Greens Corners Solar LLC

Greens Corners Solar

Matter Number 21-00982

900-2.9 Exhibit 8

Visual Impacts

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EXHIBIT 8 VISUAL IMPACTS

(a) Visual Impact Assessment

A Visual Impact Assessment (VIA) was conducted for Greens Corners Solar (the Facility) to determine the extent and assess the significance of Facility visibility. The methods used to inventory scenic resources and assess visual impacts in the VIA are consistent with methods used in the Bureau of Land Management's (BLM) Visual Resource Management (VRM) System and United States Forest Service (USFS) Scenery Management System. Components of the VIA include: identification of visually sensitive resources; viewshed mapping; confirmatory visual assessment fieldwork; visual simulations (photographic overlays); cumulative visual impact analysis; and proposed Visual Impacts and Minimization and Mitigation Plan. The VIA is included as Appendix 8-A of this Section 94-c Application.

(1) Character and Visual Quality of the Existing Landscape

The Visual Study Area utilized for the VIA consists of a 2-mile radius around the approximately 1,074-acre area. The "Resource Inventory Area" refers to a 5-mile radius around the Facility which was used during the inventory process. It is anticipated that the visibility of the Facility from the surrounding area will be limited based on the low profile of the solar panels, intervening terrain, and the dense forested landscape setting surrounding the Facility.

The existing landscape character within the visual study area provides the context for assessing the effects of changes to the landscape. Landscape character is identified and described by the combination of the scenic attributes that make each landscape identifiable or unique. A region's landscape character creates a sense of the area and describes its visual image of an area. To assess impacts to the landscape's visual character and quality, it is important to establish the context for the visual environment. This was done by establishing Landscape Similarity Zones (LSZs) within the Visual Study Area. LSZs consist of unified geographic areas that are within the broader regional landscape and have similar landscape characteristics (Smardon et al 1988). LSZs provide a more specific framework within which to evaluate changes to the landscape and potential visual effects of the Facility. LSZs were defined based on physiographic characteristics such as landform, water, vegetation, and land use patterns. U.S. Geological Survey contour and National Land Cover datasets (NLCD) were mapped using ArcGIS software and reviewed to identify areas within the Visual Study Area that had similar characteristics. LSZs within the Visual Study Area are described in more detail in Section 4.3.1.2 of the VIA and include the following:

- Lake Ontario/Open Water LSZ;
- Rural/Agricultural LSZ;

- Mixed Forest LSZ;
- Developed Area LSZ; and
- Transportation Corridor LSZ.

(2) Visibility of the Facility

Topographic viewshed analyses were conducted to assess the potential visibility of the Facility within the Visual Study Area. The map displaying the results of the viewshed analyses was used to determine the extent to which the Facility would potentially be visible from the scenic resources identified within the Visual Study Area. Field visits were then conducted to verify visibility of the Facility from the sensitive viewpoints located in areas noted as "visible" on the viewshed map.

Topographic and vegetated viewshed maps were created to identify potential visibility of the Facility's solar array and electric-distribution infrastructure equipment (i.e., on-site substation and 34.5-kilovolt [-kV] overhead collection line). The methodology for conducting these analyses is described in detail in Section 4.1.1 of the VIA.

Based on the viewshed analyses, potential views are primarily limited to the area within 1 to 2 miles surrounding the photovoltaic (PV) panels, with additional areas of potential visibility in higher-elevation areas to the south and southwest. Based on the vegetated viewshed, the highest percentage of PV panels that could potentially be visible (i.e., greater than 75 percent) were found within and adjacent to the Facility, primarily to the south. Areas not directly adjacent to the Facility that were indicated as having potential visibility would see less than 25 percent of the PV panels. Based solely on the viewshed analysis, potential locations from which the PV panels may be visible include residences adjacent to the Facility, portions of local roads adjacent to the Facility such as NY 3, Old Rome Road, Field Road, Lloyd Road, Jericho Road, and Interstate 81, and elevated locations such as residences and travelers along US 11 located approximately 1 mile to the east. Additional analysis, including field verification, further reduced the areas with potential visibility of the Facility.

The Applicant is proposing to install landscaping along portions of the Facility boundary in areas where residences and primary roads will have unobstructed views towards the Facility. According to the vegetated viewshed analyses, views of the PV panels not directly adjacent to the Facility would be primarily screened by vegetation and intervening terrain. Scattered forested hills south and east of US 11 may have views of the Facility. The viewshed results of the utility equipment were similar to the results of the PV panel

viewshed in that the majority of areas identified as "potentially seen" on both viewsheds were similar.[1] The similarity in the viewshed results can be attributed to the varying terrain and dense forested areas of the landscape surrounding the Facility.

Field visits to the Visual Study Area were conducted to properly assess the existing visual character of the landscape and to inventory potential views of the Facility from scenic resources identified as having potential views based on the viewshed analyses. The field inventory included three components: (1) identify and photo-document scenic resources/representative viewpoints; (2) classify visual sensitivity of scenic resources; and (3) describe Facility visibility from representative viewpoint locations that were visited. The field visit was conducted on February 17 and March 15-18, 2021 to capture photography from representative viewpoints during "leaf-off" conditions, discussed in Section 4.2.3.[2]

Locations identified for field verification are referred to as representative viewpoints. At each representative viewpoint, a panorama (overlapping series of photos) was captured to evaluate landscape context and potential visibility at each location. Photographs taken during the field visits are included in Appendix C of the VIA.

The representative viewpoint visited during the field visits and the degree of visibility based on the viewshed and field verification are discussed in Sections 4.3.3 and 5.2.2.3 of the VIA.

See Section 9, below, regarding glare.

(3) Visibility of Aboveground Interconnections and Roadways

Power Collection System

The Facility's power collection system includes inverters, underground collector lines, overhead collector lines, and one substation. The inverters (with integrated transformers) will be located within boxes on concrete pads and dispersed throughout the Facility (amongst the PV panels). The boxes that house the inverters will have a similar geometric shape as the PV panels and they will be treated to reduce potential visibility and reflectivity through use of dulled finishes in colors selected to blend into the backdrop. The inverters will be seen in varying degrees from local roads that pass near the Facility (i.e., NY 3, Old Rome Road, Massey Street Road, Lloyd Road, Fields Road) or from nearby residences. Views toward the inverters will also include views of other Facility components, including PV panels and perimeter fence. In some instances, the inverters will also be seen in the context of the proposed on-site substation and 34.5-kV

[1] Areas identified as "seen" on the electrical-distribution infrastructure equipment viewshed that were not identified as "seen" on the PV panel viewshed consisted of locations that were either forested or surrounded by dense forested areas, therefore, it was assumed that there would be no to little visibility from these outlier locations.

[2] Leaf-on conditions are when foliage is on the trees and shrubs. Leaf-off conditions are when there is no foliage or a reduced amount of foliage on trees and shrubs.

overhead collection line, as well as existing distribution lines located along local roads and along the edges of fields, and a transmission line that runs through the eastern portion of Facility. Given the scale of the inverters in relation to other Facility components and existing features in the landscape, it is anticipated that, where visible, the inverters will create weak contrast.

