



## Franklin County Line Upgrade Project

Georgia, St. Albans Town, Swanton, and Highgate, Vermont



## Aesthetic Analysis Report

September 19, 2023

Prepared by:



**T.J. BOYLE ASSOCIATES**  
LANDSCAPE ARCHITECTURE & PLANNING

## **Table of Contents**

A.	Introduction .....	1
B.	Description of the Project Site and Surrounding Area .....	1
C.	Methodology .....	3
D.	Quechee Test Part I: Evaluation of Potential Adverse Impacts.....	7
i.	Overview .....	7
ii.	Visibility.....	8
iii.	Private Residences.....	10
iv.	Suitability of Colors and Materials for the Project.....	10
v.	Impact on Open Space.....	10
vi.	Findings .....	11
E.	Quechee Test Part II: Evaluation of Potential Undue Impacts.....	12
i.	Community Standards .....	12
1.	Regional Plan.....	13
2.	Town Plans .....	14
a.	Georgia Town Plan.....	14
b.	St. Albans Town Plan.....	16
c.	Swanton Town Plan .....	17
d.	Highgate Town Plan.....	18
ii.	Mitigating Elements.....	19
iii.	Shocking or Offensive.....	20
F.	Findings and Conclusion .....	21

## **Appendices**

- Appendix A     Photographic Inventory
- Appendix B     Landscape Mitigation Plans
- Appendix C     Photographic Simulations
- Appendix D     Regional & Town Plan Excerpts: Clear Written Community Standard

## A. Introduction

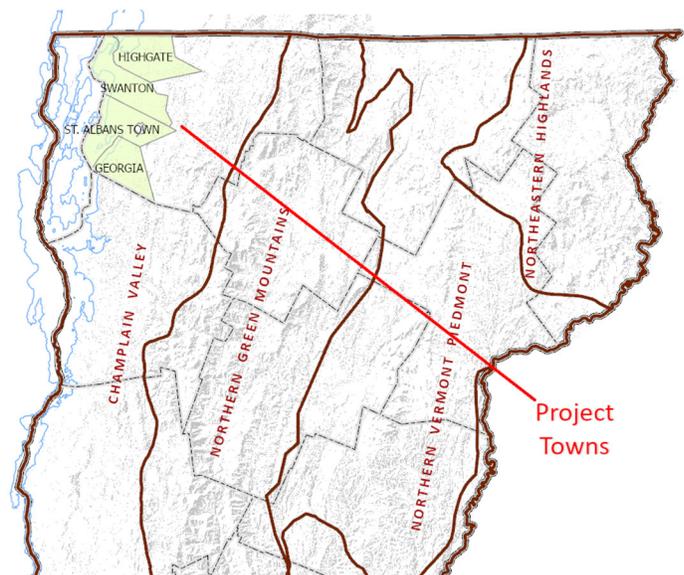
T.J. Boyle Associates, LLC (“TJB”), a landscape architecture and planning firm located in Burlington, Vermont, was retained by the Vermont Electric Power Company (“VELCO”) to conduct an aesthetic analysis to evaluate potential impacts due to a proposed transmission line rebuild between VELCO’s Georgia and Highgate Substations, which crosses through the towns of Georgia, St. Albans, Swanton, and Highgate, Vermont (referred to as the “Franklin County Line Upgrade Project”, “FCLU”, or the “Project”). The aesthetic analysis determines whether changes to the landscape’s visual character attributable to the proposed Project are adverse, and if so, whether they are also undue. This report presents the findings and conclusions of the aesthetic analysis, as well as a review of whether the proposed Project would unduly interfere with the orderly development of the region.

T.J. Boyle Associates has conducted field investigations, analyzed geographic information system (“GIS”) data, aerial photography and detailed design plans, and used the latest computer technologies to best understand the Project and how planned improvements would alter the visual character of the landscapes for which they are proposed.

## B. Description of the Project Site and Surrounding Area

The Applicant is seeking approval under 30 V.S.A. § 248 from the Vermont Public Utility Commission<sup>1</sup> (“Commission”) for a Certificate of Public Good to reconstruct and operate an existing 115 kV transmission line from VELCO’s Georgia Substation to VELCO’s Highgate substation (16.7 miles), known as the K42 line. Between these substations, the Project passes through the northern part of the Champlain Valley physiographic region, traversing portions of four towns: Georgia, St. Albans Town, Swanton, and Highgate. Figure 1 depicts the Project location within the State of Vermont, and Figure 2 shows the Project route between the Georgia and Highgate substations.

To maintain electrical transmission during construction and to fit within the existing right-of-way (“ROW”), the rebuilt line would be switched from a horizontal configuration (H-frame structures) to a vertical configuration (single-pole structures), and relocated approximately 15 feet east of the existing line. The relocated structures would be in close proximity to the existing structures, with some exceptions due to existing conditions or other design considerations. Replacement structure heights would be approximately 76.8 feet above ground, which is an increase of approximately 28 feet. The new structures would be constructed using self-weathering steel, and the replacement conductors would have lower light reflectance than the existing conductors (i.e., “non-specular”).

