structures Visible	N/A	N/A	108	0.3%
201 – 384 Structures Visible	19,632	12.0%	N/A	N/A
Total	158,854	100.0%	158,854	100.0%

* Table 1 and Figure 1, illustrate that one or more structure highpoints is theoretically visible from approximately 94.8 percent of the three-mile study area when taking only topography into consideration. However, as discussed above, this unrealistic treeless condition analysis is used only to identify the maximum potential geographic area within which further investigation is appropriate. This viewshed is not representative of the anticipated geographic extent of visibility and is not intended for public interpretation. Acreage quantities in Table 1 are rounded to nearest whole number.

Table 1 and Figure 2 – Vegetated Viewshed, indicates that one or more of the proposed transmission structures will theoretically be visible from approximately 41 percent of the three-mile study area. Approximately 59 percent of the study area will likely have no visibility of any of the structures due to intervening landform or vegetation. Visibility is most common from properties adjacent or in close proximity to the Proposed Transmission Line. Visibility will also be likely from agricultural uplands with cleared lands and down slope vistas in the direction of the Proposed Transmission Line.

Views of the Proposed Transmission Line from within the municipal boundaries of the Village of Pulaski will be available from various locations. Views are more apparent on properties and roadways in close proximity to the Proposed Transmission Line, or where localized structures and vegetation are less likely to provide a visual barrier. Open views of the transmission structures along US Route 11, Interstate 81, NYS Route 13, and other roadways that may bisect the route of the Proposed Transmission Line are evident. Filtered views of the Proposed Transmission Line may be evident in locations located towards the eastern boundary of the Village. Within the center of the Village (i.e., downtown area), views appear to be limited due to intervening topography, pockets of vegetation, and structures.

Intervening topography, vegetation and localized structures will screen most views of the proposed structures within the portion of the Village of Mexico that is within the study area. Filtered or framed

views may be possible through foreground vegetation in isolated locations east of the Village along NYS Route 104. Views of the Project may also be possible from the Phineas Davis Farmstead, however the closest potential visible structure to this area is slightly less than three (3) miles and the furthest is over 28 miles away. Overall, visual impacts from the Village of Mexico should be substantially reduced by screening (e.g. structures and localized vegetation), the relatively long distance between the Village and the Proposed Transmission Line, and the generally slim profile of the proposed structures.

Views from the Villages of Sandy Creek and Lacona are possible in a number of locations. Within the Village of Sandy Creek, potential visibility generally occurs along, or adjacent to, primary road corridors such as CR 22A (Ellisburg Street), and US Route 11. The highest potential for visibility within the Village of Lacona occurs to the east and south of the Village center along CR 48 and CR 22. Visual impacts from both of these Villages should be substantially reduced by screening (e.g. structures and localized vegetation), the relatively long distance between the Village and the Proposed Transmission Line, and the generally slim profile of the proposed structures.

Views within the Village of Mannsville appear to be most evident along Lilac Park Drive, Brown Road and sections of Lincoln Avenue. Visual impacts from both of the Village of Mannsville should be further reduced by screening (e.g. structures and localized vegetation), the relatively long distance between the Village and the Proposed Transmission Line, and the generally slim profile of the proposed structures.

Theoretically, the Village of Ellisburg has many opportunities to view the Proposed Transmission Line. This may be attributable to the Village being at a higher elevation than those Villages to the south, combined with agricultural fields throughout the municipal boundary (i.e. there is less screening by vegetation). However, visibility will be further reduced in a number of locations, such as the stretches of NYS Route 193 and NYS Route 289 (Main Street/South Landing Road) surrounding the Village center, due to localized screening from structures and vegetation. Generally, visibility is anticipated to be further reduced throughout the Village due to the relatively long distance between the Village and the Proposed Transmission line, as well as the generally slim profile of the proposed structures.

Views from the hamlets, such as Woodville, Prattham, Scotts Corners, and Wardwell are possible. Screening (e.g., buildings or other structures and localized vegetation) and distance from the Proposed Transmission Line should substantially reduce visual impacts to the hamlet of Freedom. Depending on viewer location, some hamlets will have views of the structures in relative close proximity. The generally slim profile of the proposed structures will also assist in reducing in potential visual impact.

Views will be significantly limited or completely screened from the opposite side of hills, hillocks, and river valleys. In addition, forest cover will frequently prevent background views from areas of level or slightly elevated topography.

The area most directly affected by views of the Proposed Transmission Line will be the agricultural upland located in the northern portion of the study area. This area is generally bound by NYS Routes 3 (near the Hamlet of Henderson Harbor), 178 and 193 (Village of Ellisburg), and Interstate 81. The

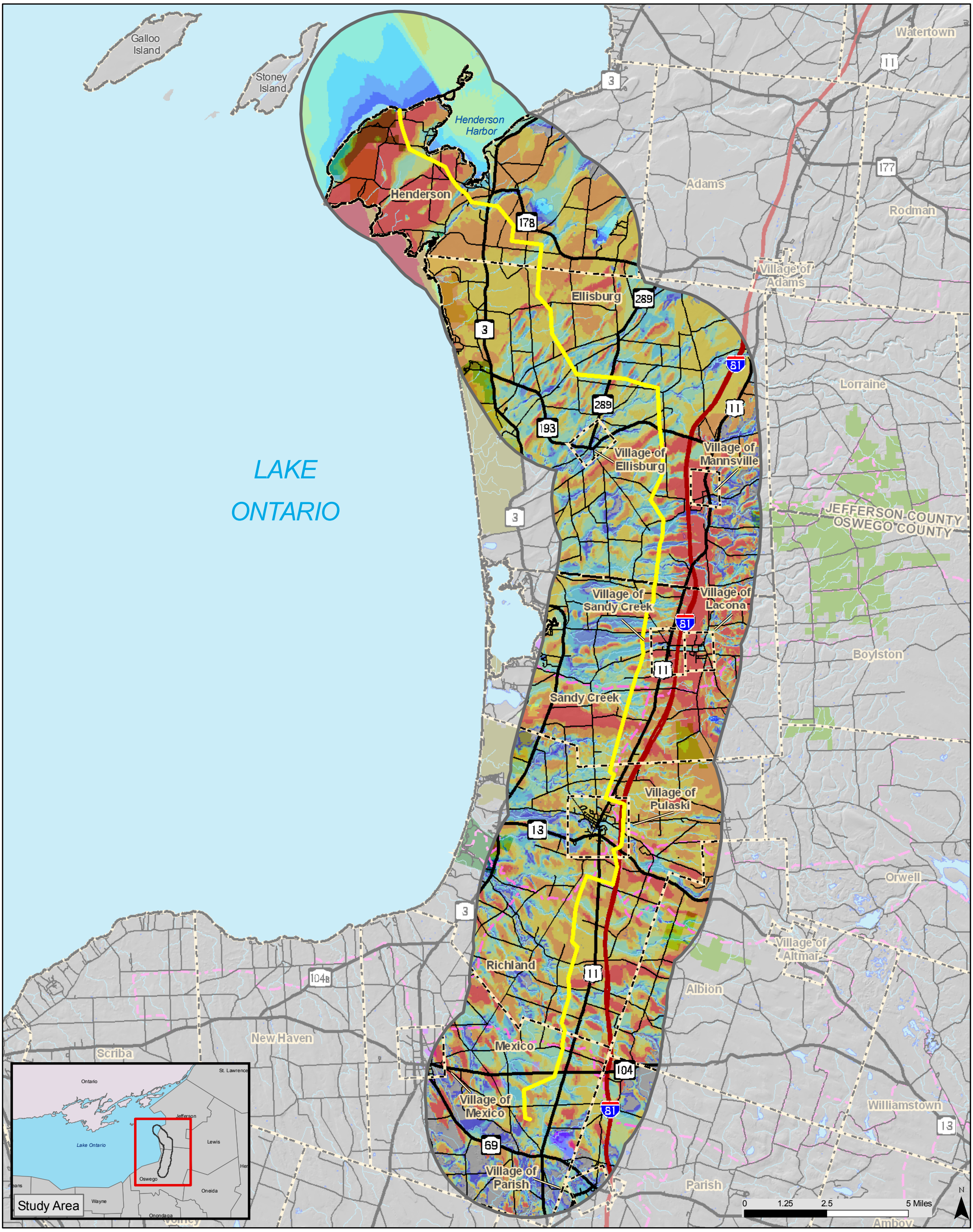
higher degree of potential visibility may be attributed to elevation and higher concentration of agricultural land (less vegetation screening). Even within this area, screening of localized structures and vegetation (e.g. hedgerows) will further lessen the potential visual impact. Within this area, as well as throughout the entire study area, residents and visitors will regularly encounter proximate views of the Proposed Transmission Line corridor within the foreground and near-middle-ground distances (i.e., ½ to 1 ½ miles). However, visibility of Proposed Transmission Line components and vegetative clearing will be greatest within ½ mile of the proposed Project.

The greatest potential for visibility will occur where the Proposed Transmission Line crosses roadways. In particular, Interstate 81 and US Route 11 may have the greatest potential for visual impact. Visibility along Interstate 81 will generally occur where the Proposed Transmission Line is in close proximity to the road corridor and where vegetation is lacking along the shoulders of Interstate 81. The segment of the roadway that may experience the greatest visual impact will occur in the vicinity of the Village of Pulaski. The Proposed Transmission Line will cross Interstate 81 in two (2) locations, as well as run adjacent to the roadway for relatively short segments. The crossings will provide the greatest opportunity for travelers to view the structures. Where the Proposed Transmission Line runs adjacent to the roadway, vegetation should further reduce its potential visibility. Similarly to Interstate 81, US Route 11 will experience two (2) crossings. However, the Proposed Transmission Line will run adjacent to US Route 11 in close proximity for a greater distance. Framed or screened views may be available along US Route 11, particularly when the proposed structures are within ½ mile of the roadway.

Generally for all roadways, views will be a mixture of foreground views (e.g. road crossings) and long distant (middleground view), fleeting as viewers pass in vehicles, or of relatively small portions of the Proposed Transmission Line. View types will vary from open to screened views. However, due to the structures' slim profile and material, visibility will be minimized. Proposed transmission structures may also be located in close proximity and on both sides of these roadways. Viewers close to the Proposed Transmission Line will also notice that structures will frequently appear and disappear behind intervening foreground landform and vegetation as they move about the study area.

A number of relatively small areas along the Proposed Transmission Line indicate visibility of between 201 and 384 structures. While visibility of the Project is likely more substantial from these areas, the viewshed does not take into consideration the impact of sheer distance on perspective of the structures. For instance, based on an average spacing between structures of 600 feet, it would take close to 23 miles along the proposed transmission route to accumulate 201 structures. It is, therefore, important to bear in mind the overall length of the Project corridor and how it will effect perception[12] of the size and number of structures on the horizon.

[12] Due to atmospheric conditions and other factors, it is anticipated that an observer would not see a proposed structure(s) many miles away. It is anticipated that most visible structures will occur in relatively close proximity to the viewer.



TOPOGRAPHIC VIEWSHED

UPSTATE NY POWER TRANSMISSION LINE

Figure 1
December 2008

State Land and National Register Site boundaries are based on the most current NYS OPRHP and NYS DEC datasets

KEY

- Proposed Transmission Line
- County Boundary
- Municipal Boundary
- Snowmobile Trail
- 3-Mile Study Area
- National Register Site
- State Park
- Wildlife Management Area
- State Forest
- Nature Conservancy Easement
- Water

Number of Structures Visible

- 1 - 5
- 6 - 10
- 11 - 20
- 21 - 35
- 36 - 50
- 51 - 100
- 101 - 200
- 201 - 384

PROJECT # 2008 - 08010

This map is computer generated using data acquired by Saratoga Associates from various sources and is intended only for reference, conceptual planning and presentation purposes. This map is not intended for and should not be used to establish boundaries, property lines, location of objects or to provide any other information typically needed for construction or any other purpose when engineered plans or land surveys are required.

File Location: B:\2008\08010\topoviewshed081220.mxd

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VEGETATED VIEWSHED*

UPSTATE NY POWER TRANSMISSION LINE

*Assumes 40-foot (12,192m) vegetation height in areas considered forested by the 2001 National Land Cover Dataset

Figure 2
December 2008

State Land and National Register Site boundaries are based on the most current NYS OPRHP and NYS DEC datasets

KEY

- Proposed Transmission Line
- County Boundary
- Municipal Boundary
- Snowmobile Trail
- 3-Mile Study Area
- National Register Site
- State Park
- Wildlife Management Area
- State Forest
- Nature Conservancy Easement
- Water

Number of Structures Visible

- 1 - 5
- 6 - 10
- 11 - 20
- 21 - 35
- 36 - 50
- 51 - 100
- 101 - 200
- 201 - 365

File Location: B:\2008\08010\Vegviewshed081222.mxd

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3.2 Inventory of Visually Sensitive Resources

3.2.1 Inventory Criteria

Because it is not practical to evaluate every conceivable location where the proposed Project might be visible, it is accepted visual assessment practice to limit detailed evaluation of aesthetic impact to locations generally considered by society, through regulatory designation or policy, to be of cultural and/or aesthetic importance. In rural areas where few resources of statewide significance are likely to be found, it is common practice to expand inventory criteria to include places of local sensitivity or high intensity of use.

Resources of Statewide Significance – The DEC Visual Policy requires that all aesthetic resources of statewide significance be identified along with any potential adverse effects on those resources resulting from the proposed Project. Aesthetic resources of statewide significance may be derived from one or more of the following categories:

- A property on or eligible for inclusion in the National or State Register of Historic Places [16 U.S.C. § 470a et seq., Parks, Recreation, and Historic Preservation Law Section 14.07];
- State Parks [Parks, Recreation, and Historic Preservation Law Section 3.09];
- Urban Cultural Parks [Parks, Recreation, and Historic Preservation Law Section 35.15];
- The State Forest Preserve [NYS Constitution Article XIV], Adirondack and Catskill Parks;
- National Wildlife Refuges [16 U.S.C. 668dd], State Game Refuges, and State Wildlife Management Areas [ECL 11-2105];
- National Natural Landmarks [36 CFR Part 62];
- The National Park System, Recreation Areas, Seashores, and Forests [16 U.S.C. 1c];
- Rivers designated as National or State Wild, Scenic, or Recreational [16 U.S.C. Chapter 28, ECL 15-2701 et seq.];
- A site, area, lake, reservoir, or highway designated or eligible for designation as scenic [ECL Article 49 or NYDOT equivalent and Adirondack Park Agency], designated State Highway Roadside;
- Scenic Areas of Statewide Significance [of Article 42 of Executive Law];
- A State or federally designated trail, or one proposed for designation [16 U.S.C. Chapter 27 or equivalent];
- Adirondack Park Scenic Vistas [Adirondack Park Land Use and Development Map];
- State Nature and Historic Preserve Areas [Section 4 of Article XIV of the State Constitution];
- Palisades Park [Palisades Interstate Park Commission]; and
- Bond Act Properties purchased under Exceptional Scenic Beauty or Open Space category.