The on-site substation and its short (approximately 75 ft) interconnection with the existing 115 kV transmission line will introduce vertical and geometric metal structures into a relatively flat landscape. Although the substation will contrast with some of the elements of the existing landscape, its overall visual effect will vary depending on the portions of the substation that are visible, distance of the substation from the viewer, and if the substation is seen in the context of other existing and proposed noticeable modification to the local natural landscape. For example, contrast is anticipated to be stronger where travelers along Old Rome and Beutel roads are approaching or adjacent to the Facility boundary and will have open views toward the substation. Although the substation will be seen in the context of other Facility components, including the PV panels, inverters and perimeter fencing, the scale of the facilities and the close proximity to the viewer, the substation will appear as a dominant feature. This visibility, however, will have a short duration for individual viewers because travelers will only be approaching and parallel to the substation for a limited time and their primary focus will be on the road ahead. Contrast is also anticipated to be strong for the residences located along Old Rome and Beutel roads approximately 0.2 miles north and west of the substation. An existing 115 kV transmission line runs through the Facility, and has introduced vertical elements into the landscape setting, due to close proximity of the viewer. Contrast is anticipated to be reduced to moderate or weak for residences located farther from the substation site, where views will be partially screened by topography, intervening vegetation or structures associated with farming (e.g., barns, sheds). It is also anticipated that views will be limited to the upper portions of the substation infrastructure equipment, such as the static masts, that may extend above tree line. Furthermore, the substation will be seen in the context of existing transmission line, and other Facility components including large tracts of PV panels that will surround the substation. It is anticipated that views from locations located 0.5-1 mile or more from the substation will be mostly to completely screened by topography and/or vegetation.

The 34.5-kV collection line is predominantly underground and features four lengths of overhead collection lines which are further described in this paragraph. Two of the overhead collection line lengths, both proposed on the southern portion of Parcel ID 82.00-3-56.2, are each shorter than 100 ft and are proposed to allow the collection to avoid impacts to wetlands. These two shorter collection line lengths are also within the interior of the Facility and are each at least 1,500 ft from the closest existing residential structure. The third collection line length is along Jericho Road, Martin Road, and Lloyd Road in the Town of Hounsfield;

the collection line for this portion of the Facility runs in parallel to the public roads and is adjacent to an existing series of utility poles. The fourth collection line is along Old Rome State Road in the Town of Hounsfield; the collection line runs parallel to the public road. The collection lines along Jericho Road, Martin Road, Lloyd Road, and Old Rome State Road are being supported by utility poles adjacent to a public road as is typical in this rural agricultural setting. The overhead distribution lines will introduce new vertical elements into the landscape setting. Views toward the 34.5-kV collection and feeder lines also will often include views of other Facility components, including PV panels and perimeter fence. In some instances, the 34.5-kV collection line will also be seen in the context of existing distribution lines located along local roads and along the edges of fields. Given the scale of the distribution line in relation to other Facility components and existing features in the landscape, it is anticipated that, where visible, the distribution lines will create weak contrast.

Internal Infrastructure

There are multiple access points to the Facility that will be located off various roads (e.g., Old Rome, Fields, Lloyd, Jericho, and Massey Street Roads) in the Facility. A series of permanent gravel access roads along the interior perimeter of the Facility and grass access corridors between the PV panel blocks and between the PV panel blocks and the fence. Access roads will be approximately 20 ft wide. The access roads will create a series of wide straight lines on the ground within the Facility. Internal access roads (i.e., those in between the PV panels) will be grassed and will most likely be screened by the PV panels. Views of the access roads will be limited to primarily those around the perimeter fence line. The access roads that are visible along the perimeter of the Facility will be similar to other driveways and farm roads within the area. Given the low profile and small scale of the access roads in relation to other Facility components and existing features in the landscape, it is anticipated that, where visible, the access roads will create weak contrast.

Security fencing will consist of a 7-foot-high chain-link fence around the Facility and the substation perimeter. The chain-link fence surrounding the Facility will consist of standard chain link fencing material. The security fence will introduce a long, continuous light-colored feature into the landscape. Because the security fence will be chain-link, it will be transparent and allow views through it to the Facility components that are within the fence line. As distance between the viewer and the Facility increase the texture of the security fence will be less distinct and the dark, dull light gray color of the security fence may begin to blend with the dark colors of the PV panels and become less noticeable. Given the transparency of the security fence and its scale in relation to other Facility components, it is anticipated that the security fence will create weak contrast.

(4) Appearance of the Facility upon Completion/Representative Views:

To show the anticipated appearances of the Facility upon completion, photographic simulations were created during leaf-off conditions which simulates worst-case scenarios. The simulations were created using ArcGIS software, Autodesk 3D Studio Max®, and rendering software, as well as Adobe Photoshop and InDesign. To create the simulations, the location data captured by the GPS device were transferred to ArcMap, where it was combined with GIS data of the preliminary Facility layout. A map showing the data was exported at true scale and imported into 3D Studio Max®. Using this scaled map as a base, 3D models of the Facility (i.e., solar panels, substations, fences, etc.) were created to scale. These 3D models of the proposed Facility, previously modeled to scale in 3D Studio Max®, were added in their appropriate locations and elevations. The views from the existing photographs were then matched in the 3D model using virtual cameras with the same focal length and field of view as the cameras used to capture photography during the field visits (see Section 4.2.3 of the VIA). After date- and time-specific lighting was added to the 3D model, renderings from the virtual cameras were created. These renderings were then blended into the existing conditions photographs in Adobe Photoshop software. Any necessary modifications to the existing landscape were completed in Photoshop as well. This process of creating a 3D model at true scale and rendering images using the same specifications used by the camera ensures that the spatial relationships of the landscape, Facility features, and viewer perspective are accurate and match the existing site photographs.

The photographic simulations for the Facility are included in Appendix G of the VIA.

(5) Lighting

On-site work would not be typically performed at night and, therefore, lighting within the facility would normally be on-demand in the rare occasions of emergency nighttime activity. Normally, lighting at the Facility may be planned only for security purposes; at the substations and main site entrances.

Proposed lighting associated with the Facility includes manually-activated emergency and security lighting located at the on-site substation. The emergency lighting will only be activated in the event of an outage or other repair-related event at the substation during nighttime hours. Within the substation a total of four emergency lights will be installed. The lighting will be mounted at a height of 30 ft on two static masts and the H-Frame structure (two lights will be mounted on the structure) and will be directed downward toward equipment. RAB LED Area light fixtures with a lumen output of 15,760 (or similar) will be used. The lights will only be turned on when Facility personnel are performing maintenance; lights will be turned off after repairs are completed. Security lights will be installed above the door of the control building at the substation. RAB LED Wall Pack fixtures (or similar) with a lumen output of 3,392 will be used. The

security lights will be on motion sensors and would only be on during nighttime hours when motion is detected. Security lighting will be directed downward and shielded to avoid light trespass and nighttime light pollution impacts. No nighttime lighting is proposed as part of the solar arrays.

The lighting plan is provided in Appendix H of the VIA.