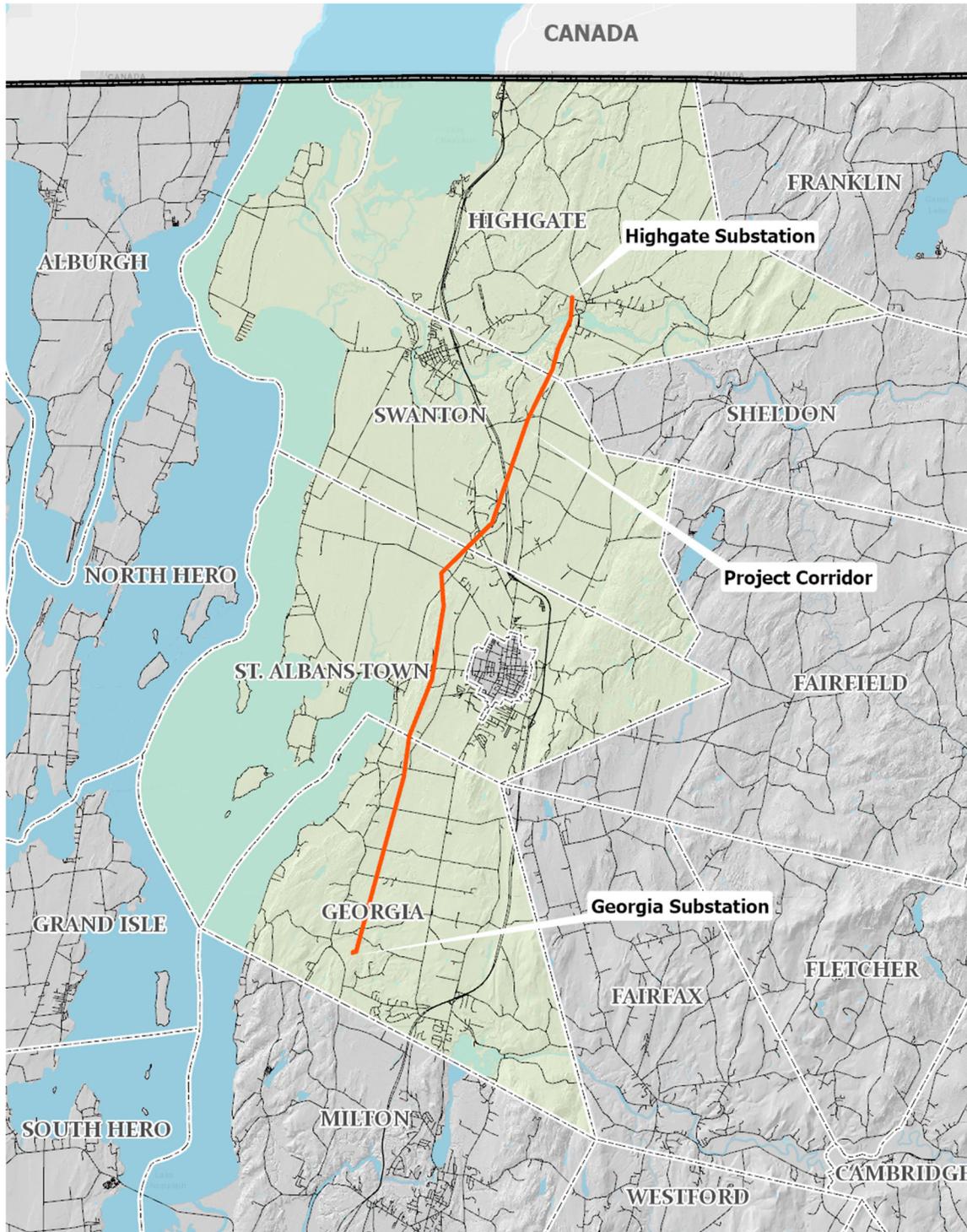


**Figure 1:** Vermont Physiographic Regions Map and Project Location

<sup>1</sup> On July 1, 2017 the Public Service Board changed its name to “Public Utility Commission”

In addition, to mitigate line losses, the Project would utilize double bundled conductors instead of the existing single conductor for each line phase.

In order to build the new structures and remove the existing structures after the replacement line is energized, new access roads and temporary construction pads will be installed within the ROW. To facilitate construction of the new access roads, installation of the replacement line, and subsequent decommissioning of the existing line, vegetation within the corridor will need to be removed.



**Figure 2:** Project route between Georgia and Highgate, Vermont.

## C. Methodology

Section 248(b)(5) of Title 30, Vermont Statutes Annotated requires the Commission to make a finding that a proposed electrical transmission Project would not have an undue adverse effect on aesthetics, as outlined in the so-called “Quechee Lakes Decision.”<sup>2</sup> As explained in the Commission’s order in Docket No. 6860, the Commission applies the Quechee Test in Section 248 proceedings, as follows:

The Public Service Board has adopted the Environmental Board’s Quechee analysis for guidance in assessing the aesthetic impacts of proposed projects under Section 248. We have previously explained the components of the Quechee analysis as follows:

In order to reach a determination as to whether the project would have an undue adverse effect on the aesthetics of the area, the Board employs the two-part test first outlined by the Vermont Environmental Board in Quechee, and further defined in numerous other decisions.

Pursuant to this procedure, first a determination must be made as to whether a project would have an adverse impact on aesthetics and the scenic and natural beauty. In order to find that it would have an adverse impact, a project must be out of character with its surroundings. Specific factors used in making this evaluation include the nature of the project's surroundings, the compatibility of the project's design with those surroundings, the suitability of the project's colors and materials with the immediate environment, the visibility of the project, and the impact of the project on open space.

The next step in the two-part test, once a conclusion as to the adverse effect of the project has been reached, is to determine whether the adverse effect of the project is “undue.” The adverse effect is considered undue when a positive finding is reached regarding any one of the following factors:

1. Does the project violate a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area?
2. Have the applicants failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the project with its surroundings?
3. Does the project offend the sensibilities of the average person? Is it offensive or shocking because it is out of character with its surroundings or significantly diminishes the scenic qualities of the area?

Our analysis, however, does not end with the results of the Quechee test. Instead, our assessment of whether a particular project would have an “undue” adverse effect on aesthetics and scenic or natural beauty is “significantly informed by overall societal benefits of the project.” (In re Petition of Tom Halnon, CPG NM-25, Order of 3/15/01 at 10-11)

Petitions of Vermont Electric Power Company, Inc. (VELCO), Vermont Transco, Docket No. 6860, Vt. Pub. Serv. Bd. (Jan. 28, 2005) at 79-80.

---

<sup>2</sup> Quechee Lakes Corporation, Applications #3W0411-EB and #3W0439-EB at pgs. 18-20

T.J. Boyle Associates interprets the first prong of the Quechee test to first require an assessment of the project's visibility. Visibility establishes the underlying method for which all visual aesthetics are evaluated to comply with the purpose of the Quechee Test. For instance, a project's design, materials and colors may be completely out of character with its surroundings, but if such project is not visible to the general public (or "average person"), then there would be no adverse visual effect. Likewise, when a project is determined to be out of character with its surroundings, one solution that the Quechee Test offers to mitigate this is to visually obscure the project with landscaping or other screening, which itself is a simple reduction or occlusion of project visibility. In this way, TJB interprets the first prong of the Quechee Test to be asking, "What is the project's visibility, and is that visibility out of character with its surroundings?" In our experience, if the Quechee Test were not interpreted in this way then a given project could be considered adverse even if it was completely invisible from surrounding areas, which would be an unreasonable interpretation and inconsistent with the purpose of the test.

Our study area for potential adverse aesthetic effects of transmission facilities tends to extend approximately one mile from a project corridor. This distance tells us whether a given project is, or is not, visible from prominent or protected locations in the study area, or, perhaps more importantly, if a project itself is in a prominent or highly visible location.

In conducting the Quechee Analysis and preparing this report, three distinct methods have been used: (1) background data collection, (2) 3D GIS modeling, (3) field investigation, and (4) Project visualization. The background data and field investigation are used to characterize the study area. The GIS modeling and field investigation are used to understand the Project components and areas with potential Project visibility. For the Project visualization, a simulation is prepared to accurately visualize the Project. All four methods are used to evaluate whether there are in fact 'adverse' impacts and if so, whether those impacts could be considered 'undue.'

- (1) **Background Data Collection.** Standard data that can help describe the landscape of the Project site, the surrounding area, and the Project are assembled. These data include available Project plans and details, aerial photography, topographical maps, Geographical Information System ("GIS") data including digital elevation model data, water and land cover information, transportation data and primary building data (public, commercial, residential), and applicable regulations such as the town plan and the regional plan.
- (2) **3D GIS Modeling.** Following the background data collection, ESRI ArcGIS PRO software is used to graphically display the 3D transmission line design prepared by the Project engineers, as well as to assess the potential for visibility due to vegetation clearing within the corridor. Other GIS information can be included to create a three-dimensional (3D) model of the existing landform, existing vegetation, and proposed improvements. The model can help to better understand the visual relationship of the basic landscape features to the Project elements. The advantage of this approach is the ease in representing the view from any viewpoint; the disadvantage is the relative coarseness of the data and the schematic quality of the image. While not as accurate as a photographic simulation, the 3D model allows for quick reference to proposed structure types and potential clearing implications along the entire length of the Project corridor (see Figure 3).