Resources of Local Interest – Places of local sensitivity or high intensity of use (based on local context) were also inventoried, even though they may not meet the broader statewide threshold. Aesthetic resources of local interest were generally derived from the following general categories:

- Recreation areas including playgrounds, athletic fields, boat launches, fishing access, campgrounds, picnic areas, ski centers, and other recreational facilities/attractions;
- Areas devoted to the conservation or the preservation of natural environmental features (e.g., reforestation areas/forest preserves, wildlife management areas, open space preserves);
- A bicycling, hiking, ski touring, or snowmobiling trail designated as such by a governmental agency;
- Architectural structures and sites of traditional importance as designated by a governmental agency;
- Parkways, highways, or scenic overlooks and vistas designated as such by a governmental agency;
- Important urban landscape including visual corridors, monuments, sculptures, landscape plantings, and urban green space;
- Important architectural elements and structures representing community style and neighborhood character;
- An interstate highway or other high volume (relative to local conditions) road of regional importance; and
- A passenger railroad or other mass transit route; and
- A residential area greater than 50 contiguous acres and with a density of more than one dwelling unit per acre.

Other Places for Analysis – Given the rural character of much of the study area, the inventory of aesthetic resources has been further expanded to be conservatively over-inclusive. In several cases, locations not rising to the threshold of statewide significance or local interest have been included to represent visibility along sparsely populated rural roadways; most selected based on field observation of open vistas. Although possibly of interest to local residents, such locations are not considered representative of any aesthetically significant place and carry little importance in the evaluation of aesthetic impact.

Resources of statewide significance, local interest, and other places for analysis were identified though a review of published maps and other paper documents, online research, and windshield survey of publicly accessible locations.

3.2.2 Summary Characteristics of Inventoried Resources

Overall Population and Density of Development – The main population centers within the study area are contained within seven Villages. Five of these are located entirely within the study area and the remaining two are partially within the study area. The most populated Villages within the study area are the Villages of Pulaski and Mexico with 2,398 and 1,572 residents, respectively.

Outside of the Village communities, population density within the study area is relatively small, given the generally rural landscape of this area. The population density of Jefferson County and Oswego County are 88 and 128, respectively, while New York State has a population density of 402. It is worth noting that while the year round population of the municipalities in the study area are fairly low, communities within the study area that include waterfront property have a significant number of seasonal residents and benefit from seasonal tourism.

Table 2 Demographic Summary of Study Area Municipalities (2000 Census)

Municipality	Year Round Population	Population Density (off-season)*[13]	Total Housing Units
New York State	*18,976,457*	*402*	
Jefferson County	111,738	*88*	*54,872*
Town of Henderson	1,377	33	577
Town of Ellisburg	3,541	42	1,269
Village of Ellisburg	269	266	100
Village of Mannsville	400	435	168
Oswego County	122,377	*128*	*45,522*
Town of Mexico	5,181	112	2,211
Village of Mexico	1,572	735	721
Town of Albion	2,083	44	704
Town of Sandy Creek	3,863	91	2,607
Village of Sandy Creek	789	552	338
Village of Lacona	590	561	271
Town of Richland	5,824	102	2,890
Village of Pulaski	2,398	729	1,155
Town of Parish	2,694	65	1,034
Village of Parish	512	332	222

Table 2 summarizes demographics for other municipalities within the study area.

Highway Corridors – Due to the long length of the study area, a number of major roadways fall within three (3) miles of the proposed project. The primary roadways within the study area are US Route 11, Interstate 81, and NYS Routes 104, 13, 178, 193, 289, 3, 69 and 69A. Traffic along these roadways varies from lightly (i.e. NYS Route 193) to heavily (i.e. Interstate 81) traveled. The following descriptions provide additional details of these roadways:

- US Route 11 generally runs north to south in Jefferson and Oswego Counties. It enters the study area at the Town of Ellisburg on the northern end, and exits from the Town of Mexico on the southern end. US Route 11 bisects the Villages of Mannsville, Sandy Creek and Pulaski, and has an average daily traffic volume of 7,182 vehicles at its most-traveled section within the study area, in the Village of Pulaski.
- Interstate 81, which is a limited access highway, runs north to south in Jefferson and Oswego Counties, in close proximity to US Route 11. It enters the study area in the Town of Ellisburg at the northern end and exits the study area from the Town of Parish at the southern end. Interstate 81 crosses through the Villages of Pulaski and Parish. The average daily

[13] Roundest to the nearest whole number.

traffic volume for Interstate 81 is 20,776 vehicles along the most traveled segment within the study area, within the Town of Richland.

- NYS Route 104 crosses the southern portion of the study area from east to west and bisects the Village of Mexico. The average traffic volume is up to 4,435 vehicles per day on the stretch between Interstate 81 and US Route 11 in the Town of Mexico.
- NYS Route 13 crosses through the study area from east to west in the Towns of Richland and Albion and bisects the Village of Pulaski. The most heavily traveled section of Route 13, between Interstate 81 and US Route 11, receives an average of 9,784 vehicles per day.
- NYS Route 178 runs from east to west in the Town of Henderson, ending upon its intersection with NYS Route 3 in the Hamlet of Henderson. The stretch of Route 178 within the study area receives up to an average of only 1,354 vehicles per day.
- NYS Route 193 generally runs from northwest to southeast in the Town of Ellisburg and bisects the Village of Ellisburg. The highest average daily traffic volume along the span of Route 193 within the study area is only 1,083 vehicles.
- NYS Route 3 weaves in and out of the study area, generally running from north to south. Route 3 enters the study area in the Town of Henderson and exits the study area from the Town of Richland. This stretch of road also encompasses part of a New York State Bike Route and the Seaway Trail.
- NYS Route 69 crosses through the southern portion of the study area from east to west through the Towns of Mexico and Parish, and bisecting the Village of Parish. The highest average daily traffic volume for the stretch of NYS Route 69 in the study area is 5,428 vehicles.
- NYS Routes 289 and 69A, in the Towns of Henderson and Mexico, respectively, each consist of a very small section of road within the study area and are lightly traveled, with an average of roughly 1,100 vehicles per day.

In addition to those routes identified above, there are numerous county and local roads that traverse the study area. These roads vary between lightly and heavily traveled depending on location.

Table 3 Annual Average Daily Traffic Volumes for Study Area Highways (NYSDOT 2006)[14]

Route	Section	AADT
NYS Route 104	Between US Route 11 and I-81	4,435
NYS Route 104	Between NYS Route 69 and NYS Route11	1,890
NYS Route 104	Between I-81 and CR 22	2,342
US Route 11	Between NYS Route 104 and CR 41A	2,065
US Route 11	Between CR 41 and Wood Road	5,332
US Route 11	Between CR 41A and CR 41/Wood Road	3,709
US Route 11	Between NYS Route 13 and CR 5	7,182
US Route 11	Between CR 5 and CR 15	2,881
US Route 11	Between Old NYS Route 69A and NYS Route 69	1,914
US Route 11	Between NYS Route 69 and NYS Route 104	1,551
US Route 11	Between CR 15 and Jefferson County Line	1,568
US Route 11	Between I-81 and Town of Ellisburg	1,555
US Route 11	Between Town of Ellisburg and NYS Route 193	1,879
US Route 11	Between NYS Route 193 and CR 189	2,169
US Route 11	Between Jefferson County Line and I-81	1,619
NYS Route 13	Between CR 48 and I-81	1,987
NYS Route 13	Between I-81 and US Route 11	9,784
NYS Route 13	Between US Route 11 and NYS Route 3	2,520
NYS Route 178	Between NYS Route 3 and Town Barn Road	1,097
NYS Route 178	Between CR 75 and NYS Route 289	1,354
NYS Route 178	Between Town Barn Road and CR 75	975
NYS Route 193	Between NYS route 3 and NYS Route 289	610
NYS Route 193	Between NYS Route 289 and I-81	993
NYS Route 193	Between NYS Route 289 and US Route 11	1,038
NYS Route 289	Between NYS Route 193 and NYS Route 178	1,154
NYS Route 3	Between NYS Route 13 and CR 15	3,277
NYS Route 3	Between NYS Route 194B and NYS Route 13	2,900
NYS Route 3	Between CR 15 and Hadley Road	1,333
NYS Route 3	Between Hadley Road and Jefferson County Line	1,719
NYS Route 3	Between NYS Route 193 and NYS Route 178	1,184
NYS Route 3	Between South Landing Road and NYS Route 193	834
NYS Route 3	Between NYS Route 178 and CR 75	1,617
NYS Route 69	Between NYS Route 69A and I-81	5,428
NYS Route 69	Between NYS Route 104 and US route 11	2,666
NYS Route 69	Between US route 11 and NYS Route 69A	2,292
NYS Route 69A	Between US Route 11 and NYS Routes 69 and 69A	1,129
Interstate 81	Between CR 15 and CR 22A	19,980
Interstate 81	Between CR 28 (Tinker Tavern Road) and NYS Route 13	10,889
Interstate 81	Between CR 2 and CR 15	12,274
Interstate 81	Between NYS Route 13 and CR 2	20,245
Interstate 81	Between NYS Route 104 and CR 28 (Tinker Tavern Road)	20,776
Interstate 81	Between CR 22A and Jefferson County Line	13,269
Interstate 81	Between NYS Route 69 and NYS Route 104	19,470
Interstate 81	Between Exit 39 and Exit 40	17,596
Interstate 81	Between Jefferson County Line and Exit 38	13,193
Interstate 81	Between Exit 38 and Exit 39	16,453
Interstate 81	Between Exit 40 and Exit 41	18,887

[14] http://www.dot.state.ny.us

Tourism – Overall, summertime appears to be the most popular season of the year. The study area contains many opportunities to enjoy boating, fishing, hiking, sunbathing, biking, as well as other activities associated with the many State and community resources.

The Salmon River, itself is a source of considerable tourism for the region, and draws numerous people to experience the renowned salmon fishing opportunities. The Salmon River Festival is held in the Village of Pulaski each fall at the culmination of the fishing season.

Although not as abundant as in nearby communities (e.g. City of Syracuse), the study area offers a variety of lodging including hotels/motels, bed and breakfast establishments, summer rentals, cottages and cabins, as well as private and public campgrounds.

Recreation and Open Space – There are many popular recreational activities within the study area, include: hiking, hunting, camping, biking, fishing, boating, golfing, and snowmobiling. Other passive outdoor pursuits such as bird watching or a leisurely drive along the coastline or through the rural landscape are also common. There are a variety of State designated recreational resources within the study area. Some of the more prominent recreational opportunities are discussed below.

New York State designated recreational resources within the study area include:

- *New York State Parks:*
    a) *Southwick Beach State Park* (Town of Henderson) – Southwick Beach State Park offers an array of outdoor recreational opportunities to visitors, including hiking and cross-country skiing on the trails and sunbathing and swimming at the beach. The Park is adjacent to Lakeview WMA.
    b) *Selkirk Shores State Park* (Town of Richland) – The Park features a campground, trails for hiking, biking and cross-country skiing, and ample beachfront for swimming, boating and fishing. Selkirk is also an idea spot for bird watching, as it on the direct migration route for a variety of bird species.
    c) *Robert G. Wehle State Park* (Town of Henderson) – The former estate of its namesake, Robert G. Wehle State Park encompasses 1,100 acres of fields and forested land, and features over 17,000 feet of Lake Ontario shoreline. The Park offers 10 miles of hiking, cross-country skiing and biking trails, tennis courts and a residence that is available to the public as a vacation rental.
- *NYS DEC Wildlife Management Areas:*
    a) *Lakeview Marsh Wildlife Management Area* (Town of Henderson) – Adjacent to Southwick Beach State Park, Lakeview WMA is part of the largest natural freshwater beach in New York State. The 3,461-acre Area is home to a diverse range of habitats, including woodlands, wetlands, open fields, shoreline and an ecologically sensitive barrier beach. Lakeview is open year round for recreation including boating and fishing.

b) *Deer Creek Marsh Wildlife Management Area* (Town of Richland) – Just north of Selkirk Shores State Park, this 1,195-acre WMA features a variety of recreational opportunities, including boating, bird watching, cross-country skiing, snowshoeing, hunting, fishing and trapping.

c) *Henderson Shores Unique Area* (Town of Henderson) – Henderson Shores Unique consists of 1,160 acres of reforested land with underlying limestone that provides an ideal habitat for a variety of specialized plants. The Area includes an accessible trail that leads to an overlook of Lake Ontario.

d) *Black Pond Wildlife Management Area* (Town of Ellisburg) – This 526-acre WMA is just north of Southwick Beach State Park and Lakeview WMA. The facility features nature trails and opportunities for bird watching, hunting and trapping.

> *NYS DEC State Forests:*

a) *Altmar State Forest* (Town of Albion) – Altmar is comprised of 926 acres just west of the Village of Altmar.

b) *Sandy Creek State Forest* (Town of Richland) – This state forest encompasses 535 acres of land south of the Villages of Lacona and Sandy Creek.

c) *Winona State Forest* (Town of Boylston) – Located at the western edge of Tug Hill Plateau, the 9,233-acre forest offers a wide array of opportunities for outdoor recreation, including cross-country skiing, snowmobiling, biking, hunting, fishing, bird-watching, horseback riding and hiking. There are 31 miles of hiking trails in the forest.

> *NYS DEC Fishing Access* (multiple towns) – The NYS DEC has identified Grindstone Creek, Little Sandy Creek, and Salmon River as public fishing streams. Public access (i.e. foot paths, vehicle parking lots) may occur at a variety of locations, and generally occur throughout the study along these river corridors.

> *State Boat Launches and Water Access Sites* (multiple towns) – There are many boat launches and water access points located throughout the study area (e.g. Stony Creek Boat Launch and Crystal Lake Water Access)

> *Seaway Trail Scenic Byway* (multiple towns) – The New York State Seaway Trail is a 454-mile scenic route paralleling Lake Erie, the Niagara River, Lake Ontario and the St. Lawrence River. The Seaway Trail has been selected as one of "America's Byways" by the U.S. Department of Transportation. The Seaway Trail was chosen for its unique landscape, which has been sculpted by the forces of nature, and for its historical significance.[15] Through the study area, the Seaway Trail follows NYS Routes 3 and 104B.

> *New York State Bike Route 11* (multiple towns) – This bike route connects the City of Plattsburgh to Pennsylvania (Bicycle Route L). Within the study area, the bike route runs in a north-south direction, entering the study area in the Town of Ellisburg and exiting from the Town of Mexico.

[15] http://www.seawaytrail.com

Additional recreational resources include:

- *Snowmobiling* (multiple towns) –Snowmobile trails may be found throughout the study area whether on public/private land or along roadways/seasonal roads. Snowmobiling is a popular activity in region of New York and is likely enjoyed by large numbers of participants within the study area during the winter months. State snowmobile trails that bisect the area include, but are not limited to, C5A, S51, S52 and S53. These trails are usually funded by the State, but are maintained by local snowmobile groups.