(6) Representative Views (Photographic Overlays)

Photographic simulations were created for each of the six representative viewpoints to depict the Facility components and the potential visual changes to the existing landscape. The simulations were used to determine the level of contrast between the existing landscape and the expected landscape after the Facility is constructed. Simulations also were created to illustrate proposed mitigation for those representative viewpoints where landscaping is proposed to help screen the Facility. See Section (a)(4) above for discussion of the methodology used for creating the simulations. The simulations are included as Appendix G of the VIA.

(7) Nature and Degree of Visual Change from Construction

Short-term visual effects, typical of any major commercial or industrial project, will occur during construction of the Facility, resulting from construction activities and the presence of construction equipment and work crews. Construction activities associated with the solar facility will include surveying, clearing portions of the construction site, stockpiling top soil, grading, trenching for installation of collector lines, installation of support pilings, delivery of the solar panel and substation components, solar panel installation, installation of substation foundations, placement and erection of substation equipment and distribution line poles, and placement of perimeter fencing.

It is anticipated that visual contrast will be introduced during Facility construction primarily for viewers associated with residences directly adjacent to the Facility, which include homes along NY 3, Old Rome State Road, Jericho Road, Lloyd Road, and Youngs Road, which primarily run north and south, and Massey Street Road, Fields Road, Martin Road, Beutel Road, and Parker Road, which primarily run east and west, where the presence of construction equipment, materials, and crews will be dominant in the foreground. However, these visual effects will be temporary because construction equipment and crews will be removed once construction is completed in each specific area. Views of Facility construction from areas not immediately adjacent to the Facility will be mostly screened by existing vegetation and/or topography. Visual effects to these viewers will be mostly limited to the presence of construction traffic on local roads.

(8) Nature and Degree of Visual Change from Operation

Long-term visual changes during operation of the Facility would result from the visibility of the above-ground components associated with the Facility, including the PV panels, inverters, on-site substations, 34.5-kV overhead collection line, and internal infrastructure including permanent access roads and fencing. Public enjoyment of a scenic resource is subjective and highly dependent on the viewer's perception of beauty and scenery. The addition of the Facility into a view may enhance one viewer's enjoyment of a location, while it could have a negligible or negative effect for a different viewer. Therefore, a process using the concept of "contrast" based on the BLM Visual Resource Management system is often used to objectively measure potential changes to landscape features of inventoried sensitive resources (BLM 1986a; BLM 1984). The BLM's visual contrast rating process (Handbook 8431-1 Visual Resource Contrast Rating) was used as the basis for reviewing potential landscape changes resulting from the Facility and is discussed below.

The degree of visual contrast is a means to evaluate the level of modification to the existing landscape features. In the context of the Facility, existing landscape scenery is defined by the visual characteristics (form, line, color, and texture) associated with the landform (including water), vegetation, and existing facilities within and adjacent to the Facility. Descriptions of each visual character element are listed below:

- Form—The shape and mass of landforms or structures;
- Line—The edge of shapes or masses, silhouettes, or bands;
- Color—The property of reflecting light of a particular intensity of wavelength that the eye can see; and
- Texture—The nature of the surface of landforms, vegetation, or structures.

The level of visual contrast introduced by an action can be measured based on changes in form, line, color, and texture. The greater the difference between these character elements found within the landscape and the proposed Facility components, the level of visual contrast becomes more apparent, which typically increases perceived contrast.

The degree of contrast introduced to a particular viewpoint by the Facility, in combination with the sensitivity of viewers at that viewpoint, will determine the level of visual effect. The following general criteria are based upon the criteria used by the BLM (BLM 1986b) when rating the degree of contrast, and are utilized here to describe the visibility/noticeability of the Facility components:

- None—The element contrast is not visible or perceived;
- Weak—The element contrast can be seen but does not attract attention;

- Weak-Moderate—The element contrast begins to attract attention and is moderately subordinate in the landscape;
- Moderate—The element contrast begins to attract attention and begins to dominate the characteristic landscape;
- Moderate-Strong—The element contrast begins to demand attention and is moderately dominant in the landscape; and
- Strong—The element contrast demands attention, will not be overlooked, and is dominant in the landscape.

Other environmental factors that can influence the amount of visual contrast introduced by project components, such as distance, angle of observation, and atmospheric conditions, are discussed in Section 5.1.1 of the VIA.

Contrast ratings were prepared for each of the representative viewpoints determined to have views toward the Facility using a form adapted from the BLM's Visual Contrast Rating Worksheet (Form 8400-4). Additional ratings of weak-moderate and moderate-strong were added to BLMs core ratings. Contrast rating worksheets were completed by a rating panel of three visual professionals with experience in conducting visual impact assessments.

To assist in the evaluation of changes associated with the implementation of the Facility, photographic simulations were compared to exiting photographs taken during the field visit. A detailed discussion of how the photographic simulations were created is included in Section 5.1.2 of the VIA. Criteria used to assist in completing the contrast rating worksheets were also based on the BLM's requirements for completing the contrast rating worksheets, as outlined in BLM Manual 8431 – Visual Resource Contrast Rating. The criteria used to complete the contrast rating worksheets along with the forms completed by the rating panel are included in Appendix F of the VIA.

Overall, the Facility will result in minimal to no change to the landscape conditions for most viewers within the Visual Study Area. Higher levels of change to the landscape may be apparent to a limited number of viewers located adjacent to the Facility. Limited views of the Facility will also be visible from a limited number of viewers at slightly elevated locations within approximately 1 mile of the Facility, including residential and travelers along NY 3, US 11, and Interstate 81. During the construction period for Facility components, viewers will be able to observe construction equipment, laydown areas, and crews. Varying degrees of visual contrast will occur when equipment and construction crews are present; however, this source of contrast will be short-term since equipment and support facilities will be removed once construction is complete. Visual effects during operation of the Facility will result from the visibility of the

aboveground components associated with the Facility, including PV panels, inverters, on-site substations, distribution and collection lines, access roads, and perimeter fencing. The Facility will introduce regular forms and horizontal and vertical lines into a landscape setting that has been modified primarily by agricultural, residential, and commercial development. Residences and travelers' local roads, such as NY 3, Old Rome State Road, and Jericho Road Lloyd Road, and Youngs Road that traverse north and south through the Facility and Massey Street Road, Fields Road, Martin Road, Beutel Road, and Parker Road located east and west, respectively, will have views towards the Facility that range from unobstructed to partially screened to completely screened by vegetation along the Facility boundary. It is anticipated that the Black River and Lake Ontario will not have views towards the Facility based on the screening effects of existing vegetation, buildings and other structures, and distance. Based on the results of the rating panel, contrast will range from moderate-weak visual impact to moderate-strong visual impact which primarily depends on the distance of the viewer to Project components, existing vegetation screening, and other human-made modifications visible within the viewscape. Landscaping is proposed around the perimeter of the Facility where adjacent viewers will have unobstructed views towards the Facility. Landscaping will consist of a variety of evergreen trees that will help to screen portions of the Project and break up the uniformity of the blocks of PV panels. Landscape screening will help to reduce contrast, significantly in some areas, and overall visibility for adjacent viewers. Viewers not directly adjacent to the Facility will be mostly to completely screened by topography and/or vegetation within the existing landscape and will therefore result in minimal to no visual impacts.