**Figure 3:** Example screenshot from the 3D GIS Model, which includes approximate heights of vegetation along the entire line.

- (3) **Field Investigation.** The viewshed maps are used to focus the field investigation on areas most likely to have views of the Project. The purpose of the field investigation is to:
- a. Verify potential visibility as indicated in the 3D GIS Model
  - b. Photograph views toward the Project from these and any other sensitive areas (parks, public facilities, etc.)
  - c. Photographically document the landscape’s visual character within the study area
  - d. Record notes concerning each viewpoint where photographs are taken
  - e. Identify location of photograph viewpoints using a global positioning system (“GPS”) unit

On completion of the field investigation, the GPS data is transferred to a GIS database and synchronization of the data and photograph locations are verified. Photo locations and the actual photos are coordinated through indexed viewpoint numbers. Documentation of the field investigation is then prepared, which is displayed on mapping within Appendix A, Photo Inventory. The Photo Inventory includes a series of panoramic views, to provide context of the surrounding conditions, and single-frame photographs to represent views to the Project site. Unless otherwise noted, single-frame photos utilize a focal length approximately equivalent to 50mm on a 35mm film or FX digital single lens reflex camera, which is considered a ‘normal lens’. A normal lens reproduces a field of view that

generally looks “natural” to a human observer. Panoramic views result in significant spatial distortion but are beneficial by providing a very wide field of view to illustrate the existing surroundings.

- (4) **Project Visualization.** It is normally helpful to create visualizations as an aid to evaluate visual impacts. Photos captured during field investigation can be used to create realistic photographic quality simulations of a Project. The specific selection of a simulation viewpoint is based on the extent of the Project’s visibility, the probable frequency and sensitivity of viewers, and the availability of a suitable photograph from the field investigation. There may be more than one viewpoint for a particular Project component or condition. However, each simulation attempts to illustrate the most visible condition from a publicly accessible viewpoint for the area and season it represents. The following process is used to create the simulation.
- a. Three-dimensional computer-aided design (“CAD”) drawings of the proposed Project elements and site plan are obtained or created.
  - b. The CAD data and aerial photographs of the area are georeferenced and overlaid. Reference markers representing fixed landscape elements visible in the photograph (i.e. existing buildings, utility poles, etc...) are added to the CAD data based on their location in the aerial photograph.
  - c. A viewpoint or camera view is created within the CAD drawing based on the camera, viewpoint and other characteristics of the photograph. A perspective drawing of the proposed Project is produced that coincides with the perspective of the photograph.
  - d. A digital image file for the simulation is created that includes separate layers for the perspective drawing and the simulation photograph. The reference markers are used to evaluate the accuracy of the perspective drawing’s camera view. The perspective drawing settings are fine-tuned to ensure the reference markers coincide with the photograph.
  - e. Elements of the perspective drawing that would be visible are rendered into the photograph using predefined textures and colors, textures and colors that occur at the existing site, or textures and colors from other similar projects.

Photographic simulations prepared for the Project are included in Appendix C.

TJB evaluates data from the steps above and compares existing conditions with plans for the proposed Project. The following sections of this report describe in detail the collection and evaluation of data and the resulting conclusions.

## D. Quechee Test Part I: Evaluation of Potential Adverse Impacts

### i. Overview

The following section provides an overview of changes to the visual landscape as a result of the Project and whether changes would create an adverse impact to a particular area. As previously noted, assessing adverse impacts includes a review of how the proposed changes compare to existing conditions. Since the Project consists of the replacement of existing transmission infrastructure, the level of noticeable change would be limited to the change in structure and conductor design, as well as changes to the landscape necessary to remove the existing structures and install the replacement structures. The assessment of impacts focuses on visibility from publicly accessible locations, which primarily consist of roadways at or near the existing transmission corridor.

The following table, Figure 4, provides a summary of locations assessed for the Project.

Location Name	AOT Road Class	Map (Appendix A)	Viewpoints (Appendix A)	Not Adverse	Adverse	Mitigation Recommended	Undue Adverse	Comments
<b>Georgia, VT</b>								
Decker Road	3	1	1 - 3		X	Y		Increase visibility because of vegetation removal – see discussion below
Plains Road	2	1	4 - 5		X			'Typical'
Pattee Hill Road	3	2	6		X			'Typical'
Reynolds Road	3	3	7		X			'Typical'
Polly Hubbard Road	3	4	8 - 9		X			'Typical'
Horseshoe Barn Road	4	n/a	n/a	X				Remote unimproved farm road with no development
Mill River Road	2	5	10 - 12		X			'Typical' *Simulation 1
Bronson Road	3	5	n/a	X				Parallel road to the corridor - see discussion below (also located in St. Albans Town, VT)
<b>St. Albans Town, VT</b>								
Bronson Road	3	6	13, 15		X			(see above)
Sully's Way	9	6	14	X				Road is offset from corridor – see discussion below
Lake Road (VT Route 36)	30	7	16 - 17		X			'Typical' *Simulation 2
Kellogg Road (at Christina Drive)	2	8	18, 20 - 21		X	Y		Increase visibility because of vegetation removal – see discussion below
Christina Drive	9	8	19		X	Y		(see above)
Lower Newton Road (VT Route 38)	30	9	22 - 23		X			Existing conductors visible on hillside
<b>Swanton, VT</b>								

Location Name	AOT Road Class	Map (Appendix A)	Viewpoints (Appendix A)	Not Adverse	Adverse	Mitigation Recommended	Undue Adverse	Comments
Kellogg Road	3	10, 11	24 - 28		X	Y		Increase visibility because of vegetation removal – see discussion below <b>*Simulation 3</b>
Mountain View Drive	3	11	29 - 31		X			'Typical'
St. Albans Road (US Route 7)	40	11	32 - 33		X			'Typical'
Sugar Maple Drive	3	11, 12	34 - 38		X			'Typical'
Gauthier Drive	3	13	39 - 41, 43		X	Y		Increase visibility because of vegetation removal – see discussion below <b>*Simulation 4</b>
Bachand Road	3	13	42	X				(see above)
Interstate 89	50	14	44 - 45		X			'Typical'
Town Highway 25	7	n/a	n/a	X				Remote unimproved farm road with no development
Woods Hill Road	2	15	46 - 47		X			'Typical'
Ironwood Lane	9	15	n/a		X			(at intersection with Woods Hill Rd)
Butternut Lane	9	15	48 - 50		X	Y		Increase visibility because of vegetation removal – see discussion below <b>*Simulation 5</b>
Glen Ridge Lane	3	16	51 - 53		X			Parallel road to the corridor - see discussion below
<b>Highgate, VT</b>								
Excavation Drive	9	n/a	n/a	X				Remote sand and gravel extraction access road
Baker Road	9	17	54		X			'Typical'
Vermont Route 207 (Highgate Road)	30	17	55	X				Minimal visibility, views only of conductors from bridge over Missisquoi River
Missisquoi River / Northern Forest Canoe Trail – Highgate Falls Carry	n/a	17	56 - 58		X			Similar visibility, more sensitive activity – see discussion below
Vermont Route 78	30	18	59 - 60		X			'Typical'