- *Salmon River* – The Salmon River originates in the Tug Hill Plateau region and flows westward through the Villages of Altmar and Pulaski, emptying in Lake Ontario at the inlet of Port Ontario. The river is known for its recreational fishing, drawing thousands of fishermen to experience the renowned salmon fishing opportunities. The river is stocked from the Salmon River Fish Hatchery (located in the Village of Altmar), which specializes in raising steelhead, chinook salmon, coho salmon, brown trout, and landlocked salmon.

- *Lake Ontario* – Lake Ontario is the primary draw for seasonal tourism throughout the study area, as there are numerous opportunities for leisure and recreation along the shoreline, as well as on the Lake itself.

- *John Ben Snow Community Complex* (Village of Pulaski) – The John Ben Snow Community Complex, on Maple Avenue Extension in the Village of Pulaski, is a multi-faceted recreational facility that was established by the foundation of its namesake, a philanthropist and native of Pulaski. The Complex includes the John S. Haldane Memorial Arena, a skateboard park, ball fields, a playground and walking trails. It is owned by the Village of Pulaski and managed by the Town of Richland.

- Municipal parks, recreational and open space resources, and other small community playgrounds and athletic fields may be scattered throughout the study area.

Cultural Resources – Within the study area, 19 structures and three (3) historic districts listed on the State and National Register of Historic Places were identified[16]. Within each district there may be many historic structures that comprise the district and are not listed individually. These include:

- Phineas Davis Farmstead;
- Stillman Farmstead;
- Slack Farmstead;
- Thayer Farmstead;
- Red Mill Farm;
- Pierrepont Manor Complex;
- Newton M. Pitt House;

[16] http://www.nationalregisterofhistoricplaces.com

- Matthew Shoecraft House;
- Samuel Sadler House;
- Methodist Church;
- Smith H. Barlow House;
- Fred Smart House;
- Charles M. Salisbury House;
- First Baptist Church;
- First National Bank of Lacona;
- Lacona Clock Tower;
- Fowler-Loomis House;
- Lacona Railroad Station; and
- Asa and Caroline Wing House.

Pulaski Village Historic District (Town of Richland) – The Pulaski Village Historic District encompasses 110 acres of land and 37 historic buildings within the Village of Pulaski. The buildings are situated along several downtown streets including Jefferson, Broad, Bridge, Hubbel and Lake, and are generally of the Italianate style of architecture. The buildings, constructed between the early 1800s and early 1920s, represent a variety of functions including commercial, residential and local government offices.

Sandy Creek Historic District (Town of Sandy Creek) – The Sandy Creek Historic District includes 37 acres of land at the junction of Lake Road and US Route 11 in the Village of Sandy Creek. There are 14 historic buildings within the District, representing the Italianate and Greek Revival styles of architecture. The buildings, which date from the mid 1820s to the late 1940s, now serve a variety of purposes including local businesses and residences.

Mexico Village Historic District (Town of Mexico) – The Mexico Village Historic District, located in the Village of Mexico, encompasses 180 acres of land, 77 historic buildings and 3 historic structures. The District, located along Main, Jefferson, Church and Spring streets, is generally of the Italianate and Greek Revival style of architecture. Current use of buildings includes local business and places of religious worship.

3.2.3 Visibility Evaluation of Inventoried Resources

Each inventoried visual resource was evaluated to determine whether a visual impact might exist. This consisted of reviewing viewshed maps and field observation to determine whether or not individual resources would have a view of the proposed Project.

Table 4 lists 145 visual resources located within the three-mile study area and identifies potential Project visibility. The location of these visual resources is referenced by numeric code on Figure A1. Of the 145 visual resources inventoried, 50 would likely be screened from the proposed Project by either intervening landform or vegetation/structures and are thus eliminated from further study.

Table 4 Visual Resource Visibility Summary

Key

● *Visibility Indicated*

○ *No Visibility Indicated*

◘ *Filtered view through trees or limited view through structures possible (field observed)*

Map ID	Receptor Name	Municipality	Inventory Type	Potential Visibility: Theoretical View Indicated by Viewshed - Excluding Existing Vegetation (See Figure 1)	Potential Visibility: Theoretical View Indicated by Viewshed - Including Existing Vegetation (See Figure 2)	Potential Visibility: Actual View Likely Based on Field Confirmation of Existing Line-of-sight[17]
Cultural Resources						
20	Stillman Farmstead	Town of Mexico	Statewide Significance	●	●	○
23	Slack Farmstead	Town of Mexico	Statewide Significance	●	●	Not Visited
26	Phineas Davis Farmstead	Village of Mexico	Statewide Significance	●	●	Not Visited
28	Fowler-Loomis House	Village of Mexico	Statewide Significance	●	○	○
30	Mexico Village Historic District	Village of Mexico	Statewide Significance	●	○	○
31	Thayer Farmstead	Town of Mexico	Statewide Significance	●	○	○
34	Asa and Caroline Wing House	Town of Mexico	Statewide Significance	●	○	○
36	Red Mill Farm	Town of Mexico	Statewide Significance	●	○	○
56	Pulaski Village Historic District	Village of Pulaski	Statewide Significance	●	●	○
68	Samuel Sadler House	Village of Sandy Creek	Statewide Significance	●	○	◘
69	Sandy Creek Historic District	Village of Sandy Creek	Statewide Significance	●	●	○
70	Newton M. Pitt House	Village of Sandy Creek	Statewide Significance	●	●	○
71	Methodist Church	Village of Sandy Creek	Statewide Significance	●	●	○
72	First Baptist Church	Village of Sandy Creek	Statewide Significance	●	○	○
73	Smith H. Barlow House	Village of Lacona	Statewide Significance	●	○	○
74	Lacona Clock Tower	Village of Lacona	Statewide Significance	●	○	○
75	First National Bank of Lacona	Village of Lacona	Statewide Significance	●	○	○
76	Fred Smart House	Village of Lacona	Statewide Significance	●	●	○
77	Lacona Railroad Station	Village of Lacona	Statewide Significance	●	●	○
78	Charles M. Salisbury House	Village of Lacona	Statewide Significance	●	●	○
79	Newman Tuttle House	Village of Lacona	Statewide Significance	●	●	○
80	Matthew Shoecraft House	Village of Lacona	Statewide Significance	●	●	○

[17] Field confirmation of potential visibility was conducted on October 13, 20 and 24, 2008, and November 12, 2008. Refer 3.4.1for additional information.

Table 4 Visual Resource Visibility Summary

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89	Pierrepont Manor Complex	Town of Ellisburg	Statewide Significance	●	●	○
111	Stony Point Lighthouse (private)	Town of Henderson	Statewide Significance	●	●	Not Visited
Recreational and Tourist Resources						
1	Rainbow Shores Preserve	Town of Sandy Creek	Local Importance	●	○	○
2	Kidder Field	Town of Sandy Creek	Other Places for Analysis	●	○	○
3	Rainbow Shores Campsite	Town of Sandy Creek	Local Importance	○	○	○
4	Deer Creek Marsh WMA (North)	Town of Sandy Creek	Statewide Significance	●	●	○
5	Deer Creek Marsh WMA (South)	Town of Richland	Statewide Significance	○	○	○
6	Selkirk Shores Preserve	Town of Richland	Local Importance	●	●	○
7	Brennan Green	Town of Richland	Local Importance	●	●	○
8	Salmon River Fishing Access (site 1)	Town of Richland	Statewide Significance	●	○	○
9	Selkirk Shores State Park	Town of Richland	Statewide Significance	●	●	○
11	Grindstone Creek Fishing Access (site 1)	Town of Richland	Statewide Significance	●	●	○
12	Grindstone Creek Fishing Access (site 2)	Town of Richland	Statewide Significance	●	●	○
13	Grindstone Creek Fishing Access (site 3)	Town of Richland	Statewide Significance	●	●	○
14	Grindstone Creek Fishing Access (site 4)	Town of Richland	Statewide Significance	●	○	○
17	Grindstone Creek Fishing Access (site 5)	Town of Richland	Statewide Significance	●	●	○
18	Grindstone Creek Fishing Access (site 6)	Town of Richland	Statewide Significance	●	●	○
19	Grampa Bob's Animal Park	Town of Richland	Other Places for Analysis	●	○	Not Visited
25	J and J Campgrounds	Town of Mexico	Local Importance	●	○	○
29	Mexico Community Park	Town of Mexico	Local Importance	●	○	○
33	Little Salmon River Fishing Access	Town of Mexico	Statewide Significance	○	○	○
41	Motomasters Park	Town of Mexico	Other Places for Analysis	●	●	○
44	Altmar State Forest	Town of Albion	Statewide Significance	●	○	○
45	NYS DEC Fishing Access - Sportsman's Pool South	Town of Albion	Statewide Significance	●	○	○

Table 4 Visual Resource Visibility Summary

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46	Salmon River Fishing Access (site 2)	Town of Albion	Statewide Significance	●	○	○
47	Salmon River Fishing Access (site 3)	Town of Albion	Statewide Significance	●	○	○
50	Streamside Campground and Country Club	Town of Richland	Local Importance	●	●	○
55	John Ben Snow Community Complex	Village of Pulaski	Local Importance	●	●	●
61	Little Sandy Creek Fishing Access (site 1)	Town of Sandy Creek	Statewide Significance	●	○	○
62	Little Sandy Creek Fishing Access (site 2)	Town of Sandy Creek	Statewide Significance	●	●	○
63	Sunset Campground	Town of Sandy Creek	Local Importance	●	○	○
64	Little Sandy Creek Fishing Access (site 3)	Town of Sandy Creek	Statewide Significance	●	●	●
65	Little Sandy Creek Fishing Access (site 4)	Town of Sandy Creek	Statewide Significance	●	●	●
84	Castor Field Park	Town of Sandy Creek	Local Importance	●	○	◘
86	Cold Springs Golf Course	Town of Ellisburg	Local Importance	●	●	Not Visited
96	Crystal Lake NYS DEC Access	Town of Henderson	Statewide Significance	●	●	○
102	Black Pond WMA	Town of Ellisburg	Statewide Significance	●	●	○
103	EL Dorado Beach Preserve	Town of Ellisburg	Local Importance	●	○	○
104	Stony Creek NYS DEC Boat Launch	Town of Henderson	Statewide Significance	●	●	○
107	Henderson Harbor Boat Launch – Municipal	Town of Henderson	Local Importance	●	●	◘
109	Robert G. Wehle State Park	Town of Henderson	Statewide Significance	●	●	○
110	Henderson Shores Unique Area	Town of Henderson	Statewide Significance	●	●	○
114	Henderson Community Park	Town of Henderson	Local Importance	●	●	○
123	Southwick Beach State Park	Town of Ellisburg	Statewide Significance	●	●	○
124	Lakeview Marsh WMA	Town of Ellisburg	Statewide Significance	●	●	○
125	Up the Creek Campgrounds	Town of Ellisburg	Local Importance	●	●	Not Visited
131	Winona State Forest	Town of Ellisburg	Statewide Significance	●	○	○
132	Snowmobile Route	Town of Sandy Creek	Local Importance	●	○	○
135	Sandy Creek State Forest	Town of Sandy Creek	Statewide Significance	●	○	○

Table 4 Visual Resource Visibility Summary

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138	North Sandy Pond Marina and Campground	Town of Sandy Creek	Local Importance	●	●	Not Visited
139	Colonial Court Campground	Town of Sandy Creek	Local Importance	●	○	Not Visited
Highway Corridors/Roadside Receptors						
15	County Route 28 (Tinker Tavern Road)	Town of Richland	Other Places for Analysis	●	●	●
16.1	County Route 41A	Town of Richland	Other Places for Analysis	●	●	●
21	NYS Route 104	Town of Mexico	Local Importance	●	○	●
32	NYS Route 69	Town of Mexico	Local Importance	●	●	○
39	NYS Route 69A	Town of Parish	Local Importance	●	○	○
40.1	LaCasse Road	Town of Mexico	Other Places for Analysis	●	●	●
48	NYS Route 13	Town of Richland	Local Importance	●	●	●
49	Compactor Pool - DEC Fishing Access	Town of Richland	Statewide Significance	●	○	○
51	US Route 11	Town of Richland	Local Importance	●	●	●
51.1	US Route 11 (South)	Town of Mexico	Local Importance	●	●	◘
51.2	US Route 11 (North)	Town of Richland	Local Importance	●	●	●
52	County Route 41	Town of Richland	Other Places for Analysis	●	●	●
60	County Route 62	Town of Sandy Creek	Other Places for Analysis	●	●	○
60.1	Frazer Road	Town of Sandy Creek	Other Places for Analysis	●	●	●
83	County Route 22A	Town of Sandy Creek	Other Places for Analysis	●	●	●
85	Balch Place (Road)	Town of Ellisburg	Other Places for Analysis	●	●	◘
91.1	Log London Road (South Sandy Creek)	Town of Ellisburg	Other Places for Analysis	●	●	●
91.2	Lee Road	Town of Ellisburg	Other Places for Analysis	●	●	●
98	County Route 78	Town of Henderson	Other Places for Analysis	●	●	●
100	County Route 90	Town of Ellisburg	Other Places for Analysis	●	●	●
101	County Route 75	Town of Ellisburg	Other Places for Analysis	●	●	●
106	Lighthouse Road	Town of Henderson	Other Places for Analysis	●	●	●

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108	North Schoolhouse Road (Adjacent to Robert G. Wehle State Park)	Town of Henderson	Other Places for Analysis	●	○	●
112	NYS Route 3/Seaway Trail Scenic Byway/Bike Route	Town of Henderson	Statewide Significance	●	●	●
116	NYS Route 178	Town of Henderson	Local Importance	●	●	●
118	NYS Route 3/Seaway Trail Overlook (Naval Operations)	Town of Henderson	Statewide Significance	●	○	○
122	NYS Route 193	Town of Ellisburg	Local Importance	●	●	●
128	NYS Route 289	Town of Ellisburg	Local Importance	●	●	●
133	US Route 11 (site 2)	Town of Sandy Creek	Local Importance	●	●	◘
134	Interstate 81	Town of Sandy Creek	Statewide Significance	●	●	●
136	County Route 48	Town of Sandy Creek	Other Places for Analysis	●	●	○
Residential/Community Resources						
10	Hamlet of Daysville	Town of Richland	Local Importance	●	○	○
16	Hamlet of Fernwood	Town of Richland	Local Importance	●	○	◘
22	Hamlet of Prattham	Town of Mexico	Local Importance	●	●	○
24	Deweys Corners	Town of Mexico	Local Importance	●	●	Not Visited
27	Village of Mexico	Village of Mexico	Local Importance	○	○	○
35	Hamlet of Colosse	Town of Mexico	Local Importance	●	○	Not Visited
37	Hamlet of Red Mill	Town of Parish	Local Importance	●	○	Not Visited
38	Village of Parish	Village of Parish	Local Importance	●	○	○
40	Graftons Square	Town of Mexico	Local Importance	●	●	○
42	Hamlet of Maple View	Town of Mexico	Local Importance	●	●	◘
43	Maple Corners	Town of Richland	Local Importance	●	●	○
53	Farmers Corner	Town of Richland	Local Importance	●	●	◘
54	Pulaski High School	Village of Pulaski	Local Importance	●	○	◘
57	Village of Pulaski (Village Center)	Village of Pulaski	Local Importance	●	●	○
58	Academy and Central School	Village of Pulaski	Local Importance	●	●	○

