Bell Atlantic Mobile Systems, LLC d/b/a Verizon Wireless and The Towers, LLC d/b/a Vertical Bridge
Marshfield Telecommunications Tower
Marshfield, Vermont

Aesthetic & Orderly Development Analysis Report
January 30, 2026

Prepared on behalf of the Vermont Department of Public Service by:

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LANDSCAPE ARCHITECTURE & PLANNING

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Appendices

I. Introduction

T.J. Boyle Associates (TJBA), a landscape architecture and planning firm that specializes in scenic resource assessment, has been retained by the Vermont Department of Public Service (DPS), to perform an independent review of potential impacts to aesthetics and orderly development of the region as the result of a proposed telecommunication project located in Marshfield, Vermont.

II. Project Description

The Towers, LLC d/b/a Vertical Bridge ("VB") is proposing a wireless telecommunications facility (the "Project") within Marshfield, Vermont. The facility will initially be used by Bell Atlantic Mobile Systems, LLC d/b/a Verizon Wireless ("Verizon" or, collectively with VB, "Petitioners"), and subsequently by other communications providers. It is proposed within a 78.73-acre private parcel of land located at 2264 U.S. Route 2. The Project will consist of:

- A self-supporting monopole telecommunications tower ("Tower") with an above ground length ("AGL") of 140-foot.
- Verizon will place three (3) sectors of three (3) panel antennas ("Antennas") each on the Tower for a total of nine (9) Antennas.
    - Each of the Antennas will be mounted at a centerline height of 137 feet above ground level ("AGL").
    - Six (6) of the Antennas will measure approximately 72 inches long and 11.9 inches wide each.
    - The remaining three (3) Antennas will measure approximately 28.9 inches long and 15.75 inches wide each.
    - The topmost height of the Antennas will be 140-foot AGL. Therefore, none of the Antennas will extend above the top of the Tower.
- At each sector, Verizon will install two (2) Remote Radio Heads ("RRHs") next to the Antennas,
    - All six (6) of the RRHs will measure approximately 14.96 inches long and 14.96 inches wide.
    - The topmost points of the RRHs will not exceed the topmost points of the Antennas.
- At east facing (Alpha) sector, Verizon will install one (1) 12-Port OVP Distribution Box ("OVP"), measuring approximately 29.5 inches long by 16.5 inches wide. The topmost point of the OVP will not exceed the topmost points of the Antennas.
- The Tower, Antennas, RRHs and OVP will be painted brown.
- The Tower and additional equipment will be located within a 50-foot by 50-foot compound ("Compound") enclosed by an 8' high chain link fence, with a locked gate, and topped with barbed wire.
- Verizon will place a 12-foot by 20-foot equipment shed ("Shed") on the ground inside the Compound, to the southeast of the Tower. The Shed will contain the electronics equipment necessary for the operation of the Project.
- Verizon will also place an emergency generator ("Generator") on a 10-foot by 12-foot concrete pad adjacent to the north of 8 the Shed. The Generator will function if there is a power outage.

- Verizon will remotely test the Generator once a week at a time to be determined.
- If diesel is used to power the Generator, its tank will be placed underneath the Generator.
- If propane is used to power the Generator, Verizon will install a 500-gallon propane tank on an 11-foot by 4-foot concrete pad to the northeast of the Tower in the Compound.

- Verizon will bring underground Utilities to the Shed from the nearest utility pole, located adjacent to and existing drive near U.S. Route 2.
- Coaxial and fiber optic cables from the Tower-mounted equipment will descend inside the hollow Monopole. The cables will exit near the base of the Monopole and will connect with the Shed via a proposed cable bridge.
- To provide access ("Access") to the Compound, VB proposes minor upgrades to extend the existing driveway and woods road leading from U.S. Route 2 to the Tower site following the existing logging road where possible to the Compound.
- The contractor will limit tree clearing to the minimum required to construct the Access and Compound, which is estimated to be approximately 4,120 square feet.
- At the close of construction, VB will reseed and mulch all disturbed areas along the Access and around the Compound.

Figure 1 provides elevations of the Tower and other equipment as provided by the Petitioners. Figure 2 illustrates the overall site plan, also as provided by the Petitioners.

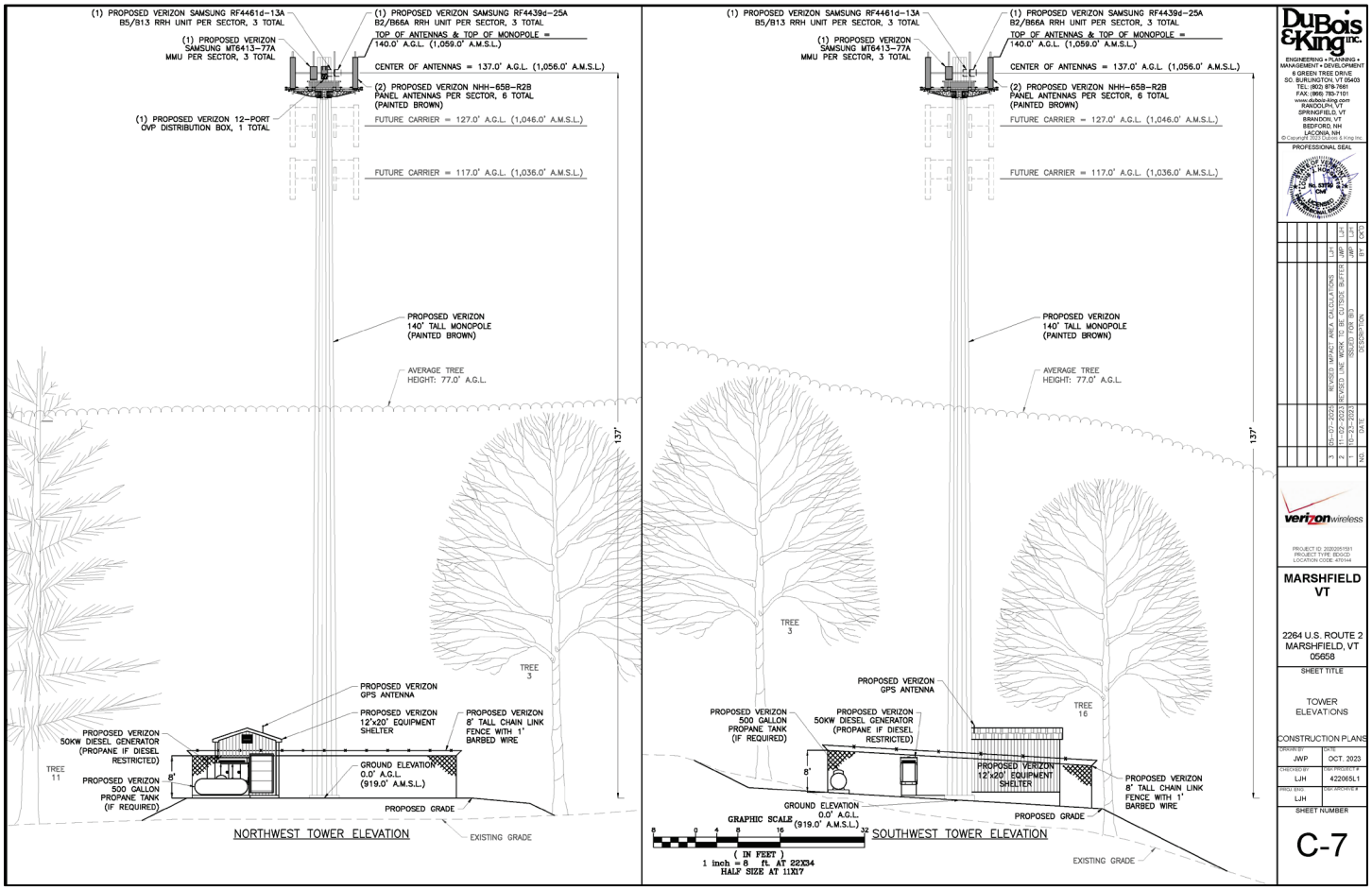


Figure 1: Northwest and Southwest Tower Elevations provided by the Petitioners (Exhibit LH-1 Permit Plans – Sheet C-7)

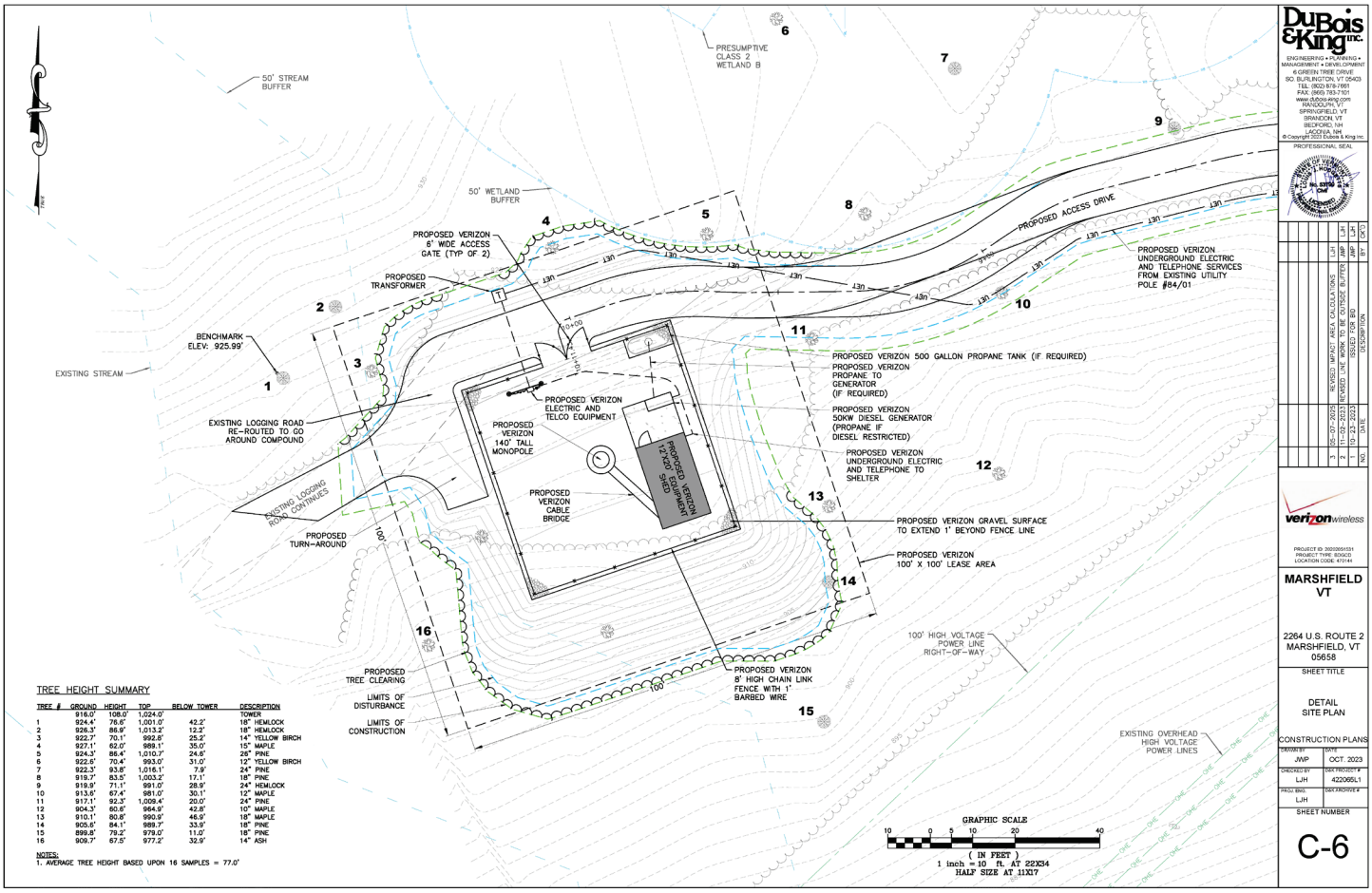


Figure 2: Overall site plan as provided by the Petitioners (Exhibit LH-1 Permit Plans – Sheet C-6)

III. Aesthetic Analysis

A. Methodology – Quechee Test

Section 248a(c)(1)of Title 30 of the Vermont Statutes Annotated requires the Vermont Public Utility Commission (the "Commission") to make a finding that a proposed telecommunications facilities will not have an undue adverse effect on aesthetics, with due consideration given to the criteria for aesthetics, as outlined in the so-called "Quechee Lakes Decision."[1] As explained in the Commission's order in Docket No. 6860, the Commission applies the Quechee Test in Section 248 proceedings, as follows:

> The [Commission] 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 [Commission] employs the two-part test first outlined by the Vermont Environmental Board in Quechee, and further defined in numerous other decisions.

[1] Quechee Lakes Corporation, Applications #3W0411-EB and #3W0439-EB at pgs. 18-20

> 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).[2]

T.J. Boyle Associates ("TJB") interprets the first prong of the Quechee Test to initially require an assessment of a project's visibility. Although the Quechee Test lists visibility of a project as a "specific factor" for evaluation, visibility establishes the underlying method for which all visual aesthetics are evaluated. 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 is to visually obscure the project with landscape mitigation or other screening, which itself is a simple reduction or occlusion of 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 to surrounding areas, which would be an unreasonable interpretation and inconsistent with the purpose of the test.

Our study area for visibility of telecommunication towers concentrates within an area of approximately two miles from the project location but considers locations beyond that distance. This distance tells us whether

[2] *Petitions of Vermont Electric Power Company, Inc. (VELCO), Vermont Transco,* Docket No. 6860, Vt. Pub. Serv. Bd., Final Order of 01/28/2005 at 80 (citing *In Re: Northern Loop Project*, Docket 6792, Order of 7/17/03 at 28).

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, four distinct methods have been used: (1) background data collection, (2) GIS viewshed analysis mapping, (3) field investigation, and (4) Project visualization. The background data and field investigation are used to identify areas with potential visibility of the Project. The background data and field investigation are used to characterize the study area. 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) **GIS Viewshed Analysis.** Following the background data collection, ESRI ArcGIS software is used to calculate a GIS viewshed or visibility analysis of potential visibility of the Project. Viewshed analysis can identify areas that have potential views of a project, and when mapped it shows the Project viewshed. The analysis applies a line-of-sight method from a prescribed point or points representing the Project (such as the top of telecommunications tower structure), to all other locations within a designated study area. Figure 3 illustrates how line-of-sight is determined visibility. The analysis results (portrayed as two viewshed maps), and background data review form the basis for organizing the field investigation.

a. A "Terrain Viewshed" map (see Appendix A, Map 2) represents how landform may block views of Project upgrades. This analysis only accounts for intervening landform and does not incorporate how vegetation, buildings, hedgerows, street trees or any other vegetation or buildings would screen visibility of the Project. However, to facilitate interpretation of the results, the map differentiates between areas with and without forest cover, since there would be no distant views if one is standing in the forest. This map represents the maximum area from which the Project could be visible, and in almost every case overstates the probable visibility.

b. A "Vegetated Viewshed" Map (see Appendix A, Map 3) represents a "Vegetated Viewshed." This map shows how vegetation, buildings and other obstructions in the landscape (in addition to landform) may block views of the Project. The data used to identify obstructions is derived from LiDAR data, the national elevation dataset, and/or the national land cover database. This map is a more realistic representation of the area from which the project is potentially visible.

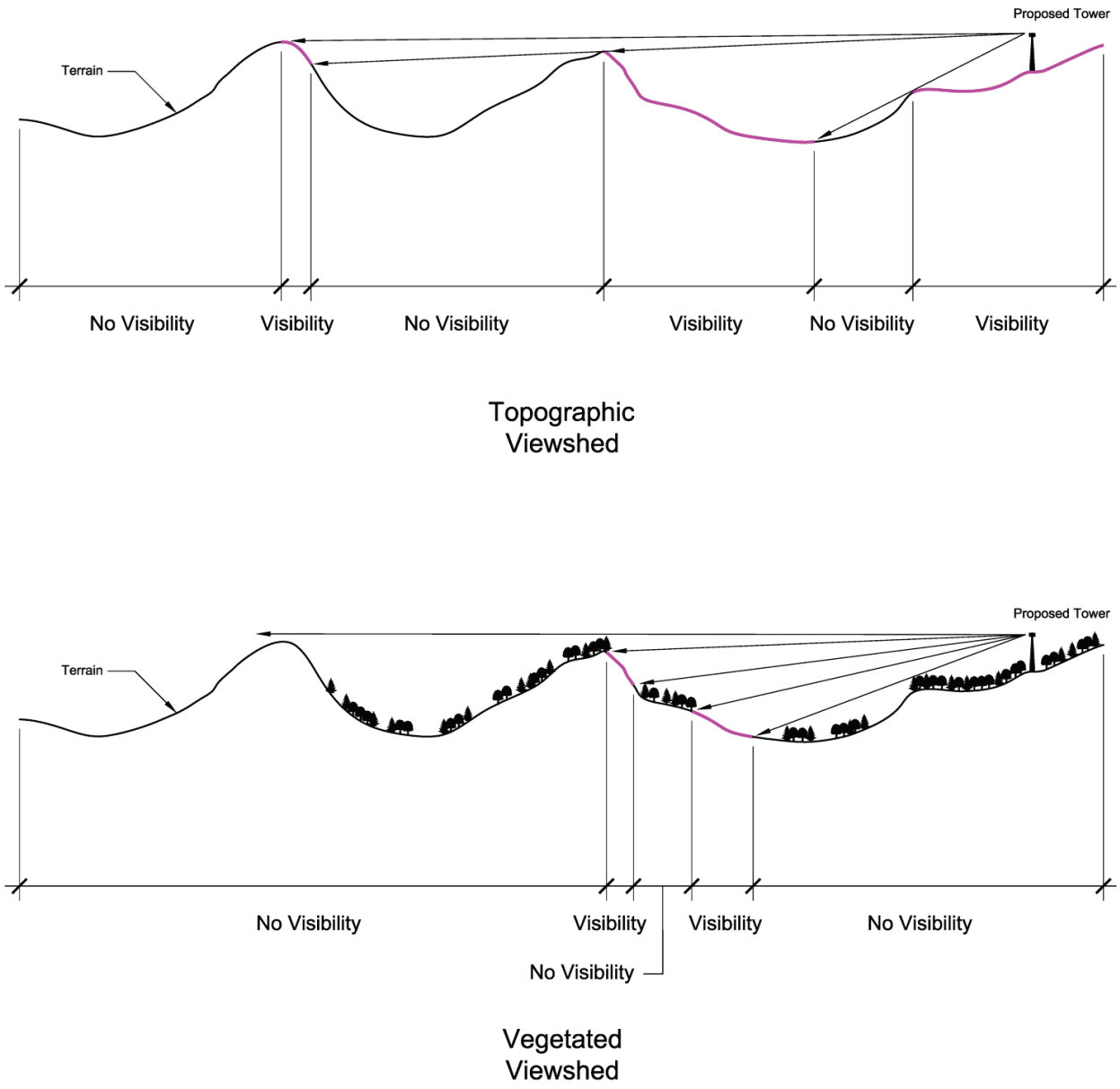


Figure 3: Terrain Viewshed and Vegetated Viewshed Diagrams. (Please note this diagram is for illustrative purposes only to portray the results of a GIS Viewshed analysis and is not representative of the proposed Project.)

When properly taken into consideration, these maps indicate areas most likely to have views, emphasizing areas vulnerable to the greatest impacts. The viewshed maps also identify areas that are unlikely to have views. The assumptions used to calculate these maps are conservative and tend to over-estimate Project visibility. Rather than serving as a final result, these maps are primarily used in preparation of the field investigation, which more fully evaluates the landscape context, views, and potential impacts based on the visibility indicated on the maps. Therefore, it is inappropriate to use these maps as the only basis to evaluate visual extent and impacts.

(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 on the viewshed maps

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 includes: (1) mapping of the routes traveled and locations of photograph viewpoints, displayed on mapping within Appendix A, and (2) a catalog of photography included as Appendix B - Photographic Inventory. Appendix B includes a series of panoramic views to provide context of the surrounding conditions, and single-frame photographs to represent views towards 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. In most situations, it is sufficient to use the GIS information used in the viewshed analysis to create a three-dimensional (3D) model. 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 compared to a photographic simulation. This type of visualization is an important tool used in conjunction with field investigation and aerial photos to complete a Quechee analysis. It can also be a very useful tool in describing the visual impact issues associated with a particular project and its alternatives.

A photographic simulation is particularly helpful in describing how the Project will appear to the affected public. Normally, a photographic simulation is prepared representing a "worst case" view of a Project where there is the potential for an adverse impact. The specific selection of the 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 "worst case" viewpoint for a particular tower. However, each simulation attempts to illustrate the most visible condition for the area 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 is georeferenced to aerial photographs of the area, and reference markers representing fixed landscape elements visible in the photograph are added (i.e. existing buildings, utility poles, etc...)

c. A viewpoint or camera view including optical characteristics of the lens used to take the photograph is created within the CAD drawing and a perspective image of the proposed Project is produced that matches the photograph.

d. The perspective image is introduced as an independent layer into the digital image file of the simulation photograph. The reference markers are used to evaluate the accuracy of the perspective settings. The settings of the perspective drawing are fine-tuned to ensure the reference markers coincide with the photograph.

e. Elements of the perspective drawing that will be visible are rendered into the photograph using texture and colors that occur on the site or are specified in the Project documents.