**Vermont AOT Road Class Descriptions:**

- (1-4) Class 1-4 town highway, undivided
- (7) Legal trail
- (9) Private road
- (30) Vermont State Highway, undivided centerline (most Vermont Highways)
- (40) US Highway, undivided centerline (most US Highways)
- (50) Interstate

**Figure 4:** Summary Table of Potential Aesthetic Impacts

**ii. Visibility**

Built originally in 1958, the existing K42 115 kV transmission line is an established component of the visual landscape within the towns of Georgia, St. Albans Town, Swanton, and Highgate. The Project viewshed or locations where visibility of proposed upgrades would be possible, would be similar to that of the existing line. However, there would be limited incremental increases to visibility due to the increased height of the proposed structures, and also as a result of vegetation clearing that is necessary to construct and deconstruct project elements. Visibility from publicly accessible locations is largely constrained to roadways that cross or are located near to the Project corridor. Below is a list of locations at which visibility would have incremental increases:

**Decker Road, Georgia.** Vegetation removal along the east side of the corridor, north of the roadway would result in limited increased views of transmission infrastructure when traveling west on Decker Road (see Viewpoint 1 in Appendix A).

**Mill River Road, Georgia.** Simulation 1 in Appendix C is prepared from the eastern edge of the ROW at the Mill River Road crossing looking north along the Project corridor. This view illustrates ‘typical’ viewing conditions and compares existing visibility with visibility of the proposed upgrades.

**Bronson Road, Georgia/St. Albans.** Bronson Road does not cross the Project corridor but runs parallel and to the east of it. Images from Viewpoints 13 and 15, as well as 14 from Sully’s Way (Appendix A), illustrate slightly distant views that would have slightly increased visibility as a result of taller structures.

**Lake Road, St. Albans.** Simulation 2 in Appendix C is prepared from Lake Road, approaching the Project from the west, looking east. This simulation illustrates ‘typical’ changes to visibility when approaching the existing transmission ROW as a result of Project upgrades.

**Kellogg Road / Christina Road, St. Albans.** A combination of vegetation removal, primarily along the west side of Kellogg Road (within the Project corridor) and increases of structure heights would result in limited increased views of transmission infrastructure when traveling both of these roads.

**Kellogg Road, Swanton.** A combination of vegetation removal along the east side of the road (within the Project corridor), and increases to structure height would result in limited increased views of transmission infrastructure, particularly when traveling north on Kellogg Road (see Simulation 3 in Appendix C).

**Gauthier Drive, Swanton.** The line is first visible from Gauthier Drive to the northwest of the intersection with Sugar Maple Drive (see Viewpoint 39 in Appendix A). Gauthier Drive then crosses into the corridor, curves to the north, and proceeds north for over 700 feet within the Project corridor. At the intersection with Bachand Road, Gauthier Drive turns 90 degrees and leaves the corridor to the east (see Map 13 in Appendix A). Images from Viewpoints 40, 41, 42, and 43 illustrate views along this section of the Project during leaf-on and leaf-off conditions. The alignment of the roadway within the corridor, along with vegetation removal south and north of where the road enters and leaves the corridor contribute to increased visibility of upgrades through this section of the project. Simulation 4 in Appendix C illustrates the view midway along this portion of Gauthier Drive, looking roughly south.

**Butternut Lane, Swanton.** Butternut Lane is a short cul-de-sac that ends at the eastern edge of the ROW and appears to access 4 residences. The removal of a portion of existing hedgerow which extends along and then into the eastern edge of the corridor, along with the increased structure height would result in limited increased views of transmission infrastructure (see Simulation 5 in Appendix C).

**Glen Ridge Lane, Swanton.** Glen Ridge Lane is another cul-de-sac street. It starts east of the corridor from Highgate Road, turns north, and parallels the corridor to the east for roughly 1,300 feet. It appears to access roughly 25 residences. The neighborhood is generally separated from the Project by existing woods, which would remain. However, the combination of terrain and increased structure heights would result in limited increased views from Glen Ridge Lane.

**Missisquoi River / Northern Forest Canoe Trail – Highgate Falls Carry.** The Northern Forest Canoe Trail is a 740-mile trail that follows historic waterways from Old Forge, New York, to Fort Kent, Maine.<sup>3</sup> At Highgate Falls, a carry to navigate around the falls is located just north of the VT Route 207 bridge. The pathway for the carry crosses the corridor west of VT Route 207 (See Viewpoints 56 and 57 in Appendix A) and the western portage has views of the corridor extending south of the Missisquoi River. Clearing for construction at the corridor crossing would increase visibility temporarily. Otherwise, changes to visibility would be typical.

### **iii. Private Residences**

The majority of the Project corridor or right-of-way easement is located on private property, and at several locations within close proximity and view to private residences. It appears that many of these residences have been built since the existing line was constructed, and it also is reasonable to assume that the majority of residents have moved to these locations after the existing line was in place. In general, visibility from private residences to Project upgrades would be similar to that of the existing line. There would be limited instances where the additional height of the structures, and vegetation removal would increase visibility.

At locations where private residences would have similar views of Project upgrades as compared to the existing line, potential impacts would be limited to changes in the type and appearance of the transmission infrastructure.

### **iv. Suitability of Colors and Materials for the Project**

The Project materials and colors would primarily consist of weathered steel transmission structures, glass insulators, aluminum conductors, and the shield and fiber optic cables. At certain locations, galvanized steel guy wires may also be present. Although the materials of the pole structures would change from wood to metal, the proposed structures would have a similar aesthetic as the existing wooden structures. The weathering steel would acquire a medium to dark brown material, similar in color to a wooden structure when originally installed. However, they would not age to a lighter gray, like wooden structures. The conductors would utilize a non-specular treatment which significantly reduces glare and reflectivity of the conductors.

Other than the change in structure configuration, the visual appearance of colors and materials of Project upgrades would be very similar to that of the existing line. Due to the linear nature of electrical transmission lines, the surrounding landscape varies significantly. At many locations, there is surrounding structures and infrastructure with similar colors and materials. Within other locations, the Project's colors and materials are unique within that setting. However, since the Project is replacing an existing line that is an established part of the landscape, the Project's colors and materials are considered compatible with the surroundings.