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59	Malby Corners	Town of Sandy Creek	Local Importance	●	●	Not Visited
66	Village of Sandy Creek	Village of Sandy Creek	Local Importance	●	●	●
67	Oswego County Fairgrounds	Village of Sandy Creek	Local Importance	●	●	○
81	Village of Lacona	Village of Lacona	Local Importance	●	●	◘
82	Sandy Creek Central School	Village of Sandy Creek	Local Importance	●	○	Not Visited
87	Village of Mannsville	Village of Mannsville	Local Importance	●	●	◘
88	Central School Number 1 Ellisburg-Lorraine	Village of Mannsville	Local Importance	●	○	○
90	Pierrepont Manor	Town of Ellisburg	Local Importance	●	○	○
91	Hamlet of Wardwell	Town of Ellisburg	Local Importance	●	●	Not Visited
92	Taylor Settlement	Town of Ellisburg	Local Importance	●	●	●
93	Belleville-Henderson Central School	Town of Ellisburg	Local Importance	●	●	○
94	Hamlet of Belleville	Town of Ellisburg	Local Importance	●	●	○
95	Roberts Corner	Town of Henderson	Local Importance	●	●	○
97	Scotts Corners	Town of Henderson	Local Importance	●	●	○
99	Alexander Corners	Town of Henderson	Local Importance	●	●	○
105	Hungerford Corners	Town of Henderson	Local Importance	●	●	●
113	Aspinwall Corners	Town of Henderson	Local Importance	●	○	◘
115	Hamlet of Henderson	Town of Henderson	Local Importance	●	●	○
117	Henderson Harbor	Town of Henderson	Local Importance	●	●	○
119	Association Island	Town of Henderson	Local Importance	●	●	○
120	Hamlet of Bishop Street	Town of Henderson	Local Importance	●	●	Not Visited
121	Hammond Corners	Town of Ellisburg	Local Importance	●	●	○
126	North Landing	Town of Ellisburg	Local Importance	●	○	○
127	Hamlet of Woodville	Town of Ellisburg	Local Importance	●	●	○
129	Village of Ellisburg	Village of Ellisburg	Local Importance	●	●	○

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130	Cobblestone Corners	Town of Ellisburg	Local Importance	●	●	◘
137	Sandy Pond Corners	Town of Sandy Creek	Local Importance	●	●	Not Visited
140	Jefferson Park	Town of Ellisburg	Local Importance	●	○	Not Visited

3.2.4 Select Resources Beyond 3-Miles

In addition to those inventoried resources listed in Table 4, additional resources of Statewide Significance were identified during the research completed for the VRA. Although not all-inclusive, the following resources were identified:

a) *Sandy Island Beach Unique Area* (Town of Sandy Creek) – Sandy Island Beach is a 126-acre DEC Unique Area along the shore of Lake Ontario, approximately 4.1 miles from the proposed Project site. Unique areas such as Sandy Island and Sandy Pond received their status because of special ecological significance. These areas are part of a 17-mile stretch of the Eastern Lake Ontario Dune and Wetland System and contain prime habitat for countless bird species, as well as a variety of mammals.

b) *Sandy Pond Beach Unique Area* (Town of Sandy Creek) – Sandy Pond Beach is a 103-acre DEC Unique Area just due north of Sandy Island Beach Unique Area, on Lake Ontario. It is roughly 4.6 miles from the proposed Project.

c) *Sandy Island Beach State Park* (Town of Sandy Creek) – Sandy Island Beach is a 16-acre State Park adjacent to Sandy Island Beach Unique Area. The Park, which is roughly 4 miles from the proposed Project, offers numerous opportunities for hiking, bird-watching, canoeing and kayaking.

d) *Trout Brook State Forest* (Town of Boylston and Town of Orwell) – Trout Brook is a 635-acre State Forest 4.8 miles from the proposed Project site. Popular activities in the Forest include hiking and cross-country skiing.

3.3 Factors Affecting Visual Impact

To bring order to the consideration of visual resources, the inventory of visual resources is organized into several recognizable elements, as follows:

3.3.1 Landscape Units

Landscape units are areas with common characteristics of landform, water resources, vegetation, land use, and land use intensity. While a regional landscape may possess diverse features and characteristics, a landscape unit is a relatively homogenous, unified landscape of visual character. Landscape units are established to provide a framework for comparing and prioritizing the differing visual quality and sensitivity of visual resources in the study area. Discrete landscape units were identified through field inventory and air photo interpretation, and divide the study area into zones of unique patterns and visual composition. Within the visual resources study area, five distinctive landscape units were defined. These landscape units, their general landscape character, and use are as follows:

Village Center – The study area contains the Villages of Mexico, Parish, Pulaski, Sandy Creek, Lacona, Ellisburg, and Mannsville. These Villages, particularly the larger communities, are primarily residential and commercial community centers. Built structures and streets dominate the visual landscape. Each Village includes a small downtown area, or focal point, based around a main thoroughfare.

Generally, built structures and streets dominate the visual landscape in each of the Villages. Trees line many of the roadways. Most buildings are one to three stories tall, including brick and wood frame structures. Buildings are a mix of older architectural styles (e.g. predominately Federal and Late Victorian) interspersed with conventional, more modern, mid- to late-20th century residences. Some of the older buildings are very well maintained or restored while others are in various states of disrepair or alteration. Views within the Village centers are generally short distance and focused along streets (which are typically arranged in a grid/block pattern). Structures and trees generally block most distant views, however, filtered, framed, and in some cases open views are possible through foreground vegetation and buildings from the perimeter of the Villages. Development density drops sharply as one moves away from the central business district as the Village Center landscape unit transitions to the Rural Agricultural Landscape Unit.

Views within the Village Center landscape unit may be considered to be of moderate visual quality depending on the character and composition of built and natural features within view.

Hamlet Centers – Rural hamlets are characterized by low to medium density clusters of older residential dwellings and very limited to no retail or commercial services. Buildings are typically one to two stories tall, and include brick commercial blocks and wood frame structures. Buildings styles are an interesting mix of older architectural styles (e.g. Federal, Late Victorian, Italianate) interspersed with more modern, utilitarian styles as well as pre-manufactured homes.

A number of rural crossroad hamlets exist within the study area. These areas vary in size but are generally typified by a small group of houses in an otherwise rural area. Most hamlets occur at road

intersections, such as that between a state route and county route. Residences (a mix of old and new and of varying maintenance) and accessory structures (barns, garages, etc.) are a main feature of rural hamlets. Places of worship, community buildings and general stores are also common.

Roadside residences and street trees often reinforce axial views along the highway. Views are typically short distance and directed towards the main thoroughfare and adjacent structures. Structures and trees generally block most views, however, filtered or framed views beyond the hamlet may exist through foreground vegetation. Development density drops almost immediately as one travels away from the hamlet center; transitioning quickly to the character of the surrounding Rural Agricultural Landscape Unit.

The study area includes over 10 definitive hamlets. The hamlets of Henderson Harbor, Henderson, Pierrepont Manor, Belleville, Wardwell, and Red Mill are representative of this unit.

Views found within the Rural Hamlet Landscape Unit may be considered to be of moderate visual quality depending on the character and composition of built and natural features within view.

Rural Agricultural Landscape Unit – This landscape unit is predominantly a patchwork of open land, including working cropland/pastures and successional old-fields transected by property-line hedgerows, occasionally interspersed with woodlots. The terrain itself consists of relatively level topography with gentle low-lying hills and small rounded hillocks rising 180 to 190 feet above Lake Ontario.

Within this landscape unit, population densities are very low and structures are sparsely located. Uses are predominantly agricultural and very low-density residential. Minor areas of commercial use are occasionally found along the roadside. Building stock consists primarily of permanent homes and manufactured housing, along with accessory structures (barns, garages, sheds, etc.). Structures are of varying vintage and quality. Poorly maintained or dilapidated structures and properties are not uncommon sights.

Views within the Rural Agricultural Landscape Unit are often constrained by foreground vegetation and hills. However, distant vistas are common from higher elevations across down-slope agricultural lands or across the expansive agricultural plain. Straight stretches of road can also provide long axial views, while narrow curving roads often provide an interesting series of short views of the rural landscape, but also force drivers to direct their attention to the road rather than the adjacent scenery.

Some local residents and visitors may regard the aesthetic character of this landscape unit as an attractive and pastoral setting; others may view it as a working landscape, similar in character with much of rural upstate New York. Although a component of the background landscape, this inland area is not widely associated with scenic quality of the adjacent waterfront landscape that is central to the region's appeal.

Views within the Rural Agricultural landscape unit may be considered of moderate visual quality.

State Land – Pockets of state owned land are scattered throughout the study area and include Parks, Forests, and Wildlife Management Areas (WMA). These lands are lightly developed, yet offer a wide array of recreational opportunities, including nature viewing, hiking, fishing, hunting and camping. Those properties located inland tend to be of the State Forest variety, whereas properties closer to the lakeshore tend be of the Wildlife Management Area, Unique Area, Historic Site and State Park variety.

State Parks and historic sites along the lakeshore tend to have more in the way of infrastructure, including campsites, pavilions, interpretive centers and picnic areas. Among the major public land resources along within the study area are Henderson Shores Unique Area, Deer Creek Marsh WMA, Black Pond WMA, Southwick Beach State Park, Lakeview Marsh WMA, Robert G. Wehle State Park, and Selkirk Shores State Park, in addition to several Nature Conservancy and Thousand Islands Land Trust properties and public fishing access sites. Although The Nature Conservancy and the Thousand Islands Land Trust properties are not state owned, they are characteristically similar and are therefore included within the landscape unit.

Within this landscape unit, dense forest typically prevents distant vistas. However, views beyond the immediate foreground may occur in discrete locations where openings in the forest cover permit and locations along the lakeshore. Filtered views through woodland vegetation may also be available during leaf-off seasons.

Views found within the State Land landscape unit may be considered to be of moderate to high visual quality depending on the character and composition of built and natural features within view.

Waterfront – The scenic character of Lake Ontario (including bays) appears to be the principal factor influencing residential development patterns along the shoreline. Many seasonal and year-round residents desire to live by the water and enjoy the views of the waterfront and islands for which the region is so renowned. The scenic value of waterfront property has resulted in residential development along the study area shoreline. Residential structures include traditional single-family residences, cottages, camps, and mobile homes; nearly all oriented to take best advantage of water views. Along the shoreline, development density may be highly variable. Shoreline areas between the water's edge and residential structures are commonly cleared, partly or often completely, to create unencumbered vistas.

The Waterfront landscape unit is identifiable along roadways paralleling the lakefront and at the end of lake access roads. Most waterfront homes are located within close proximity of the water. Beyond the immediate shoreline views quickly diminish due to the lack of pronounced topographic rise inland from the shoreline.

Through much of the Waterfront landscape unit, residential properties directly front county routes and local roadways. Occasional public and private roads lead to organized neighborhoods defined by closely spaced homes, camps or trailers clustered in a one or two block grid pattern paralleling the shoreline. Individual docks, usually spaced only feet apart, protrude from the shoreline providing private access for homeowners and vacation renters. While many waterfront properties are very well

maintained and contribute to the overall beauty of the waterfront landscape, other private properties have fallen to some degree of disrepair and detract from the visual quality of the waterfront setting.

Many views from the Waterfront landscape unit are focused primarily on views of the Lake Ontario and may be considered of moderate to high visual quality depending on the character and composition of built and natural features within view.

3.3.2 Viewer/User Groups

Viewers engaged in different activities, while in the same landscape unit, are likely to perceive their surroundings differently. The description of viewer groups is provided to assist in understanding the sensitivity and probable reaction of potential observers to visual change resulting from the proposed Project.

Local Residents – These individuals would view the proposed Project from homes, businesses, and local roads. Except when involved in local travel, such viewers are likely to be stationary and could have frequent and/or prolonged views of the Project. They know the local landscape and may be sensitive to changes in particular views that are important to them. Conversely, the sensitivity of an individual observer to a specific view may be diminished over time due to repeated exposure.

Through Travelers – Commuters and through travelers would view the proposed Project from highways. These viewers are typically moving and focusing on the road in front of them. Consequently, their views of the proposed Project may be peripheral, intermittent, and/or of relatively brief duration. Given a general unfamiliarity or infrequent exposure to the regional or local landscape, travelers are likely to have a lower degree of sensitivity to visual change than would local residents and workers.

Recreational Users – This group generally includes all local residents involved in outdoor recreational activities, as well as visitors who come to the area specifically to enjoy the cultural, recreational, scenic resources, and open spaces of the region.

The sensitivity of recreational users to visual quality is variable; but to many, visual quality is an important and integral part of the recreational experience. The presence of transmission towers may diminish the aesthetic experience for those that believe the rural landscape should be preserved for agricultural, rural residential, open space and similar uses. Such viewers will likely have high sensitivity to the visual quality and landscape character, regardless of the frequency of duration of their exposure to the proposed Project. For those with strong utilitarian beliefs, the presence of the proposed Project will have little aesthetic impact on their recreational experience.

While the scenic quality of the Thousand Islands landscape is an important aspect of the recreational experience for most visitors, viewers will also be cognizant of various foreground details, developments and other visually proximate activities. Visitors and recreational users currently view the existing working landscape, low to moderate-density roadside residential and commercial uses of varying aesthetic quality, as well as utility infrastructure.

A greater number of recreational users will be present in the region when the weather is clear and warm as compared to overcast, rainy or cold days. In addition, more recreational users will be present on weekends and holidays than on weekdays.

Tourists – This region of New York State is a widely recognized vacation destination drawing thousands of visitors year-round. These individuals come to the area specifically to enjoy the historic, recreational, and scenic resources of the lakes, rivers and islands.

Most tourists and seasonal residents would have high sensitivity to the visual quality and landscape character, regardless of the frequency or duration of their exposure to the Proposed Transmission Line. This group may view the proposed facility while passing by the proposed Project while boating, fishing, or while traveling local roadways for the purpose of enjoying the scenic landscape.

3.3.3 Distance Zones

Distance affects the apparent size and degree of contrast between an object and its surroundings. Distance can be discussed in terms of distance zones, e.g., foreground, middleground and background. Distance zones established by the U.S. Forest Service and reiterated by the NYSDEC Visual Policy are used in this VRA. A description of each distance zone is provided below to assist in understanding the effect of distance on potential visual impacts.