Other items that can help in visualization of what a proposed project will appear from surrounding areas include elevation drawings of Project elements, site plans and line of sight sections.

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.

B. Quechee Test Part I – Evaluation of Adversity

1. Overview

The Project is located within the Northern Vermont Piedmont physiographic region. The Northern Vermont Piedmont is a landscape of rolling hills, narrow valleys, and forested ridgelines, creating a patchwork of woods, farms, and small rural communities. Most hillsides are covered by northern hardwood forests, while the valleys open into fields, pastures, and river corridors that support long-standing agricultural traditions.

The Project is proposed slightly west of Marshfield's village center. Proceeding west from the village center, the compact cluster of historic homes, small businesses, and civic buildings quickly gives way to a more open rural setting. Buildings become more widely spaced, with larger yards, roadside trees, and pockets of vegetation softening the shift from village to countryside. Within a short distance, the corridor opens into views of the Winooski River valley, where fields, meadows, and scattered homes sit against forested hillsides, marking a clear transition from the walkable village core to the broader rural landscape.

The proposed Tower location is situated on a wooded hillside toward the rear of a large residential property on the north side of US Route 2. The Project site is visually separated from the roadway by mature vegetation and the adjacent residential structures. Within the wooded area between the road and the Project, there is also an electrical transmission corridor and associated clearing. The electrical corridor, including its infrastructure, is generally not detectable from the surrounding area assessed.

As described in the methodology, GIS viewshed analyses were prepared to best understand areas most likely to have visibility of the Project mapping (Appendix A, Maps 2 and 3). Viewsheds were calculated based on three heights: at 140 feet to represent the total Project AGL, at 127 feet (the center line of future antenna (mid-level), and at 117 feet (the center line of the lowest level of future antenna). By calculating viewsheds at heights lower than the top of the Tower, the analysis can illustrate where substantial portions of the structure may be visible. Field investigation found that the GIS viewsheds were mostly accurate, although limitations in available GIS data appear to modestly overestimate potential visibility. The attached photographic inventory (Appendix B) includes views that were documented during field investigation and represent locations with the highest potential for visibility of the Project. Images include a series of 180-degree panoramic images to provide context and

character of the surrounding area and single-frame photos, captured with a 50mm equivalent focal length to illustrate views towards the Project.

2. Visibility

Viewshed analyses indicate that the Project's visibility would be largely constrained within the study area, with overall limited visibility. This is primarily due to the extensive forest cover throughout the surrounding region. Most potential visibility occurs along segments of the US Route 2 corridor and at lower elevations along the base of the Winooski River Valley. The following discussion of visibility is organized into two distance ranges: locations within 1 mile of the Project and those beyond 1 mile.

< 1 – Mile Visibility

Most potential visibility occurs within one mile of the Project. Intermittent views are available along US Route 2 in both directions from the Tower, as well as from locations within the village of Marshfield. Visibility within this one-mile area is documented in Viewpoints 1, 2, 3, 4, and 7. The Project would be most apparent in views along US Route 2 immediately adjacent to the Project parcel. An open lawn associated with residential development on the parcel abuts the roadway, allowing unobstructed views toward the mature woods that rise along the back edge of the lawn. The proposed Tower would extend above the treetops and be visible against the sky. Simulation 1, provided in Appendix C (Exhibit DPS-MB-3), offers a photorealistic representation of how the Project would appear along this approximately 900-foot section of Route 2. The residential structure visible in Simulation 1 is located on the host property.

From within the Village of Marshfield and within one mile of the Project, views are represented by Viewpoints 2 and 3. Visibility would be most apparent in the area around the School Street and Gilman Street intersection, including views from the Old School House Commons, which serves as Marshfield's community center. The community center grounds include a playground, ball field, basketball/pickleball court, community garden, concert gazebo, and a natural trail. The former school building houses the Jaquith Library, Town Clerk's office, Historical Society, gym, community room, and several small businesses. Simulation 2, provided in Appendix C (Exhibit DPS-MB-4), is prepared from Viewpoint 2, and represents views from this area. The Tower will be visible midway up the hillside of the ridge that rises and parallels US Route 2 and the Winooski River to the northwest. It will extend above the canopy on the vegetated hillside, with higher vegetation on the ridge providing a background. Other visibility from public locations within the village will be intermittent and isolated, largely screened by vegetation and buildings, as illustrated by Viewpoint 3.

West of the Village of Marshfield and within one mile of the Project, visibility will be possible from US Route 2, which runs southwest–northeast in the vicinity of the site. Views will be most available to eastbound travelers, where intermittent visibility extends for roughly one-half mile approaching the Project, prior to Pike Road. As with views from within the Village, the Tower will appear emerging above the canopy on the ridge side and will be backgrounded by mature woods higher on the slope. Near Pike Road, the upper portion of the Tower may begin to break into the sky above the treetops.

Views were also assessed from Upper Depot Road, south of the Village. As shown on the Terrain Viewshed Map (Map 2, Appendix A), large areas of potential visibility occur along the side slopes of the southern and southeastern ridge that defines the Winooski River valley. However, the Vegetated Viewshed Map demonstrates that these areas are almost entirely obstructed, primarily due to intervening vegetation. Viewpoint 4 represents a location with limited roadside vegetation that allows some filtered views toward the Project site during leaf-off conditions. In general, tree density along this corridor substantially screens views, even during leaf-off periods

> 1 – Mile Visibility

Beyond one mile from the Project, the potential for visibility decreases substantially. East of the site, only limited and isolated areas of visibility occur, primarily along US Route 2 (Appendix B, Viewpoint 6) and near the lower portion of Folsom Hill Road close to its intersection with US Route 2 (Appendix B, Viewpoint 5). From these locations, the Tower would appear emerging above the canopy midway up the ridge side and would be backgrounded by mature woods higher on the slope. Closer to the Village, intervening structures and vegetation would largely screen views of the Tower.

West of the Project, small areas of potential visibility occur farther southwest along US Route 2, as illustrated by Viewpoint 8, located slightly less than one and a half miles from the site near the intersection with Beaver Meadow Road. From this area, the Project would similarly appear midway on the ridge side, rising above the treetops and backed by additional vegetation. Simulation 3 in Appendix C (Exhibit DPS-MB-5) provides a photorealistic depiction of the expected view from Viewpoint 8 once the Project is constructed.

3. Private Residences

The Vegetated Viewshed Map (Appendix A, Map 3) indicates that the Project is not likely to be visible from the adjacent residences near Viewpoint 1. Field investigation from nearby roadways supports this conclusion. Some degree of visibility is expected from residences located farther away, including homes within the Village. Many of these residences will be partially or fully screened by intervening buildings and vegetation. For those locations where visibility does occur, views would be generally consistent—at varying distances and intensities—with the conditions illustrated in Simulations 2 and 3.

4. Suitability of Colors and Materials for the Project

The Project's visible materials will consist of painted brown metal for the self-supporting monopole Tower. Associated appurtenances, including the Antennas, RRHs, and OVP, will also be painted brown. While it is assumed that any future cellular panel antennas would be painted brown as well, those components are not included in this analysis. All visible elements will have a smooth surface appearance.

Using a brown finish on the exposed portions of the Project helps the structure blend more effectively with the mixed vegetation that typically surrounds the site. In most locations where the Project is visible, views already include a variety of colors and materials associated with nearby development, which further moderates contrast. Seasonal changes and varying lighting conditions will also influence the degree of contrast and visibility throughout the year.

5. Impact on Open Space

Act 250 and Section 248 decisions do not clearly define the term "open space." Similarly, regional plans and town plans have differing definitions of open space, if any at all. The Central Vermont Regional Plan readopted on July 9, 2024 (the "Regional Plan")[3] does not define open space, depict where it is located, or how impacts to open space should be described or evaluated. Similarly, the 2018 Marshfield Town Plan, adopted August 21, 2018 (the "Town Plan")[4] also does not have specific definitions of open space, does

[3] https://centralvtplanning.org/wp-content/uploads/2024/07/2016-CVRPC-Regional-Plan-readopted-2024_Effective-July-9-2024.pdf

[4] https://centralvtplanning.org/wp-content/uploads/2012/03/Marshfield-Town-Plan-Adopted-08-21-181.pdf

not clearly describe where it is located, or how impacts to open space should be described or evaluated. Within the Town Plan, the term open space is used loosely, primarily in reference to open agricultural land and within the context of maintaining the rural character of the community.

The Project is located within a wooded portion within a private parcel. It is not anticipated that the Project would have a significant impact on Open Space.

6. Summary

The findings of this analysis indicate that the proposed Project would be visible from portions of the surrounding area, with the most consistent visibility occurring from locations along the US Route 2 corridor. Viewshed mapping tends to overstate potential visibility due to limitations in available GIS data and the absence of on-the-ground contextual information. Field-verified photo simulations show that the greatest contrast occurs along the segment of US Route 2 immediately adjacent to the Project parcel, where the Tower extends above the background vegetation and is visible against the sky.

In most other locations with visibility, including views from within the Village of Marshfield, the Tower would be seen midway up the ridge, with higher vegetation providing a background that reduces contrast. Even so, confirmed visibility from surrounding roadways, including US Route 2, elevates the sensitivity of the setting.

Based on these conditions, the Project would be considered to result in an adverse impact on the aesthetics and the natural or scenic beauty of the area. Given this determination, it is necessary to evaluate the Project under the second step of the Quechee test.

C. Quechee Test Part II – Evaluation of Undue Adversity

1. 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 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. In Docket No. 7508, the Public Utility Commission held 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."[5] 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." Id. At 53. The Commission has further clarified that any such standard must expressly "designate the [project] parcel as a scenic resource worthy of protection."[6]

The Vermont Supreme Court ("VSC") has also shed light on the scope of what qualifies as specific, clear written standards, stating that "[i]n contrast to the Act 250 context, § 248 review supplants rather than

[5] *Petition of Georgia Mountain Community Wind*, LLC, Docket No. 7508, Order of 6/11/2010 at p. 52
[6] *Petition of Rutland Renewable Energy, LLC*, Docket No. 8188, Order of 3/11/15 at 85-86.

supplements local zoning regulation."[7] Accordingly, the VSC held 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."[8] The VSC clarified 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)."[9] As such, the particular language used within Town and Regional Plans is important for determining whether a standard is clearly written and specifically applies to a given Project.

For this Project, available local and regional planning documents were reviewed to determine if the Project would violate a clear written community standard. The following sections summarize the community scenic-quality standards contained in the Regional Plan, the 2024 CVRPC Regional Plan Readoption Assessment Report with Appendices[10] (the "Regional Plan Readoption Report"), the Town Plan, and the Marshfield Wireless Telecommunications Facilities Bylaw (the "Town Telecommunications Bylaw") A series of the most pertinent excerpts from these documents are included in the discussion below. Additional referenced pages, along with other plan sections generally applicable to scenic quality within the region, are provided in Appendix D – Regional and Town Plan Excerpts.

i. Regional Plan

1. INTRODUCTION

STATEMENT OF BASIC PRINCIPLES

The goals and objectives of each element of this Plan implement the following broad policies of the Central Vermont Regional Planning Commission:

- CVRPC encourages planning that identifies, respects and preserves our important historic, natural, cultural, and recreational resources.
- CVRPC seeks to maintain a healthy environment and to respect the Region's historic settlement patterns.

(Regional Plan at 1-7)

2. LAND USE ELEMENT

RESOURCE PROTECTION

Scenic Areas

Central Vermont is a place of celebrated natural beauty. Its scenic landscapes not only enrich lives and spirits and attract new businesses and residents, they also provide the basic ingredient for one of the Region's most important industries - tourism. Each year thousands of visitors travel here to see the mountain vistas, pastoral scenes, fertile valleys, historic villages, Interstate 89 (which has received awards for its scenery), remote back roads, and woodlands ablaze with autumn color. Thus, it is in our best interest, both psychologically and economically, to preserve the best of Central Vermont's visual splendor.

(Regional Plan at 2-14)

[7] In re Petition of Apple Hill Solar LLC, 2021 VT 69 at ¶ 33
[8] Id at ¶¶ 34 and 36.
[9] Id at ¶ 37.
[10] https://centralvtplanning.org/wp-content/uploads/2024/07/Readoption-Assessment-Report-Full-Approved-070924.pdf

GENERAL LAND USE GOALS, POLICIES, AND STRATEGIES
Goal 5:

To preserve the aesthetic quality of the Region

Polices:

1. Municipalities and developers are encouraged, through design and siting of structures, to make a concerted effort to preserve access to and enjoyment of scenic views for the public.
2. Unless effectively screened, or clearly in the best interest of the general public, ridge line development or conspicuous development on locally prominent landscape features is discouraged.
3. The scale and siting of new structures should be in keeping with the surrounding landscape and architecture; however, towers should utilize stealth technology.

8. CVRPC encourages the State and municipalities to maintain existing roadside views by means of vegetation clearing, where appropriate.
9. CVRPC will attempt to inventory and map the Region's scenic resources, with assistance from municipalities.
10. The location of telecommunication towers is a significant aesthetic issue within the Region. Policies intended to minimize negative impact are presented in the wireless telecommunication facilities policies of this Plan.
11. CVRPC will track indicators that show impacts on aesthetic quality and natural beauty in Central Vermont.

(Regional Plan at 2-41 to 2-42)

4. <u>TRANSPORTATION ELEMENT</u>

TRANSPORTATION GOALS AND POLICES

Goal 5:

To establish a transportation system that minimizes consumption of resources and maximizes the protection of the environment.

Policies:

2. Encourage the preservation and enhancement of scenic views and corridors.

(Regional Plan at 4-7)

5. <u>UTILITIES, FACILITIES AND SERVICES ELEMENT</u>

Wireless Telecommunications Facilities

While Central Vermonters want and expect good cellular service, they also expect the placement and design of new facilities to be guided by a respect for the integrity of the Region's landscape…

… As such, it is important to balance aesthetics, signal quality, health, business and personal needs when deciding whether and where to build new towers and other facilities.

(Regional Plan at 5-27)

WIRELESS TELECOMMUNICATION FACILITIES GOAL: Effective and efficient communication systems.

Polices:

2. Telecommunication facilities should be sited, designed, maintained and operated so as to minimize negative impacts on natural, cultural and scenic resources. Use of stealth design and/or use of existing

structures are encouraged where appropriate. New towers should be no taller than necessary to provide coverage. The policies of this Plan addressing ridgeline and hilltop development (see Land Use Element, Goal 5) are intended to apply to telecommunication facilities.

7. CVRPC will provide its "Model Telecommunication Facility" bylaw to all member municipalities and work with towns and cities to develop bylaw, ordinance, and/or town plan language to address facility siting. The Commission encourages municipalities that adopt telecommunications regulations to provide for an expedited permit process for small scale facilities.

8. New towers should be constructed in areas served by existing road or trails.

9. Access roads should be designed to minimize their impact on scenic, agricultural, forestry, and natural resources.

(Regional Plan at 5-55 to 5-56)

The Regional Plan covers a wide range of topics for the region including land use, housing, economics, cultural resources and other community issues. As is often true of Regional Plans, encouragement is offered for the constituent towns to review their own needs and desires, and there are rarely any specific guidelines for scenic quality control. A review of the Regional Plan maps did not identify any scenic protections or recommendations for the Project site or surrounding areas. The Future Land Use map appears to depict the Project within the "Rural" district, but immediately adjacent to an area shown in the "Resource" district.

Based on this review, the Regional Plan does not provide clear written standards for the Project site or surrounding area, and the siting of the Project will not conflict with the goals of the land use patterns of the region. Due to limited visibility of the Project from surrounding areas, the Project would not unnecessarily impact any highly scenic landscapes or scenic resources noted in the Regional Plan.

The Regional Plan Readoption Assessment Report was also reviewed. The report does not provide any additional guidance related to scenic quality or scenic-resource protection within the region. Its appendices are limited to Energy and Housing topics. As a result, no further excerpts from this document are included in this analysis.

ii. Town Plan

PREFACE. A SENSE OF PLACE IN MARSHFIELD

Marshfield Now

The Marshfield landscape represents the accumulated total of the decisions and compromises made by generation over time…

… The economic, scenic and wildlife values of the natural environment, in combination with the historic values of the built environment, provide a distinctive 'sense of place' in the Town of Marshfield.

(Town Plan at 3 to 4)

CHAPTER 1 OVERVIEW

I. Purpose of the Town Plan

This Town Plan provides guidelines and recommendations for how Marshfield will accommodate growth, development and opportunities for improvement without losing its rural character.

(Town Plan at 5)

IV. Basic Goals and Principles of the Marshfield Town Plan

7. To maintain the rural character of the community as defined by its traditional village areas, open spaces and forested hills, as well as the human activities theron. (Chapter 9)

(Town Plan at 7)

CHAPTER 3 THE LAND AND ITS RESOURCES

I. Overview

The landscape is the stage and source for all human activity. In Marshfield, natural features have determined the character of the community in its settlement patterns and have served as a source of livelihood and beauty to Town residents over the last two centuries. These resources continue to provide both opportunities and constraints to development.

(Town Plan at 21)

IV. Land-Based Cultural Resources

The special way in which people have interacted with the natural environment over time has resulted in a complex and rich heritage in Marshfield. The resulting cultural environment - the historic buildings, sites, landscapes and scenic vistas - work together to evoke a "sense of place" that gives Marshfield its identity. The identification of these vulnerable cultural elements that comprise community character is necessary before taking measures to plan for change, to influence the scale of change, and mitigate the nature of the impact of change on the character of Marshfield.

(Town Plan at 36)

VI. Land Resource Goals, Objectives, And Strategies

Goal: To protect and preserve the integrity and function of Marshfield's important natural resources and environmentally sensitive areas.

Objectives:

13. To preserve Marshfield's scenic beauty.

(Town Plan at 21)

CHAPTER 4 UTILITIES, FACILITIES, MUNICIPAL PROPERTY AND SERVICES

I. Utilities

E. Telecommunications

Telephone service is provided by Fairpoint New England. Cellular access is provided by multiple telecommunications companies. With the increasing demand for cellular capabilities comes an increasing demand for cellular towers. It will be important to balance aesthetics, signal quality, health, business and personal needs when deciding whether, and where, to site additional telecommunication towers.

(Town Plan at 42)

… Marshfield currently has a Wireless Telecommunications Facilities Bylaw. The Telecommunication Bylaw includes the purposes for the bylaw. Said purposes are adopted by reference in this Town Plan and are meant as a guideline for any Section 248 review.

(Town Plan at 43)

II. Municipal Property

Property Classifications

Town owned property is classified into four primary categories:

- Natural and scenic areas

(Town Plan at 45 to 46)

C. Natural and Scenic Areas

The town owns a forest consisting of 50 acres located just outside the Village District on Folsom Hill Road, and a 120 acre meadow located along the U.S. route 2 corridor, across the Winooski River, where the Martin Covered Bridge is located.

C1. Town Forest…

C2. Martin Covered Bridge…

C3. Stranahan Town Forest

(Town Plan at 47 to 48)

CHAPTER 8 ECONOMIC DEVELOPMENT

III. Rural Character

… The purpose of this section is to define rural character as used in this Town Plan. The rural character exists due to the scenic vistas, large uninterrupted forested areas, open fields, agricultural uses, and limited and scattered development along back roads…

… The importance of protecting natural areas, forest lands, and scenic vistas has also been made clear through repeated surveys.

The rural character needs to be evaluated from three perspectives: Route 2, Marshfield Village, and back roads…

… Route 2, outside of the village areas, is characterized by views of fairly open areas adjacent to the Winooski River. More distant views of uninterrupted forested ridgelines are also found. Several large farms along Route 2 add to the rural character…

… A viewshed analysis from Routes 2 and 232 was developed (see Viewshed Analysis map). The map shows the areas that can be viewed from these roads. The viewshed was divided into two categories: those areas that have some protection and those without protection. The protected areas included those areas within the Forestry and Conservation District, Flood Hazard District, conserved lands, and publicly-owned lands.

(Town Plan at 71 to 72)

Within the Town Plan, Marshfield clearly recognizes the importance of scenic quality, often articulated through the community's emphasis on maintaining its "Rural Character." The Plan identifies three designated "Natural and Scenic Areas": the Town Forest, the Martin Covered Bridge, and the Stranahan Town Forest. None of these resources are located within the Project study area, nor would they have visibility of the proposed Project.

The Town Plan also includes a Viewshed Analysis Map (see Appendix D – Town Plan Excerpts) that identifies areas of potential visibility from US Route 2 and Route 232. These areas are categorized as either Protected Viewshed or Unprotected Viewshed. A note on the map states: "Protected Viewshed includes areas publicly owned, conserved areas, or areas within the Forestry and Conservation District."