### **v. Impact on Open Space**

Previous Act 250 and Section 248 decisions do not clearly define what is meant by the term “open space,” and some regional plans and town plans have differing definitions of open space, if any at all. For the FCLU, applicable planning documents include the Northwest Regional Plan 2023-2031, adopted July 26, 2023 (“Regional Plan”)<sup>4</sup>, the Town of Georgia, Vermont 2017 Comprehensive Municipal Plan, adopted January 9,

---

<sup>3</sup> <https://www.northernforestcanoetrail.org/>

<sup>4</sup> [https://www.nrpcvt.com/wp-content/uploads/2023/07/ADOPTED\\_RegionalPlan\\_2023.pdf](https://www.nrpcvt.com/wp-content/uploads/2023/07/ADOPTED_RegionalPlan_2023.pdf)

2017 (“Georgia Town Plan”)<sup>5</sup>, the Town of St. Albans Town Plan, approved June 15, 2020 (“St. Albans Town Plan”)<sup>6</sup>, the Swanton Town and Village Municipal Plan, adopted August 22, 2023 (Swanton Town Plan)<sup>7</sup>, and the Highgate Town Plan 2023-2013, adopted July 20, 2023 (Highgate Town Plan)<sup>8</sup>.

The Regional Plan directly references open space(s) 12 times, typically in reference to the preservation or conservation of open space and typically in coordination with natural resources. The Natural and Cultural Resources section includes the goal to “[p]rotect significant natural resources, including ... open space...” (Regional Plan at 84.) However, the Regional Plan does not provide a specific definition of open space. The St. Albans Town Plan does not incorporate the term “open space” and while the Georgia, Swanton, and Highgate Town Plans all mention open space, none of the plans provide a clear definition.

The United States Environmental Protection Agency, Region 1, New England provides the following description of “What is Open Space / Green Space”:

Open space is any open piece of land that is undeveloped (has no buildings or other built structures) and is accessible to the public. Open space can include:

- Green space (land that is partly or completely covered with grass, trees, shrubs, or other vegetation). Green space includes parks, community gardens, and cemeteries.
- Schoolyards
- Playgrounds
- Public seating areas
- Public plazas
- Vacant lots

Open space provides recreational areas for residents and helps to enhance the beauty and environmental quality of neighborhoods. But with this broad range of recreational sites comes an equally broad range of environmental issues. Just as in any other land uses, the way parks are managed can have good or bad environmental impacts, from pesticide runoff, siltation from overused hiking and logging trails, and destruction of habitat.<sup>9</sup>

If the Project location were to be considered open space for the purposes of this review, Project upgrades would not impact open spaces any more than the existing line.

## vi. Findings

The FCLU would replace an existing 115 kV line with a new 115 kV line. Proposed Project upgrades would include some noticeable visual differences, including:

- Change from H-frame structure configuration to vertical, single-pole structure configuration.
- The average structure height increase of 28 feet.
- Use of double bundled conductors.

<sup>5</sup> <https://www.townofgeorgia.com/media/1911>

<sup>6</sup> [https://cms7files.revize.com/stalbansvt/Document\\_Center/Government/2020%20Town%20Plan%20-%20adopted%20June%2015%202020%20-%20Signed.pdf](https://cms7files.revize.com/stalbansvt/Document_Center/Government/2020%20Town%20Plan%20-%20adopted%20June%2015%202020%20-%20Signed.pdf)

<sup>7</sup> NOT AVAILABLE

<sup>8</sup> [https://www.highgatevt.org/vertical/sites/%7B27DD8364-9602-460E-9A11-4C6436D74153%7D/uploads/town\\_plan\\_2023-2031\\_part\\_1\(5\).pdf](https://www.highgatevt.org/vertical/sites/%7B27DD8364-9602-460E-9A11-4C6436D74153%7D/uploads/town_plan_2023-2031_part_1(5).pdf)  
[https://www.highgatevt.org/vertical/sites/%7B27DD8364-9602-460E-9A11-4C6436D74153%7D/uploads/town\\_plan\\_2023-2031\\_part\\_2\(5\).pdf](https://www.highgatevt.org/vertical/sites/%7B27DD8364-9602-460E-9A11-4C6436D74153%7D/uploads/town_plan_2023-2031_part_2(5).pdf)

<sup>9</sup> <https://www3.epa.gov/region1/eco/uep/openspace.html>

Additionally, clearing for the deconstruction of the existing line and construction of the proposed line would increase visibility at certain locations as described above. As noted in figure 4, Summary Table of Potential Aesthetic Impacts, at several of the potential locations with public visibility, impacts are noted as typical. Typical conditions include minor changes to the extent of visibility, mostly due to the increase of structure height. Noticeable changes to structure configuration, and to a lesser extent, structure material (wood to self-weathering steel). Typical changes are illustrated in Simulations 1 and 2 in Appendix C.

In review of criteria for the first step of the Quechee Test, increases to visibility and changes to the appearance of transmission infrastructure within the existing corridor would result in limited adverse impacts to the aesthetic of the surrounding area.

## **E. Quechee Test Part II: Evaluation of Potential Undue Impacts**

### **i. Community Standards**

Although Section 248 does not require local permitting of projects seeking a Certificate of Public Good, local plans and regulations are reviewed under the second prong of the Quechee Test (described in Section C of this Report) where it has been determined that a project may have a potential adverse visual impact. Under *Quechee*, this involves an assessment as to whether or not a project violates a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area. The Public Utility Commission has noted that “[i]n order for a provision to be considered a clear, written community standard, it must be ‘intended to preserve the aesthetics or scenic beauty of the area’ where the proposed project is located and must apply to specific resources in the proposed project area.”<sup>10</sup> The Commission clarified that generalized statements and general scenic resource policies that are not focused on a particular scenic resource or that fail to offer specific guidance or measures to protect the resource cannot be considered “clear written community standards.”<sup>11</sup> The Commission has further clarified that any such standard must expressly designate the “[project] parcel as a scenic resource worthy of protection.”<sup>12</sup>

The Vermont Supreme Court (“VSC”) has also provided clarification to the issue of what qualifies as specific, clear written standards, previously stating that “[i]n contrast to the Act 250 context, § 248 review supplants rather than supplements local zoning regulation.”<sup>13</sup> Specifically, the VSC has previously determined that language such as “the purpose of the Rural Conservation Districts is to preserve this distinctive rural character while accommodating low density residential development... Agriculture, forestry, very low density single-family residential development, and certain limited uses that are suitable in rural areas are permitted in the district” are “broad and general statements in the Town and Regional Plans [that] are not sufficiently specific to constitute a basis for denying a permit under § 248.”<sup>14</sup> The VSC clarifies the issue further, stating “our case law supports the conclusion that indications in the Town and Regional Plans that development in the Rural Conservation District or outside of the urban center should be compatible with the area’s rural character are not clear, written community standards such that violation renders the project’s adverse impact undue under § 248(b)(5).”<sup>15</sup> As such, the particular language used within Town and Regional Plans is important for

---

<sup>10</sup> Petition of Georgia Mountain Community Wind, LLC, Docket No. 7508 at p. 52.