Results of the rating panel are further discussed in Section 5.2.2.3 of the VIA.

(9) Related Operational Effects of Facility

The PV panels are designed to absorb sunlight, rather than reflect it, and the glass panels that protect the PV panel surface are typically formulated with glass designed to allow sunlight to pass with minimal reflection. Panels will have anti-reflective coatings that will further reduce reflectivity from PV panels. Any glare off the PV panels is anticipated to be minimal and would further be mitigated by existing and proposed screening vegetation.

Based on the PV panel design and construction, as well as operation of the tracker system, glare resulting from sunlight reflected by the PV panels will occur to only a limited extent within the Visual Study Area. Although the Facility may represent a potential source of additional glare in the Visual Study Area, introduced glare will not be sufficient to adversely affect views in the area or create an annoyance for viewers. Therefore, potential glare impacts from the Facility are considered to be negligible, as documented in the glare analysis provided in Appendix H of the VIA.

No plumes, shading, glare or other visual impacts are predicted during operation of the Facility.

(10) Visual Resources Affected by Facility

Scenic resources were identified in accordance with guidance provided by 94-c Exhibit regulations Part 900-2.9 and the NYSDEC Program Policy DEP-00-2 *Assessing and Mitigating Visual Impacts* (NYSDEC 2000) which identifies categories from which aesthetic resources of statewide significance can be derived. The categories identified within the DEP-00-2 Policy are generally consistent with those scenic resources that are to be considered under 94-c Exhibit regulations Part 900-2.9 and include the following categories:

- Landmark landscapes;
- Wild, scenic or recreational rivers administered respectively by either the NYSDEC or the APA pursuant to ECL Article 15 or Department of Interior pursuant to 16 USC Section 1271;
- Forest preserve lands;
- Scenic vistas specifically identified in the Adirondack Park State Land Master Plan;
- Conservation easement lands;
- Scenic byways designated by the Federal or State governments;
- Scenic districts and scenic roads;
- Designated by the Commissioner of Environmental Conservation pursuant to ECL Article 49;
- Scenic districts;
- Scenic areas of statewide significance (SASS);
- State parks or historic sites;
- Sites listed on National or State Registers of Historic Places;
- Areas covered by scenic easements, public parks or recreation areas;
- Locally designated historic or scenic districts and scenic overlooks;
- High-use public areas.
- Properties on or eligible for inclusion in the National Register of Historic Places (NRHP) or State Register of Historic Places (SRHP);
- State Parks;
- Urban Cultural Parks;
- State Forest Preserves;
- National Wildlife Refuges, State Game Refuges and State Wildlife Management Areas;
- National Natural Landmarks;
- Sites of the National Park System, including Recreation Areas, Seashores, and Forests;

- National or State Wild, Scenic or Recreational Rivers;
- Sites, areas, lakes, reservoirs or highways designated or eligible for designation as scenic;
- Scenic Areas of Statewide Significance (SASS);
- State or federally-designated trails, or one proposed for designation;
- Adirondack Park Scenic Vistas;
- State Nature and Historic Preserve Areas;
- Palisades Park; and
- Bond Act Properties purchased under Exceptional Scenic Beauty or Open Space Category.

In addition, resources of local significance were identified within the visual study area and included local parks and recreation areas, lakes and rivers, major transportation corridors, and schools and colleges. The scenic resources identified within the visual study area are listed in Appendix B of the VIA.

(b) Viewshed Analysis

(1) Viewshed Map with Facility Visibility on 1:24,000 Scale

Topographic and vegetated viewshed maps were created within the 2-mile Visual Study Area and 5-mile Resource Study Area to identify potential visibility of the solar array and the electrical-distribution equipment. The methodology for conducting these analyses is described in detail in Section 4.1.1 of the VIA. The viewshed maps were prepared and are presented on a 1:24,000 scale recent edition topographic base map. Scenic resources identified within the Visual Study Area were combined with the viewshed maps to identify where potentially visible areas intersected with scenic resources. The viewshed analysis and scenic resources identified are depicted on the composite map in Appendix B of the VIA. Locations identified for field verification, referred to Representative Viewpoints, as well as viewpoints identified for simulation are depicted on Figure 5 of the VIA. The results of the viewshed analysis are discussed in Section 5.2.2.2 of the VIA.

Line-of-sight profiles were prepared to demonstrate potential Facility visibility and sources of screening from various locations along two lines within the Visual Study Area as depicted on Figure 5 of the VIA. These profile lines were selected because they intersected scenic resources and portions of the Facility. Using ArcGIS software, data regarding the scenic resources, Facility components, and representative viewpoint locations were overlaid on the DEM and NLCD data. Next, lines were drawn through representative viewpoints and Facility. ArcGIS software then sampled elevations along the lines. The resulting output includes bare-earth profile lines and separate lines demonstrating additional screening provided by vegetation. Lines on the vertical axis were exaggerated in order to demonstrate topographic

relief over a long distance. The line-of-sight profiles were then imported into Adobe Illustrator in order to add Facility components, vegetation or other sources of screening, and labels. Existing features located along the viewing paths were identified using recent aerial photography. The line-of-sight profiles are included as Appendix D of the VIA.

(2) Methodology to Develop Viewshed Maps

Topographic viewshed analyses were conducted to assess the potential visibility of the Facility. Due to differences in height in the Facility components, two separate viewshed analyses were conducted:

- One viewshed analysis focused on the location and height of the solar arrays. The solar arrays will occupy the largest area of land within the Facility and, therefore, represent the most extensive source of potential contrast introduced into the landscape. A height of 15 ft was used for the viewshed analysis, based on the maximum height of a representative single-axis tracker solar module when the module is fully titled.
- One viewshed analysis focused on the electrical-distribution infrastructure equipment: the one proposed on-site substation and the on-site 34.5-kV overhead collection line that extends to the boundary of the Facility. The substation and overhead line were used because they are the tallest components proposed within the Facility. The viewshed analysis of the electrical-distribution infrastructure equipment was run using a point for each static mast within the substation (with a height of 65 ft), with two points for the substation, and the 34.5-kV pole structures that are 55 ft tall for the overhead distribution lines.

An assumed viewer height of 6 ft was used for both analyses. The topographic viewshed analyses assumed "bare-earth" conditions and were conducted using Environmental Systems Research Institute ArcGIS Geographic Information System (GIS) Desktop 10.6 software with the Spatial Analyst extension to process 10-meter Digital Elevation Models (DEM) of the terrain within the Visual Study Area. The ArcGIS software analyzes line-of-sight from the three-dimensional coordinates of Facility components to points on the terrain surface, thereby identifying locations from which the Facility will potentially be visible. The bare-earth modeling approach used in the viewshed analyses, based only on the effects of terrain on visibility, results in a very conservative assessment of potential visibility. A bare-earth analysis does not take into account the visibility effects of vegetation or buildings, which in practice may screen or block certain views.