The Project is located within an area identified as Protected Viewshed. The Project parcel is not publicly owned and does not appear to include any conservation measures; however, it is located within the Forestry and Conservation District. In Chapter 9, Land Use Plan, the Town Plan states that "…new development in this zone should be considered with great care, limited in scope, and closely monitored." (Town Plan at 77) Under Desired Future Conditions, the Plan further notes that "Prominent landscape features (i.e., ridgelines, hilltops) remain free, or nearly free, of visible development." (Town Plan at 77)

Although the Viewshed Analysis Map identifies the general area as Protected Viewshed, it does not specifically identify the Project site as a scenic resource. While the Town Plan advises that development in this district should be approached carefully and that certain landscape features should remain free or nearly free of visible development, it does not establish a clear, written community standard specific to the Project site. The Town Plan does not identify the Project site as a scenic resource, nor does it provide specific guidance for protecting scenic resources at this location. The Plan does, however, adopt by reference the Town Telecommunications Bylaw.

iii. Town Telecommunications Bylaw

1.2 Purposes

The purpose of this bylaw is to protect the public health, safety and general welfare of the Town of Marshfield while accommodating the communication needs of residents and businesses. This bylaw shall:

A. Preserve the character and appearance of the Town of Marshfield while allowing adequate wireless telecommunications services to be developed.

B. Protect the scenic, historic, environmental, and natural resources of the Town of Marshfield.

G. Minimize the adverse visual effects of towers and other facilities through careful design and siting standards.

(Town Telecommunications Bylaw at 1)

The Town Telecommunications Bylaw does not identify specific scenic resources, including the Project site. It does however provide design requirements, which are further evaluated under Section 248a(c)(2) of Title 30, discussed under Section IV of this analysis.

Summary of Community Standards

Based on this review of the Regional Plan and Town Plan, including the Regional Plan Readoption Assessment Report and the Town's Wireless Telecommunications Facilities Bylaw, the proposed Project would not violate any clearly written community standard intended to preserve the aesthetics or scenic beauty of the area. While these documents consistently encourage the protection of scenic quality and the maintenance of the Town's rural character, they do not identify the Project site as a scenic resource, nor do they establish specific, mandatory standards for protecting scenic resources at this location.

The plans generally articulate broad policy goals rather than prescriptive requirements tied to particular viewsheds or ridgelines. None of the, limited, designated Natural and Scenic Areas are located within the Project study area, and none would have visibility of the proposed facility. As a result, there is no clear, written community standard that would be directly implicated or violated by the Project's presence or visibility.

2. Mitigating Elements

Due to the inherently vertical form of telecommunications towers, the range of feasible mitigation measures is limited. Within these constraints, the Project appears to incorporate generally available and effective mitigation strategies to help the proposed Tower fit more appropriately into the surrounding landscape. The most consequential mitigation is the selected location. Rather than placing the Tower on a prominent ridgeline, the Project situates it midway along the hillside, set back from close proximity to US Route 2. This siting allows the facility to take advantage of the surrounding mature forest, which reduces its overall prominence in the broader viewshed.

The Project Compound and the lower portion of the Tower will be fully screened from the surrounding area by intervening forest cover. In locations where visibility does occur, most views will see the Tower against a background of vegetation rather than silhouetted against the sky, which reduces contrast and visual detectability. The use of a brown finish on all visible components, including the monopole, antennas, and appurtenances, further diminishes contrast by allowing these elements to blend with the mixed deciduous and evergreen vegetation typical of the site.

Taken together, these measures demonstrate that the Project incorporates generally available mitigation steps that a reasonable person would employ to improve the harmony of the facility with its surroundings.

3. Shocking and 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. For other types of projects, the Commission notes "a project will be found to offend the sensibilities of the average person if the project would be so out of character with its surroundings or so significantly diminish the scenic qualities of the area as to be offensive or shocking to the average person. In determining whether a project would offend the sensibilities of an average person, the Commission will consider the perspective of an average person viewing the project from both adjoining residences and from public vantage points." PUC Rule 5.112.

The evaluation of impacts did conclude that the Project would be considered adverse from portions of the surrounding area. Photo simulations demonstrate, however, that the character of the Project does not create a high level of contrast with the surrounding landscape from the majority of locations where visibility occurs (Appendix C, Simulations 2 and 3). These simulations also illustrate that distance substantially reduces the Project's apparent prominence. While GIS viewshed analyses identify potential visibility based solely on line-of-sight, such mapping does not account for human visual acuity, which limits detectability of small or narrow objects at greater distances, nor does it incorporate the surrounding visual context that influences how strongly an element contrasts with its background.

Overall, the Project incorporates features that reduce its prominence, including the selected location, which helps moderate contrast and prevents the Tower from becoming a dominant feature within the broader visual landscape. Even along the limited portion of US Route 2 directly adjacent to the Project parcel, where the Tower extends above the background vegetation and is seen against the sky, the facility would not appear so out of character with its surroundings as to significantly diminish the

scenic qualities of the area. Telecommunication towers are a common and readily visible component throughout the Vermont visual landscape.

For these reasons, the Project would not be considered shocking or offensive to the average person.

D. Findings and Conclusions

The findings of this analysis conclude that the proposed Project would have an adverse effect on the scenic or natural beauty or aesthetics of the area. However, it would not violate any of the three criteria of the second part of the Quechee Test.

- The Project would not violate any clear written community standards intended to preserve the aesthetics or scenic beauty of the area. Our review found that both the Regional and Town Plans and associated documents recognize the importance of scenic quality within the area. However, neither plan designates the specific Project site as a scenic resource or provides specific language that would be considered a clear written community standard applicable to the Project.
- The Project incorporates generally available mitigation. The Tower is sited to reduce its prominence and take advantage of surrounding landform and vegetation to significantly limit visibility.
- The Project would not be so out of character with its surroundings or diminish the scenic qualities of the area where it would be considered shocking or offensive. This in part was determined by review of the photographic simulations that illustrate the Tower reasonably blending with the character of the surrounding landscape.

In conclusion, it is our opinion that the Marshfield Telecommunications Tower satisfies the Quechee Test and therefore its impact on aesthetics would NOT be UNDULY ADVERSE.

IV. Municipal and Regional Recommendations, the Town Plan, the Regional Plan, and Substantial Deference

Section 248a(c)(2) of Title 30 of the Vermont Statutes Annotated requires the Commission to make a finding that:

> Unless there is good cause to find otherwise, substantial deference has been given to the plans of the affected municipalities; to the recommendations of the municipal legislative bodies and the municipal planning commissions regarding the municipal plans; and to the recommendations of the regional planning commission concerning the regional plan. Nothing in this section or other provision of law shall prevent a municipal body from basing its recommendations to which substantial deference is required under this subdivision (2) on an ordinance adopted under 24 V.S.A. § 2291(19) or bylaw adopted under 24 V.S.A. chapter 117 by the municipality in which the facility is located. A rebuttable presumption respecting compliance with the applicable plan shall be created by a letter from an affected municipal legislative body or municipal planning commission concerning compliance with the municipal plan and by a letter from a regional planning commission concerning compliance with the regional plan.

This provision is most closely aligned with the typical review of Orderly Development under 30 V.S.A. § 248(b)(1). For this Project, the Regional Plan, the Town Plan, and the Town's Wireless Telecommunications Facilities Bylaw have been reviewed. The following section discusses the specific recommendations contained within each of these documents, with particular attention to the design standards set forth in the Town Telecommunications Bylaw. Excerpts from these documents are provided in the discussion below, along with the corresponding pages, provided in Appendix D – Regional and Town Plan Excerpts. The municipality and the regional planning commission did not file comments on the Project or otherwise make recommendations regarding the Project's compliance with the municipal or regional plans.

Regional Plan

The Regional Plan does not provide substantially more information regarding wireless telecommunications facilities than what is already addressed in the section discussing Community Standards for the Aesthetic Analysis. However, the Plan's broader guidance and recommendations must still be evaluated for their relevance to orderly development, even if they do not rise to the level of a clear, written community standard for scenic protection. However, it does continue to discuss the need and importance for telecommunications in the region.

Under Facilities, Services and Utilities Goals, Policies, and Strategies, Policy 2 for Wireless Telecommunication Facilities states, "Telecommunication facilities should be sited, designed, maintained and operated so as to minimize negative impacts on natural, cultural and scenic resources. Use of stealth design and/or use of existing structures are encouraged where appropriate. New towers should be no taller than necessary to provide coverage. The policies of this Plan addressing ridgeline and hilltop development (see Land Use Element, Goal 5) are intended to apply to telecommunication facilities. As noted above, Goal 5 is, "To preserve the aesthetic quality of the Region" and includes several applicable policies regarding protection of scenic resources.

As discussed with the Aesthetic Analysis, the Project appears to comply with these requirements, which found that the Project's design minimizes negative impacts on scenic resources through its siting and the use of a brown finish on visible components. The selected location avoids development along the ridgeline and takes advantage of the surrounding mature forest cover, while resulting in only minimal vegetation clearing due in part to the use of an existing driveway and logging road. From most viewpoints, the brown finish allows the Tower to blend with the vegetated background, further reducing its visual prominence.

Policy 8 states, "New towers should be constructed in areas served by existing road or trails" and Policy 9 states, "Access roads should be designed to minimize their impact on scenic, agriculture, forestry, and natural resources." As noted above, the access road takes advantage of an existing driveway and logging road, resulting in minimal clearing and impact to other natural resources.

The Regional Plan also recognizes the importance and growing demand for wireless communications technologies, noting under Utilities, Facilities, and Services, the "Wireless communication through broad band technologies has become a part of everyday life and a service relied upon by business, emergency services, and the public." (Regional Plan at 5-27).

Within the section that discusses Economics, the Regional Plan notes, "The State's communications policy and planning have benefited Central Vermont in the form of a network of telecommunications infrastructure that enables information-based industries to link into a worldwide telecommunications

network… The increasing region-wide availability of the state-of-the-art telecommunications/ information technology infrastructure (including high speed internet access and wireless communications) is increasing work options for Central Vermonters." (Regional Plan at 7-6 to 7-7) Under Economic Goals, Policies, and Strategies, the Regional Plan, Policy 7 includes the following,

> "Implement the goals and policies presented in the Energy, Utilities, Facilities and Services and Transportation elements of this Plan to maintain and plan for adequate infrastructure, energy, telecommunications, and transportation systems to accommodate and support business growth and expansion.
>
> These efforts to maintain and plan for adequate systems to support business growth and expansion include support of:
>
> …State-of-the-art telecommunications/broadband infrastructure that would increase work options and reduce commuting and its impacts on the transportation infrastructure and the environment;"
>
> (Regional Plan at 7-16 to 7-17)

Town Plan and Town Telecommunications Bylaw

The Town Plan notes that, "… Cellular access is provided by multiple telecommunications companies. With the increasing demand for cellular capabilities comes an increasing demand for cellular towers. It will be important to balance aesthetics, signal quality, health, business and personal needs when deciding whether, and where, to site additional telecommunication towers." (Town Plan at 42) As noted above, the Town Plan proceeds to adopt by reference, the Town Telecommunications Bylaw.

Section 1.2 outlines the stated purposes of the Bylaw,

> **1.2 Purposes**
>
> The purpose of this bylaw is to protect the public health, safety and general welfare of the Town of Marshfield while accommodating the communication needs of residents and businesses. This bylaw shall:
>
> A. Preserve the character and appearance of the Town of Marshfield while allowing adequate wireless telecommunications services to be developed.
>
> B. Protect the scenic, historic, environmental, and natural resources of the Town of Marshfield.
>
> C. Provide standards and requirements for the operation, siting, design, appearance, construction, monitoring, modification, and removal of wireless telecommunications facilities and towers.
>
> D. Minimize tower and antenna proliferation by requiring the sharing of existing communications facilities, towers, and sites where possible and appropriate.
>
> E. Promote the use of existing structures to provide these services.
>
> F. Facilitate the provision of telecommunications services to the residences and businesses of the Town of Marshfield.
>
> G. Minimize the adverse visual effects of towers and other facilities through careful design and siting standards.

H. Encourage, through performance standards and incentives, the location of towers away from higher density residential areas and from other sensitive areas such as schools, hospitals and childcare facilities.

I. Follow the guidelines and regulations set forth in the Marshfield Town Plan and Zoning Regulations.

(Town Telecommunications Bylaw at 1)

Section 1.2 outlines the stated purposes of the Bylaw, which collectively emphasize balancing the community's need for reliable telecommunications service with the Town's longstanding commitments to rural character, scenic quality, environmental protection, and thoughtful land-use planning. These purposes include both regulatory standards and broader aspirational goals—such as reducing aesthetic and other environmental impacts, encouraging co-location, promoting the use of existing structures, and steering new facilities away from sensitive areas. Taken together, they establish the framework against which the Project's siting, design, and visibility considerations are evaluated.

1.6 Permitted and Prohibited Locations

Wireless telecommunications towers or facilities may be permitted as conditional uses upon compliance with the provisions of this bylaw in the following zoning districts:

Village Residential
Agricultural and Rural Residential

In addition, within the Village Residential district, only small scale facilities will be allowed as defined below.

Additionally, freestanding telecommunications towers or antennas not defined as small scale facilities, may not be located in any of the following locations:

A. Within 100' or the height of the tower, which ever is greater, of a State or Federally designated wetland.

B. The habitat of any State listed Rare or Endangered Species.

C. Within 300' horizontally from any Historic District or property eligible to be listed on the Federal Historic Register.

D. Closer than 200' horizontally to the boundary of the property on which the tower is located.

E. Closer than 500' horizontally to any structure existing at the time of the application which is used as either a primary or secondary residence, to the property of any school, or to any other building.

F. Within 100' or the height of the tower, which ever is greater, horizontally of any river or perennial stream.

G. Within 500' horizontally of any known archeological site.

H. Within 1,000' horizontally of a designated scenic road or highway.

(Town Telecommunications Bylaw at 2 to 3)

Section 1.6 establishes where wireless telecommunications facilities may be considered and, equally importantly, where they are prohibited. The Bylaw allows towers and facilities as conditional uses

within the Village Residential and Agricultural/Rural Residential districts, while limiting the Village Residential district to small-scale installations only. Beyond these baseline siting allowances, the section sets out a series of exclusion zones designed to protect sensitive natural, cultural, and residential resources. These include required setbacks from wetlands, rare or endangered species habitat, historic properties, archaeological sites, perennial streams, scenic roads, and existing residences or community facilities. Collectively, these locational standards reflect the Town's intent to ensure that new telecommunications infrastructure is sited in a manner that avoids sensitive areas, reduces potential conflicts with surrounding land uses, and maintains the community's scenic and environmental values.

The Project is located in the Forestry and Conservation zoning district, outside the Agricultural and Rural Residential district along US Route 2.

1.11 Access Roads and Above Ground Facilities

Where the construction of new wireless telecommunications towers and facilities requires construction of or improvement to access roads, to the extent practicable, roads shall take into consideration the contour of the land, and be constructed or improved within forest fringe areas, along the edge of open fields, and not in open fields. Utility or service lines shall be designed and located so as to minimize or prevent disruption to the scenic character or beauty of the area. The Town may require closure of access roads to vehicles following facility construction where it is determined that site conditions warrant the same and where maintenance can reasonably access the facility site on foot.

(Town Telecommunications Bylaw at 7)

1.12 Tower and Antenna Design Requirements

Proposed facilities shall not unreasonably interfere with the view from any public park, natural scenic vista, historic building or district, or major view corridor. Height and mass of facilities shall not exceed that which is essential for the intended use and public safety.

A. Towers, antennas and any necessary support structures shall be designed to blend into the surrounding environment through the use of color camouflaging and architectural treatment, except in cases in which the Federal Aviation Authority (FAA), state or federal authorities have dictated color. Use of stealth design, including those which imitate natural features may be required in visually sensitive locations, and are highly recommended for all installations.

B. In order to protect public safety and to preserve the scenic character and appearance of the area, the height limit for towers, antennas and tower-related fixtures shall be not more than 20 feet above the average height of the tree line measured within 100 feet of the highest vertical element of the telecommunications facility. Notwithstanding the above, additional height may be approved upon a finding by the Development Review Board that the additional height is necessary in order to provide adequate coverage in the Town of Marshfield or to accomplish collocation of facilities and that the additional height will not cause an undue visual impact on the scenic character or appearance of the area.

C. Towers, antennas and any necessary support structures shall be designed to avoid having an undue adverse aesthetic impact on prominent ridgelines and hilltops. In determining whether a tower's aesthetic impact would be undue and adverse, the Board will consider:

   i. the period of time during which the proposed tower would be viewed by the traveling public on a public highway;

ii. the frequency of the view experienced by the traveling public;

iii. the degree to which the tower would be screened by existing vegetation, the topography of the land, and existing structures;

iv. background features in the line of sight to the proposed tower that obscure the facility or make it more conspicuous;

v. the distance of the proposed tower from the view point and the proportion of the facility that is visible above the skyline;

vi. the sensitivity or unique value of a particular view affected by the proposed tower;

vii. significant disruption of a viewshed that provides context to a historic or scenic resource.

The Board shall have the authority to impose conditions consistent with the purpose of this section in approving a proposed facility. Furthermore, the Board may designate an alternative location for the tower to be evaluated by the applicant if it is determined that the proposed location would result in undue adverse aesthetic impacts. In consideration of this, the applicant may revise its application to include such a site, assuming it is available to the applicant and reasonably technically feasible to meet the applicant's communication objectives.

D. All buildings and structures accessory to a tower (except for electric power poles where specifically exempted by the Board) shall meet the minimum setback requirements of the underlying zoning district or setback requirements specified in this bylaw. If the minimum setbacks of the underlying zoning district are less than the height of the tower, including antennas or other vertical appurtenances, the minimum distance from the tower to any property line shall be no less than the height of the tower, including antennas and other vertical appurtenances.

E. Ground mounted equipment or antennas as well as buildings and structures accessory to a tower shall be screened from view by suitable vegetation, except where a design of non-vegetative screening better complements the architectural character of the surrounding neighborhood. A planted or vegetative screen shall be a minimum of ten feet in depth with a minimum height of six feet and shall have the potential to grow to a height of at least 15 feet at maturity. Existing on-site vegetation outside the immediate site for the wireless facility shall be preserved or improved. Disturbance to existing topography shall be minimized unless the disturbance is demonstrated to result in less visual impact of the facility from surrounding properties and other vantage points.

Sections 1.11 and 1.12 establish complementary standards intended to minimize the visual and environmental impacts of wireless telecommunications facilities through careful access design and thoughtful facility aesthetics. Access roads and utility lines must follow land contours, remain at field edges or within forest fringe areas, and be located to avoid unnecessary disturbance to scenic character, with the Town retaining discretion to close roads after construction. Tower and antenna design must similarly protect public views, limit height and mass to what is essential, and incorporate camouflaging, vegetative screening, and, where appropriate, stealth design. Additional height or alternative siting may be considered only when needed for coverage or co-location and when it will not result in undue adverse aesthetic effects. Together, these provisions ensure that both the approach to a facility and the facility itself are integrated into the landscape in a manner that preserves Marshfield's scenic and environmental values.

Summary of Compliance with Municipal and Regional Plans

The Petitioners state that "it is not possible to provide coverage to the target area while strictly complying with the zoning conditions therein, therefore the Project has been design to comply with the restrictions listed to the extent it is feasible, with due consideration being given to the purpose of the restriction." (Prefiled Testimony of Louis Hodgetts at 12)

In particular, the Project does not comply with the following components of the Town Telecommunications bylaw.

- The Project is located just outside the Agricultural and Rural Residential zoning district, the only district in which the bylaw allows telecommunications facilities that are not considered 'small scale', and within the Forestry and Conservation district.
- The Project access road is located just beyond 50 feet from a delineated wetland, portions of the equipment compound are approximately 70 feet away, and the tower itself is sited roughly 100 feet from the wetland—closer than the Tower's 140-foot height.
- Portions of the equipment compound are located approximately 57 feet from an intermittent stream, and the Tower itself is sited roughly 90 feet from the stream—closer than the Tower's 140-foot height, though the Bylaw's setback standard applies specifically to perennial streams
- The Petitioners provide a survey of nearby trees that have an average height or AGL of 77 feet. The Tower has an overall AGL of 140 feet, or 63 feet taller than the average tree AGL. However, the top elevations of the same surrounding trees are only 30-foot lower than the top elevation of the Tower.

The Project complies with the Bylaw's other setback requirements, including required distances from property lines, nearby residences and structures, archaeological resources, and historic districts. The tower is located approximately 750 feet from the edge of US Route 2, which is not a designated scenic road or highway.