Foreground (0-½ mile) – At a foreground distance, viewers typically have a very high recognition of detail. Cognitively, in the foreground zone, human scale is an important factor in judging spatial relationships and the relative size of objects. From this distance, the sense of form, line, color and textural contrast with the surrounding landscape is highest. The visual impact is likely to be considered the greatest at a foreground distance.

Middleground (½ mile to 3 miles) – This is the distance where elements begin to visually merge or join. Colors and textures become somewhat muted by distance, but are still identifiable. Visual detail is reduced, although distinct patterns may still be evident. Viewers from middleground distances characteristically recognize surface features such as tree stands, building clusters and small landforms. Scale is perceived in terms of identifiable features of development patterns. From this distance, the contrast of color and texture are identified more in terms of the regional context than by the immediate surroundings.

Background (3-5 miles to horizon) – At this distance, landscape elements lose detail and become less distinct. Atmospheric perspective[18] changes colors to blue-grays, while surface characteristics are lost. Visual emphasis is on the outline or edge of one landmass or water resource against another with a strong skyline element.

[18] Atmospheric Perspective: Even on the clearest of days, the sky is not entirely transparent because of the presence of atmospheric particulate matter. The light scattering effect of these particles causes a reduction in the intensity of colors and the contrast between light and dark as the distance of objects from the observer increases. Contrast depends upon the position of the sun and the reflectance of the object, among other items. The net effect is that objects appear "washed out" over great distances.

3.3.4 Duration/Frequency/Circumstances of View

The analysis of a viewer's experience must include the distinction between stationary and moving observers. The length of time and the circumstances under which a view is encountered is influential in characterizing the importance of a particular view.

Stationary Views – Stationary views are experienced from fixed viewpoints. Fixed viewpoints include residential neighborhoods, recreational facilities, historic resources and other culturally important locations. Characteristically, stationary views offer sufficient time, either from a single observation or repeated exposure, to interpret and understand the physical surroundings. For this reason, stationary viewers have a higher potential for understanding the elements of a view than do moving viewers.

Stationary views can be further divided to consider the effect of short-term and long-term exposure. Sites of long-term exposure include any location where a stationary observer is likely to be visually impacted on a regular basis, such as from a place of residence. Sites of short-term exposure include locations where a stationary observer is only visiting, such as recreational facilities. Although the duration of visual impact remains at the discretion of the individual observer, short-term impacts are less likely to be repeated for a single observer on a regular basis.

Moving Views – Moving views are those experienced in passing, such as from moving vehicles, where the time available for a viewer to cognitively experience a particular view is limited. Such viewers are typically proceeding along a defined path through highly complex stimuli. As the tendency of automobile occupants is to focus down the road, the actual time a viewer is able to focus on individual elements of the surrounding landscape may be a fraction of the total available view time. Obviously, a driver is most affected by driving requirements.

Conversely, the greater the contrast of an element within the existing landscape, the greater the potential for viewer attention, even if viewed for only a moment by a moving viewer. Billboards along a rural highway, designed to attract attention and recognition, are an example of this condition. Furthermore, an element is more likely to be perceived in greater detail by local residents to whom it is experienced on a daily basis than it is to passers-by.

3.3.5 Summary of Affected Resources

As listed in Table 4, of the original 145 inventoried visual resources, 50 would likely be screened from the proposed Project by either intervening landform or vegetation/structures and are thus eliminated from further study. Table 5 summarizes the factors affecting visual impact (landscape unit, viewer group, distance zone and duration/frequency/circumstances of view) described above for each visual resource determined to have a potential view of the proposed Project.

Table 5 Visual Resource Impact Summary

Map ID	Receptor Name	Municipality	Inventory Type	Approximate Number of Structures Visible (see Figure 2)	Factors Affecting Visual Impact: Landscape Unit	Viewer/User Group(s)	Distance (miles) /Distance Zone (to nearest structure)	Moving/ Stationary
1	Rainbow Shores Preserve	Town of Sandy Creek	Local Importance	0	State Land	Recreational	2.7/Middleground	Stationary
2	Kidder Field	Town of Sandy Creek	Other Places for Analysis	0	Recreational	Local residents	2.5/Middleground	Stationary
3	Rainbow Shores Campsite	Town of Sandy Creek	Local Importance	0	Rural Agricultural	Recreational	2.4/Middleground	Stationary
4	Deer Creek Marsh WMA (North)	Town of Sandy Creek	Statewide Significance	4	State Land	Recreational	2.5/Middleground	Stationary
5	Deer Creek Marsh WMA (South)	Town of Richland	Statewide Significance	0	State Land	Recreational	3.0/Background	Stationary
6	Selkirk Shores Preserve	Town of Richland	Local Importance	1	State Land	Recreational	2.9/Middleground	Stationary
7	Brennan Green	Town of Richland	Local Importance	17	Rural Agricultural	Recreational	2.9/Middleground	Stationary
8	Salmon River Fishing Access (site 1)	Town of Richland	Statewide Significance	0	Rural Agricultural	Recreational	2.8/Middleground	Stationary
9	Selkirk Shores State Park	Town of Richland	Statewide Significance	2	State Land	Recreational	2.8/Middleground	Stationary
10	Hamlet of Daysville	Town of Richland	Local Importance	0	Hamlet Center	Travelers, local residents/workers	2.1/Middleground	Stationary
11	Grindstone Creek Fishing Access (site 1)	Town of Richland	Statewide Significance	4	Rural Agricultural	Recreational	1.9/Middleground	Stationary
12	Grindstone Creek Fishing Access (site 2)	Town of Richland	Statewide Significance	9	Rural Agricultural	Recreational	1.7/Middleground	Stationary
13	Grindstone Creek Fishing Access (site 3)	Town of Richland	Statewide Significance	3	Rural Agricultural	Recreational	1.6/Middleground	Stationary
14	Grindstone Creek Fishing Access (site 4)	Town of Richland	Statewide Significance	0	Rural Agricultural	Recreational	1.6/Middleground	Stationary
15	County Route 28 (Tinker Tavern Road)	Town of Richland	Other Places for Analysis	20	Rural Agricultural	Local residents/workers	0.4/Foreground	Moving
16	Hamlet of Fernwood	Town of Richland	Local Importance	0	Hamlet Center	Travelers, local residents/workers	0.4/Foreground	Stationary
16.1	County Route 41A	Town of Richland	Other Places for Analysis	7	Rural Agricultural	Local residents/workers	0.0/Foreground	Moving
17	Grindstone Creek Fishing Access (site 5)	Town of Richland	Statewide Significance	1	Rural Agricultural	Recreational	0.8/Middleground	Stationary
18	Grindstone Creek Fishing Access (site 6)	Town of Richland	Statewide Significance	2	Rural Agricultural	Recreational	0.8/Middleground	Stationary
19	Grampa Bob's Animal Park	Town of Richland	Other Places for Analysis	0	Rural Agricultural	Travelers, local residents/workers	1.3/Middleground	Stationary
20	Stillman Farmstead	Town of Mexico	Statewide Significance	13	Rural Agricultural	Local residents	0.5/Middleground	Stationary
21	NYS Route 104	Town of Mexico	Local Importance	0	Rural Agricultural	Travelers, local residents/workers	0.1/Foreground	Moving
22	Hamlet of Prattham	Town of Mexico	Local Importance	21	Hamlet Center	Travelers, local residents/workers	0.7/Middleground	Stationary
23	Slack Farmstead	Town of Mexico	Statewide Significance	6	Rural Agricultural	Local residents	0.8/Middleground	Stationary
24	Deweys Corners	Town of Mexico	Local Importance	5	Hamlet Center	Travelers, local residents/workers	2.0/Middleground	Stationary
25	J and J Campgrounds	Town of Mexico	Local Importance	0	Rural Agricultural	Recreational	2.6/Middleground	Stationary
26	Phineas Davis Farmstead	Village of Mexico	Statewide Significance	225[19]	Village Center	Local residents	2.9/Middleground	Stationary
27	Village of Mexico	Village of Mexico	Local Importance	0	Village Center	Travelers, local	2.8/Middleground	Stationary

[19] Due to atmospheric conditions and other factors, it is anticipated that an observer would not see a high number of proposed structure(s) many miles away. This may be the case for other receptors contained in Table 5.

Table 5 Visual Resource Impact Summary

Map ID	Receptor Name	Municipality	Inventory Type	Approximate Number of Structures Visible (see Figure 2)	Factors Affecting Visual Impact: Landscape Unit	Viewer/User Group(s)	Distance (miles) /Distance Zone (to nearest structure)	Moving/ Stationary
						residents/workers		
28	Fowler-Loomis House	Village of Mexico	Statewide Significance	0	Village Center	Local residents	2.6/Middleground	Stationary
29	Mexico Community Park	Town of Mexico	Local Importance	0	Rural Agricultural	Recreational	2.3/Middleground	Stationary
30	Mexico Village Historic District	Village of Mexico	Statewide Significance	0	Village Center	Travelers, local residents/workers	2.9/Middleground	Stationary
31	Thayer Farmstead	Town of Mexico	Statewide Significance	0	Rural Agricultural	Local residents	2.8/Middleground	Stationary
32	NYS Route 69	Town of Mexico	Local Importance	114	Rural Agricultural	Travelers, local residents/workers	2.4/Middleground	Moving
33	Little Salmon River Fishing Access	Town of Mexico	Statewide Significance	0	Rural Agricultural	Recreational	2.0/Middleground	Stationary
34	Asa and Caroline Wing House	Town of Mexico	Statewide Significance	0	Rural Agricultural	Local residents	1.2/Middleground	Stationary
35	Hamlet of Colosse	Town of Mexico	Local Importance	0	Rural Hamlet	Travelers, local residents/workers	1.4/Middleground	Stationary
36	Red Mill Farm	Town of Mexico	Statewide Significance	0	Rural Agricultural	local residents	1.5/Middleground	Stationary
37	Hamlet of Red Mill	Town of Parish	Local Importance	0	Hamlet Center	Travelers, local residents/workers	2.0/Middleground	Stationary
38	Village of Parish	Village of Parish	Local Importance	0	Village Center	Travelers, local residents/workers	3.0/Background	Stationary
39	NYS Route 69A	Town of Parish	Local Importance	0	Rural Agricultural	Travelers, local residents/workers	3.0/Background	Moving
40	Graftons Square	Town of Mexico	Local Importance	8	Hamlet Center	Travelers, local residents/workers	0.8/Middleground	Stationary
40.1	LaCasse Road	Town of Mexico	Other Places for Analysis	9	Rural Agricultural	Local residents/workers	0.0/Foreground	Moving
41	Motomasters Park	Town of Mexico	Other Places for Analysis	1	Rural Agricultural	local residents	0.2/Foreground	Stationary
42	Hamlet of Maple View	Town of Mexico	Local Importance	2	Hamlet Center	Travelers, local residents/workers	0.3/Foreground	Stationary
43	Maple Corners	Town of Richland	Local Importance	6	Hamlet Center	Travelers, local residents/workers	1.8/Middleground	Stationary
44	Altmar State Forest	Town of Albion	Statewide Significance	0	State Land	Recreational	2.5/Middleground	Stationary
45	NYS DEC Fishing Access - Sportsman's Pool South	Town of Albion	Statewide Significance	0	Rural Agricultural	Recreational	2.6/Middleground	Stationary
46	Salmon River Fishing Access (site 2)	Town of Albion	Statewide Significance	0	Rural Agricultural	Recreational	2.9/Middleground	Stationary
47	Salmon River Fishing Access (site 3)	Town of Albion	Statewide Significance	0	Rural Agricultural	Recreational	2.8/Middleground	Stationary
48	NYS Route 13	Town of Richland	Local Importance	38	Rural Agricultural	Travelers, local residents/workers	0.1/Foreground	Moving
49	Compactor Pool - DEC Fishing Access	Town of Richland	Statewide Significance	0	Rural Agricultural	Recreational	1.1/Middleground	Stationary
50	Streamside Campground and Country Club	Town of Richland	Local Importance	3	Rural Agricultural	Recreational,	1.3/Middleground	Stationary
51	US Route 11	Town of Richland	Local Importance	14	Rural Agricultural	Travelers, local	0.1/Foreground	Moving

Table 5 Visual Resource Impact Summary

Map ID	Receptor Name	Municipality	Inventory Type	Approximate Number of Structures Visible (see Figure 2)	Factors Affecting Visual Impact: Landscape Unit	Viewer/User Group(s)	Distance (miles) /Distance Zone (to nearest structure)	Moving/ Stationary
						residents/workers		
51.1	US Route 11 (South)	Town of Mexico	Local Importance	10	Rural Agricultural	Travelers, local residents/workers	0.3/Foreground	Moving
51.2	US Route 11 (North)	Town of Richland	Local Importance	20	Rural Agricultural	Travelers, local residents/workers	0.1/Foreground	Moving
52	County Route 41	Town of Richland	Other Places for Analysis	21	Rural Agricultural	Local residents/workers	0.4/Foreground	Moving
53	Farmers Corner	Town of Richland	Local Importance	34	Hamlet Center	Travelers, local residents/workers	0.5/Middleground	Stationary
54	Pulaski High School	Village of Pulaski	Local Importance	0	Rural Agricultural	Local residents/workers	0.2/Foreground	Stationary
55	John Ben Snow Community Complex	Village of Pulaski	Local Importance	9	Village Center	Recreational	0.3/Foreground	Stationary
56	Pulaski Village Historic District	Village of Pulaski	Statewide Significance	15	Village Center	Travelers, local residents/workers	0.8/Middleground	Stationary
57	Village of Pulaski	Village of Pulaski	Local Importance	25	Village Center	Travelers, local residents/workers	0.4/Foreground	Stationary
58	Academy and Central School	Village of Pulaski	Local Importance	10	Village Center	Local residents/workers	0.8/Middleground	Stationary
59	Malby Corners	Town of Sandy Creek	Local Importance	3	Hamlet Center	Travelers, local residents/workers	0.4/Foreground	Stationary
60	County Route 62	Town of Sandy Creek	Other Places for Analysis	232	Rural Agricultural	Local residents/workers	0.9/Middleground	Moving
60.1	Frazer Road	Town of Sandy Creek	Other Places for Analysis	5	Rural Agricultural	Local residents/workers	0.1/Foreground	Moving
61	Little Sandy Creek Fishing Access (site 1)	Town of Sandy Creek	Statewide Significance	0	Rural Agricultural	Recreational	1.2/Middleground	Stationary
62	Little Sandy Creek Fishing Access (site 2)	Town of Sandy Creek	Statewide Significance	21	Rural Agricultural	Recreational	1.2/Middleground	Stationary
63	Sunset Campground	Town of Sandy Creek	Local Importance	0	Rural Agricultural	Recreational	0.9/Middleground	Stationary
64	Little Sandy Creek Fishing Access (site 3)	Town of Sandy Creek	Statewide Significance	26	Rural Agricultural	Recreational	0.6/Middleground	Stationary
65	Little Sandy Creek Fishing Access (site 4)	Town of Sandy Creek	Statewide Significance	7	Rural Agricultural	Recreational	0.1/Foreground	Stationary
66	Village of Sandy Creek	Village of Sandy Creek	Local Importance	7	Village Center	Travelers, local residents/workers	0.3/Foreground	Stationary
67	Oswego County Fairgrounds	Village of Sandy Creek	Local Importance	51	Rural Agricultural	Recreational, local residents, tourists	0.6/Middleground	Stationary
68	Samuel Sadler House	Village of Sandy Creek	Statewide Significance	0	Village Center	Local residents	0.9/Middleground	Stationary
69	Sandy Creek Historic District	Village of Sandy Creek	Statewide Significance	1	Village Center	Travelers, local residents/workers	0.8/Middleground	Stationary
70	Newton M. Pitt House	Village of Sandy Creek	Statewide Significance	1	Village Center	Local residents	0.9/Middleground	Stationary
71	Methodist Church	Village of Sandy Creek	Statewide Significance	1	Village Center	local residents	0.9/Middleground	Stationary
72	First Baptist Church	Village of Sandy Creek	Statewide Significance	0	Village Center	local residents	1.2/Middleground	Stationary