To supplement the topographic viewshed analyses, a vegetated viewshed was conducted using United States Geological Survey LANDFIRE existing vegetation land height data (USGS 2021) to identify areas within the Visual Study Area where potential screening may be provided by forest vegetation. This database

provided height data for the Visual Study Area. The vegetated viewsheds for the solar panels and electrical-distribution infrastructure equipment were run as described above. Since the vegetation viewshed considers both terrain and the approximate tree height of forested areas, it more accurately reflects potential Facility visibility within the Visual Study Area. The resulting viewshed map conservatively shows areas with potential visibility based on topography and vegetative screening (Figure 4 of the VIA). It is conservative because "seen" areas identified in the viewshed analyses do not necessarily indicate that the Facility will be visible or noticeable to the casual observer.[3] "Seen" areas indicate that some portion of the Facility could be potentially visible from that point because there may be a direct, unobstructed line-of-sight between the Facility component and some location within the Visual Study Area. Factors such as distance, color, lighting and atmospheric conditions (such as weather) that can diminish visibility under actual field conditions were not accounted for in this viewshed analyses.

The viewshed analysis of the PV panels included determining the percentage of PV panels that will be potentially visible from areas identified as "seen," as determined by the viewshed analysis, within the Visual Study Area. The results of the PV panel viewshed analysis was then grouped by percentage of PV panels potentially visible. The results of the electrical-distribution infrastructure equipment viewsheds were characterized as visible or not visible. The results of the viewshed analysis for the PV panels and electrical-distribution infrastructure equipment are shown on Figure 4 of the VIA.

The map displaying the results of the viewshed analyses was used to determine the extent to which the Facility will potentially be visible from the scenic resources identified in Section 4.2.2 of the VIA. Sources of data used to develop the viewshed maps are noted in Appendix A of the VIA.

(3) Sensitive Viewing Areas

The viewshed mapping was used to determine sensitive viewing areas, including recreational areas, residences, businesses, historic properties, and travelers with potential views the of Facility.

Scenic resources were identified in accordance with guidance provided by 94-c Exhibit regulations Part 900-2.9 and NYSDEC Program Policy DEP-00-2 *Assessing and Mitigating Visual Impacts* (NYSDEC 2000) which identifies categories from which aesthetic resources of statewide significance can be derived. The categories identified within the DEP-00-2 Policy are generally consistent with those scenic resources that are to be considered under 94-c Exhibit regulations Part 900-2.9, Section 9000-2.9. The categories reviewed to identify scenic resources included those outlined in 94-c Exhibit regulations Part 900-2.9 and

[3] The "casual observer" is considered an observer who is not actively looking or searching for the Facility but is engaged in activities at locations with potential views of the proposed Facility, such as hiking, driving on a scenic road, or relaxing on a beach. If the Facility is not noticeable to the casual observer, visual effects can be considered minor to negligible.

NYSDEC Policy DEP-00-2, as noted in Sections 3.2 and 3.3 of the VIA, and the following additional categories:

- Local Parks and Recreation Areas;
- Lakes and Rivers;
- Major Transportation Corridors;
- Residential Areas; and
- Schools and Colleges.

Data sources reviewed to identify scenic resources were obtained through the New York State GIS Clearinghouse; Environmental Systems Research Institute; national, state, and local agency websites and local planning and zoning documents; and Google Earth. The scenic resources identified within the Resource Inventory Area are listed in Appendix B of the VIA and are shown on Figure 3 of the VIA. Scenic resources identified within the Resource Inventory Area were combined with the viewshed maps (as described in Section 4.1.1 of the VIA) to identify where potentially visible areas intersected with scenic resources. Areas identified as being potentially visible on the viewshed maps were reviewed during the field visits (see Section 4.2.3 of the VIA) to review expected visibility of the Facility and assess potential visual impacts. Locations identified for field verification are referred to as representative viewpoints.

(4) Important or Representative Viewpoints

The Applicant held virtual pre-application meetings with the Town of Hounsfield on December 16, 2020, the Town of Watertown on December 16, 2020, and Jefferson County on December 17, 2020 to share the preliminary viewpoint map pursuant to 94-c Exhibit regulations Part 900-1.3, Exhibit 2. A list including a total of 10 scenic resources were presented to the town. Responses were not received by the town. No additional scenic resources were identified during the pre-application meetings.

The Applicant also met individually with various local stakeholders as discussed in Exhibit 2, Overview and Public Comment.

Table 2 in the VIA includes a description of representative viewpoints within the visual study area that were visited during the field visits, describes their associated existing viewing conditions, and identifies whether the Facility would be visible. Representative viewpoints are shown in Figure 5 of the VIA.

Table 8-1: Representative Viewpoints Selected for Simulations

Viewpoint No. [a/]	Representative Viewpoint Name	Resource Type	Approximate Distance to Nearest Facility Component (miles)[b/]	Viewing Direction	Existing Landscape Characteristics and Views [c/]	Views Toward Facility [d/ e/] l *Not Visible* ¡ *Visible*
1	Brownville WMA	State Wildlife Management Area	3.3	South/Southwest	The landscape is characterized by flat terrain in the foreground distance zone transitioning to gently rolling terrain to the south. This site is surrounded by forested areas and open fields to the northeast and southeast with forested plots and residential areas to the west. Human-made features include roads, residences structures associated with the Department of Environmental Conservation Region 6 office and distribution lines along Game Farm Road and Mullin Road which run along the western border of the site. Views toward the Facility are completely screened by existing vegetation to the south/southwest.	l
2	Vogt House, Arthur Walrath House, William Archer House, Stephen Simmons House, NYS Route 12E	Historic (NRHP), Travel way	2.12	Southwest	The landscape is characterized by relatively flat terrain and is within a suburban setting. The Black River is approximately 0.1 mile south of the sites. This site is surrounded by development associated with Brownville. Human-made features include roads, residential and commercial development, and distribution lines along NYS Route 190 which runs just south of the sites. Views are open towards the open space towards NYS Route 190. Views toward the Facility are screened by existing vegetation and topography.	l

Viewpoint No. [a/]	Representative Viewpoint Name	Resource Type	Approximate Distance to Nearest Facility Component (miles)[b/]	Viewing Direction	Existing Landscape Characteristics and Views [c/]	Views Toward Facility [d/ e/] l *Not Visible* ¡ *Visible*
3	East Hounsfield Christian Church, Olympic Trail, NYS Route 3, Residential 113	Historic (NRHP), Travel way, Residential	0.1	North	The landscape is characterized by flat to gently rolling terrain. Vegetation consists of trees along roadways and around residential and agricultural development. Human-made features include residential and commercial development, roads, and distribution lines. Views toward the Facility are partially screened by existing vegetation and intervening terrain in the foreground; however, Views towards the solar array, substation and electrical infrastructure are open with partial screening from existing vegetation along the road.	¡
4	Olympic Trail, NYS Route 3	Travel way	0.6	East	The landscape characteristics include flat to gently rolling terrain surrounded by patches of forested areas. Vegetation consists of trees along the roadway and around residential development. The site is also surrounded by agricultural development. Human-made features include the roadway, residential development and distribution lines along the road. Views towards the solar array, substation and electrical infrastructure are possible.	l
5	Residential 114	Residential Area / Travel Way	0.04	South	The landscape is characterized by flat terrain with gradually rolling forested hills to the north that is within a suburban setting. Vegetation consists of trees along streets, and around residential and agricultural development, and pockets of forested areas to the north and south. Human-made features include residential development, roads, and distribution lines along the road. Views from the site are generally open obstructed by adjacent residential development and associated vegetation with extended views up and down the road. Views towards the solar array, substation and electrical infrastructure are open with partial screening from existing vegetation along property lines.	¡