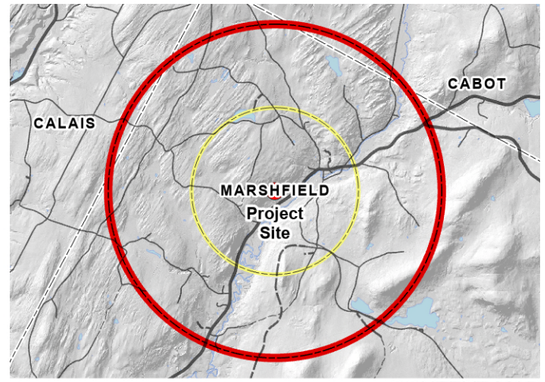
More broadly, the Project's siting and design appear to support the key restrictions and goals embedded in the Town Telecommunications Bylaw, the Town Plan, and the Regional Plan. These documents emphasize minimizing aesthetic and visual impacts while ensuring that essential wireless telecommunications services can be provided; within the area. As fully detailed in the aesthetic analysis, this review found the Project does successfully minimize adverse aesthetic and visual impacts.

This review also finds that the Petitioners have demonstrated a documented, sitespecific coverage necessity, minimized visual and environmental impacts through thoughtful siting and design choices, and reasonably exhausted lessintrusive alternatives while complying with most bylaw standards. Although the Project does not conform to certain municipal setbacks from wetlands and streams, it remains subject to, and must comply with, applicable state standards and protections for these resources.

Based on this review, it appears that the Project meets the "substantial deference" standard, with appropriate consideration given to the recommendations of the municipal and regional plans.

Appendix A

Project Maps



CONTEXT MAP

Marshfield Telecommunications Tower

Appendix A

MAP 1: AERIAL CONTEXT MAP

January 2026

LEGEND

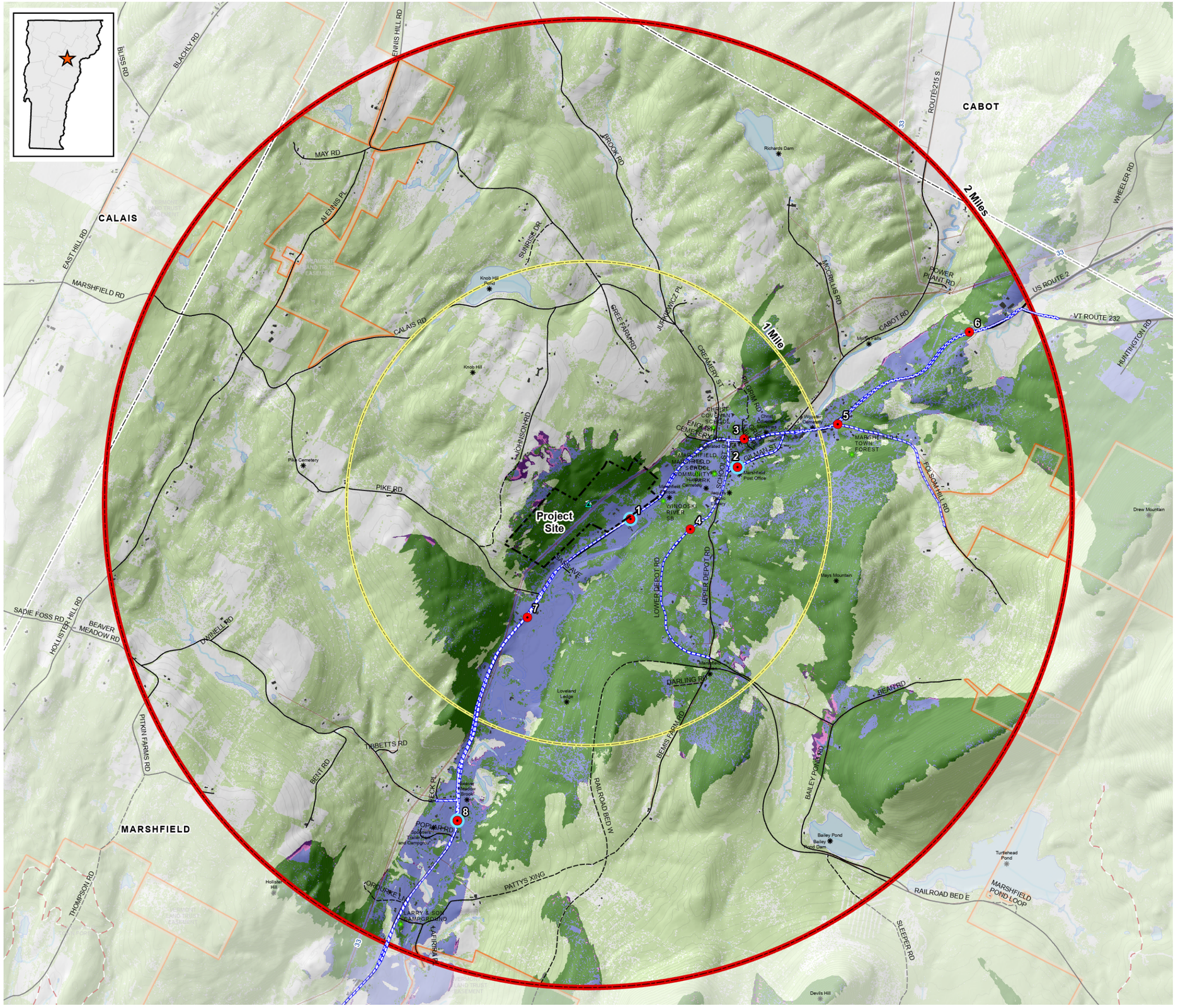
- Viewpoint Location
- Simulation Location
- Proposed Tower
- Landmarks
- Recreation Sites
- Utility Lines
- Inventory Route
- 1-Mile Radius
- Town Boundary
- Vermont Protected Lands
- Hydrology

NORTH

0 0.25 Miles

Service Layer Credits: EGC_services\IMG_VCGI_CLR_SP_CACHE: VCGI

T.J. BOYLE ASSOCIATES
LANDSCAPE ARCHITECTURE & PLANNING



SITE MAP

Marshfield Telecommunications Tower

Appendix A

MAP 2: TERRAIN VIEWSHED MAP

[2-Mile Study Area]

January 2026

LEGEND

- Viewpoint Location
- Simulation Location
- Proposed Tower
- Landmarks
- Recreation Sites
- Inventory Route
- 20' Contours
- Vermont Trails
- 2-Mile Study Area
- Town Boundary
- Hydrology
- Vermont Protected Lands

Potential Visibility within Non-Forested Areas

- Top of Antennas & Monopole Tower (140')
- Center Line of Future Antenna (127')
- Center Line of Future Antenna (117')

Potential Visibility within Forested Areas

NORTH

0 0.25 0.5 0.75 Miles

GIS viewshed mapping is a preliminary means of visual analysis. While beneficial for preliminary orientation and investigation, because of data assumptions and omissions, viewshed maps are not a definitive indication of visibility. Potential visibility needs to be confirmed through field investigation and other visualization techniques.

Elevation data derived from LiDAR data and/or the National Elevation Dataset.

T.J. BOYLE ASSOCIATES
LANDSCAPE ARCHITECTURE & PLANNING

SITE MAP

Marshfield Telecommunications Tower

Appendix A

MAP 3: VEGETATED VIEWSHED MAP

[2-Mile Study Area]

January 2026

LEGEND

- Viewpoint Location
- Simulation Location
- Proposed Tower
- Landmarks
- Recreation Sites
- Inventory Route
- Utility Lines
- 20' Contours
- Vermont Trails
- 1-Mile Radius
- 2-Mile Study Area
- Town Boundary
- Hydrology
- Vermont Protected Lands

Potential Visibility within Non-Forested Areas

- Top of Antennas & Monopole Tower (140')
- Center Line of Future Antenna (127')
- Center Line of Future Antenna (117')

NORTH

0 0.25 0.5 0.75 Miles

GIS viewshed mapping is a preliminary means of visual analysis. While beneficial for preliminary orientation and investigation, because of data assumptions and omissions, viewshed maps are not a definitive indication of visibility. Potential visibility needs to be confirmed through field investigation and other visualization techniques.

Elevation and obstruction data derived from LiDAR data, aerial imagery, the National Elevation Dataset and the National Land Cover Database.

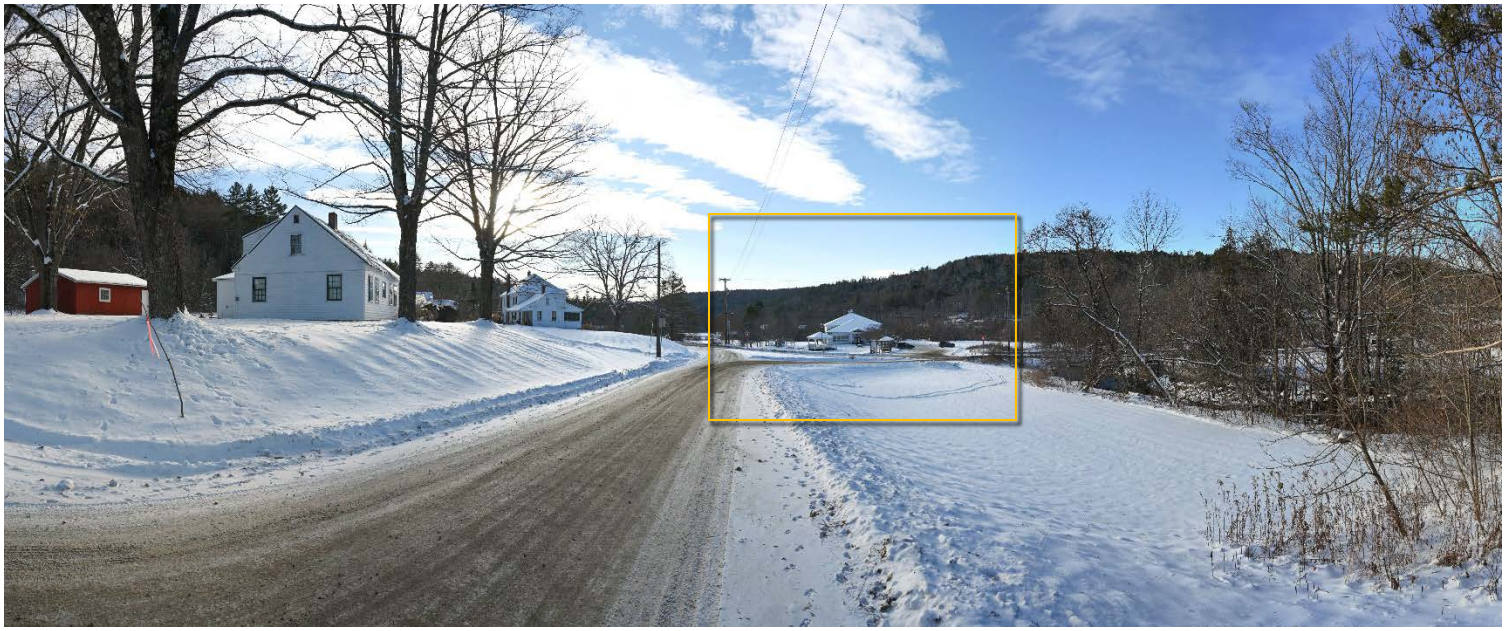
T.J. BOYLE ASSOCIATES
LANDSCAPE ARCHITECTURE & PLANNING

Appendix B

Photographic Inventory

Viewpoint 1: Approximately 180° panoramic view from US Route 2, southwest of Marshfield Village, adjacent to the Project site, panning from southwest (left) to northeast (right). The orange rectangle represents the image below, which is captured with a 50mm focal length.

Viewpoint 1: View from US Route 2 looking slightly northwest towards the Project site. SEE SIMULATION 1 (50mm)

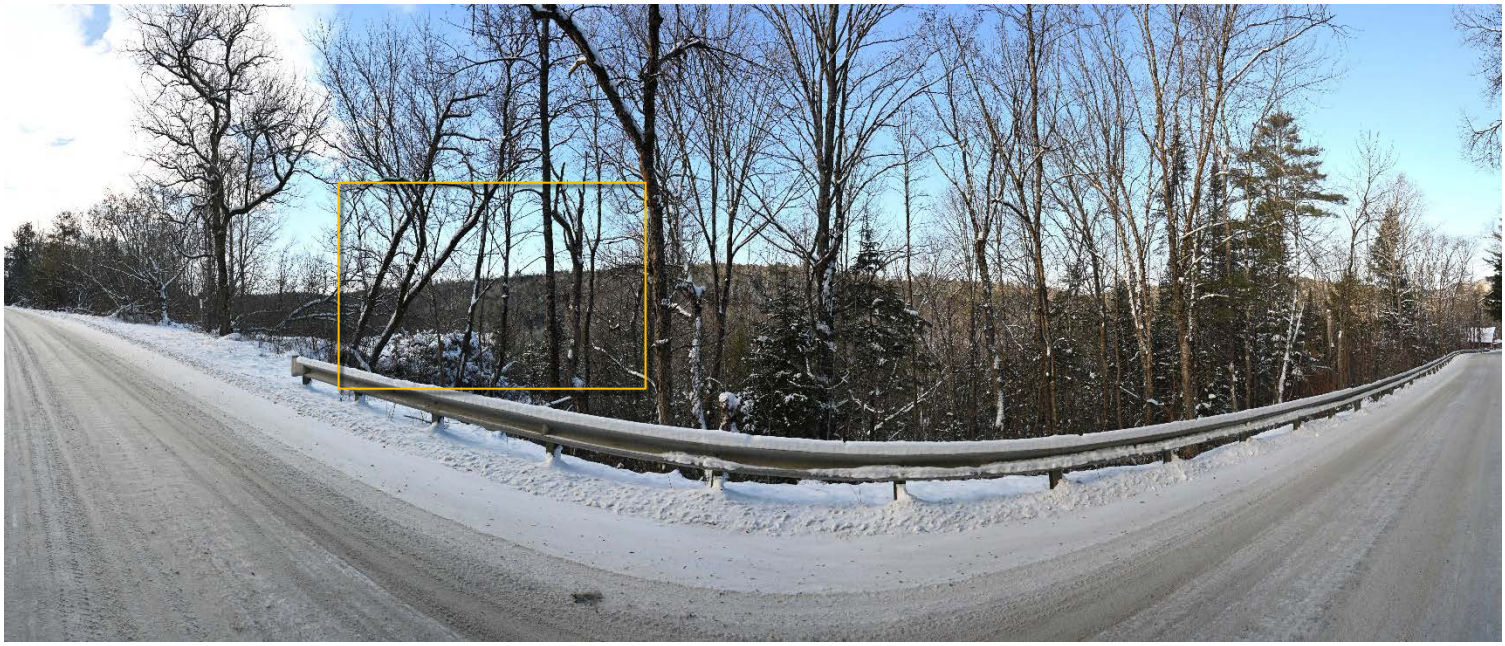


Viewpoint 2: Approximately 180° panoramic view from Gilman Street at the intersection with School Street, south of US Route 2 in Marshfield Village, east of the Project site, panning from southeast (left) to northwest (right). The orange rectangle represents the image below, which is captured with a 50mm focal length.

Viewpoint 2: View from Gilman Street looking slightly southwest towards the Project site. SEE SIMULATION 2 (50mm)

Viewpoint 3: Approximately 180° panoramic view from the intersection of Church Street and US Route 2 within Marshfield Village, northeast of the Project site, panning from southeast (left) to northwest (right). The orange rectangle represents the image below, which is captured with a 50mm focal length.

Viewpoint 3: View from Church Street looking southwest towards the Project site. (50mm)



Viewpoint 4: Approximately 180° panoramic view from Lower Depot Road, south of Marshfield Village and east of the Project site, panning from southwest (left) to northeast (right). The orange rectangle represents the image below, which is captured with a 50mm focal length.

Viewpoint 4: View from Lower Depot Road looking approximately west towards the Project site. (50mm)

Viewpoint 5: Approximately 180° panoramic view from Folsom Hill Road at the intersection with US Route 2, within the eastern edge of Marshfield Village, and northeast of the Project site, panning from south (left) to north (right). The orange rectangle represents the image below, which is captured with a 50mm focal length.

Viewpoint 5: View from Folsom Hill Road looking slightly southwest towards the Project site. (50mm)

Viewpoint 6: Approximately 180° panoramic view from US Route 2, within the eastern side of the study area (west of VT Route 232), and northeast of the Project site, panning from southeast (left) to northwest (right). The orange rectangle represents the image below, which is captured with a 50mm focal length.

Viewpoint 6: View from US Route 2 looking southwest towards the Project site. (50mm)

Viewpoint 7: Approximately 180° panoramic view from US Route 2 southeast of the Project site, panning from west (left) to east (right). The orange rectangle represents the image below, which is captured with a 50mm focal length.

Viewpoint 7: View from US Route 2 looking slightly northeast towards the Project site. (50mm)

Viewpoint 8: Approximately 180° panoramic view US Route 2 near the intersections with Beaver Meadow Road, southeast of the Project site, panning from northwest (left) to southeast (right). The orange rectangle represents the image below, which is captured with a 50mm focal length.

Viewpoint 8: View from US Route 2 looking northeast towards the Project site. SEE SIMULATION 3 (50mm)

Appendix C

Photographic Simulations

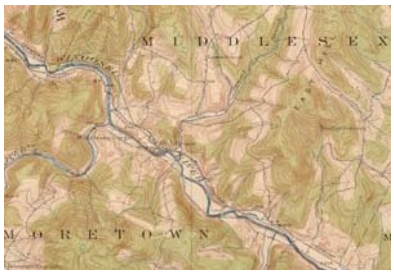
Simulation 1 – see Exhibit DPS-MB-3

Simulation 2 - see Exhibit DPS-MB-4

Simulation 3 - see Exhibit DPS-MB-5

Appendix D

Regional & Town Plan Excerpts



Central Vermont Regional Plan

2016

Readopted: July 9, 2024
Effective: July 9, 2024

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Table of Contents

Introduction

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PREAMBLE

The Central Vermont Regional Planning Commission (CVRPC) was created in 1967 under Vermont Statute Title 24, Chapter 117, to provide planning assistance to municipalities within the Region and create a forum for addressing those issues which transcend municipal boundaries. This same piece of legislation requires Regional planning agencies to prepare plans which are consistent with statewide goals and compatible with the plans of their member municipalities and adjoining Regions. This document seeks to satisfy that mandate.

CVRPC is not a part of state government, but is a creature of State Statute and bound by that Statute. Representatives appointed by the legislative bodies of its member communities govern the Commission's activities and policies.

OVERVIEW OF THE REGION

The Central Vermont Region is comprised of 23 municipalities in Washington and Orange Counties. As its name implies, the Region lies at the geographic heart of the State. Accordingly, it embodies many of the most celebrated qualities of Vermont's culture and landscape, and serves as its political hub, as well. Unfortunately, our problems are also typical of those in evidence throughout the State: a sluggish economy, inefficient use of resource lands, stressed infrastructure, and increased energy costs and consumption, among them.

Located along the northern spine of the Green Mountain range in the Central Vermont Region, Camels Hump, elevation 4,083 feet, is the highest undeveloped mountain in the state.

Physically, the Region is transected by several north-south running mountain chains (e.g. Green Mountains, Northfield Range, Worcester Range, Irish Hills, Woodbury Mountains, and Groton Range) separated by fertile river valleys. The valley of the Winooski River is the exception to this pattern cutting across the mountains as it flows west to Lake Champlain. (See map: Topography)

It was in the valleys where early settle-

ment began where population, commerce, and infrastructure have historically been concentrated in compact hamlets, villages, and cities. Often the surrounding countryside and wilderness supplied the raw materials (e.g. lumber, granite, wool, grains, milk, etc.) for the manufacturing concerns of these centers.

Robinson sawmill, Calais, constructed 1803, is the oldest standing sawmill in Vermont.

In recent decades however, people, and to a lesser extent, commerce has shifted into the countryside. As a result of this trend, many of Central Vermont's rural municipalities have doubled their population while our largest cities have not grown at all, and even declined.

The reasons for shifting land use and habitation patterns are several: the emergence of commuter lifestyles, a population seeking rural environs, and the growth of resort areas and second home development, among them. All of these have been enabled by the advent and subsequent dominance of the automobile.

The fact that much of the Region's new growth has occurred along transportation corridors is no accident, and is often encouraged by land use regulations. Not until very recently have we noticed the more disturbing aspects of "strip development" and suburban sprawl.

Still, while Central Vermont is no longer immune to the perils and pitfalls of life in modern America, it remains a place of unique beauty, character, and promise. We are not yet "just like everywhere else." In fact, Central Vermont is diverse beyond its size. We are home to a golden dome, and an interstate highway, remote logging roads, covered bridges, fast food restaurants, a culinary institute, a military college, road houses, opera houses, ski condos, hunting camps, conservatives, liberals, farmers, artisans, lawyers, activists, teachers, bureaucrats, politicians, merchants, the unemployed, the elderly, and perhaps most importantly, children.