<sup>11</sup> *Id.* at p. 53.

<sup>12</sup> Petition of Rutland Renewable Energy, LLC, Docket No. 8188, Order of 3/11/15 at p. 85-86.

<sup>13</sup> *In re* Petition of Apple Hill Solar LLC, 2021 VT 69 at ¶ 33.

<sup>14</sup> *Id.* at ¶¶ 34 and 36.

<sup>15</sup> *Id.* at ¶ 37.

determining whether a standard is a clear written community standard and specifically applies to a given Project.

To determine if the FCLU would violate a clear written community standard, available local and regional planning documents were reviewed, including the Regional Plan, Georgia Town Plan, St. Albans Town Plan, Swanton Town Plan, and the Highgate Town Plan. A selection of excerpts from the Regional and Town Plans relating to clear written community standards are provided in Appendix D.

## 1. Regional Plan

The Regional Plan is broken into sections that cover specific planning elements for the region. There is no dedicated section to scenic resources, but a simple short paragraph near the end of the Natural and Cultural Resources section, which primarily encourages local communities to incorporate scenic resource assessment into their planning process. There are relatively limited references to aesthetics or scenic resources in the document as a whole.

However, at the beginning of the **Natural and Cultural Resources** chapter, the second of three goals is to “protect and conserve historically significant buildings and locations, archaeological resources, and important scenic and aesthetic resources, starting with those identified in local and regional plans” (Regional Plan at 84). Under the subsection Assets and Values the Regional Plan continues to state:

Beyond the historical richness of the region, Northwest Vermont boasts an extremely robust mosaic of diverse landscapes, from the Adirondacks-backed agricultural viewsheds of the Lake Champlain islands to the heavily wooded western slopes of the Green Mountains. With sensitive siting and design, it’s possible for scenic landscapes to be developed and still retain much of their intrinsic character. Aesthetic considerations are recognized as a legitimate public concern under Criterion 8 of Act 250. Conserving the region's aesthetic resources is crucial to maintaining its sense of place.

(Regional Plan at 85)

Rivers and Watersheds: Rivers and streams offer sustenance, scenic beauty and recreational opportunities, and they heavily influence the cultural, social, and economic environment of Northwest Vermont.

(Regional Plan at 87)

Scenic Resources: The region’s scenic resources are plentiful and include both natural and human-influenced elements. Undeveloped ridgelines are among the region’s highly valued natural scenic resources, serving both as vantage points (the areas we enjoy views from) and as terminal views (and create the scene we are enjoying through our observation). Because impacts on scenic resources are assessed as part of the Act 250 development review process, communities in the Region may wish to incorporate a scenic resource assessment as part of their planning processes.

(Regional Plan at 96)

The concluding Goals and Policies for Natural and Cultural Resources chapter states:

## 2. **Protect and conserve historically significant buildings and locations, archaeological resources, and important scenic and aesthetic resources identified in local and regional plans.**

- b. Ensure that land development along prominent ridgelines and hilltops is designed to fit within the landscape and avoid undue adverse visual impacts.

- d. Encourage energy generation and distribution facilities to minimize their visual impact on ridgelines, slopes and open areas.

(Regional Plan at 79)

Specific “Prominent ridgelines and hilltops” are not identified within the Regional Plan and design guidelines to assure that land development “fit(s) within the landscape” are not provided. The Regional Plan covers a wide range of topics including land use, housing, economics, cultural resources, and other community issues. It clearly recognizes the importance of scenic resources within the region. However, as is often true of regional plans, encouragement and support is offered for the constituent towns to review their own needs and desires, and there are rarely any specific guidelines for scenic quality control.

As an appendix to the Regional Plan, the Northwest Regional Planning Commission (“NRPC”) has also incorporated an enhanced energy plan. The NRPC Regional Energy Plan, adopted June 28, 2017 (the “Regional Energy Plan”)<sup>16</sup>. The Regional Energy Plan provides guidance for how the region can achieve state and regional energy goals. Topics within the Regional Energy Plan primarily focus on energy use and generation. Electrical transmission is primarily discussed in its proximity to preferred sites for solar generation projects. There is little discussion of scenic resources and aesthetics and where it is mentioned, it is in relation to the siting of solar and wind projects. The Regional Energy Plan does note that the Upper Missisquoi and Trout Rivers are designated National Scenic and Recreational Rivers, although not within Highgate.

Based on review of the Regional Plan, including the Regional Energy Plan, these documents do not provide clear written standards for the Project site or the area surrounding the Project. The Regional Plan provides general statements and offers support, recommendations, and guidance for its member municipalities to implement scenic resource protection within their communities. The Project would not conflict with the general goals of the region as they relate to scenic quality and aesthetics.

## **2. Town Plans**

A review of the Town Plans as they relate to clearly written community standards is provided as follows. Excerpts from each of the Town Plans that reference scenic resources, aesthetics, or natural beauty of the area are provided in Appendix D.

### **a. Georgia Town Plan**

Section 2 of the Georgia Town Plan provides a consolidated list of goals and policies for each section of their Town Plan:

#### **SECTION 2. Plan Goals and Policies**

##### **E) Historic and Scenic Resources**

###### **Goals:**

To encourage that Georgia’s noteworthy historic and scenic resources remain intact.

###### **Policies:**

- E-1) Places of outstanding historical, educational or scenic value shall be protected from development that would unreasonably impair their character or quality.

---

<sup>16</sup> [https://www.nrpcvt.com/wp-content/uploads/2022/09/NRPC\\_EnergyPlan\\_2017.pdf](https://www.nrpcvt.com/wp-content/uploads/2022/09/NRPC_EnergyPlan_2017.pdf)

- E-3) To encourage innovation in design and layout of development so that the visual impact can be minimized.
- E-4) To encourage the use of vegetative buffers and other screening methods to reduce the visual impact of development.

(Georgia Town Plan at 13)

#### **M) Utilities, Facilities, and Town Services**

##### **Goals:**

... Public utilities and services should be enhanced in ways that improve economic development opportunities and quality of life, but that do not jeopardize public health, the environment or scenic resources...

(Georgia Town Plan at 17)

#### **N) Land Use**

##### **Goals:**

To concentrate residential, commercial and industrial growth in the Village Center and the South Village area to protect the Town's rural character and resources.

##### **Policies:**

- N-5) Encourage the preservation of land in an agricultural, wooded or open state, particularly in areas of the town which are important scenic viewsheds and not well connected to service systems.

(Georgia Town Plan at 18)

Section 4 of the Georgia Town Plan, The Physical Setting most directly addresses scenic resources within the town and includes a subsection dedicated to Scenic Resources. The section that discusses Water Resources notes that Lake Champlain is an aesthetically sensitive resource. However, language within this section includes general goals and statements for the preservation of scenic resources and the need for appropriate planning and review. However specific scenic resources or methods of preservation are not provided.