Viewpoint No. [a/]	Representative Viewpoint Name	Resource Type	Approximate Distance to Nearest Facility Component (miles)[b/]	Viewing Direction	Existing Landscape Characteristics and Views [c/]	Views Toward Facility [d/ e/] l *Not Visible* ¡ *Visible*
6	U.S. Highway 11	Travel Way	2.4	West/Southwest	The landscape is characterized by gently to moderately rolling terrain in a suburban setting. Vegetation consist of trees along streets and around residential and commercial development with denser forested areas to the southwest and northeast. Human-made features include the commercial development, including the C.A.N.I. Medical Complex, multi-family residential development, roads and distribution lines. Views to the west are partially obstructed by existing vegetation in the foreground. Views of the solar array are possible, but unlikely from this area and screened from this viewpoint. Views of the substation and electrical infrastructure are screened.	l
7	Elisha Camp House, Sackets Harbor (State-listed), Sackets Harbor Village Historic District	Historic (Historic District)	4.4	East	The landscape is characterized by flat terrain and is within a suburban setting. Vegetation consists of trees along streets and around residential development. Human-made features are limited primarily to the road, fences, streetlights, and residential and commercial development. Views towards the Facility are completely screened by vegetation along the roadway and residential development.	l
8	District School No. 19, St. Paul's Episcopal Church	Historic (NRHP)	2.35	Northeast	The landscape is characterized by relatively flat terrain. Vegetation consists of trees along streets and around residential development and dense forested areas to the northeast and southwest. Human-made features include residential development and distribution lines. Views from the site are primarily limited by adjacent existing vegetation and residential development with some extended views up and down the street. Views towards the Facility are completely screened by existing vegetation.	l

Viewpoint No. [a/]	Representative Viewpoint Name	Resource Type	Approximate Distance to Nearest Facility Component (miles)[b/]	Viewing Direction	Existing Landscape Characteristics and Views [c/]	Views Toward Facility [d/ e/] l *Not Visible* ¡ *Visible*
9	Simon Read Farm, Olympic Trail	Historic (NRHP), Travel way	1.05	Northeast	The landscape character is flat terrain within a rural setting. Vegetation consists of trees along streets and around residential and agricultural development. Human-made features include residential development, roads, and distribution lines. Views from this location are limited by exiting vegetation and residential development with open views up and down the street. Views towards the Facility are limited by the existing vegetation that is in the foreground, however views of the solar array, substation, and electrical infrastructure from the Olympic Trail are possible but unlikely.	l
10	Residential 115	Residentia l Area	1.6	Northwest	The landscape is characterized by gently to moderately rolling terrain. Interstate 81 is approximately 1.5 miles to the east. The landscape consists of suburban residential development along Route 11. Vegetation primarily includes lawns and trees surrounding residential structures and large dense forested areas to the east and west buffering the residential developments along Route 11. Human-made features include residential buildings, streets, signs and distribution lines. Views from the site are limited to the immediate foreground by adjacent development and vegetation. Views towards the Facility will be screened by development and vegetation.	l

Viewpoint No. [a/]	Representative Viewpoint Name	Resource Type	Approximate Distance to Nearest Facility Component (miles)[b/]	Viewing Direction	Existing Landscape Characteristics and Views [c/]	Views Toward Facility [d/ e/] l *Not Visible* ¡ *Visible*
11	Residential 116	Residential Area	3.8	North/Northeast	The landscape is characterized by gently rolling terrain with a large forested area to the southwest. Vegetation includes dense forested areas to the southwest and trees within residential lots. Human-made features include scattered residential development, roads, and distribution lines. Views from the site are generally open and consist primarily of agricultural development and the existing roadways. Views towards the solar array, substation, and electrical equipment will be partially screened by variations in terrain.	l
12	Honeyville (Cassler Marsh State) WMA; U.S. Highway 11	Wildlife Management Area Travel Way	3.2	Southwest	The landscape is characterized by relatively flat terrain that is within a suburban setting. Vegetation is limited to trees along streets and around residential development with denser forested areas to the east and west. Human-made features include residential development along U.S. Highway 11, streets, signs, and distribution lines. Views from the site are primarily limited by adjacent residential development with some extended views up and down the street. Views towards the Facility are partially screened by existing vegetation and development surrounding the site, however views of the solar array from U.S. Highway 11 are possible but unlikely.	l

Viewpoint No. [a/]	Representative Viewpoint Name	Resource Type	Approximate Distance to Nearest Facility Component (miles)[b/]	Viewing Direction	Existing Landscape Characteristics and Views [c/]	Views Toward Facility [d/ e/] l *Not Visible* ¡ *Visible*
13	Black River Bay Campgrounds	Locally Important Resource	3.2	South/Southeast	The landscape is characterized by flat terrain to the southeast and gently rolling terrain to the northwest. Vegetation consists of forested area within the campgrounds and along the Black River with open fields and scattered small woodlands to the southeast. NYS Route 180 is located 0.2 miles east of the site. Other Human-made features include structures associated with the campgrounds, residential developments, and a boat docking area. Views from the campgrounds are limited by the wooded areas in the foreground. Views southeast towards the Facility are screened by vegetation and residential development directly south of the site.	l
14	East Hounsfield Free Library	Locally Important Resource	0.2	Northwest	The landscape is characterized by gently rolling terrain just west of a commercial suburban area. Vegetation includes trees along the road and within commercial and residential lots. Human-made features include the road, commercial and residential developments, signs and distribution lines. Views are primarily limited by trees along the roadway and residential and commercial structures. Views towards the Facility will be partially screened by the forested plot northwest of the free library and by the nearby commercial development. However, views of the solar array, substation, and electrical infrastructure are possible but unlikely.	l

Viewpoint No. [a/]	Representative Viewpoint Name	Resource Type	Approximate Distance to Nearest Facility Component (miles)[b/]	Viewing Direction	Existing Landscape Characteristics and Views [c/]	Views Toward Facility [d/ e/] l *Not Visible* ¡ *Visible*
15	Watertown Sportsmen's Club, NYS Route 3, Residential 117	Locally Important Resource, Residential Area, Travel Way	1.63	North/Northwest	The landscape is characterized by gently to moderately rolling terrain. Vegetation includes dense forested areas to the east and west with trees along streets. Human-made features are limited to a distribution line, scattered residences, and the road. Views from this viewpoint are limited to the foreground by the rolling terrain and existing vegetation. Views towards the Facility are screened by vegetation and terrain, resulting in no views of the solar array, substation, and electrical infrastructure.	l
16	Watertown Town Clerk Basketball, Tennis Courts & Baseball Field	Locally Important Resource	2.6	Northwest	The landscape is characterized by moderate rolling terrain to the south and northeast within a suburban setting Vegetation consists of large wooded areas to the south and northwest with trees along roadways and within residential developments. Human-made features are limited to the road, residential and commercial development and distribution lines along the road. Views are primarily limited to the foreground distance zone by vegetation along the roads and residential and commercial structures. However, extended views occur looking down the roadway. The Facility is located to the northwest and views toward the Project will be screened by vegetation and development.	l