PURPOSE OF THE PLAN

Title 24 VSA Chapter 117 Section 4347 "Purposes of Regional Plan" states:

> "A Regional plan shall be made with the general purpose of guiding and accomplishing a coordinated, efficient and economic development of the Region which will, in accordance with present and future needs and resources, best promote the health, safety, order, convenience,

prosperity and welfare of the inhabitants as well as efficiency and economy in the process of development. This general purpose includes, but is not limited to recommending a distribution of population and of the uses of the land for urbanization, trade, industry, habitation, recreation, agriculture, forestry and other uses as will tend to:

(1) create conditions favorable to transportation, health safety, civic activities and educational and cultural opportunities;

(2) reduce the waste of financial, energy and human resources which result from either excessive congestion or excessive scattering of population;

(3) promote an efficient and economic utilization of drainage, energy, sanitary and other facilities and resources;

(4) promote the conservation of the supply of food, water, energy and minerals;

(5) promote the production of food and fiber resources and the reasonable use of mineral, water, and renewable energy resources; and

(6) promote the development of housing suitable to the needs of the Region and its communities."

While the above language outlines the purposes of the Plan from a statutory standpoint, CVRPC views the Plan primarily as a means to enhance the lives of the Region's residents. Accordingly, the preservation and enhancement of the "quality of life" for all Central Vermont residents is the guiding principle of this Plan and the work of the Central Vermont Regional Planning Commission (CVRPC).

The term "quality of life" encompasses an array of factors that influence the level of satisfaction and enjoyment we are able to achieve in our day-to-day lives. As such, any analysis of quality of life must address both our basic needs and our desires and aspirations. Among these are:

1) A Safe Environment - Central Vermonters desire clean air, water and land, a safe multi-modal transportation system, and access to quality health care and emergency services;

2) Job Opportunities - We desire meaningful, secure jobs paying livable wages.

3) Natural Beauty - We place a high value on the scenery and resources the landscape provides.

4) Educational Quality - Central Vermonters of all ages should have access to affordable, quality educational opportunities to enrich their lives and improve their skills.

5) Low Crime Rate - Central Vermont residents should live safe from crime.

CVRPC hopes this Plan reflects our desire to live in a Region that will be a model of health, wealth, knowledge, beauty, culture, and community for many generations to come. It is a goal of CVRPC to define, quantify, and track these elusive concepts over the next five year planning period.

IMPLEMENTATION

This Plan presents the most recent demographic and statistical data available during the period over which it was written. Much of this information comes from the 2000 U.S. Census; however, a variety of other sources are used, as well, including state and local reports. In addition, demographic projections ("Economic and Demographic Forecast, Central Vermont Regional Planning Region 2000 to 2020") were developed for CVRPC by Economic & Policy Resources, Inc. These projections are incorporated by reference as an appendix to the Plan. Data sources have been identified for all charts and tables cited in the text.

In the course of preparing this Plan, CVRPC agreed to compile data that is not included in the body of the 2003 Plan, but which may be significant or useful in identifying and understanding important Regional trends in the 2016 Plan. CVRPC intends to track these indicators over the life of the Plan (and beyond) in order to monitor changes in the Region's quality of life and help identify meaningful policies and programs for the future.

Throughout this document are specific policies, recommendations, strategies, offers and proposals designed to reflect the values of Central Vermont residents and help realize the goals of this Plan. It is primarily through the statutory functions and obligations of CVRPC, and the initiative of the Region's municipalities, that these and other aspects of the Plan will be implemented. Title 3 Section 4021 of the Vermont Statutes also stipulates that State agency plans must be compatible with Regional plans, as well as approved municipal plans. In this regard, CVRPC believes that the definition of growth centers used by State agencies should be compatible with that

The goals and objectives of each element of this Plan implement the following broad policies of the Central Vermont Regional Planning Commission:

- CVRPC in cooperation with its member municipalities and neighboring Regions seeks to guide the future of development to gain the maximum benefit for the least cost.
- CVRPC is dedicated to the promotion of the economic, social and educational well being of the Region and its residents by supporting the creation of opportunities for self-improvement while protecting individual rights and liberties.
- CVRPC encourages planning that identifies, respects and preserves our important historic, natural, cultural, and recreational resources.
- CVRPC promotes housing availability to meet the needs of people of all socio-economic levels.
- CVRPC seeks to maintain a healthy environment and to respect the Region's historic settlement patterns.
- CVRPC promotes diversified economic development and the creation and/or maintenance of sufficient jobs for all residents.
- CVRPC encourages development patterns which result in more energy efficient transportation patterns.
- CVRPC encourages investment in public facilities and services in areas of population and economic growth.
- CVRPC supports the identification and utilization of economic growth centers as a method of achieving development patterns that are mutually advantageous to the environment and the socio-economic needs of the Region's towns.

(The use of the word "encourage" in this Plan is intended to mean "to foster or give support to" and is not intended to indicate any mandates.)

ACKNOWLEDGEMENT OF CHANGING CONDITIONS

By law, Regional plans in Vermont have a statutory life of eight years. The information and policies presented in this document represent CVRPC's best effort to pre- sent an accurate and useful picture of conditions in Central Vermont at the beginning of a planning period starting in the summer of 2016. We recognize, however, that we live in dynamic times and that some of the facts, issues, and concerns presented here may change over the life of this Plan. If conditions warrant amendments to the Plan prior to its expiration date, the Commission will respond accordingly.

2016 Central Vermont Regional Plan
Land Use Element

2

The land, or more broadly, the natural earth, is the source of all that sustains human life. This fact is sometimes easy to forget in modern America. Water pours from our taps. Food is purchased, often already prepared, under the fluorescent lights of the supermarket. Clothing hangs from a rack at the corner boutique. Shelter is erected for us out of "construction materials" on "building lots."

Yet, we remain inextricably dependent upon natural systems. Traced to their origins, all of life's necessities are products of the earth and its processes. So are we.

Over the past several decades, Vermont has witnessed dramatic cultural change. Technological advances in the areas of transportation and telecommunications have been the primary agents of this transformation, opening up what was a fairly insular, self-sufficient rural society to the "outside world." With this exposure came new people, new development, and new social, economic, and land use patterns. Some of the changes the State has experienced have been beneficial; some have not.

While people may always argue about the pros and cons of technology and land development, they are part of our current reality. The challenge before us now is to guide these forces of change so as to bring about a marriage between our culture and our place that is sustainable, harmonious, and mutually beneficial. In the years to come, nothing will say more about the success of our efforts than the way in which people use the land and its resources.

DISCUSSION: TRENDS

In recent decades, the amount of land in agricultural production and wetlands has diminished, as forested and developed lands have expanded. While it is always difficult to predict the future, especially for the long term, certain expectations regarding land use seem reasonable, at least over the life of this Plan. Among them are:

- Acreage in forestland may increase slightly, but will not change dramatically. Conversion to development will probably be offset by vegetative succession of abandoned farmland.

- Developed land will increase. The amount of land converted to development will be a function of several variables, including: the Regional economy, population trends, regulatory controls, and the patterns of growth.

PRODUCTIVE RESOURCES

Central Vermont possesses "working landscapes" where people manage, nurture, and harvest the resources of nature. Farmlands, forest lands, and lands containing mineral resources are vitally important to the economy and character of our Region. This Plan encourages the protection of resource production lands and the livelihoods of the people who use them by recognizing their benefits, promoting their products, and rethinking the attitudes, policies, and land use patterns that threaten their existence.

Agricultural Land

In spite of the general decline of agriculture, farming and farmlands continue to con- tribute many millions of dollars annually to the economy of the Region, and directly provide over one thousand jobs to its residents, and many more indirectly. According to the 2005 Vermont Occupational Employment Projections, farming and forestry is still projected to account for about 1,000 jobs in Central Vermont in 2012.[1] The lure of our pastoral landscape yields substantial indirect benefits from tourists, as well.

In addition, the case can be made that preserving farms and farmlands may help pre- serve urban economies. Sprawling suburbs, office parks and shopping malls in now agricultural areas would likely contribute to the demise of downtown businesses and neighborhoods.

Farming helps to define the Region's cultural identity and provides Central Vermont

[1]Vermont. Department of Labor: 2004- 2014 Occupational Employment Projections.

residents with open space, recreational opportunities, aesthetic pleasure, and a sense of place. More importantly, farms and farm soils, if protected now, can assure us of some degree of Regional self-sufficiency in the event that outside food supplies dwindle, are cut off, or become prohibitively expensive. While such scenarios may seem far-fetched for the short term, a number of circumstances already in motion could make them a reality within our lifetimes. Among such circumstances are: global climate change, dwindling and expensive energy reserves, disease susceptible mono- culture farming in major production areas, soil salinization and water shortages in these same locations, trade fluctuations, and worldwide population increases.

Farmlands provide a variety of environmental functions from which we all benefit. They provide wildlife habitat. They capture carbon dioxide, thereby maintaining air quality. They help protect the integrity and function of our flood plains and wetlands. They can help maintain water supplies through groundwater recharge. Farms, as they exist in Central Vermont, are part of, and contribute to, the natural systems that sustain life.

In light of all this, a strong, healthy agricultural economy is vital to the Region's well- being. The limited supply of primary agricultural soils, their general suitability for septic systems, combined with agriculture's increasing dependence on higher quality land make it crucial that land use decisions dis- play foresight and recognize the importance of these soils to future generations. As such, it is a primary goal of this Regional Plan to preserve and promote a viable agricultural economy, culture, and land base.

Vermont Agricultural Soils

See map: *Central Vermont Primary Agricultural Soils*

Agricultural Value:

1, 2, and 3 have few limitations restricting their use; these soils are level to gently rolling and are the most productive.

Soils in classes 4, 5, 6, and 7 have more limited agricultural value due to slope, excessive wetness or shallow depth to bedrock.

Classes 4 and 7 are Federally classified as "statewide," but within Vermont agricultural values 1 through
7 are all categorized as "primary agricultural soils."

Vermont soils are identified by USDA/NRCS in its publication *Farm-land Classification Systems for Vermont Soils (June 2006 edition*).

USDA/NRCS acknowledges those soils with agricultural values of 1 through 7 as demonstrating the characteristics needed for various agricultural uses. This compilation is updated when necessary, is avail- able in print, on the internet, and on CD-ROM.

Complete details are available at: www.nrb.state.vt.us/llup/publications/importantfarmlands.pdf

The Vermont Center for Geographic Information: www.vcgi.org

Your nearest office of the USDA/NRCS, or online at:

www.vt.nrcs.usda.gov/soils/

http:/websoilsurvey.nrcs.usda.gov

Forest Land

Although forests cover 74% of the state today, Vermont wasn't always the "Green Mountain" state. At the time of European settlement, forests covered almost all of Vermont, but wide-scale clearing begun in the early 1800s significantly changed the landscape to an agricultural haven. Clearing reached its peak in the mid to late 1800s and reduced forest cover to about 35% of the state. Over the last century westward expansion, the decline of the sheep industry, and reduced timber harvesting have contributed to the steady regrowth of Vermont's forests.

Forests provide many benefits to Central Vermont residents. The timber industry contributes to the economy, providing jobs and important wood and paper products. Forests contain habitat essential to a variety of wildlife species and help protect and replenish surface and groundwater supplies. They also perform an important atmospheric cleansing function, protecting the quality of the air we breathe. Many recreational pursuits are dependent on, or enhanced by, forests, as is the aesthetic quality of the Region. Additionally outdoor recreation and tourism are major contributors the Vermont economy.

While approximately 77% of the total land area in Central Vermont is forest land, for the first time in a century Vermont is experiencing an overall loss of forest cover. While it is hard to pin down the exact amount of acreage, a US Forest Service report indicates Vermont may have lost up to 69,000 acres of forest land between 2010 to 2015. Forest fragmentation is due to the conversion of forests to agriculture and commercial uses, yet the main cause is scattered residential development. It occurs incrementally and over time non-forested pockets tend to multiply and expand. Eventually the forest is fragmented and reduced to scattered, disconnected forest islands. The remnant forest islands resulting from this fragmentation are surrounded by land uses that threaten the health, function, and value of those forest islands for animal and plant habitat, and for human use. As forest fragments become ever smaller, practicing forestry becomes operationally impractical, economically nonviable, and culturally unacceptable. Based upon information contained within the ANR Act 171 Guidance document, 25-years ago, 19,000 family forest landowners owned parcels up to 10 acres in size. By 2012, there were 43,000 family forest landowners. Overall, economically and environmentally sustainable forest management is very difficult on lands smaller than 50 acres.

In 2016, the Vermont Legislature passed Act 171 which amended multiple provisions related to timber harvesting and forest management. The act amends municipal and regional planning goals to encourage management of forestlands to improve forest blocks and habitat connectors and encourage the use of locally grown forest products. The Act defines a "forest block" as a contiguous area of forest in any stage of succession and not currently developed for non-forest use. A forest block may include recreational trails, wetlands, or other natural features that do not themselves possess tree cover. These can be different

sizes and are identified by the land cover of an area and not bounded by political or parcel boundaries.

The State of Vermont maps and ranks important and significant landscape features, as contained within the online mapping tool BioFinder. To view the Region's Highest Priority Interior Forest Blocks and the Region's Highest Priority Connectivity Blocks see Natural Resource Map #3. Together these data layers represent a connected network of forest that provides high-quality interior forest habitat.

It should be noted this map does not identify all of the Region's productive forestland. Productive forestlands are defined as all large tracts which in themselves, or when combined, form a major economic unit for long-term timber production. It is important that these lands are conserved through sound, long-term forest management programs, and compatible patterns of growth and development.

Mineral Resources

The mineral deposits of Central Vermont are recognized as an important resource. The presently known mineral resources of the Region include granite, talc, asbestos, chromite, verde antique, sand and gravel.

The granite quarries of Barre Town and granite industries of Barre City, Berlin, Calais and Montpelier are major contributors to our economy and living monuments to a colorful part of our Regional heritage. While sand and gravel deposits are less renowned, they play an important part in local and personal economies and are relied upon by municipalities for road building and maintenance materials.

The products of earth resource operations are so important that we must accommodate them even as we guard against their more harmful aspects. This is an example where the planning process can be used to encourage locations and operating procedures that could minimize the conflicts and uncertainties of the regulatory process.

RESOURCE PROTECTION

Within our Region's boundaries are many ecologically sensitive areas and resources that serve as symbols of our natural heritage and barometers of the Region's environ- mental health.

These environmentally sensitive lands are not mere amenities. They have great value for education and research and for the understanding and appreciation of natural systems and

processes. They perform critical ecological functions, enhancing the stability and diversity of ecosystems. They also provide aesthetic relief and recreational opportunities, and hence, economic benefit.

The preservation of ecologically sensitive places is a goal of this Plan. Human use of such areas should be accomplished in a manner which protects their integrity and function.

Resource protection lands include: protected lands, wildlife habitat, high elevation areas, steep slopes, critical resource areas, groundwater recharge areas, surface waters, wetlands, floodplains and scenic areas. (See maps: *Natural Resources 1* & *Natural Resources 2*)

Wildlife Habitat

Our native wildlife species are valued by Central Vermont residents in a variety of ways for a variety of reasons. Some merely enjoy their presence as a reflection of nature's spirit. Some rely on wildlife for sport, food, or income (direct and indirect). Others have scientific or academic interests in wild creatures. For many of us, a combination of the above factors plays a role in our appreciation of wildlife.

Our most critical wildlife species are generally thought of as those which yield significant economic return, provide for sport and subsistence hunting, are symbolic of wilderness values, or face the threat of extirpation or extinction. We know that viable habitat is the single most important survival need for most of these species; yet for many, habitat loss and fragmentation is a real and present threat.

Based upon information contained within the 12/14/17 draft ANR Act 171 Guidance document titled "Planning: A Key Step Towards Protecting Forest and Wildlife Resources", "habitat connectors" are those areas of land or water that links larger patches of habitat within a landscape to allow for the movement, migration, and dispersal of animals and plants. They can be a forest block, riparian area, or a specific road crossing that wildlife repeatedly use. Forest fragmentation contributes to the loss of wildlife habitat, and the loss or decline of habitat connectivity and minimizes a species' ability to travel between hunting, breeding and migration grounds.

As noted above within the Forest Lands section of this chapter, the State of Vermont maps and ranks lands

and waters that support important ecosystems, natural communities, habitats, and species. The Region's Highest Priority Connectivity Blocks are comprised of habitat blocks that are of the greatest importance for wildlife movement and genetic exchange on a regional scale. Together with the Region's Highest Priority Interior Forest Blocks these data layers represent a regionally connected network of forest that provides high-quality interior forest habitat. The inclusion of Highest Priority Surface Water and Riparian Areas identifies additional lands along streams, rivers, lakes and ponds which also serve as wildlife corridors. See Natural Resource Map #3.

Additionally, the Vermont Department of Environmental Conservation has defined and mapped the following significant habitats: deer wintering habitat , bear reproduction zones, natural communities and any areas necessary to support the food, shelter or breeding needs of endangered species (See Natural Resources Map #1).[3]

High Elevation Areas and Steep Slopes

Areas of high elevation and steep slopes garner multiple considerations for resource protection. Slopes between 15-25% grade are typically considered "steep" in Vermont and elevations about 2,500 feet are regulated at the State level, with some com- munities regulating at lower elevations. Soils in these areas are often more sensitive to erosion, as at high elevation they can be shallow to bedrock, and on steep slopes are being willed by gravity to move. Where soils are more erodible, disturbance of them is more likely to lead to effects on water quality, as soils and their nutrients are washed into surface waters. Additional sediment in rivers can lead to bank destabilization and streambank erosion. High elevation areas also have an important role in the watershed overall, as the starting point for much precipitation that will eventually run over the land to valley water bodies.

Special scenic and wildlife habitat values are connected to high elevation areas as well.

At some elevations, climatic conditions are just right for supporting certain species that are rare at lower elevations. Vermont has long identified with the scenery of its mountains, and ridgeline vistas are inherently formed by lands at highest elevation. In Central Vermont the Camels Hump State Park is established as an ecological area**,** to protect scarce and rare plants and preserve natural habitat and wilderness aspect.

3 Vermont. Department of Environmental Conservation. Critical Habitats.

Critical Resource Areas

For the purposes of this Plan critical resource areas include:

- National Natural Landmarks: a designation that encourages and supports the voluntary conservation of sites that illustrate the nation's geological and biological history, and to strengthen the public's appreciation of America's natural heritage;

- State-designated Natural Areas: limited areas of land which have retained their wilderness character, although not necessarily completely natural and undisturbed, or have rare or vanishing species of plant or animal life or similar features of interest which are worthy of preservation for the use of present and future residents of the State and may include unique ecological, geological, scenic, and contemplative recreational areas on State lands;

- Sites listed on the Vermont Rare, Threatened and Endangered Species, and Significant Natural Communities as designated by the Vermont Natural Heritage Inventory; and

- Elevations over 2,500 feet as shown on USGS topographic maps.

Groundwater Recharge Areas

Well over half of Central Vermont's residents, and many of its businesses and industries receive their water from subterranean sources. In our rural areas, this figure rises to almost 100%. In general, groundwater sources in Central Vermont are plentiful and of good quality. In addition, groundwater is usually less susceptible to seasonal fluctuations and contamination than surface water making it an ideal source for public, urban supplies.

Incidents of groundwater contamination are on the rise, however, primarily due to improper activities within those areas which serve to replenish supplies.[4] Sources of groundwater contamination in Central Vermont include domestic sewage, landfills, improperly disposed of hazardous wastes, leaky underground storage tanks, pesticides and fertilizers.

4 Greenberg, A.S. Groundwater Quality Protection and Planning: A Guide for Local Government, UVM, 1991.

Supply quantity is threatened in some locations, as well, because of an increase in impermeable surfaces in aquifer recharge areas.

Once contaminated, groundwater supplies are difficult and expensive to rehabilitate. New sources may be hard to find, costly to develop, and susceptible to the same fate as the tainted source, if treated similarly. It is critical, therefore, that our existing and future groundwater supplies are protected. The future of our municipalities and their prospects for new growth and development depend upon the quality and quantity of this important resource.

The State of Vermont has adopted an aggressive groundwater management strategy designed to promote a proactive approach to the protection of subterranean water supplies. This strategy includes the delineation of critical recharge zones (known as Wellhead Protection Areas or WHPA's) for public water supply systems and the establishment of land use guidelines to reduce contamination potential on these sites. Al- though WHPA's have no individual regulations attached to them, existing State regulatory programs will regard them as "red flags" indicating the need for special

consideration of proposed development activities. In addition, the Department of Environmental Conservation requires that a "source protection plan" that minimizes the contamination risk within WHPA's be developed.

Surface Waters

The Region's lakes, ponds, rivers and streams represent an invaluable resource. They provide water for drinking, and domestic and industrial uses. They generate hydroelectric power. They dilute and assimilate various effluent. They provide recreational and aesthetic values for public use and enjoyment. They also contribute to the propagation of fish and wildlife and to economic development.

Streams, rivers and lakes with adequate vegetative buffers on their shorelines enhance the benefits of the resource. Vegetative buffers protect shorelines from flood flow and ice damage, prevent bank erosion, are aesthetically pleasing, and maintain a cool water temperature, an adequate oxygen level for fish habitat, and effluent assimilation capacity.

Unfortunately, the demands that we place upon surface waters are often incompatible and detrimental to their overall quality and function. Our challenge is to balance our needs with respect to surface waters and to adjust current development practices so as to minimize their harmful impacts.

Floodplains and Fluvial Erosion

Canoeing on Wrightsville Reservoir, Middlesex, Vermont.