### **SECTION 4. The Physical Setting**

#### **A. Introduction**

The Town of Georgia is rich with natural resources. The diverse landscape stretches from the shores of Lake Champlain across the sandy flats of Georgia Plains and the open farmland of Georgia Center, to the western foothills of the Green Mountains. These resources enrich the lives of all those who live, work and play in our community. Our natural resources provide recreational opportunities, a scenic landscape, and support the local economy. Through good planning and sustainable management of these resources, we seek to enhance the quality of life for current and future Georgia residents.

(Georgia Town Plan at 50)

#### **F. Water Resources**

**Lake Champlain.** Lake Champlain is a sensitive resource. It is sensitive environmentally, aesthetically and in terms of its ability to absorb development. The area's "carrying capacity" and development requires extensive oversight and planning initiatives to ensure its long term health and viability.

(Georgia Town Plan at 59)

#### **H. Scenic Resources**

The views and scenic beauty of the Georgia landscape are greatly valued and appreciated by residents and visitors alike. Georgia's gradual transition from the foothills to the lake provides beautiful scenery: The juxtaposition of rolling farmland, historic settlements, and forest within the Champlain lowlands creates a landscape that enhances our community and our quality of life. Scenic resources must be a consideration in

planning and development, including ridgelines, foregrounds of distant views, open lands, vistas, and historic village settlements.

Lake Champlain is particularly important as visual and aesthetic resource for the Town of Georgia. To the west, we enjoy beautiful views of the Adirondacks and to the east we see the Green Mountains. The shoreline itself is a scenic resource and is particularly sensitive to human and natural change.

Changes in our working landscape will also affect the aesthetics of our community. Just as Vermont's forest cover has risen from 20-30% in 1850 to over 75% today, we can expect to see our landscape change as the economics of forestry and agriculture change. We can also expect that demand for new renewable energy sources will create interest in wind power development in our town and towns within our viewshed. Balancing economic, environmental and aesthetic interests will require careful review of projects and consideration of all potential costs and benefits.

Poorly planned development can threaten the scenic beauty of our community. These scenic resources contribute to the local quality of life and sense of place, help to preserve and enhance property values, and are instrumental in defining the character of the Town. Future development must be sensitive to these areas of the landscape. Development should be properly sited to protect scenic vistas, and to avoid steep slopes and hilltops. Through the use of flexible zoning tools, such as PUDs, the town can allow creative site design that accommodates and respects scenic and natural resources.

(Georgia Town Plan at 64)

## **H. Scenic Resources**

**Summary.** These areas serve unique functions which are very sensitive to human interference and deserve a level of protection. They are usually unsuited for human habitation but ideally suited for wildlife habitat and have significant ecological, recreational, scientific, and scenic value. They represent a dwindling resource which, with careful planning, this generation may be able to offer as a gift to the next generation.

(Georgia Town Plan at 66)

The Georgia Town Plan continues to mention aesthetics and scenic resources in Section 5, Utilities, Facilities, and Town Services and Section 6, Land Use. The existing VELCO 115 kV transmission line is noted under Private Utilities (Section 5). Section 7 is the Energy section and outlines Georgia's approach and goals for energy use and includes subsection C, Siting Energy Generation Facilities in Georgia, but it does not discuss scenic resources or transmission facilities. Section 8, Plan Implementation, includes the following proposed action, "Conduct a study of scenic resource in Georgia and include specifically identified scenic resource in the Municipal Plan." (Georgia Town Plan at 105). However, this action has not been completed to the best of my knowledge.

### **b. St. Albans Town Plan**

The Vision Statement for the St. Albans Town Plan reads, "The Town of St. Albans is and will continue to be a community where there is... an appreciation of our natural, cultural, scenic, and historical resources." (St. Albans Town Plan at 10). Most discussion regarding scenic resources is found in Chapter 5, Scenic and Natural Resources, and includes the following:

**5.1. Goal** - Identify, protect, preserve, and transform important natural and scenic features of St. Albans' landscape.

(St. Albans Town Plan at 33)

Policy: Protect and preserve scenic locations and scenic roads

St. Albans is a scenic place. The Town's working landscape and agricultural heritage with rolling fields, tree lines, and farm buildings are a critical component of this beauty. Lake Champlain figures prominently in the sweeping views from the hills on the east of Town, to the views along the lakeshore and the beauty of islands. St. Albans Bay's natural beauty and historic village area also contribute to St. Albans Town's sense of place.

The Town should work to specifically identify scenic locations and scenic roads in St. Albans in the future. The Town should then decide if there should be regulatory protection of the identified scenic locations and scenic roads

(St. Albans Town Plan at 37-38)

In Chapter 13, Implementation of the Plan, subsection 13.1, Priority Goals notes that, “[a] goal has been selected from each chapter in the Town Plan, which is listed below to be targeted as a priority.” (St. Albans Town Plan at 69).

Scenic and Natural Resources: Identify, protect, preserve, and transform important natural and scenic features of St. Albans’ landscape.

(St. Albans Town Plan at 69)

Reference to scenic resources and aesthetics is limited in the St. Albans Town Plan and do not identify specific resources, nor has further efforts been made to identify scenic resources since the plan was adopted. There is an Energy section, which does not discuss scenic resources or electrical transmission facilities.

**c. Swanton Town Plan**

Swanton’s approach to scenic resources is primarily discussed in Chapter 5, Scenic and Natural Resources, which contains the following:

**Chapter 5. Scenic and Natural Resources**

The purpose of this chapter is to describe Swanton's commitment to stewardship of the natural environment and to provide a basis for policies that guide the Town's decisions that will affect the natural environment.

... There are significant natural resources in private ownership including primary agricultural soils, scenic areas, wetlands, and wildlife habitats.

... Swanton should also investigate the identification and protection of scenic viewsheds within the community.

(Swanton Town Plan at 20)

**5.1 Goal:** To protect and maintain the important natural features of Swanton including: Lake Champlain, the Missisquoi River and its tributaries, the Missisquoi National Wildlife Refuge, archeological sites, and scenic areas.

Policy: Protect important vistas and scenic views of Swanton which are worthy of protection.

(Swanton Town Plan at 21)

**5.5 Goal:** To provide for the wise and efficient use of Vermont's natural resources including the extraction of earth resources, and to ensure the proper restoration and preservation of the aesthetic qualities of the surrounding area.

Policy: Ensure existing reclamation requirements are adequate and that the aesthetic qualities of the surrounding area are considered.

Chapter 11, Recreation, notes that “a scenic 1-mile recreation trail (called the Swanton Fit and Healthy Trail) was opened as a first segment to the Lamoille Valley Rail Trail.” (Swanton Town Plan at 40). The Project is not within the viewshed of the Swanton Fit and Healthy Trail. Otherwise, specific scenic resources and methods of scenic resource preservation are not provided within the Swanton Town Plan.

**d. Highgate Town Plan**

Statements within the Highgate Town Plan, make it apparent that the scenic quality is an important resource for the town, although there is limited discussion of scenic resources. There is not a specific chapter or section for scenic resources; most references can be found in Chapter 4, Natural and Cultural Resources.