Viewpoint No. [a/]	Representative Viewpoint Name	Resource Type	Approximate Distance to Nearest Facility Component (miles)[b/]	Viewing Direction	Existing Landscape Characteristics and Views [c/]	Views Toward Facility [d/ e/] l *Not Visible* ¡ *Visible*
17	Madison Barracks	Historic (NRHP)	3.8	East/Southeast	The landscape is characterized by relatively flat to gently rolling in a suburban setting with the Black River Bay located 0.3-mile northwest. Vegetation includes open grassy fields and trees along roadways and within residential developments. Large dense forested areas are located to the northeast and east. Human-made features include the road, residential development and distribution lines along the road. From this viewpoint, views are more restricted by existing vegetation and residential developments. Views towards the Facility are completely screened by intervening terrain, vegetation, and development in the foreground distance zone.	l
18	Great Lakes Seaway Trail, Muskellunge Fishing Pier, Muskellunge Parking Lot, Muskellunge Boat Launch	Travel way Scenic resource	2.2	East	The landscape is characterized by flat to gently rolling terrain. Vegetation consists of dense forested areas to the east and west with open grass areas around residential developments Muskellunge Bay is located approximately 0.5 mile west of the site. Human-made features include residential homes, the Muskellunge boat launch and parking lot, distribution lines and streets. Views from this location are limited due to the existing vegetation but extend up and down the street. Views towards the Project will be screened by vegetation in the foreground.	l

Viewpoint No. [a/]	Representative Viewpoint Name	Resource Type	Approximate Distance to Nearest Facility Component (miles)[b/]	Viewing Direction	Existing Landscape Characteristics and Views [c/]	Views Toward Facility [d/ e/] l *Not Visible* ¡ *Visible*
19	Interstate 81	Travel way	1.0	North/Northeast	The landscape is characterized by moderate rolling terrain in a suburban setting. Vegetation includes open grassy areas with trees along the roadway, pockets of forested areas and dense forested areas to the east and south. Human-made features are limited to I-81 and intersecting roads, commercial and residential development, and a distribution line along the road. Views from this viewpoint are somewhat open to the east, south, and west across grassy areas but are eventually screened by vegetation in the foreground distance zone. Views towards the Facility will be screened by vegetation in the foreground.	l
20	Massey Street Road/Residential 118	Travel way/Residential	0.1	West	This landscape is characterized by relatively flat to gently rolling terrain. Vegetation includes trees bordering open agricultural fields and open grass areas around residential homes. Dense forested areas are found to the south east and west. Human-made features include Old Rome State Road, residential and agricultural development, and a distribution line along the road. Views from this viewpoint are open to the east, west, and north, with some vegetation screening views to the south. Views of the solar array, substation, and electrical equipment are possible as towards the Facility will be open.	¡

Viewpoint No. [a/]	Representative Viewpoint Name	Resource Type	Approximate Distance to Nearest Facility Component (miles)[b/]	Viewing Direction	Existing Landscape Characteristics and Views [c/]	Views Toward Facility [d/ e/] l *Not Visible* ¡ *Visible*
21	Fields Road/Residential 119	Residential/Travel Way	0.1	East	This landscape is characterized by gently rolling to flat terrain. Vegetation includes few trees bordering open agricultural fields and open grass areas around residential homes. Pockets of dense tree stands are found to the north and southwest. Human-made features include Fields Road and residential and agricultural development. Views from this viewpoint are open to the east, west, north and south. Views towards the Facility will be only partially screened by residential development and trees, with possible views of the solar array, substation, and electrical equipment.	¡
22	Martin Road/Residential 120	Residential/ Travel Way	0.3	Southwest	This landscape is characterized by relatively flat terrain. Vegetation includes few trees bordering open agricultural fields and open grass areas around residential homes. Pockets of tree stands are found to the north. Human-made features include Martin Road and residential and agricultural development. Views from this viewpoint are open to the west, north and south, with some vegetation screening views to the east, resulting in possible views of the solar array, substation, and electrical equipment.	¡
23	Old Rome State Road/Residential 121	Travel Way/Residential	0.1	East	This landscape is characterized by flat terrain. Vegetation includes tree stands bordering open agricultural fields and residential homes. Patches of dense forested areas are found to the west. Human-made features include Old Rome Road, residential and agricultural development, and a distribution line. Views from this viewpoint are open to the east with vegetation and terrain screening views to the south, west, and north, resulting in possible views of the solar array, substation, and electrical equipment.	¡

Viewpoint No. [a/]	Representative Viewpoint Name	Resource Type	Approximate Distance to Nearest Facility Component (miles)[b/]	Viewing Direction	Existing Landscape Characteristics and Views [c/]	Views Toward Facility [d/ e/] l *Not Visible* ¡ *Visible*
24	Beutel Road/Residential 122	Travel Way/ Residential	0.01	East	This landscape is characterized by flat terrain to moderately rolling hills. Vegetation includes trees bordering open agricultural fields and within residential lots. Dense forested areas are found to the north, west, and northeast. Human-made features include roads, residential developments, and distribution lines. Views from this viewpoint are open to the east, south, and west, resulting in possible views of the solar array, substation, and electrical equipment.	¡

Notes:

a/ Viewpoint No. correspond to Figure 5. Bold numbers correspond with simulations.

b/ Distance noted is from the location visited during the field visits and the closest point along the nearest Facility components (perimeter fence).

c/ Distance zones are defined as foreground ground (0 to 0.5 mile), middleground (0.5 to 4 miles), and background (4 miles or more). The level of visual effect for each distance zone is described in Section 5.1.1.

d/ Visibility is based on conditions observed during the field reconnaissance noted in Section 4.2.3. Proposed mitigation such as vegetative screening is not applied for this table but is discussed in Section 5.2.2.3 and Section 7 below.

e/ Viewpoints were field verified. For items labeled as visible, only a portion of the Facility may be visible in the photograph.

(c) Visual Contrast Evaluation

(1) Photographic Simulations of Facility and Interconnections

Photographic simulations were created to depict the appearance of the proposed Facility components and their potential changes to the existing landscape. The simulations were used to determine the level of contrast between the existing landscape and the expected landscape after the proposed Facility is constructed. Simulation locations are shown on Figure 5 and the simulations are included in Appendix G of the VIA.

(2) Photographic Simulations of Facility and Interconnections with Mitigation

Simulations were also created to illustrate proposed mitigation for those representative viewpoints where landscaping is proposed to help screen the Facility. Vegetative screening will be provided along portions of NY 3 and around multiple residential areas that traverse the Facility, to help screen views of the solar panels from residences and travelers along the roadway. Simulations depicting views of the Facility with mitigation implemented are included Appendix G of the VIA.

(3) Results of Visual Impact Assessment

As noted in Section 5.1.1 of the VIA, a panel of three visual professionals completed contrast rating worksheets for six representative viewpoints. To assist in the evaluation of changes associated with the implementation of the Facility, photographic simulations were compared to exiting photographs taken during the field visit.