Floodplains are areas of land adjacent to a water body that are frequently inundated by water. While these places serve important ecological functions, including flood-water storage, sediment trapping, nutrient filtering and aquifer recharge, they also can be hazardous to human life and property. Arising from a variety of causes, including heavy rain, melting snow, ice jams, poor drainage and dam breaks, flooding is the most frequent, damaging and costly type of natural disaster experienced in the State and Region. In fact, over the last 50 years flood recovery costs have averaged $14 million per year (not adjusted for inflation) statewide.

Floods cause damage in two distinct, but related, ways. Inundation can fill structures with water and cause property damage and drowning. It is a great concern for those living in or near flood hazard zones. Surprisingly, however, fluvial erosion, including bank failure and changes in river channel courses during floods, actually causes more damage.

Scenic Areas

Central Vermont is a place of celebrated natural beauty. Its scenic landscapes not only enrich lives and spirits and attract new businesses and residents, they also provide the basic ingredient for one of the Region's most important industries - tourism. Each year thousands of visitors travel here to see the mountain vistas, pastoral scenes, fertile valleys, historic villages, Interstate 89 (which has received awards for its scenery), remote back roads, and woodlands ablaze with autumn color. Thus, it is in our best interest, both psychologically and economically, to preserve the best of Central Vermont's visual splendor.

LAND DEVELOPMENT ISSUES

As our population increases and ages, more people require shelter, jobs, and places to purchase and manufacture goods. Consequently, growing areas, or areas preparing for growth, must find the ways and means to accommodate new construction. In Central Vermont, the pace of new construction has greatly exceeded the rate of population growth over the past few decades. In fact, since 1970 the number of new housing units and businesses here has increased at more than twice the rate of the population. This fact is, in part, indicative of society's appetite for new products, personal services, and independent living, and in part due to comparatively large growth in the Region's 18 - 64 year old age cohort group.

Given the uncertainties of the economy and vagaries of society, it is difficult to say whether this trend will continue unabated over the next few decades. However, it is safe to forecast that growth and development will continue at some level, and that the Region must be prepared to accommodate this growth for the good of its residents and its economy. At the same time, it is important to acknowledge that there are physical, ecological, and economic limits to current patterns of growth and development. Accordingly, the development policies presented in this element are intended to guide new land development so as to maximize its economic and societal benefits while avoiding, to the extent practicable, its environmental and societal pitfalls.

GENERAL LAND USE GOALS, POLICIES, AND STRATEGIES

Goal 1:

To promote sound management, conservation and use of the Region's natural resources.

Policies:

1. Municipalities are encouraged to establish conservation commissions (under V.S.A. 24, Chapter 118) to assist in the identification, study, maintenance and protection of important natural resources.

2. Encourage the improved identification and mapping of surface and groundwater resources.

Strategy 2a. Work with State and Federal partners, such as U.S. Geological Survey, VT Geological Survey, and the Agency of Natural Resources in delineating ground watersupply, aquifers, and groundwater protection areas.

Strategy 2b. Support towns in identifying wetlands and vernal pools that are not already mapped by the State of Vermont.

3. Support the betterment of surface water quality in the Region.

Strategy 3a. Storage and utilization of fertilizers, pesticides, petro-chemicals, herbicides, sludge, or other potentially harmful industrial, agricultural, commercial or residential materials, must be accomplished in a manner compatible with existing regulations.

Strategy 3b. CVRPC opposes the downgrading of surface water classifications unless such action is required to accommodate treated effluent from new or expanded municipal sewage treatment facilities. The Commission also opposes the upgrading of surface water classifications where such upgrading might be misleading or dangerous to users.

Specifically, development activities in designated WHPA's shall be carefully reviewed for groundwater impacts.

7. Hazardous wastes shall be disposed of properly to prevent any degradation of groundwater.

8. It is the policy of CVRPC to encourage the preservation of wetlands so as to protect their function and productivity. Efforts (including consideration of site design options) should be made to mitigate against the possible adverse impacts of development on the Region's wetlands.

9. Prevent the spread of terrestrial invasive species and forest pests.

Strategy 9a. Work with partners to implement coordinated invasive species and forest pest education, detection, prevention and control measures.

Strategy 9b. Encourage landscaping with native species over the use of non-native species, particularly in non-urban environments. Work with UVM Extension Master Gardeners on educating homeowners on the use of native trees and plants.

Goal 5:
To preserve the aesthetic quality of the Region

Polices:

1. Municipalities and developers are encouraged, through design and siting of structures, to make a concerted effort to preserve access to and enjoyment of scenic views for the public.

2. Unless effectively screened, or clearly in the best interest of the general public, ridge line development or conspicuous development on locally prominent landscape features is discouraged.

3. The scale and siting of new structures should be in keeping with the surrounding landscape and architecture; however, towers should utilize stealth technology.

4. Outdoor lighting should be limited to minimum levels necessary to ensure safety and

security of persons and property.

5. Light sources shall be shielded and not directly visible from public roads or adjacent residences.

6. Landscaping with native species is generally preferred over the use of nonnative species, particularly in non-urban environments. The use of non-native trees and plants for landscaping can lead to unintended introductions of species which out- compete native vegetation.

7. Where possible, parking lots and storage areas should be well landscaped and/or otherwise screened from view on public roads.

8. CVRPC encourages the State and municipalities to maintain existing roadside views by means of vegetation clearing, where appropriate.

9. CVRPC will attempt to inventory and map the Region's scenic resources, with assistance from municipalities.

10. The location of telecommunication towers is a significant aesthetic issue within the Region. Policies intended to minimize negative impact are presented in the wireless telecommunication facilities policies of this Plan.

11. CVRPC will track indicators that show impacts on aesthetic quality and natural beauty in Central Vermont.

12. New development should make all reasonable attempts to minimize noise pollution and shall not exceed accepted standards in residential areas.

Goal 6:

To ensure that new development in the vicinity of the Region ’s interstate interchanges is appropriate to the setting and considers the impact of such development on adjacent village and urban centers.

TRANSPORTATION GOALS AND POLICES

GOAL 1:

To achieve a Regional transportation planning process that is comprehensive, multi-modal, and public, and is integrated with Regional and local land use planning as outlined in the Central Vermont Regional Plan.

Policies:

1. Encourage municipalities' analysis of transportation needs at the local level, including the relationships between development patterns and transportation needs, and which considers various modes of travel.

2. Encourage coordination and cooperation in comprehensive transportation planning among the various municipalities in the Region and at the Regional, State, and private levels.

3. Undertake a comprehensive Regional analysis of existing and anticipated travel behavior and multi-modal approaches to accommodating anticipated travel demand.

4. Balance Regional and local decision-making, and flexibility in transportation planning, when conflicts develop between local and State plans.

5. Promote a project prioritization process that takes the goals of the Regional Transportation Plan into consideration.

6. Promote open and inclusive public participation in the multi-modal planning and development of transportation projects.

7. Support the planning and design of the Region's transportation system to encourage development and re-development in existing villages, cities, and designated growth centers.

8. Encourage the full integration of transportation and land use planning at the Regional and local level.

GOAL 2:

To preserve and maintain the existing transportation system.

Policies:

portation arteries.

8. Support updating and optimization of traffic signal timings on a regular schedule and coordinate where appropriate.

9. Market public transit to new users.

GOAL 4:
To integrate modes of travel in order to allow for their most effective use and ultimately reduce dependence on single occupant vehicles.

Policies:

1. Encourage the development of park and ride lots for car and van pools, and encourage employers to provide incentives to car and van pool users.

2. Promote physical and operational connections between various modes of transportation.

3. Ensure adequate mobility for all segments of the population, including residents who cannot or do not use private automobiles.

4. Foster a sense of mutual respect among users of the various modes of transportation.

5. Encourage the availability of multiple options for the movement of people and goods.

GOAL 5:
To establish a transportation system that minimizes consumption of resources and maximizes the protection of the environment.

Policies:

1. Support efforts to minimize negative environmental impacts associated with the transportation system (including air quality, noise levels, surface water, vegetation, agricultural land, fragile areas, and historical/archaeological sites).

2. Encourage the preservation and enhancement of scenic views and corridors.

3. Support efforts to minimize energy consumption, especially nonrenewable energy resources, and explore expanded use of alternative fuels.

UTILITIES, FACILITIES AND SERVICES ELEMENT

5

Public and private utilities, facilities, and services play a critical role in providing for the health, safety, and welfare of Central Vermont's citizens. All of us depend, in one way or another, upon water distribution systems, solid waste and sewage disposal, police and fire protection, health services, schools, parks, and electric power and information technology.

The location, condition and availability of services and facilities can have a profound influence on growth and development in a region. Homes, businesses, and industry tend to concentrate where utilities and facilities are readily available, while areas remote from infrastructure and services are more costly and difficult to develop (they often contain important natural resources as well). Hence, communities and regions, through the thoughtful placement of infrastructure, may direct growth to the most suitable location, or away from areas where change may have undesirable impacts.

The condition and scale of utilities also needs to be considered. Where facilities are over-sized and under-utilized they may encourage unplanned growth, or operate inefficiently and at unnecessary financial expense to residents. For systems that are at capacity and/or outdated, further development may cause environmental damage. Failure to upgrade urban systems may stall new growth or push it away from growth-designated areas. Communities and regions can avoid the above scenarios through the appropriate timing and sizing of infrastructure improvements[1].

1 This text contains selected amendments to the 2016 Central Vermont Regional Plan. Comprehensive data updates have not been conducted for the purposes of amendment. Some statistics and figures (those labeled with "2008 Data") may not represent the most current data.

UTILITIES

Electric Power

It goes without saying that electric power is a vital component of life in modern America. When our sources of power are lost, even temporarily, as a result of weather conditions or technical difficulty, the result may be chaos and hardship. Perishables perish, business and industry halts, and the rhythms of domestic life are profoundly interrupted.

As the Region grows, so does its demand for reliable and affordable electricity, but existing sources of electric power are limited and the costs of developing new ones are dear. Neither is electricity completely benign in its impacts. Its generation, transmission, and distribution raise issues of environmental protection, public health, land use and aesthetics. Fortunately, studies have shown that kilowatt-hours can be saved at an expenditure of far less than it takes to generate them; furthermore, conserving electricity creates jobs, conserves natural resources, curbs pollution, and expands opportunities for self-reliance too.

Vermont has become a leader in the move towards energy independence and is undertaking an ambitious renewable energy program that could at least put it on a path toward obtaining 90% of its energy from renewable sources by 2050.

These facts did not escape the Department of Public Service (DPS) as it prepared its Comprehensive Energy Plan as directed by Executive order # 79. A fundamental theme of the DPS plan is its promotion of "least cost integrated planning" as "a way for electric utilities to plan for a portfolio of supply resources, demand-side management programs, and transmission and distribution improvements that will enable the company to serve its customers at the lowest life-cycle cost, including environmental and economic costs."

Regional electric markets have restructured, and electricity is now sold in a regionally competitive market. Recent narrowing between Vermont retail electric rates and New England rates is due in part to low natural gas prices driving costs down elsewhere in the region. However, challenges remain to carry out transmission upgrades needed in the years ahead and to ensure that long-term electricity needs are met in a cost-effective and environmentally-sustainable manner.

Wireless Telecommunication Facilities

Wireless communication through broad band technologies has become a part of everyday life and a service relied upon by business, emergency services, and the public. Clearly, the ability to communicate to almost anyone, from almost anywhere, at almost anytime brings added convenience and security to our lives.

Throughout Central Vermont, we are seeing continuing applications for the installation of wireless telecommunication facilities. This is partly because the demand for wireless services is growing and partly because of changes in technology.

While Central Vermonters want and expect good cellular service, they also expect the placement and design of new facilities to be guided by a respect for the integrity of the Region's landscape and compliance with microwave emissions standards. As such, it is important to balance aesthetics, signal quality, health, business and personal needs when deciding whether and where to build new towers and other facilities.

> *The 2014 Vermont Telecommunications Plan highlights the fact that technology is evolving very fast and that changes over the last 10 years have blurred the line between what is an essential service and what is not. For example, the 2004 Telecommunications Plan survey indicated that an overwhelming majority of Vermont households (77%) had not even considered the idea of giving up their traditional landline service in favor of wireless service. Today, 29.9% of Vermont adults live in wireless-only households, and that number continues to increase as service expands and becomes more reliable.*

The Federal Telecommunications Act of 1996 does not allow local governments to prohibit the construction of wireless facilities on a town-wide (or city-wide) basis, or to make regulatory barriers so onerous as to effectively block service. However, municipalities did retain the right to place reasonable requirements and restrictions upon such facilities in order to protect community character and the environment, and encourage the efficient use of resources. In 2007, the Vermont Legislature created 30 V.S.A. § 248a. Section 248a provided telecommunications carriers seeking to construct telecommunications facilities the option of obtaining a CPG as an alternative to local zoning and Act 250 environmental review. Applicants using the Section 248a process are not obligated to adhere to zoning ordinances of the host town.

During the 2014 legislative session, the General Assembly crafted new provisions relating to town participation in 248a proceedings. Criteria is applied in the review of projects requiring the Public Service Board to give *substantial deference* to the land conservation measures in the plans of affected municipalities and the recommendations of the municipal legislative bodies and the municipal and regional planning commission regarding the municipal and regional plans, respectively, unless there is *good cause* to find otherwise.

Communities planning for the appropriate sitting of wireless facilities have to ask themselves many questions as they proceed. Would they rather have several small scale, less visible, facilities closer to the population or a few large, highly visible sites in less populated spots? Are there certain locations that are so environmentally or visually sensitive that they should be "off-limits"? What areas are providers most interested in serving? Through careful planning and clear language in the duly adopted municipal plan, cities and towns can ensure good service without compromising their character or the welfare of their residents.

Broadband and Internet Services

Internet services have become an integral part of everyday life relied upon by business, emergency services, and the public. Clearly, the ability to communicate to almost anyone, from almost anywhere, at almost any time brings added convenience and security to our lives. Broadband is an oft-referenced essential telecommunication technology that refers to high speed internet access. Central Vermont has several internet providers, and high speed connections are now available to most residents in highly populated areas. Although service has improved beyond dial-up for many Central Vermont residents and businesses, the nature of "adequate" service is an evolving concept that will continue to present challenges for the region. As the broadband networks supporting the global and national economies are improved to meet demands for greater speed, residents and businesses in Central Vermont will need service that is adequate for them to participate. Broadband was originally defined as data communications at speeds faster than a dial-up connection, which is typically 56kbps or less. The Vermont Dept. of Public Service now defines high speed internet access as 4 Mbps download and 1 Mbps upload or greater.

This wealth of culture is partly responsible for Central Vermont's popularity as a tourist destination. At the same time, tourism bolsters our cultural resources. The link between culture and the economy is becoming ever clearer.

Central Vermont is home to a talented array of artists, musicians and crafts people, including many who have migrated here seeking a fertile ground and supportive environment for their endeavors. A multitude of festivals, galleries, playhouses, concert halls, and patron organizations exist in support of these talents.

The Region's public libraries (of which there are more than one dozen) conduct and sponsor readings, discussions, lectures and other literary activities. In addition, a few local literary publications provide a forum for amateur writers.

Central Vermont has several facilities capable of housing large cultural events and programs, including the Barre Opera House (seating capacity 645 and recently renovated to be handicap accessible), Montpelier's City Hall Auditorium (seating capacity 600-650), Barre City Auditorium, and Barre City Recreational facility (the BOR). The Region's colleges, and primary and secondary schools also provide space for cultural happenings.

Museums are archives of our culture. Central Vermont's cultural treasures are well protected in a diversity of small museums. Montpelier is home to the T.W. Wood Art Gallery (Vermont College), the Statehouse Museum, the Children's Museum of Central Vermont, and the Vermont Historical Society Museum. The former Kent Tavern Museum in Calais remembers 18th and 19th century agrarian life. In Northfield, the Norwich University museum displays a variety of military artifacts. Several local historical societies maintain small displays as well.

HISTORIC AND ARCHEOLOGICAL RESOURCES

Preserving an accurate and tangible record of historic and prehistoric endeavors of the people of Central Vermont helps us to develop a better understanding of the past and an awareness and appreciation of our cultural lineage. Significant properties and historic resources edify and provide important benefits to individuals, municipalities, and the Region in the forms of aesthetics enhancement, economic revitalization, tourism, job creation and investment tax credits.

Central Vermont harbors a rich historic record, in its buildings, in its soil, and in the very fabric of its landscape. It is a goal of this Region to preserve, protect, and perpetuate this record as an important part of Vermont's heritage.

FACILITIES, SERVICES AND UTILITIES GOALS, POLICIES AND STRATEGIES

WASTEWATER TREATMENT GOAL: Improvement and expansion of wastewater treatment facilities and options so as to protect public health, maximize public investment, and reinforce desired patterns of growth.

Policies:

1. This Plan supports efforts to improve existing wastewater collection and treatment systems.

2. Encourage municipalities to establish a schedule indicating when and for what uses remaining capacity should be allocated. A schedule of the number and types of hookups can serve a similar purpose.

3. Encourage continued efforts to improve water quality through the separation of combined sewers or other method to ameliorate the harmful impacts of combined sewer overflows.

4. Support efforts to upgrade components of aging wastewater systems to address depreciation, improve energy efficiency and increase flood resilience of the Region's systems.

A. Encourage coordination of upgrades to coincide with other municipal infrastructure projects (i.e. roads).

B. Perform outreach to municipalities whose systems are approaching 20-yr design life and connect local operators/commissions with available technical assistance.

5. In order to encourage municipalities to optimize the use of wastewater treatment capacities, municipalities are encouraged to participate in inter-municipal facilities or agreements. Inter-municipal facilities can prove cost effective for the communities involved. At the same time, capacity allocation agreements offer individual communities the option of encouraging or discouraging growth.

Provide model inter-municipal agreements upon request.

6. New or expanded wastewater treatment facilities should be planned where municipalities have immediate need or where additional growth is appropriate, including *Regional Centers*, *Town Centers*, *Hamlets*, *Resort Centers*, and *Mixed Use Commercial and Industrial* areas.

Explore opportunities to develop a region-wide water and wastewater study to identify priority investments to supporting desired growth patterns.

7. Encourage planning for and installation of decentralized community wastewater treatment systems in villages, hamlets, and in clustered housing developments, and ensure that agreements for those facilities adequately provide for ongoing maintenance and oversight.

3. Work with the region's small water supply systems to build administrative capacity, coordinate with each other and develop capital improvement plans and budgets.

A. Encourage participation in VT DEC's Asset Management trainings.

B. Incorporate outreach and education regarding water and wastewater infrastructure planning into Municipal Transportation Capital Improvement Planning task in the Transportation Planning Initiative.

4. Inter-municipal water supply agreements are encouraged. The sharing of water resources can be a cost effective method of insuring that water supply adequately supports the municipal plan.

5. CVRPC encourages municipalities that have not already done so, to identify and protect backup or alternative sources of water.

A. Assist such efforts at the request of local officials.

B. Raise awareness of groundwater mapping resources available from the VT Agency of Natural Resources and U.S. Geological Survey.

6. Water service area expansions should be designed to encourage development in areas where growth is appropriate including Regional Centers, Town Centers, Hamlets, Resort Centers, Rural Commercial and Industrial areas and growth centers as identified by town plans.

7. Capacity expansion and water quality improvements to existing water supply systems are encouraged where such problems are impediments to concentrated growth.

8. CVRPC urges communities when designing and constructing public water systems and, to require the site engineer to provide "as-built" plans so as to ensure exact knowledge of the placement of underground collection lines. when the need for repair or replacement arises.

ELECTRIC POWER GOAL: Improvement, and expansion of electric power generation methods and infrastructure so as to provide adequate service, conserve energy, maximize benefits of public investment, minimize impacts on aesthetic, ecological and recreational resources, and protect public health.

Policies:

1. CVRPC supports the concepts of "demand side management" and "least cost integrated planning" as mechanisms to reduce electrical power consumption, and its attendant costs (both financial and environmental) through conservation and energy efficiency

2. CVRPC encourages the development and use of renewable energy sources to meet the region's electrical power needs, while minimizing impacts on aesthetic, ecological and recreational resources (see *Energy* element of this Plan).

3. CVRPC encourages diversity in the region's future power supply so as to establish

flexibility and avoid reliance on any single source.

4. CVRPC encourages utilities and the Public Service Board to give greater consideration to making service territories more flexible by allowing for inter-utility connections and deregulation where there will be beneficial impact to the consumer and the environment. Such flexibility will help promote the Region's goals regarding settlement patterns, and save money as well.

5. Proposals to introduce extra high voltage and ultra high voltage transmission lines (capacity greater than 345 KV, AC or DC) to Central Vermont should be carefully scrutinized pending satisfactory resolution to the health and safety issues concerning their operation.

6. The Commission encourages adherence to environmentally and ecologically sound utility line maintenance practices.

Plans and designs for utility infrastructure and corridors should incorporate climate projections and be reviewed for long-term reliability, safety and economic, social and aesthetic impacts.