Table 5 Visual Resource Impact Summary

Map ID	Receptor Name	Municipality	Inventory Type	Approximate Number of Structures Visible (see Figure 2)	Factors Affecting Visual Impact: Landscape Unit	Viewer/User Group(s)	Distance (miles) /Distance Zone (to nearest structure)	Moving/ Stationary
73	Smith H. Barlow House	Village of Lacona	Statewide Significance	0	Village Center	Local residents	1.3/Middleground	Stationary
74	Lacona Clock Tower	Village of Lacona	Statewide Significance	0	Village Center	local residents	1.6/Middleground	Stationary
75	First National Bank of Lacona	Village of Lacona	Statewide Significance	0	Village Center	local residents	1.6/Middleground	Stationary
76	Fred Smart House	Village of Lacona	Statewide Significance	3	Village Center	Local residents	1.6/Middleground	Stationary
77	Lacona Railroad Station	Village of Lacona	Statewide Significance	1	Village Center	local residents	1.6/Middleground	Stationary
78	Charles M. Salisbury House	Village of Lacona	Statewide Significance	2	Village Center	Local residents	1.7/Middleground	Stationary
79	Newman Tuttle House	Village of Lacona	Statewide Significance	8	Village Center	Local residents	1.9/Middleground	Stationary
80	Matthew Shoecraft House	Village of Lacona	Statewide Significance	53	Village Center	Local residents	2.0/Middleground	Stationary
81	Village of Lacona	Village of Lacona	Local Importance	35	Village Center	Travelers, local residents/workers	1.8/Middleground	Stationary
82	Sandy Creek Central School	Village of Sandy Creek	Local Importance	0	Village Center	Local residents/workers	1.2/Middleground	Stationary
83	County Route 22A	Town of Sandy Creek	Other Places for Analysis	96	Rural Agricultural	Local residents/workers	0.1/Foreground	Moving
84	Castor Field Park	Town of Sandy Creek	Local Importance	0	Rural Agricultural	Recreational	0.5/Middleground	Stationary
85	Balch Place (Road)	Town of Ellisburg	Other Places for Analysis	123	Rural Agricultural	Local residents/workers	1.6/Middleground	Stationary
86	Cold Springs Golf Course	Town of Ellisburg	Local Importance	71	Rural Agricultural	Recreational	1.4/Middleground	Stationary
87	Village of Mannsville	Village of Mannsville	Local Importance	4	Village Center	Travelers, local residents/workers	1.5/Middleground	Stationary
88	Central School Number 1 Ellisburg-Lorraine	Village of Mannsville	Local Importance	0	Rural Agricultural	Local residents/workers	1.3/Middleground	Stationary
89	Pierrepont Manor Complex	Town of Ellisburg	Statewide Significance	4	Hamlet Center	Local residents	1.5/Middleground	Stationary
90	Pierrepont Manor	Town of Ellisburg	Local Importance	0	Hamlet Center	Travelers, local residents/workers	1.7/Middleground	Stationary
91	Hamlet of Wardwell	Town of Ellisburg	Local Importance	21	Hamlet Center	Travelers, local residents/workers	1.4/Middleground	Stationary
91.1	Log London Road (South Sandy Creek)	Town of Ellisburg	Other Places for Analysis	17	Rural Agricultural	Local residents/workers	0.2/Foreground	Moving
91.2	Lee Road	Town of Ellisburg	Other Places for Analysis	32	Rural Agricultural	Local residents/workers	0.2/Foreground	Moving
92	Taylor Settlement	Town of Ellisburg	Local Importance	11	Hamlet Center	Travelers, local residents/workers	2.0/Middleground	Stationary
93	Belleville-Henderson Central School	Town of Ellisburg	Local Importance	45	Hamlet Center	Local residents/workers	1.6/Middleground	Stationary
94	Hamlet of Belleville	Town of Ellisburg	Local Importance	34	Hamlet Center	Travelers, local residents/workers	1.3/Middleground	Stationary
95	Roberts Corner	Town of Henderson	Local Importance	3	Hamlet Center	Travelers, local residents/workers	2.3/Middleground	Stationary
96	Crystal Lake NYS DEC Access	Town of Henderson	Statewide Significance	45	Rural Agricultural	Recreational	1.7/Middleground	Stationary
97	Scotts Corners	Town of Henderson	Local Importance	93	Hamlet	Travelers, local residents/workers	0.8/Middleground	Stationary
98	County Route 78	Town of Henderson	Other Places for Analysis	49	Rural Agricultural	Local residents/workers	0.1/Foreground	Moving

Table 5 Visual Resource Impact Summary

Map ID	Receptor Name	Municipality	Inventory Type	Approximate Number of Structures Visible (see Figure 2)	Factors Affecting Visual Impact: Landscape Unit	Viewer/User Group(s)	Distance (miles) /Distance Zone (to nearest structure)	Moving/ Stationary
99	Alexander Corners	Town of Henderson	Local Importance	57	Hamlet	Travelers, local residents/workers	0.9/Middleground	Stationary
100	County Route 90	Town of Ellisburg	Other Places for Analysis	63	Rural Agricultural	Local residents/workers	0.5/Middleground	Moving
101	County Route 75	Town of Ellisburg	Other Places for Analysis	41	Rural Agricultural	Local residents/workers	0.3/Foreground	Moving
102	Black Pond WMA	Town of Ellisburg	Statewide Significance	3	State Land	Recreational	2.0/Middleground	Stationary
103	EL Dorado Beach Preserve	Town of Ellisburg	Local Importance	0	State Land	Recreational	2.1/Middleground	Stationary
104	Stony Creek NYS DEC Boat Launch	Town of Henderson	Statewide Significance	8	Waterfront	Recreational	1.4/Middleground	Stationary
105	Hungerford Corners	Town of Henderson	Local Importance	25	Hamlet Center	Travelers, local residents/workers	0.5/Middleground	Stationary
106	Lighthouse Road	Town of Henderson	Other Places for Analysis	47	Rural Agricultural	Local residents/workers	0.1/Foreground	Moving
107	Henderson Harbor Boat Launch – Municipal	Town of Henderson	Local Importance	5	Waterfront	Recreational	0.5/Middleground	Stationary
108	North Schoolhouse Road (Adjacent to Robert G. Wehle State Park)	Town of Henderson	Other Places for Analysis	0	Rural Agricultural	Local residents/workers	0.2/Foreground	Moving
109	Robert G. Wehle State Park	Town of Henderson	Statewide Significance	1	State Land	Recreational	0.7/Middleground	Stationary
110	Henderson Shores Unique Area	Town of Henderson	Statewide Significance	2	State Land	Recreational	1.8/Middleground	Stationary
111	Stony Point Lighthouse (private)	Town of Henderson	Statewide Significance	143	Waterfront	Local residents	3.0/Background	Stationary
112	NYS Route 3/Seaway Trail Scenic Byway/Bike Route	Town of Henderson	Statewide Significance	15	Rural Agricultural	Travelers, local residents/workers, recreational	0.2/Foreground	Moving
113	Aspinwall Corners	Town of Henderson	Local Importance	0	Hamlet Center	Travelers, local residents/workers	0.5/Middleground	Stationary
114	Henderson Community Park	Town of Henderson	Local Importance	35	Hamlet Center	Recreational	0.8/Middleground	Stationary
115	Hamlet of Henderson	Town of Henderson	Local Importance	43	Hamlet Center	Travelers, local residents/workers	1.0/Middleground	Stationary
116	NYS Route 178	Town of Henderson	Local Importance	94	Rural Agricultural	Travelers, local residents/workers	0.6/Middleground	Moving
117	Henderson Harbor	Town of Henderson	Local Importance	8	Hamlet Center	Travelers, local residents/workers	0.9/Middleground	Stationary
118	NYS Route 3/Seaway Trail Overlook (Naval Operations)	Town of Henderson	Statewide Significance	0	Rural Agricultural	Travelers, local residents/workers, recreational	1.7/Middleground	Moving
119	Association Island	Town of Henderson	Local Importance	21	Waterfront	Recreational	2.4/Middleground	Stationary
120	Hamlet of Bishop Street	Town of Henderson	Local Importance	40	Hamlet Center	Travelers, local residents/workers	1.7/Middleground	Stationary
121	Hammond Corners	Town of Ellisburg	Local Importance	12	Hamlet Center	Travelers, local residents/workers	1.0/Middleground	Stationary
122	NYS Route 193	Town of Ellisburg	Local Importance	73	Rural Agricultural	Travelers, local residents/workers	0.1/Foreground	Moving

Table 5 Visual Resource Impact Summary

Map ID	Receptor Name	Municipality	Inventory Type	Approximate Number of Structures Visible (see Figure 2)	Factors Affecting Visual Impact: Landscape Unit	Viewer/User Group(s)	Distance (miles) /Distance Zone (to nearest structure)	Moving/ Stationary
123	Southwick Beach State Park	Town of Ellisburg	Statewide Significance	3	State Land	Recreational	2.3/Middleground	Stationary
124	Lakeview Marsh WMA	Town of Ellisburg	Statewide Significance	4	State Land	Recreational	2.8/Middleground	Stationary
125	Up the Creek Campgrounds	Town of Ellisburg	Local Importance	7	Rural Agricultural	Recreational	2.5/Middleground	Stationary
126	North Landing	Town of Ellisburg	Local Importance	0	Hamlet Center	Travelers, local residents/workers	2.9/Middleground	Stationary
127	Hamlet of Woodville	Town of Ellisburg	Local Importance	27	Hamlet Center	Travelers, local residents/workers	1.3/Middleground	Stationary
128	NYS Route 289	Town of Ellisburg	Local Importance	49	Rural Agricultural	Travelers, local residents/workers	0.3/Foreground	Moving
129	Village of Ellisburg	Village of Ellisburg	Local Importance	18	Village Center	Travelers, local residents/workers	2.2/Middleground	Stationary
130	Cobblestone Corners	Town of Ellisburg	Local Importance	35	Hamlet Center	Travelers, local residents/workers	0.5/Middleground	Stationary
131	Winona State Forest	Town of Ellisburg	Statewide Significance	0	State Land	Recreational	2.9/Middleground	Stationary
132	Snowmobile Route	Town of Sandy Creek	Local Importance	0	Rural Agricultural	Recreational	0.6/Middleground	
133	US Route 11 (site 2)	Town of Sandy Creek	Statewide Significance	17	Rural Agricultural	Travelers, local residents/workers	0.8/Middleground	Moving
134	Interstate 81	Town of Sandy Creek	Local Importance	22	Rural Agricultural	Travelers, local residents/workers	0.1/Foreground	Moving
135	Sandy Creek State Forest	Town of Sandy Creek	Statewide Significance	0	State Land	Recreational	2.1/Middleground	Stationary
136	County Route 48	Town of Sandy Creek	Other Places for Analysis	119	Rural Agricultural	Local residents/workers	2.3/Middleground	Moving
137	Sandy Pond Corners	Town of Sandy Creek	Local Importance	16	Hamlet Center	Travelers, local residents/workers	2.3/Middleground	Stationary
138	North Sandy Pond Marina and Campground	Town of Sandy Creek	Local Importance	1	Rural Agricultural	Recreational	2.3/Middleground	Stationary
139	Colonial Court Campground	Town of Sandy Creek	Local Importance	0	Rural Agricultural	Recreational	2.4/Middleground	Stationary
140	Jefferson Park	Town of Ellisburg	Local Importance	0	Hamlet Center	Travelers, local residents/workers	2.9/Middleground	Stationary

3.4 Degree of Project Visibility

3.4.1 Field Observation and Photography

On October 13, 20 and 24, 2008, and November 12, 2008 a field crew drove public roads and visited many of the potentially affected visual resources (as determined through viewshed mapping) to document existing visibility in the direction of Proposed Transmission Line. All photographs were taken from affected visual resources using a 12.2-mega pixel digital camera with a lens setting of approximately 50mm[20] to simulate normal human eyesight relative to scale. The location selected for each photograph was judged by the field observer to be the most unobstructed line-of-sight to the Proposed Transmission Line from the subject visual resource. To the degree possible, photographs were taken at an appropriate time of day to minimize the effect of glare within the camera's field of view and to maximize visible contrast of the landscape being photographed.

The precise coordinates of each photo location were recorded in the field using a handheld global positioning system (GPS) unit. To determine the direction of the Proposed Transmission Line from each photo location, the precise coordinates of all proposed tower structures were pre-programmed into the GPS as a "waypoint." The GPS waypoint direction indicator (arrow pointing along calculated bearing) was used to determine the appropriate bearing for the camera, so that a desired structure, would be generally centered in the field of view of each photograph.

3.4.2 Photo Simulations

Selection of Key Receptors for Photo Simulation – To demonstrate how the actual structures will appear within the study area from a variety of locations, representative photo simulations were prepared from 21 locations. The specific location of these simulations was chosen for their relevance to the factors affecting visual impact (viewer/user groups, landscape units, and duration/frequency) and circumstances of view discussed above.

Table 6 Key Receptors Selected for Photo Simulation

Map ID	Receptor Name
16.1	County Route 41A
21	NYS Route 104
40.1	LaCasse Road
48	NYS Route 13
51	US Route 11
51.1	US Route 11 (South)
51.2	US Route 11 (North)
55	John Ben Snow Community Complex
60.1	Frazer Road
66	Village of Sandy Creek
91.1	Log London Road (South Sandy Creek)
91.2	Lee Road
100	County Route 90
101	County Route 75
106	Lighthouse Road
108	North Schoolhouse Road (Adjacent to Robert G. Wehle State Park)
112	NYS Route 3/Seaway Trail Scenic Byway/Bike Route
116	NYS Route 178
122	NYS Route 193
128	NYS Route 289
134	Interstate 81

Because the visibility of proposed structures will most commonly affect local residents from rural homes and during daily travel along roadways, and that most open vistas of the Project typically occur in locations along rural roadways,

[20] A Canon EOS Rebel XT digital SLR with a 24-85milimeter (mm) zoom lens was used for all Project photography. This digital camera, similar to most digital SLR cameras, has a sensor that is approximately 1.6 times smaller than a comparable full frame 35mm film camera. Recognizing this differential, the zoom lens used was set to approximately 31mm to achieve a field-of-view comparable to a 50mm lens on a full frame 35mm camera (31mm x 1.6 = 50mm).

views selected for photo simulation favor such views even though the number of viewers may not be large. Simulations completed for the VRA were generally completed within ½ mile of the Proposed Transmission Line as the greatest potential impact are from within foreground views.