**CHAPTER 4: Natural and Cultural Resources**

**Forest Resources.** ... Highgate's forests provide quality forest products while supporting tourism, recreation, wildlife habitat, and the scenic, rural nature of the Town.

(Highgate Town Plan at 18)

**Natural Resource Goals**

2. Maintain the character of the Town through the preservation of the environmental resources that make Highgate unique: including the Town's forests, wildlife habitat, biological diversity, shore land and water resources, scenic vistas and agricultural land.

**Natural Resources Actions**

4. Identify the important vistas and scenic features in Highgate that are worthy of protection.

(Highgate Town Plan at 25)

There are additional brief references in Chapter 7, Community Facilities and Services, and Chapter 9, Land Use, but none of which note specific scenic resources or preservation methods. An implementation action in Chapter 11, Recommendations for Implementing the Plan includes, "[i]dentify the important vistas and scenic features in Highgate that are worthy of protection." (Highgate Town Plan at 88). However, there is no indication that this has been completed. Within Chapter 5, Energy, the only reference to aesthetics or scenic resources is in relationship to the size of new solar facilities.

In summary, the Town Plans contain many generalized statements and policies concerning scenic resources. Each of the plans identify the need to inventory scenic resources and vistas, but none of the towns have completed that task. There are no clearly written standards within the Town Plans concerning specific resources that pertain to the Project site and surrounding area.

Based on this review of community standards described in the Regional Plan and corresponding Town Plans, as proposed, the Project would not violate a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area.

## ii. Mitigating Elements

The FCLU employs several forms of mitigation to significantly reduce the aesthetic impacts of the Project. Most importantly, the Project is a proposed upgrade of an existing line and would simply replace existing electrical transmission infrastructure within an existing right-of-way. This reduces potential impacts to incremental differences between the existing and proposed characteristics of the transmission components. Overall, mitigation incorporated with the Project includes:

- The entire length of upgrades to the K42 transmission line would be located within an existing transmission line corridor. Essentially, proposed upgrades would replace an existing 115 kV transmission line with a new 115 kV transmission line.
  - ❖ The K42 Line is an existing high-voltage transmission line and is an established part of the existing landscape.
  - ❖ Proposed upgrades consist of replacement of existing structures and transmission infrastructure.
  - ❖ Additional visibility of transmission infrastructure, as a result of upgrades to the K42 line, would be limited and incremental.
- Landscape mitigation is proposed at several locations to screen and soften views that may be created as a result of Project upgrades. Landscape plantings are proposed at five locations to screen and soften visibility of the Project. VELCO continues to work with potentially impacted parties to further assess the need for mitigation plantings. (See Appendix B for proposed Landscape Mitigation Plans)
- VELCO conducted an in-depth community engagement process, including several public meetings and contact with individual affected property owners prior to submission of the 248 application. At several locations, changes to the line design were made based on input from the engagement process. The outreach process continues, particularly with impacted property owners, including the assessment or desire for mitigation plantings for private residences.
- Non-specular conductors and Optical Ground Wire (OPGW) are proposed that would significantly reduce reflectivity of the conductors and OPGW and reduce the overall appearance of the line.

Between the design of proposed infrastructure and siting Project upgrades within an existing transmission line corridor, Project upgrades would result in limited impacts. Given that all improvements were able to be located within or immediately adjacent to existing infrastructure would significantly diminish potential noticeable changes to the landscape in which the Project is located. The FCLU successfully incorporates reasonable mitigation as part of the Project.

### **iii. Shocking or Offensive**

When evaluating whether a Project would offend the sensibilities of the average person, the criteria to make this assessment is related back to the first part of the Quechee Test; how the Project ‘fits’ within its surroundings. An ‘average person’ is considered a disinterested party, not an affected neighbor. The threshold for a Project to be shocking or offensive is high and a project would need to be entirely inconsistent with the surrounding land uses or exceptionally out of scale with the surroundings.

The Project effect on aesthetics as a whole was found to result in adverse aesthetic impact. However, the level of impact would be very low, limited to incremental differences between the existing line and proposed line. However, Project upgrades would not offend the sensibility of the average person. The FCLU would not be offensive or shocking. This determination is based on a number of factors that were assessed during the aesthetic analysis.

- The Project would either replace or expand existing electrical transmission infrastructure, which is an established part of the existing visual landscape.
- As illustrated in Simulations 1 through 5, although the Project upgrades would utilize a single pole versus h-frame configuration, in general, Project upgrades have a similar character as compared to the existing conditions.
- Proposed upgrades in general would utilize similar color, material and form to existing infrastructure within the same location.
- Clearing for the Project would be limited to vegetation within the ROW and limited removal of danger trees outside the ROW.
- The Project is proposed at a location that does not include unique or protected scenic qualities.
- Electrical transmission lines and substations are a common element throughout Vermont landscape.

Proposed changes as part of the FCLU would have a limited effect on the aesthetics of the area in which the Project is located. The Project could not be considered offensive or shocking when compared to the existing conditions of these areas.

## F. Findings and Conclusion

Although the Project was found to result in overall adverse impacts to the aesthetics and scenic and natural beauty of the area, the level of adversity would be very low. This finding is based on the following facts:

- Project upgrade would replace existing electrical transmission infrastructure.
- The replacement of the K42 115 kV transmission line would result in limited changes to the scale, form or overall visual appearance compared to the existing 115 kV transmission line.
- Visibility of Project components would be limited, screened by surrounding vegetation and other obstructions.
- Within views that would have visibility of Project upgrades, existing transmission infrastructure is already an established part of the visual landscape, there would be very limited locations where upgrades would result in new visibility of transmission infrastructure.
- Proposed transmission infrastructure would be similar in color, size and form as existing transmission infrastructure within the same location.

Although the Project was found to result in an overall adverse impact, it would not violate any of the three criteria in the second part of the Quechee Test.

- The conformance review found that the Project as proposed meets the generalized goals and objectives of the applicable Regional and Town Plans. The Project would not violate a clear written community standard intended to preserve the aesthetics or scenic beauty of the area.
- The applicant has taken all reasonable mitigation steps:
  - a. The Project is located within an existing transmission corridor where transmission infrastructure is a well-established component of the visual landscape.
  - b. The Project would replace an existing 115 kV transmission line with a proposed 115 kV transmission line.
  - c. Landscape mitigation plantings are proposed to screen and soften limited views that would be created of Project upgrades. See Appendix B.
  - d. The applicant has and continues to conduct an in-depth community engagement process, which has influenced parts of the Project design.
  - e. Non-specular conductors and OPGW will be utilized to reduce reflectivity and overall Project visibility.
- The Project would not be offensive or shocking because:
  - a. It would not be a dominant or highly visible feature in the landscape.
  - b. Project upgrades would replace an existing transmission line, which is an established component of the visual landscape and would not be out of character with its surroundings.

In conclusion, the FCLU meets the Quechee Test insofar as its impact on aesthetics would NOT be UNDULY ADVERSE.