7. The corridor concept is generally supported by this Plan. As such, the location of new transmission lines should share existing power line routes as illustrated on the Central Vermont utilities map. However, it is recognized that existing routes may not always be optimal for additional or expanded transmission lines. It is also recognized that the construction of distribution lines within, or adjacent to, public highway rights-of-way may, in some instances, have more negative aesthetic impacts than would a parallel route away from the road.

8. Utility infrastructure and corridors shall be sited so as to minimize aesthetic impacts, particularly in areas of local and regional scenic importance.

A. Wherever practicable, utility lines will be installed underground or behind structures in downtowns and village centers

B. The use of wood support structures, appropriate conductor colors for the background, and landscape compatibility techniques are encouraged.

C. Municipalities, in their plans, should consider the visual impacts of the siting of utility poles. Traffic safety and water quality issues may also be pertinent in certain locations.

9. Resource areas, as identified by this Plan, shall be avoided wherever possible, in the location or routing of new substation or transmission facilities.

10. Substation facilities should be located in industrial areas or in those planned for industrial use whenever practical. In any case, such facilities should be sited as unobtrusively as possible.

10. Land development adjacent to or on an important prehistoric or historic archeological site should be designed to minimize the impact upon the site.

11. Prehistoric and historic archeological sites are recognized as important to Vermont's history. Any activity that may have an impact on a prehistoric or archeological site should be planned in consultation with the Division for Historic Preservation, Agency of Commerce and Community Development.

12. CVRPC will provide support to local, regional, and state non-profit historic preservation trusts upon request.

13. CVRPC will promote the awareness of historic preservation through periodic publication of funding sources available to municipalities and investment tax credits available to individuals.

WIRELESS TELECOMMUNICATION FACILITIES GOAL: ~~To promote~~ Effective and efficient communication systems.

Policies:

1. Telecommunication facilities should not be sited where they may create an attractive nuisance.

2. Telecommunication facilities should be sited, designed, maintained and operated so as to minimize negative impacts on natural, cultural and scenic resources. Use of stealth design and/or use of existing structures are encouraged where appropriate. New towers should be no taller than necessary to provide coverage. The policies of this Plan addressing ridgeline and hilltop development (see Land Use Element, Goal 5) are intended to apply to telecommunication facilities.

3. Use of existing towers, communication facilities, and structures where possible, is encouraged and expected rather than development of new transmission and receiving stations. Permits for tower facilities should require permiteess to accommodate additional users, appropriate to the structure, at a fair market rate.

4. Permits for towers should require a financial mechanism to ensure their removal by service providers should they be abandoned or rendered obsolete by advances in technology. Processes for establishing bonds should take inflation into account as many years can elapse between construction and removal.

5. Applicants must demonstrate that telecommunication facilities comply with FCC emission standards in order to protect public health and safety.

6. Assist service providers and municipalities to identify appropriate locations for the construction of new tower (or other facilities) necessary to achieve adequate coverage of the Region as well as locations that are not appropriate for new towers. CVRPC will act to implement the results of this effort through its participation in the Section 248 Process.

7. CVRPC will provide its "Model Telecommunication Facility" bylaw to all member municipalities and work with towns and cities to develop bylaw, ordinance, and/or town plan language to address facility siting. The Commission encourages municipalities that adopt telecommunications regulations to provide for an expedited per-

mit process for small scale facilities.

8. New towers should be constructed in areas served by existing roads or trails.

9. Access roads should be designed to minimize their impact on scenic, agricultural, forestry, and natural resources.

EMERGENCY/HEALTH SERVICES GOAL: To promote effective, efficient and accessible emergency and health care services.

Policies:

1. Adequate health care facilities and personnel should be planned and located throughout the Region so that all residents have access to such services. It is necessary that planning for these facilities be coordinated with population distribution and existing and future transportation patterns.

2. For all aspects of emergency/health service delivery, full consideration of the costs and benefits of cooperative and regional provision of these services is encouraged.

EMERGENCY MANAGEMENT GOALS:

1. To build disaster resistant communities in Central Vermont through sound emergency planning and management.

2. To ensure that all communities in Central Vermont have the appropriate information, resources, and tools to respond to disaster events and recover from their impacts.

Policies:

1. Promote the importance of local emergency management plans to municipalities in Central Vermont.

2. Encourage municipalities to annually review and update their Rapid Response Plans for the new contact information and to identified risks.

3. Encourage municipalities to undertake and periodically review an all-hazards assessment in their community to identify potential hazards and the at-risk people and property.

4. Encourage municipalities to adopt minimum standards for public roads, bridges, and culverts (using the Vermont Local Roads Program and FEMA's standards).

5. Encourage municipalities to implement land use policies and development regulations that consider the potential impacts of disasters on people and property.

6. Discourage residential, commercial, or residential development in flood plains.

7. Maintain, wherever possible, vegetated buffer strips adjacent to all waterways to reduce the occurrence and magnitude of flooding.

ECONOMIC ELEMENT

7

A healthy economy is essential to maintaining Vermont's quality of life. A diversified and dynamic economy provides employment, stimulates social and cultural interaction, and provides the resources for the provision of a wide variety of community services, including education, health care and a well maintained physical infrastructure. On the individual level, a diversified economy offers greater opportunities for individuals to engage in satisfying and meaningful occupations and pursuits.

Economic vitality is a balance between human, natural and capital resources. The interaction of these factors determines the scale and intensity of growth and development. The Economic Element of the Central Vermont Regional Plan focuses on making effective use of the wide range of resources available in the region, while maintaining the balance of these resources.

DISCUSSION: GENERAL ECONOMIC PROFILE

Like the rest of Vermont, the Central Vermont economy has evolved from an agricultural/ manufacturing emphasis to a more complex mixture of economic activity. The growth of the travel/ hospitality/recreation industry, for instance, has contributed to the expansion of the retail and wholesale trades, and other services like construction and mortgage banking. Manufacturing, which has expanded to include food processing, plays a significant role in the attraction of tourists and the diversification of agriculture. No one sector can stand alone; changes in one will have an effect on all the others.

Total employment in Central Vermont is expected to increase by approximately 14,000 over the 2000-2020 period at an average rate of 1.4% per year. However, given a sharp drop in employment in 2008 and 2009, the Region exhibited only 1.3% growth between 2003 and 2013. While Washington County is expected to see

construction sectors, as well as the expansion of seasonal and permanent housing. A challenge exists to balance the competing demands of accommodating growth while preserving resources.

By its nature, the ski industry operates within some of the more environmentally sensitive areas of the Region. The ski areas, themselves, have often recognized the strong relationship between the health of the environment and the health of the ski industry and have demonstrated a desire to ensure that ski-related development respects the natural environment.

Central Vermont continues to have significant ties to the agricultural and forest-based economies. In addition to direct economic contribution, farms and forests helps to define the Region's cultural identity and provides Central Vermont residents with open space, recreational opportunities, aesthetic pleasure, and a sense of place. The continued economic viability of these highly valued working landscapes will be a key factor in preventing the conversion of these lands to other uses.

Though a variety of economic and social factors continue to threaten the local sourcing that was common in the past, new economic and social forces make this a good time to look anew at local food and wood product manufacturing. Many farmers are growing for local markets, local processors are feeling pressure for growth, the majority of maple producers have diversified their operations, and public interest in maintaining our agricultural economy is clearly on the rise.

ECONOMIC DEVELOPMENT

Self Sufficiency

Research has shown that community and economic development are best supported when local solutions and resources are brought to bear on local problems.

Small, new businesses are the backbone of economic development and job creation. In Washington County, enterprises with less than 20 employees comprise 90% of total private businesses while providing for 38% of total private employment.

programs, several of which have been recognized at the national level, and curriculum integration.

Institutions of higher education play an important role both as major employers and as support institutions for technology based industry. The Central Vermont region hosts six colleges and post-secondary schools. Spin off institutes and for-profit ventures undertaken by the higher education community have added substantially to the economic and cultural wellbeing of the region. Advanced educational institutions also play a major role through the provision of programs that advance technical and problem solving skills.

While an elementary and high school education can provide the building blocks for an educated work force, individual advancement and technological improvement will depend on the development of life-long learning habits and opportunities for all workers. The public education system must expand to meet the vocational needs of adults. Public and private institutions and employers must take a proactive role in identifying the skills necessary for economic vitality in the future, and take the steps necessary to prepare and retain the work force.

Transportation and Communication

A number of factors contribute to the appeal of Central Vermont to businesses. The transportation system in Central Vermont provides ready access to markets for goods produced here, as well as facilitating the flow of tourists into the region from the major northeast metropolitan areas. The region is served by the interstate highway system and national freight and passenger rail service. Private business and general aviation are served by the all-weather Edward F. Knapp State Airport, and passenger air service is readily accessible through the Burlington International Airport.

The State's communications policy and planning have benefited Central Vermont in the form of a network of telecommunications infrastructure that enables information-based industries to link into a worldwide telecommunications network. There remain challenges to both take advantage of this advanced technology, and to keep pace with the developments of this quickly changing industry. The increasing region

-wide availability of the state-of-the-art telecommunications/information technology infrastructure (including high speed internet access and wireless communications) is increasing work options for Central Vermonters.

Quality of Life as an Economic Consideration

Quality of life is a difficult concept to define, yet many would agree that it stems from the sense of security and well-being that comes from being part of a community. Central Vermont's small town character, with its opportunities for participatory government, diverse social interaction, and human scale commerce plays a major role in maintaining an excellent quality of life.

Essential to a high quality of life is a dynamic and varied cultural experience. The village as the center of social activity provides the critical mass necessary for a flourishing interchange of ideas, art and culture. The traditional New England village is a virtual textbook of human history. The variety of architectural styles reveal the economic and social fortunes of its inhabitants, past and present.

The New England village is considered by many to be the pinnacle in land use design. In scale and function, it satisfies our needs for privacy, community and livelihood. Maintaining historic development patterns of village centers surrounded by resource based agricultural, mineral, forest and recreational activities balances economic and environmental interests. Concentrating growth and development within the confines of a village or "growth center" allows the community to implement infrastructure improvements in an efficient and effective manner that will improve the quality of life while limiting the degradation of the environment.

Central to the preservation and development of village patterns and commerce are affordable public utilities and services that allow increases in residential and commercial densities. While the costs of water and sewer for dispersed development can be borne by individual owners and users, public systems that benefit the entire community are frequently beyond the capacity of individual users to support. Equitable methods of financing that recognize the social, economic and environmental

3 Vermont has the highest tuition costs in the nation for state universities and colleges while ranking 47th out of 50

ECONOMIC GOALS, POLICIES AND STRATEGIES

Goal 1: Full employment[4] and the creation and preservation of high quality jobs in a diverse range of occupations.

Goal 2: Business retention, growth and development that anticipate and meet market opportunities.

Policy 1: Promote career exploration and education planning for all young people and reduce barriers to participation in some form of post-secondary education or training.

A. Promote sharing of best practices within the Region's supervisory unions with regards to dual-enrollment, work-based learning internship and apprenticeship programs and assist with identifying resources and incentives for these efforts.

B. Promote an annual regional Student Career Day/Job Fair event targeted to High School students for summer employment, job shadow opportunities and internships.

C. Facilitate effort to identify partners and formalize network of STEM-related (science, technology, engineering and math) companies, high schools, educational institutions, Tech Centers, and Community College of Vermont (akin to Vermont Youth Conservation Corps. concept, applied to STEM sectors) to provide hands-on training and internships.

D. Identify, inventory and support resources programs that place emphasis on sound management and mentorship for young workers, particularly at-risk youth, in partnership with service providers such as Washington County Youth Services Bureau and ReSource/ReBuild.

4 The level of employment, or unemployment rate, which provides the maximum sustainable rate of economic growth and Gross Domestic Product without resulting in accelerating inflation. A Full Employment rate that is also just above the rate which will cause inflationary pressure, is called the Non-Accelerating Inflation Rate of Unemployment (VT Dept. of Labor).

B. Continue to expand availability and improve the quality of broadband to enable telecommuting and home-based work opportunities, particularly in more rural areas of the Region.

C. Identify policy and programmatic gaps and opportunities to expand access to capital for businesses, particularly knowledge-based.

D. Work with Capstone Community Action partners to explore opportunities to develop a network (e.g. "Community Capital Exchange") where local businesses and investors come together to identify capital needs, investment, and opportunities to apply commercial strategies to maximize improvements in social and environmental well-being, such as Capstone Community Action's Community Capital Exchange initiative.

E. Encourage organizations or professional associations to provide networking and a unified voice to creative economy sectors (writers, web designers, etc.).

F. Explore opportunities for regional innovation partnerships and/or technology transfer with employers, educational and research institutions and other public partners.

G. Encourage online marketing training and technology use for small and micro businesses, including participation in Vermont Digital Economy Project trainings and use of aggregated web platforms such as the Vermont Food System Atlas or Made in Vermont.

H. Increase collaboration with business development organizations to enhance delivery of technical assistance to the wide range of small and micro businesses and entrepreneurial enterprises serving the Region.

Policy 5: Implement the goals and policies presented in the Utilities, Facilities and Services and Land Use elements of this Plan that enhance and optimize quality of place to attract and retain employers and residents.

These efforts to enhance and optimize quality of place include preservation of historic and cultural assets; maintaining the scenic qualities of our agricultural and forest lands, protection of natural resources and environmental quality, expansion of local food systems and healthy lifestyles, and increased access to recreational opportunities and amenities

POLICY 6: Ensure availability of commercial and industrial space to meet employment and business expansion needs.

A. Assess capacity of commercial and industrial space using available data, including existing GIS information, and identify the various types of commercial and industrial space needs.

B. Assist municipalities in promoting marketable sites and identifying assets, deficits and options available to meet industrial and commercial site development needs; for example, the potential for use of small wastewater treatment systems.

C. Maintain inventory and support the reclamation and redevelopment of blighted, contaminated or potentially contaminated sites (i.e. "brownfields"). Continue to actively seek funds to facilitate this effort.

D. For uses that do not require a rural location, guide and assist commercial, industrial and institutional uses to locate in downtowns, villages and adjacent industrial areas, or at those locations in the fringe areas that have been significantly developed and are zoned for such purposes.

Policy 7: Implement the goals and policies presented in the Energy, Utilities, Facilities and Services and Transportation elements of this Plan to maintain and plan for adequate infrastructure, energy, telecommunications, and transportation systems to accommodate and support business growth and expansion.

These efforts to maintain and plan for adequate systems to support business growth and expansion include support of:

A transportation system that efficiently transports goods and services and employees to their place of work;

An efficient and stable energy system that provides for reduced costs, consumption and reliance on nonrenewable energy sources;
State-of-the-art telecommunications/broadband infrastructure that would increase work options and reduce commuting and its impacts on the transportation infrastructure and the environment; and
Water, wastewater and storm water management systems in locations that allow for appropriately-scaled commercial and industrial expansion, higher densities and co-location of jobs, housing and services.

Policy 8: Support the continued use and sustainability of our natural resources and associated industries.

A. Encourage the continued productivity of viable mineral resources.

B. Facilitate the use of locally obtained materials for building and highway construction and maintenance. Assist municipalities in mapping the important, accessible resources.

C. Ensure that resource extraction operations follow best management practices to minimize impacts to the local and surrounding environment and other land uses, and to allow for site restoration.

D. Implement the goals and policies presented in the Land Use element of this Plan related to continued use, sustainability and protection of productive forests and prime agricultural soils.

Goal 3: Incomes sufficient to meet or exceed basic needs with opportunities to advance and to achieve financial security.

Policy 9: Support and encourage the business community and policy makers in developing strategies for the retention and creation of jobs that pay a livable wage.[5]

5 Defined in statute as the hourly wage required for a full-time worker to pay for one-half of the basic needs budget for a 2-person household, with no children, and employer-assisted health insurance, averaged for both urban and rural areas (VT Legis. Joint Fiscal Office).

Policy 15: Increase economic resilience by mitigation of and adaptation to extreme weather events and flooding.

A. Encourage and assist employment centers with participation in FEMA's Community Rating System to enhance community-wide floodplain management efforts and reduce flood insurance premiums.

B. Develop and implement outreach strategies targeted to business and residential property owners to raise awareness of flood risk and promote strategies and resources to reduce vulnerabilities.

C. Work with communities to upgrade flood hazard bylaws and improve storm water mitigation strategies in order to minimize risks to homes, businesses and public infrastructure.

D. Encourage communities to direct new commercial or industrial development to areas not at risk from erosion and inundation flood hazards, where feasible.

E. Consider the benefit to local and regional economic resilience when prioritizing assistance with Hazard Mitigation Assistance grants.

Policy 16: Support coordinated and complementary efforts to market the Region's unique, yet-connected downtowns and villages.

A. Utilize results from Vermont Downtown Action Team retail market analyses to assist with marketing available commercial space, business recruitment and start-up support.

B. Promote collaborative marketing with common themes among regional downtowns and villages, chambers of commerce, scenic byway committees and Vermont Tourism via region-wide events and tours (e.g. cycling; hiking; food, farm and brewery; covered bridges; stone arts; and fall foliage) targeted to both visitors and residents.

C. Support formation and expand capacity of community-based or business associations focused on village vitality, marketing and enhancements.

Goal 5: Sustainable and viable agricultural and forest lands.

Policy 17: Promote and expand asset-based recreation and tourism with an emphasis on year-round offerings.

A. Support efforts to develop and update local and region-wide inventories of natural, historic, scenic, agricultural and recreational assets at the local level to support tourism and quality of life promotion.

B. Investigate feasibility of a region-wide promotion effort similar to Newport's "Fresh by Nature."

C. Identify gaps in offerings and support expansion of facilities to develop off-season activities, host multi-day events, conferences and weddings and various related support services.

D. Work with municipalities to identify viable options for expanded commercial and public outdoor recreational facilities, including trail development and related infrastructure that are environmentally and culturally sustainable.

E. Explore options and pursue resources to update VT TrailFinder web site.

Policy 18: Foster collaborative partnerships among regional food system stakeholders.

A. Assist with identifying sustainable collaborative frameworks and funding sources to continue the work of the Central Vermont Food Systems Council.

B. Collaboratively host an annual meeting focused on best-practice-partnerships among economic development, land use planning and conservation stakeholders to support local food systems.

2018 MARSHFIELD TOWN PLAN

Adopted August 21, 2018

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THE TWENTIETH CENTURY

In the early twentieth century Marshfield experienced changes in business, communication, industry and transportation. The first telephone and electric service arrived in the village about 1900 and Rural Free Delivery of mail began about 1907. Marshfield Village was incorporated in 1911 where residents constructed a sewage system, street lighting, and a fire station with an organized volunteer fire department.

By 1920 the town's professions included an auctioneer, a beekeeper, a blacksmith, four carpenters, a coal dealer, three horse dealers, a jeweler, two lumber dealers, a milk dealer, two painters and paperhangers, and a shoe repairer. Other occupations included a clergyman, five justices of the peace, and two physicians. Local businesses included agricultural implements, a drug store, two fertilizer dealers, a grain merchant, five general stores, a boarding house, two saw mills, a stable and a stove salesman. The railroad station had an express company and a telegraph company. The town also boasted its own hydroelectric power plant and a large stone dam that contained the Marshfield Reservoir.

The Groton State Forest, established in 1919, is located along the town's eastern border. From 1933 until 1941 the Civilian Conservation Corps built park shelters and hiking trails to provide year round recreational opportunities. The CCC also worked on forestry projects and constructed a permanent road through the forest to the town of Groton.

The old stagecoach road along the Winooski River, known as the River Road, was paved in 1932 between Plainfield and Marshfield and given the designation U.S. Route 2. Automobile travelers vacationed overnight at five private tourist cabin locations along the highway. Electric lines reached local houses and barns in the late 1930s and in the early 1950s bulk milk tanks were introduced to the dairy farms. The bulk tank led to the demise of many marginal farms that could not afford the new technology.

The fires of 1905 and 1909 destroyed many buildings in the village, the devastating flood of the Winooski River in 1927 and the national depression of the 1930s made it difficult for the town to recover economically. Later in the 1960s, the population began to increase with a back-to-the-land movement that attracted new residents from urban and suburban living to Marshfield's countryside.

MARSHFIELD NOW

In 1970 the town population grew to 1033 and Marshfield joined the neighboring town of Plainfield in building a public school. The mission of the Twinfield Union School community is to educate all students to become responsible, productive, critical-thinking, life-long learning citizens in a safe, nurturing environment of mutual respect, high standards, creativity and academic excellence.

The Marshfield landscape represents the accumulated total of the decisions and compromises made by generations over time. Houses, roads and hills all have their stories. Today's landscape was created by a decline in agriculture, the return of the forests, a growth in population and the introduction of conservation zoning and land-

protection programs. Also significant has been the increasing conversion of the town into a bedroom community of residents who commute to employment opportunities in larger towns. This has led to the building of houses in forests and fields, fragmenting the landscape for agriculture, forestry and wildlife.