The panel focused the evaluation of potential effects on the vegetation and structural contrast measures due to the uniform zero rating on the landform contrast measure by the panel members. The landform contrast was rated as zero primarily because the Facility is located on flat to gently rolling terrain and little to no grading will be required. Therefore, no change in the landform is anticipated. Contrast rating worksheets are included in Appendix F of the VIA.

Table 8-2: Summary of Results of Contrast Rating Panel

Representative Viewpoint No. a/	Representative Viewpoint	Distance to Nearest Facility Component (miles/feet)	Viewer Group	Average Contrast Rating Results			
				Panelist 1	Panelist 2	Panelist 3	Contrast Rating Results b/
VP-01	East Hounsfield Christian Church	0.1 / 525	Residential / Traveler	3.7	3.7	4	Moderate-Strong
VP-02	Massey Street Road / Residential	0.04 / 200	Residential / Traveler	4.3	4	3.7	Moderate-Strong

Representative Viewpoint No. a/	Representative Viewpoint	Distance to Nearest Facility Component (miles/feet)	Viewer Group	Average Contrast Rating Results			
				Panelist 1	Panelist 2	Panelist 3	Contrast Rating Results b/
VP-03	Old Rome State Road / Residential	0.1 / 450	Residential / Traveler	3.7	2.7	2.3	Moderate
VP-04	Fields Road and Lloyd Road / Residential	0.1 / 1,000	Residential / Traveler	3	2.3	2.7	Moderate
VP-05	Old Rome State Road / Residential	0.1 / 600	Residential / Traveler	2	2	1.7	Moderate-Weak
VP-06	Beutel Road and Old Rome State Road / Residential	0.01 / 55	Residential / Traveler	3	2.3	2	Moderate-Weak
	Notes: a/ Simulation number (VP-#) corresponds to the order in which the simulations appear in Table 2 (e.g., 3, 5, 20, 22, 24) and Appendix G. b/ Contrast rating results reflect averages without mitigation taken into consideration.						

Descriptions of the contrast rating results for each of the six representative viewpoints is included in Section 5.2.2.3 of the VIA.

Overall, the Facility will result in minimal to no change to the landscape conditions for most viewers within the Visual Study Area. Higher levels of change to the landscape may be apparent to a limited number of viewers located adjacent to the Facility. Limited views of the Facility will also be visible from a limited number of viewers at slightly elevated locations within approximately 1 mile of the Facility, including residential and travelers along NY 3, US 11, and Interstate 81. During the construction period for Facility components, viewers will be able to observe construction equipment, laydown areas, and crews. Varying degrees of visual contrast will occur when equipment and construction crews are present; however, this source of contrast will be short-term since equipment and support facilities will be removed once construction is complete. Visual effects during operation of the Facility will result from the visibility of the aboveground components associated with the Facility, including PV panels, inverters, on-site substations, distribution and collection lines, access roads, and perimeter fencing. The Facility will introduce regular forms and horizontal and vertical lines into a landscape setting that has been modified primarily by agricultural, residential, and commercial development. Residences and travelers' local roads, such as NY 3, Old Rome State Road, and Jericho Road Lloyd Road, and Youngs Road that traverse north and south through the Facility and Massey Street Road, Fields Road, Martin Road, Beutel Road, and Parker Road located east and west, respectively, will have views towards the Facility that range from unobstructed to partially screened to completely screened by vegetation along the Facility boundary. It is anticipated that

the Black River and Lake Ontario will not have views towards the Facility based on the screening effects of existing vegetation, buildings and other structures, and distance. Based on the results of the rating panel, contrast will range from moderate-weak visual impact to moderate-strong visual impact which primarily depends on the distance of the viewer to Project components, existing vegetation screening, and other human-made modifications visible within the viewscape. Landscaping is proposed around the perimeter of the Facility where adjacent viewers will have unobstructed views towards the Facility. Landscaping will consist of a variety of evergreen trees that will help to screen portions of the Project and break up the uniformity of the blocks of PV panels. Landscape screening will help to reduce contrast, significantly in some areas, and overall visibility for adjacent viewers. Viewers not directly adjacent to the Facility will be mostly to completely screened by topography and/or vegetation within the existing landscape and will therefore result in minimal to no visual impacts.

(d) Visual Impacts Minimization and Mitigation Plan

A Visual Impacts Minimization and Mitigation Plan (VIMMP) is provided as Appendix H of the VIA and summarized below. This includes a glare study, landscape plan, and lighting plan.

(1) Advertisements, Conspicuous Lettering, or Logos

Advertisements, conspicuous lettering, or logos identifying the facility owner, solar module manufacturer, or any other supplier entity, other than warning and safety signs, will not be on the Facility infrastructure.

(2) Electrical Collection System

The electrical collection system will be located underground, to the extent practicable (see Exhibit 5). Structures shall only be constructed overhead for portions where necessary based on engineering, construction, or environmental constraints.

(3) Electric Collection and Transmission Facilities Design

Electric collection and transmission facilities design will use wood poles or steel pole structures; steel poles will be self-weathering (such as Corten or equivalent) or other surface finish in dark brown or green color, non-glare finish.

(4) Non-specular Conductors

Non-specular conductors will be used for any overhead portions of the transmission line and the electric collection system.

(5) FAA Turbine Colors for Wind Facilities

This section is not applicable and is therefore not discussed in this plan.

(6) Shadow Flicker for Wind Facilities

This section is not applicable and is therefore not discussed in this plan.

(7) Glare for Solar Facilities

See Glare Study (Appendix A of the VIMMP).

(8) Planting Plan

See Landscape Plan (Appendix B of the VIMMP).

(9) Lighting Plan

See Lighting Plan (Appendix C of the VIMMP).

In addition to the minimization and mitigation plan, additional mitigation strategies are proposed as follows:

- "Good housekeeping" will be implemented to maintain the Facility free of debris, trash, and waste during construction.
- The solar panels will be located within the existing open fields within the Facility and vegetation clearing will be limited, to the maximum extent practicable. Several swaths of forested wetlands within the Facility will be retained.
- The Facility setbacks have been increased in some areas based on community and stakeholder input. The setback of the PV panels reduces the visibility of the Facility from several residential areas and local roads.
- Vegetative screening will be provided along portions of NY 3 and around multiple residential areas that traverse the Facility, to help screen views of the solar panels from residences and travelers along the roadway.
- The design approach of breaking up the PV panels into smaller sections interspersed with natural vegetated landscape will help to mitigate the visual effects from surrounding areas.
- When construction is complete, areas disturbed during the construction process will be reseeded.
- Panels will have anti-reflective coatings that will reduce the level of reflectivity and will be trackers, minimizing glare even further.
- The electrical collection system will be located underground, to the maximum extent practicable. Structures will be constructed overhead for portions where necessary based on engineering constraints and environmental considerations.

- Outdoor night lighting at the substations will be kept to the minimum required for emergencies. Lighting will only be activated in the event of an outage or other repair-related event at the substation during nighttime hours and will be turned off after repairs are completed.