Simulations were not completed from all potentially affected visual resources, however, they do provide representative examples of how the proposed Project will appear under varying circumstances of distance and landscape character. Table 6 lists the key receptors selected for photo simulation.

The location of simulated views, as well as all photo simulations are presented in Appendix A.

Photo Simulation Methodology – A photo simulation of the proposed Project was prepared from each key receptor location. Photo simulations were developed by superimposing a rendering of a three-dimensional computer model of the proposed Project into the base photograph taken from each corresponding visual resource (see section 3.4.1). The three-dimensional computer model was developed in *Autodesk Civil 3D 2009* and *Autodesk 3D Studio Max 2009* (Max) software.

Simulated perspectives (camera views) were then matched to the corresponding base photograph for each simulated view by replicating the precise coordinates of the field camera position (as recorded by GPS) and the focal length of the camera lens used (e.g. 50mm). Precisely matching these parameters assures scale accuracy between the base photograph and the subsequent simulated view. The camera's target position was set to match the bearing of the corresponding existing condition photograph as recorded in the field. With the existing conditions photograph displayed as a "viewport background," minor camera adjustments were made (horizontal and vertical positioning, and camera roll) to align the horizon in the background photograph with the corresponding features of the 3D model.

The appearance of the structures is based on details provided by Upstate Power. The heights of the structures generally range from 90 to 105 feet; with structures up to 155 feet. Details of the structures are contained in Appendix A.

The proposed condition model was rendered using the base photograph as a "Max background environment map." The 3D model was rendered using sunlight settings approximating the date and time of day the base photograph was taken. To the extent practicable, and to the extent necessary to reveal impacts, design details of the proposed structures were built into the 3D model and incorporated into the photo simulation. Consequently, the scale, alignment, elevations and location of the visible elements of the Proposed Transmission Line are true to the conceptual design.[21] The rendered view was then opened using *Adobe Photoshop CS2* software for post-production editing (i.e., airbrush out portion of structures that fall below foreground topography and vegetation).

Arms Length Rule – The photo simulations included in Appendix A have been printed using an 11"x17" page format. At this image size, the page should be held at approximately arms length[22] so

[21] It is recognized that structure type, location, and height will vary along the line and that final details will be determined in the detailed design phase.

[22] Viewing distance is calculated based a 39.6-degree field-of-view for the camera lens used, and the 15.5" wide image presented in Appendix A. "Arm's length" is assumed to be approximately 22.5 inches from the eye. Arm's length varies for individual viewers.

that the scene will appear at the correct scale. Viewing the image closer would make the scene appear too large and viewing the image from greater distance would make the scene appear too small compared to what an observer would actually see in the field.

For viewing photo simulations at other page sizes (i.e., computer monitor, projected image or other hard copy output) the viewing distance/page width ratio is approximately 1.5/1. For example, if the simulation were viewed on a 42-inch wide poster size enlargement, the correct viewing distance would be approximately 63 inches; or 5 ¼ feet.

Field Viewing – The photo simulations present an accurate depiction of the appearance of the Proposed Transmission Line suitable for general understanding of the degree and character of Project visibility. However, these images are a two-dimensional representation of a three-dimensional landscape. The human eye is capable of recognizing a greater level of detail than can be illustrated in a two-dimensional image. Agency decision-makers and interested parties may benefit from viewing the photo simulations in the field from any or all of the simulated vantage points. In this manner, observers can directly compare the level of detail visible in the base photograph with actual field observed conditions.

3.5 Character of Project Visibility

3.5.1 Compatibility with Regional Landscape Patterns

The visual character of a landscape is defined by the patterns, forms and scale relationships created by lines, colors, and textures. Some patterns dominate while others are subordinate. The qualitative impact of a Project is the effect the development has on these patterns, and by corollary on, the visual character of the regional landscape.

Existing Landscape – The visible patterns (form, line, color, and texture) found within the Project region can best be described as representative of the agricultural landscape typical of the region. Given the rural nature of the study area, visible colors are natural, muted shades of green, brown, gray, and other earth tones. When viewed from a distance, the landscape maintains a rather uniform and unbroken blending of colors, which tend to fade with hazing of varying atmospheric conditions. The landscape also consists of a network of existing transmission lines and corresponding structures scattered throughout the study area.

The following describes the compatibility of the Proposed Transmission Line with regional landscape patterns within which it is contained and viewed. This evaluation is graphically depicted in the photographic simulations provided in Appendix A.

Form – The form of the regional landscape essentially consists of gently rolling upland with sinuous hills rising above clearly defined and often steep sided valleys. The woodland edge of agricultural fields commonly creates a brief vertical offset in this sinuous landscape form. The introduction of 384 structures may create an obvious disruption or in some cases enhance current disruptions of the rolling agricultural landscape of the study area. These structures would be more evident with at close-in views.

Line – The existing landscape maintains a sinuous curvilinear line formed by the rolling hills along the horizon. Few situations will expose the viewer to witness the proposed structures break the horizon. The structures will break the tree line when viewers are at a lower elevation looking up towards the structures.

When visible, the conductors will also introduce a horizontal line in the landscape as well. These lines are thin and would be visible only at relatively close distances. Required vegetation clearing will also create vertical lines and breaks in continuous vegetation stands and thereby increase visibility along the Proposed Transmission Line corridor. These clearings may be seen at greater distances.

Color – The reddish-brown color of the corten steel structures will most often be viewed against an adjacent landform or vegetation. Under these conditions the structures would be highly compatible with the hue, saturation and brightness (or dullness) of the background landform and distant elements of the natural landscape. In addition to the corten steel poles, gray structures will be used at the substation and transition stations; these structures will not be as compatible with the landscape. Overall, color contrast will further decrease with increasing distance and/or periods of increased atmospheric haze or precipitation.

Texture – The structures have been specifically selected, instead of skeletal (or lattice) frame towers, to minimize textural contrast and provide a more simple form. Smooth metallic structures used at the substation and transition station will not blend in as easy within the natural landscape.

Scale/Spatial Dominance – The proposed transmission structures will be of similar scale to those larger (e.g. 230kV) transmission structures that currently bisects the study area. In many cases the proposed structures may be the tallest visible elements on the horizon and will be disproportionate to many elements commonly visible on the regional landscape. From many foreground vantage points the contrast of the proposed structure with commonly recognizable features may result in the proposed Project being perceived as a highly dominant visual element. However, when viewed from middleground and background vantage points, the perceived scale and spatial dominance begins to lessen.

3.5.2 Visual Character during the Construction Period

Construction of the Proposed Transmission Line will require use of mobile cranes and other large construction vehicles. Components will be delivered via large semi-trucks. However, the construction period is expected to be relatively short. As such, construction related visual impacts will be brief and are not expected to result in adverse prolonged visual impact to area residents or visitors.

3.6 Galloo Island 230kV Transmission Line

As part of the overall Proposed Transmission Line, a 2.6-mile 230kV transmission line on Galloo Island will be constructed. The proposed transmission line will include a new substation, transition station, and 45 new 230kV transmission structures. The transmission structures, 85’ tall corten steel monopoles, will also have a 34.5kV underbuild.

The transmission line will require vegetation clearing along portions of the route. The cleared vegetation will be allowed to return to a partial vegetative state (low scrub/shrub); however, trees along the ROW will be permanently cleared so as not to interfere with the Proposed Transmission Line once it is in operation.

To illustrate the appearance of the Proposed Transmission Line on Galloo Island, transmission structure detail and the (2) simulations from south of Gil Harbor are provided in Appendix B.

Table 7 Galloo Island Photo Simulation Locations

Map ID	Receptor Name
G1	Lake Ontario
G2	Lake Ontario

4.0 MITIGATION PROGRAM

As recognized by DEC Policy DEP-00-2, mitigation measures to reduce potential visual impacts include efforts undertaken during the planning and design stage of proposed project development[23] and those implemented during construction and operation.[24] Mitigation strategies that have already been or which will be evaluated or undertaken by the Applicant include the following:

Screening

Portions of the Project will be visible from several viewpoints of local importance or other places for analysis, as well as statewide significant resources. If it is determined that screening is justified in localized areas, it may be necessary to obtain consent of the landowner to introduce screening in the most effective location. Screening may be more effective on property adjacent to the ROW easement, rather than within the ROW itself, as it would be closer to the viewer, thus more effective in blocking an unwanted view.

Vegetative screening may be undertaken in the following instances:

- Supplemental plant material may be considered in order to screen views of the proposed Project for those property owners that are highly sensitive to the visual appearance of the proposed Project. It is anticipated that this would be limited to properties adjacent or in immediate proximity to the proposed Project.
- Plant material can be considered around proposed transition stations and/or substations.
- Existing plant material should be used, where feasible, to screen views of the Proposed Transmission Line.
- A 75' buffer of existing vegetation, where applicable, will be retained along Interstate 81 to further reduce visibility of those drivers traveling north and south on the highway.

Professional Design/Project Siting/Relocation

Sensitive siting of a proposed Project is among the most effective strategies to avoid or reduce visual impacts. To the extent practicable, Upstate Power has already taken siting into consideration, and has proposed an alignment, and substation and transition station locations, which, for the most part, are substantially set back from sensitive receptors, including many roadways.

The following strategies were used:

- The Proposed Transmission Line will parallel or utilize existing transmission, gas, and railroad ROW's, where feasible.

[23] This category is referred to as "Professional Design and Siting" in the DEC Visual Policy.

[24] The DEC Visual Policy specifies "Maintenance" as a distinct visual impact mitigation category. As described in this section, "maintenance" of transmission lines is essentially related to vegetation management practices, and includes the extent of clearing undertaken during construction as well as ongoing vegetation management practices.

- Limit the number of times the Proposed Transmission Line crosses Interstate 81.
- Where possible, the Proposed Transmission Line should cross roadways at a perpendicular or roughly perpendicular angle, so as to reduce the visual exposure time for people traveling by car, foot, or bicycle along public roadways.
- Vegetation clearing should be kept to a minimum, yet not impede operation.
- The Mexico substation is located adjacent to the NYPA ROW.
- One set of davit arms will be used on single circuit structures (tangent and corner).
- Pole styles should be limited to show consistency.

Camouflage/Disguise

- By utilizing corten steel poles, the color of the majority of the transmission structures (not including substations) will be more compatible with the surrounding landscape.

Low Profile/Downsizing

- Where possible, the shortest possible structure should be used.

Alternate Technologies

- Although the use of wooden or laminated steel poles may be considered in visually sensitive areas, given the structural requirements for the support of the single circuit and design for a possible second circuit in the future, opportunities are limited.

Non-specular Materials

- Many of the proposed poles will be corten steel, and therefore will not be as reflective. Although the proposed substations involve metallic equipment and structures these elements are either sufficiently removed from sensitive receptors and does not warrant painting of metallic surfaces. Non-specular conductor material may also be considered.

Lighting

- No lighting is anticipated. If lighting is necessary around the substation/transition station, shields should be used in order to reduce light trespass on adjacent land.

Maintenance

- Substations will be kept free of significant weed growth and debris.
- During construction, the minimal width necessary for equipment access should be cleared, and areas will be restored to allow the continuation of agricultural uses where present, or will be allowed to regenerate to a scrub/shrub type of vegetation. Vegetation will be periodically maintained in this (scrub/shrub or cropland) state. However, trees will not be allowed to mature. A vegetation management plan will be developed to be used in periodically maintaining the vegetation within the ROW.

Decommissioning

> Should the Proposed Transmission Line, substations, transition stations, and associated structures no longer be necessary, these structures will be removed. Disturbed areas should be allowed to become re-established as natural or cultivated vegetation.

5.0 SUMMARY AND DISCUSSION OF POTENTIAL VISUAL IMPACT

Visibility Summary

The vegetated viewshed map indicates that one or more of the proposed transmission structures are theoretically visible from approximately 41 percent of the three-mile study area. Approximately 59 percent of the study area will likely have no visibility of any of the structures. Visibility is most common from properties adjacent or in close proximity to the Proposed Transmission Line. Visibility will also be most evident from agricultural uplands with cleared lands and down slope vistas in the direction of the Proposed Transmission Line.

Views of the Proposed Transmission Line from within the municipal boundaries of the Village of Pulaski will be available from various locations. Views are more evident on properties and roadways in close proximity to the Proposed Transmission Line or where localized structures and vegetation are less likely to provide a visual barrier. Open views of the transmission structures along US Route 11, Interstate 81, NYS Route 13, and other roadways that bisect the route of the Proposed Transmission Line are evident. Filtered views of the Proposed Transmission Line may be evident in locations in such locations as the John Ben Snow Community Center. Within the center of the Village (i.e., downtown area), views appear to be limited due to intervening topography, pockets of vegetation, and structures.

Intervening topography, vegetation and localized structures will screen most views of the proposed structures within the portion of the Village of Mexico that is in the study area. Filtered or framed views may be possible through foreground vegetation in isolated locations east of the Village along NYS Route 104. Also, visibility may be available in the vicinity of the Phineas Davis Farmstead. Overall, visual impacts from the Village of Mexico should be substantially reduced by screening (e.g. structures and localized vegetation), the relatively long distance between the Village and the Proposed Transmission Line, and the generally slim profile of the proposed structures.

Views from the Villages of Sandy Creek and Lacona are possible in a number of locations. Within the Village of Sandy Creek, potential visibility may occur along or adjacent to road corridors such as CR 22A, and US Route 11. Most of the potential visibility within the Village of Lacona may occur to the east and south of the Village center along CR 48 and CR 22. Visual impacts from both of these Villages should be substantially reduced by screening (e.g. structures and localized vegetation), the relatively long distance between the Village and the Proposed Transmission Line, and the generally slim profile of the proposed structures.

Views within the Village of Mannsville appear to be most evident along Lilac Park Drive, Brown Road, Lincoln Avenue and US Route 11. Visual impacts from the Village of Mannsville should be further reduced by screening (e.g. structures and localized vegetation), the relatively long distance between the Village and the Proposed Transmission Line, and the generally slim profile of the proposed structures.

Theoretically, the Village of Ellisburg has many opportunities to view the Proposed Transmission Line. The Village is at a higher elevation than those Villages to the south, combined with agricultural

fields throughout the municipal boundary, there is less screening by vegetation. However, visibility will be further reduced in a number of locations such as stretches of NYS Routes 193 and 289 due to localized screening from structures and vegetation. Generally, throughout the Village due to the relatively long distance between the Village and the Proposed Transmission line, as well as the generally slim profile of the proposed structures, visual impacts are anticipated to be further reduced.

The area most directly affected by views of the Proposed Transmission Line will be the agricultural upland located in the northern portion of the Proposed Transmission Line. The higher degree of potential visibility may be attributed to the areas elevation and higher concentration of agricultural land (less vegetation screening). Even within this area, screening of localized structures and vegetation (e.g. hedgerows) will further lessen the potential visual impact. Within this area, as well as throughout the entire study area, residents and visitors will regularly encounter proximate views of the Proposed Transmission Line corridor within the foreground and near-middleground distances (i.e., ½ to 1 ½ miles). However, visibility of Proposed Transmission Line components and vegetative clearing will be greatest within ½ mile.

The greatest potential for visibility will occur where the Proposed Transmission Line crosses the roadways. In particular two (2) of these roadways, Interstate 81 and US Route 11, may have a greater potential for visual impact Visibility along Interstate 81 will generally occur where the proposed transmission line is in relatively close proximity to the road corridor, crosses the corridor, and where vegetation is lacking along the shoulders of Interstate 81. The segment of Interstate 81 that may experience the greatest visual impact will occur in the vicinity of the Village of Pulaski (see Figure A5). The Proposed Transmission Line will cross Interstate 81 in two (2) locations, as well as run adjacent to the roadway for relatively short segments. The crossings will provide the greatest opportunity for travelers to view the structures. Where the Proposed Transmission Line runs adjacent to the roadway, vegetation should further reduce its potential visibility (see Figure A22). Similarly to Interstate 81, US Route 11 will experience two (2) crossings (see Figure A6). However, the Proposed Transmission Line will run adjacent to US Route 11 in close proximity for a greater distance. Framed or screened views may be available along US Route 11, particularly when the proposed structures are within ½ mile of the roadway (see Figures A7 and A8).

Generally for all roadways, views will be a mixture of foreground views (e.g. road crossings) and long distant (middleground view), fleeting as viewers pass in vehicles, or of relatively small portions of the Proposed Transmission Line. View types will vary from open to screened views. However, due to the structures' slim profile and material, visibility will be minimized as distance increases. Proposed transmission structures will be located in close proximity and on both sides of these roadways. Viewers within close proximity of the Proposed Transmission Line will also notice that structures will frequently appear and disappear behind intervening foreground landform and vegetation as they move about the study area.

No views, or limited views will occur on the backside of the many hills river valleys found throughout the study area. Where topography is oriented toward the Proposed Transmission Line components, forest cover commonly prevents distant views.

It is also important to note that within this area, there are often views of existing transmission structures, large cell towers, and industrial uses.

Impact on Visual Resources

Resources of Statewide Significance – Based on the viewshed analysis, one or more of the proposed transmission towers will be visible from approximately 95 of 145 (approximately 66%) inventoried visual resources.

Potentially affected resources of Statewide Significance, which are open to the public, include, but are not limited to, resources such as:

- Phineas Davis Farmstead;
- Southwick Beach State Park;
- Lakeview Marsh WMA
- Seaway Trail Scenic Byway;
- Robert G. Wehle State Park; and
- NYS DEC Fishing access locations scattered throughout the study area.

In addition, the study area contains three (3) historic districts – Pulaski Village Historic District (Village of Pulaski), Sandy Creek Historic District (Village of Sandy Creek), and the Mexico Village Historic District (Village of Mexico). Based on field observations, it appears that many views in the direction of the Proposed Transmission Line will generally be screened by the presence of mature street trees and site landscaping combined with one- and two-story residential and commercial structures (see Table 4).

The Proposed Transmission Line will also be visible from sections of the Seaway Trail Scenic Byway (see Figure A18). Of the approximate 20 miles of the Seaway Trail (NYS Route 3) traversing the study area, one or more of the proposed transmission structures will be visible from approximately 9.5 miles (approximately 47.5%).

Views may be possible within the Robert G. Wehle State Park. In particular, the greatest chance to view the Proposed Transmission Line will be along the park boundary nearest the transmission line and within the Parks maintenance facility near the intersection of Windmill and Military Roads. Many views in the direction of the Project will be screened by vegetation.

The NYSDEC visual Policy states,

> *"Aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Significant aesthetic impacts are those that may cause a diminishment of the public enjoyment and appreciation of an inventoried resource, or one that impairs the character or quality of such a place. Proposed large facilities by themselves should not be a trigger for a declaration of significance. Instead, a project by virtue of its siting in visual proximity to an inventoried resource may lead staff to conclude that there may be a significant impact."*

Based on this definition, it is reasonable to conclude that visibility of the Proposed Transmission Line from any of these affected resources of statewide significance does not result in detrimental effect on the perceived beauty of the place or structure; nor will the Project cause the diminishment of public enjoyment and appreciation of an inventoried resource, or impair the character or quality of such a place.

Resources of Local Interest – Portions of the Proposed Transmission Line will be visible from places of local interest that do not meet the broader statewide threshold for visual significance. Most commonly affected are roadside views along various state and county highways.

Views were found along portions of many of the State routes within the study area (see Figures A3, A5, A18, A19, A20, and A21). Several county and town roads will also have intermittent views of the Proposed Transmission Line at varying distance (see Figures A2, A4, A10, A12, A13, A14, A15, A16, and A17). The impact upon visitors driving through the study area is primarily dependent upon the duration of one's view of the Proposed Transmission Line while driving along local road corridors. Most local parks and recreational facilities, residential neighborhoods in the hamlets and Villages where the prevalence of mature street trees and site landscaping combined with significant topographical changes, one and two story residential, and in some cases commercial structures substantially limit or screen distant views.

Filtered views from the John Ben Snow Community Center will be available to the parks users (see Figure A9). The transmission structures may be visible through vegetation and above the vegetation canopy. It should be noted that traffic on Interstate 81 is also visible.

The Proposed Transmission Line will cross the Salmon River, east of Interstate 81 within the Village of Pulaski. Views of the Project from the river will include structures, vegetation clearing, and overhead wires. Based on field review, access to this section of the river is not easily available but can be reached by walking the river from access points to the north and south.

Based on viewshed analysis, views from the Oswego County Fairgrounds will be possible. The transmission structures will most likely be seen above the vegetation from elevated views within the fairgrounds (i.e. from the top of grandstand structures). Generally, it is anticipated that an increase in potential viewers from the fairgrounds will occur when it is in use. Exposure may be further reduced by such factors as viewer activities and if the activities take place during daylight or nighttime hours.

Visibility of the Proposed Transmission Line along the shore of Lake Ontario is anticipated to be minimal due to screening caused by vegetation. Viewers will notice a clearing in vegetation from where the cable extends underground to the first structure (transition station), which is located approximately 790 feet from the shoreline. The potential for visibility is anticipated to decrease the further the viewer is from the shore. Although there is a clear line of sight to the Proposed Transmission Line, visibility will be further reduced by such factors as distance, atmospheric conditions, and viewer activities.

Character of View

Typical views are characterized by patchwork of undeveloped woodland interspersed with working farmland surrounded by rolling hills, ravines and valleys. While such pastoral views are common throughout the region, most residents and visitors would agree that the agricultural lands and valleys within the study area are of moderate to high visual quality.

When visible, the well-defined vertical form of the new transmission structures on the horizon will introduce a distinct perpendicular element into the landscape. This will be more apparent when the viewer is in close proximity to the Proposed Transmission Line. The Proposed Transmission Line will also create the need for additional clear-cutting along currently vegetated sections of the proposed route. Clearings at the crest of hills may be more evident at longer distances and the form of the landform may be interrupted.

Affected Viewers

The study area, with the exceptions of the community centers, are quite rural with a small year round population. The most populated Town within the study area is the Town of Richland with 5,824 residents; the most populated Village within the study area is the Village of Pulaski with 2,398 residents. Traffic along the many highways located within the study area varies from lightly to heavily traveled. Interstate 81 has an average annual daily traffic (AADT) volume that exceeds 20,700 vehicles; NYS Route 193 has just over 600 vehicles. While the proposed Project will be frequently visible to local residents and travelers, the total number of potentially affected permanent year-round viewers within the study area is relatively small when compared to other regions of New York State.

People visit this region of New York specifically to enjoy the historic, recreational, and scenic resources of the lake, river, and islands. The sensitivity of these individuals to visual quality is variable; but to many, visual quality is an important and integral part of their outdoor experience. The presence of the Proposed Transmission Line may diminish the aesthetic experience for those that believe that the rural landscape should be preserved for agricultural, rural residential, open space and similar uses. Such viewers will likely have high sensitivity to the visual quality and landscape character, regardless of the frequency of duration of their exposure to the proposed Project. For those with strong utilitarian beliefs, the presence of the proposed Project may have little aesthetic impact on their recreational experience.

Galloo Island 230kV Transmission Line

Visibility of the Proposed Transmission Line on Galloo Island will be most prevalent from the shoreline of the Island as well as offshore locations that have foreground views.

Open views of the Proposed Transmission Line will be available from the south side of the Island (e.g. in the vicinity of Gil Harbor and approximately one mile south) as well as the northeast side of the Island in the vicinity of the proposed transition station. Views will be most available to recreation boaters and commercial vessels; there currently are no year-round residents on Galloo Island. Most views will fleeting and short in duration, while some may be long-term, particularly for those who

may fish in the waters in close proximity to the Island. Visibility of the required vegetation clearings along the route will be more noticeable closer to the Island.

Many of the factors (e.g. viewer group, distance, atmospheric conditions) contributing to visibility, as discussed in the VRA, will have an affect on the structures visibility. It is also anticipated that the proposed structures will not be perceived from many locations on the mainland. The simulations contained in Appendix B show how the view will look after the transmission line and the proposed Hounsfield Wind Farm are constructed.[25] The Proposed Transmission Line will add additional horizontal and vertical lines, but will not be the dominant structures on the Island.

In addition to the transmission towers, a substation and transition station will be located in the center of the Island and along the northeast shoreline, respectively. While it is anticipated that the transition station will be visible, it is anticipated that the substation will be generally screened from offshore viewers as a result of screening by topography and vegetation (see Figure B2).

Sub-aquatic Cable

The proposed cable will be sub-aquatic (horizontal directional drilled at the landfalls) and it is anticipated that it will not be visible from water and land locations.

Visual Impact Conclusion

The U.S. Department of Energy and New York State Public Service Commission have mandated that renewable energy sources, such as wind parks, will provide an increasing percentage of the nation's electricity in the coming years. Meaningful development of renewable wind energy will reduce reliance on fossil fuel combustion and nuclear fission facilities and result in reduction in air pollutants and greenhouse gasses. The Proposed Transmission Line will connect a proposed Hounsfield Wind Farm to an existing New York Power Authority transmission line. This essential means of delivering electricity from the proposed wind farm to consumers will, in a small part, assist in meeting this ambitious federal and state objective to provide an environmentally friendly and renewable energy source to help meet the growing energy needs for New York State residents and business.

It is not anticipated that the proposed Project will significantly affect the community's overall visual or aesthetic characteristics, as much of the proposed Project is consistent with the existing visual character. Along much of the proposed route existing utility and railroad corridors are adjacent or in close proximity to the Proposed Transmission Line. However, the proposed structures along the route will be taller and more noticeable than many of the existing structures in the area. The use of mitigation techniques will help to minimize the potential visual impact associated with the Proposed Transmission Line.

[25] The Hounsfield Wind Farm VRA will be reviewed under SEQR and is not included in this report.

Glossary[26]

Aesthetic impact: Aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Mere visibility, even startling visibility of a project proposal, should not be a threshold for decision-making. Instead a project, by virtue of its visibility, must clearly interfere with or reduce the public's enjoyment and/or appreciation of the appearance of an inventoried resource (e.g. cooling tower plume blocks a view from a State Park overlook).

Aesthetically significant place: A formally designated place visited by recreationists and others for the express purpose of enjoying its beauty. For example, millions of people visit Niagara Falls on an annual basis. They come from around the country and even from around the world. By these measurements, one can make the case that Niagara Falls (a designated State Park) is an aesthetic resource of national significance. Similarly, a resource that is visited by large numbers who come from across the state probably has statewide significance. A place visited primarily by people whose place of origin is local generally is generally of local significance. Unvisited places either have no significance or are "no trespass" places.

Aesthetic Quality: There is a difference between the quality of a resource and its significance level. The quality of the resource has to do with its component parts and their arrangement. The arrangement of the component parts is referred to as composition. The quality of the resource and the significance level are generally, though not always, correlated.

Atmospheric perspective: Even on the clearest of days, the sky is not entirely transparent because of the presence of atmospheric particulate matter. The light scattering effect of these particles causes atmospheric or aerial perspective, the second important form of perspective. In this form of perspective there is a reduction in the intensity of colors and the contrast between light and dark as the distance of objects from the observer increases. Contrast depends upon the position of the sun and the reflectance of the object, among other items. The net effect is that objects appear "washed out" over great distances.

Control Points: The two end points of a line-of-sight. One end is always the elevation of an observer's eyes at a place of interest (e.g. a high point in a State Park) and the other end is always an elevation of a project component of interest (e.g. top of a stack of a combustion facility or the finished grade of a landfill).

Line-of-sight profile: A profile is a graphic depiction of the depressions and elevations one would encounter walking along a straight path between two selected locations. A straight line depicting the path of light received by the eye of an imaginary viewer standing on the path and looking towards a predetermined spot along that path constitutes a line-of-sight. The locations along the path where the viewer stands and looks are the control points of the line-of-sight profile.

Scientific Perspective: Scientific, linear, or size perspective is the reduction in the apparent size of objects as the distance from the observer increases. An object appears smaller and smaller as an observer moves further and further from it. At some distance, depending upon the size and degree of contrast between the object and its surroundings, the object may not be a point of interest for most people. At this hypothetical distance it can be argued that the object has little impact on the composition of the landscape of which it is a tiny part. Eventually, at even greater distances, the human eye is incapable of seeing the object at all.

Viewshed: A map that shows the geographic area from which a proposed action may be seen is a viewshed.

[26] NYSDEC Visual Policy (2000) pp. 9-11.

Visual Assessments: Analytical techniques that employ viewsheds, and/or line-of-sight profiles, and descriptions of aesthetic resources, to determine the impact of development upon aesthetic resources; and potential mitigation strategies to avoid, eliminate or reduce impacts on those resources.

Visual impact: Visual impact occurs when the mitigating effects of perspective do not reduce the visibility of an object to insignificant levels. Beauty plays no role in this concept. A visual impact may also be considered in the context of contrast. For instance, all other things being equal, a blue object seen against an orange background has greater visual impact than a blue object seen against the same colored blue background. Again, beauty plays no role in this concept.

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