Marshfield has evolved over time from an almost self-sufficient agricultural and small manufacturing economy to a more complex mixture of economic activity. The Town introduced zoning and planning in 1969 to encourage responsible growth while maintaining the historic rural character of the community. Our Town Plan recognizes that Marshfield is, and through the planning process can remain, a small, rural, primarily residential community characterized by a population that is both economically and demographically diverse.

Living in the hills that form the watershed of the Winooski River provides an opportunity to build a healthy and sustainable community where a diverse group of people live together in ways that create a sense of common interest in a common landscape. The economic, scenic and wildlife values of the natural environment, in combination with the historic values of the built environment, provide a distinctive 'sense of place' in the Town of Marshfield. This 'sense of place' is preserved and enhanced when concerned citizens take action locally to protect and conserve the heritage and natural resources of our rural community.

CHAPTER 1

OVERVIEW

I. PURPOSE OF THE TOWN PLAN

This Town Plan provides guidelines and recommendations for how Marshfield will accommodate growth, development and opportunities for improvement without losing its rural character.

This Plan recognizes the Town is, and through the planning process should remain, a small, rural, primarily residential community which has an economically and demographically diverse population.

This Plan is designed as a guide to:

- Promote the health, safety, and welfare of Marshfield residents.
- Prevent overcrowding of land and foster its wise and sound use.
- Manage concentrations of buildings, commercial activity, and small scale industry.
- Provide transportation, water, waste disposal, schools, recreational opportunities, affordable housing, and other public needs while making adequate provisions for protection of the environment.
- Promote the protection of Marshfield's natural environment, including maintaining connections between its large forested blocks and aquatic resources.
- Participate with the CVRPC to identify and preserve interior forest blocks, habitat connectivity blocks, riparian corridors, and areas of physical landscape diversity in Marshfield in fulfillment of Act 171.
- Maintain wildlife road crossings as a means of allowing wildlife to move freely through the town and to cross into adjacent habitat.

II. COMMUNITY VALUES AND PRIORITIES

A community-wide survey was conducted by the Marshfield Planning Commission in the summer of 2014 as part of the previous plan update. A summary of the results of the survey (Appendix A) and public meetings on this plan are on file in the office of the Marshfield Town Clerk and can be viewed online at http://www.town.marshfield.vt.us/index.asp?SEC=C4283BAA-77B7-4D96-A84C-EAD00B7CEBC2&Type=B_BASIC

III. IMPLEMENTATION

Per 2016's Act No. 90 (H.367) the Town of Marshfield, its Selectboard, its Planning Commission, and all its other municipal entities and public officials will actively work to implement the goals, objectives, and strategies of this plan at a minimum in the following ways:

- By using this document as the foundation for future land use regulations (i.e. zoning and/or subdivisions) that the voters of the Town can amend or authorize over the life of the plan.
- By using this Plan as a guide in all relevant government decision-making processes.
- By reviewing the plans and activities of State agencies to ensure that they are consistent with this document (and taking appropriate action if they are not).
- By promoting the philosophy of this Plan with neighboring towns and at the regional level through continued participation in regional organizations such as the Central Vermont Regional Planning Commission and the Vermont League of Cities and Towns.
- Through the Town's participation in the VT Act 250 process as a "statutory party," particularly under criterion 10 (conformance with the local plan).
- Through participation in the Section 248 process for the siting of energy or telecommunication facilities.
- By participation in Act 174, which includes section 248 plus RBES Residential Building Energy Standards.
- By participating in the state's groundwater protection program (Act 64), including state regulations regarding groundwater withdrawal rules, in order to ensure that the use of groundwater in Marshfield is consistent with the protection of groundwater as a public trust resource.

IV. BASIC GOALS AND PRINCIPLES OF THE MARSHFIELD TOWN PLAN

1. To protect and preserve the integrity and function of Marshfield's important natural resources, environmentally sensitive areas, and historic features. (Chapter 3)
2. To realize an efficient system of public facilities, services and schools to meet future needs. (Chapter 4)
3. Promote and maintain a transportation system which is safe and efficient for vehicles and pedestrians, enhances the economic vitality of village areas, and

preserves the quality of Marshfield's environment. (Chapter 5)

4. To promote awareness of the opportunities for renewable energy sources, and the conservation of energy resources including providing residents with information about Residential Building Energy Standards. (Chapter 6)

5. To encourage housing development/redevelopment consistent with the Town's desire that residents have a safe and affordable place to live including senior residents. (Chapter 7)

6. To stimulate appropriate economic development and provide opportunities for individuals to establish locally-based business ventures, while maintaining high environmental standards, especially in the village, and to identify areas of town for appropriate individual/commercial development. (Chapter 8)

7. To maintain the rural character of the community as defined by its traditional village areas, open spaces and forested hills, as well as the human activities thereon. (Chapter 9)

8. To maintain and enhance recreational opportunities.

9. To present a Land Use Plan and proposed zoning regulations which will help to achieve the goals within this plan while using language that is clearly understandable.

10. To make the town of Marshfield flood resilient and address vulnerabilities and set forth how to mitigate said vulnerability in our community.

V. COMPATIBILITY STATEMENT

According to Vermont statute, a municipal plan is considered to be "compatible" with the plans of its neighboring towns and the region if it "will not significantly reduce the desired effect" of the same. By virtue of its geography and planning goals, Marshfield's potential for inter-municipal land use conflicts is limited.

This Plan's basic focus is to preserve the Town's rural character while accommodating reasonable growth and development; this plan does not appear to threaten or obstruct the planning goals of any neighboring community or the Central Vermont Regional Planning Commission.

CHAPTER 3

THE LAND AND ITS RESOURCES

I. OVERVIEW

The landscape is the stage and source for all human activity. In Marshfield, natural features have determined the character of the community in its settlement patterns and have served as a source of livelihood and beauty to Town residents over the last two centuries. These resources continue to provide both opportunities and constraints to development.

However, as recent decades have demonstrated, the resources that the land can provide are finite and vulnerable. This is particularly true during periods of rapid growth and development. It will be in Marshfield's long-term best interest therefore, to use land and its resources efficiently and wisely so that they may continue to provide opportunities for human endeavor and growth and the long term viability of these natural resources.

This chapter describes:

- The physical landscape of Marshfield; its geology, topography and soils.
- The resource production lands.
- The resource protection lands and waters.
- The land based cultural resources.
- The goals, objectives, and strategies designed to maintain a harmonious and mutually beneficial balance between people and the land.

II. PHYSICAL GEOGRAPHY

The Town of Marshfield is located in Washington County in Northeastern Vermont. It is bounded by the Towns of Plainfield, Groton, Peacham, East Montpelier, Calais, and Cabot, and contains approximately 27,904 acres, or 43.6 square miles, of land. It is about 74 percent forested, with only about 2.6 percent of its land area developed. Approximately 12 percent of Marshfield's land area is cropland, pasture, or open land and another 6 percent is formerly open land in the process of reverting to forest. Wetlands (including only those mapped by the state) and surface waters comprise about 5.4 percent of the Town's total area (See Table 14).

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Table 17* Land Use in Marshfield				
Category	1999		2005	
	Acreage	% Total	Acreage	% Total
Forest Land	21,172	75.9	20,675	73.9
Ag/Open Land	3,127	11.2	3,263	11.7
Scrub/Shrub	1,782	6.4	1793	6.4
Wetlands	831	3.0	844	3.0
Developed Land	710	2.5	727	2.6
Surface Water	287	1.0	692	2.4

Source: CVRPC _ LULC Data

A. GEOLOGY

The Winooski River is the approximate boundary between the granite rock of the Knox Mountain Pluton to the east, and the calcareous quartz-mica schist of the Waits river and Gile Mountain rock to the west. The valley and the land to the west is the best agricultural area, and has historically been the location of the most productive farms, and intensive settlement. Parts of the granite rock are plastered with alluvium and glacial outwash, such as Maple Hill, the Nasmith Brook drainage, and along VT Route 232. The outwash has produced small pockets of sand and gravel in these areas, such as the field on the old John Fowler farm, and the town sand pit on the Nasmith Brook Road. Where it is lacking the alluvium and outwash the granite has weathered to produce a thin, acidic soil that is unsuitable for agriculture or development, and the early attempts at settlement in these areas have been abandoned.

The schists are about 350 million years old, deposited as muds in a shallow warm sea, and the granite arrived as red hot magma that pushed up under the schists a few million years later. The overlying schists were slowly eroded away by water and thousands of years of glaciation to expose the underlying granite and the topography we see today, with the many visible reminders of the sedimentation, volcanism, glaciation, and weathering of our stormy past.

B. TOPOGRAPHY

Topography, the lay of the land, is defined by elevation and slope. Both of these are natural features that influence past and future settlement patterns and uses of the land.

With just over 1,500 feet of topographic relief inside its boundaries, Marshfield is rugged and picturesque. Hilly, but not mountainous, Marshfield is part of the physiographic region known as the Vermont Piedmont - a plateau that has been dissected by streams and subdued by glaciation. Generally, slopes are moderately steep. From a minimum elevation of just about 730 feet along the Winooski River at the Plainfield border, the terrain climbs to over 2,000 feet in many places. The highest peaks include: an unnamed mountain on the west side of Pigeon Pond at 2,308 feet; Hardwood Mountain at 2,245 feet; and Burnt Mountain at 2,243 feet. The Winooski River divides the Town into two clearly different portions, while the river's flood plain provides the flat areas of Town. East of the river there are a number of distinct hills and mountains with significant slopes and high elevations. On the western side of the Winooski River are a series of hills including Hollister Hill, Gritt Hill, Knob Hill, which form a north-south upland plateau of lower elevation than the peaks on the eastern portion of Town. Steep slopes in the east portion of Town exist because the land rises quickly on either side of the Winooski River and in the area adjacent to the several brooks which run generally southeast into the river.

The steepness of the land as determined by slope can restrict the viability of septic tank systems, building locations, utility and safety service, and road building. Elevation is also important in evaluating the fragility of landforms, as soils are thinner, erosion more extensive, vegetative cover more sparse, and climatic conditions more severe as elevation increases, especially above 2,000 feet.

Slope is a factor taken into consideration when determining where development is permitted. Generally, proposed development on land with slopes greater than 15 percent require more detailed design, construction criteria, and consideration of soil parameters, thereby increasing development costs and potential environmental damage due to erosion and runoff. With slopes of greater than 20 percent the likelihood of environmental damage due to erosion and runoff is increased.

Marshfield's ridgelines provide abundant habitat for numerous species of wildlife, migration corridors for raptors and songbirds, and aesthetic appeal for town residents and our visitors. Although we are sensitive to the impending dangers presented by climate change, we suggest that many, if not most, of our ridgelines are not appropriate venues for industrial scale wind farms. While not opposed to wind power, leveling portions of mountains and creating major roads to otherwise unfragmented ridgelines would result in undesired outcomes. Accordingly, the Town will consider zoning regulations that specifically prohibit the siting of industrial scale development on our unfragmented and scenic ridgelines.

C. SOILS

Soil is the layer of earth that lies directly over the bedrock. It is the layer through which rain and nutrients filter, upon which crops and trees grow, and where wildlife and humans create their lives and homes. The type of soil that develops in an area is dependent on its parent material (bedrock and glacial deposits), vegetation,

topography, climate and time. Understanding the characteristics and capabilities of these soils is important for planning the types, locations, and intensities of future land uses. Soils information can be an important guide for reviewing individual development proposals.

Scientists of the USDA Soils Conservation Service (SCS) (now known as Natural Resource Conservation Services, or NRCS) have mapped the soils in Marshfield and the data has been transferred to GIS mapping. A soil interpretation sheet for each soil type is available which describes the soil and evaluates its capability for certain uses. Information on slope, texture, density, permeability, depth to bedrock, flood hazard, frost action, depth to seasonal high water table, and other characteristics is available. Soils are evaluated for their suitability for construction, septic systems, water supply, recreation, farming, woodland management and wildlife and resource material uses. In general, unfavorable soil types for development typically contain excessive slopes, shallow depth to bedrock or hardpan, wet soils, excessively drained soils, unstable soils, and erodible soils.

The majority of soils identified in the survey of Marshfield by the Soil Conservation Service have severe limitations for septic tank absorption due to depth to rock, wetness, slow percolation, flooding, and/or poor filtering. Those soils with slight or moderate limitations for septic tank absorption fields are limited to those existing on 3-8 percent slopes are not greatly in evidence. In many of the soils that have moderate or even severe limitations for septic absorption, it may be possible to install special systems.

III. RESOURCE PRODUCTION LANDS

Resource production lands benefit society on many levels - economic, aesthetic, recreational, and environmental. They provide habitat for wildlife, undeveloped sites for flood storage and watershed protection, scenic vistas, open spaces for a variety of outdoor pursuits, and increased utilization of local sources of food and wood products. Agricultural lands are particularly vulnerable to encroachment and conversion as they are often level, cleared and on good building soils.

A. AGRICULTURAL LAND

Although Marshfield, with its rugged landscape and narrow valleys, may not fit the image of an agricultural community, it does contain some good farmland soils. Prime and statewide important agricultural soils in Marshfield are located primarily along the Winooski River Valley, Route 232, Maple Hill, and along the Hollister Hill road on the western Town boundary. These soils are extremely important for agriculture because they are primary soils on land that remains open and in active agricultural use. In the southern portions of town and along Route 2 where significant views, open space, active farms and prime agricultural soils combine with important historic landscapes and buildings, conservation of these areas becomes especially important.

C. SURFACE RESOURCES

Marshfield's water resources are a large, interconnected hydrologic system of aquifers, lakes, ponds, streams, rivers (collectively known as surface waters) and wetlands. In addition, riparian areas and floodways provide protection for Marshfield's surface waters. The quantity and quality of water is affected by natural factors such as precipitation, soils, geology, and vegetation. Because of the manner in which precipitation flows from the land into drainage networks, there is a direct relationship between land use and surface water quality. Poor land use practices and development within watersheds may disturb the natural balance between ground and surface water resources and result in flooding, erosion and sedimentation. This occurs when development creates a more impervious surface causing a change in hydrology, and when erosion is created during construction that runs off into water bodies. Loss of aquatic habitat, decreased aquifer recharge, irregular stream flows and water pollution are all possible impacts of poor watershed land use and development practices. The quality of water resources in Marshfield is important for public health and safety, recreation, aquatic biological integrity, diversity of wildlife, environmental quality, and scenic beauty and requires special consideration in land use planning.

Surface Waters

The Vermont Water Quality Standards (VWQS) and Vermont statutes set forth a water quality classification system which governs Vermont's surface waters and specifies (1) water quality goals to be attained or maintained and (2) the minimum standard to be maintained for a designated Class of water quality. The Classification system includes three classes of waters that are assigned by use. Class A waters are the highest classifications of waters in Vermont that receive the most protection. Class A waters are of two types, Class A1 ecological waters and Class A2 water supplies. All waters located above 2,500 feet are designated as Class A1 by Vermont statute (10 V.S.A. § 1253 (a). Any other waters designated as Class A1 must be classified through the planning process. No waters in Marshfield have been specially designated as Class A1. Accordingly, there are no Class A1 waters in the Town of Marshfield.

There is a public water supply for the Village of Marshfield. The public water supply for the Village emanates from a groundwater spring off Folsom Hill Road, not from a surface water (see subsection on Groundwater for protections for springs and groundwater). Class B2 waters are all waters that are not designated as Class A1 or A2. Accordingly, most of the surface waters in Marshfield are classified as Class B2 Waters. There are no uses currently managed as Class B1, reclassification of a use to B1 is currently done through the planning process.

There is also a public water supply for Twinfield Union School.

Under Vermont law, Class B2 streams must "consistently exhibit good aesthetic value and provide high quality habitat for aquatic biota, fish and wildlife." They should

for Marshfield residents.

Nonnative Invasive Species
Nonnative, invasive species have increased exponentially throughout the state. Unfortunately, Marshfield is no exception to this observation. The proliferation of invasive plants displaces our native vegetation, degrades wildlife habitat, is aesthetically unappealing, and can lower property values. Accordingly the Town will work in conjunction with the Conservation Commission to limit the spread of invasive species on Town property and along Town roads.

V. LAND-BASED CULTURAL RESOURCES

The special way in which people have interacted with the natural environment over time has resulted in a complex and rich heritage in Marshfield. The resulting cultural environment - the historic buildings, sites, landscapes and scenic vistas - work together to evoke a "sense of place" that gives Marshfield its identity. The identification of these vulnerable cultural elements that comprise community character is necessary before taking measures to plan for change, to influence the scale of change, and mitigate the nature of the impact of change on the character of Marshfield.

A. HISTORIC AND ARCHEOLOGICAL RESOURCES

Many of Marshfield's historic buildings and other features are listed in the Vermont Division for Historic Preservation's "Inventory of Historic Sites and Structures." The Division categorizes Marshfield Village as an historic district. Most of the structures listed in the inventory are private residences, although a few public and semi-public buildings are listed as well. A listing in the inventory affords no specific protection for a structure or benefits for its owner; it is merely intended to catalogue historic resources to facilitate owner-initiated or local protection efforts.

The State inventory reveals that, in the outlying farming districts, the majority of the houses and barns appear to have been built between 1830 and 1860, a period when the Greek Revival style was popular. One outstanding exception is the Theodore Wood House on Hollister Hill, which is a rare example of the French Second Empire style. Many of these individual architectural resources, when combined with the important surviving farms, create rural districts suitable for inclusion on the National Register of Historic Places. The most outstanding of these districts which should be targeted for protection in local ordinances and National Register listing is that northwest of Plainfield Village on Hollister and Gritt Hills extending to Town Highway 55 and Route 2 on the east, and to the intersection of Town Highways 42 and 46 on the west. Two farmhouses of outstanding architectural detail, the Tibbitts and Smith Farms are situated near the Hollister Hill Schoolhouse and the Rich-Hollister Cemetery. The Eaton cemetery, the Wood home, and Hollister Hill Farm are also located in this area. All of the resources are of outstanding historic/cultural value with a common agricultural theme.

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A. HISTORIC AND ARCHEOLOGICAL RESOURCES

Many of Marshfield's historic buildings and other features are listed in the Vermont Division for Historic Preservation's "Inventory of Historic Sites and Structures." The Division categorizes Marshfield Village as an historic district. Most of the structures listed in the inventory are private residences, although a few public and semi-public buildings are listed as well. A listing in the inventory affords no specific protection for a structure or benefits for its owner; it is merely intended to catalogue historic resources to facilitate owner-initiated or local protection efforts.

The State inventory reveals that, in the outlying farming districts, the majority of the houses and barns appear to have been built between 1830 and 1860, a period when the Greek Revival style was popular. One outstanding exception is the Theodore Wood House on Hollister Hill, which is a rare example of the French Second Empire style. Many of these individual architectural resources, when combined with the important surviving farms, create rural districts suitable for inclusion on the National Register of Historic Places. The most outstanding of these districts which should be targeted for protection in local ordinances and National Register listing is that northwest of Plainfield Village on Hollister and Gritt Hills extending to Town Highway 55 and Route 2 on the east, and to the intersection of Town Highways 42 and 46 on the west. Two farmhouses of outstanding architectural detail, the Tibbitts and Smith Farms are situated near the Hollister Hill Schoolhouse and the Rich-Hollister Cemetery. The Eaton cemetery, the Wood home, and Hollister Hill Farm are also located in this area. All of the resources are of outstanding historic/cultural value with a common agricultural theme.

The map of Marshfield from Beers Atlas of 1873, when compared with existing development, is valuable in identifying historical archaeological sites. Industrial archaeological sites along the rivers and streams in the eastern part of Town have not been surveyed. Archaeologically sensitive lands are important and should be given consideration during project planning because they are likely to contain either Native American and/or historic archaeological sites.

B. RURAL CHARACTER

The rural character of the Town is of great value to residents: it helps give a sense of identity to Marshfield. Development which is insensitive to aesthetic resources will diminish the quality of life of Town residents. The rural character exists due to the scenic vistas, large uninterrupted forested areas, open fields, agricultural uses, and limited and scattered development along back roads. Eighty-eight percent of residents who responded to a survey in 2004 said that "rural character" was important in town planning. Respondents to a 2014 survey described farms, solitude, dirt roads, space, nature, sense of community, and quiet as examples of rural character. The importance of protecting natural areas, forest lands, and scenic vistas were ranked by over 80% of the respondents as high or medium. A more complete discussion of rural character is found in Chapter 9, the Land Use Plan.

VI. LAND RESOURCE GOALS, OBJECTIVES, AND STRATEGIES

GOAL: To protect and preserve the integrity and function of Marshfield's important natural resources and environmentally sensitive areas.

OBJECTIVES:

1. To encourage and strengthen the agricultural and forest industries.

2. To encourage the current use of agricultural and forest lands and discourage their conversion and/or fragmentation.

3. To discourage the conversions and fragmentation of interior forest blocks, habitat connectivity blocks, and areas of physical landscape diversity.

4. To maintain aquatic resources and their connections.

5. To preserve prime and statewide agricultural soils.

6. To encourage the voluntary protection of farms through conservation easements and participation in current use programs.

7. To ensure that the appropriate extraction of earth resources minimizes environmental impacts and addresses the aesthetic qualities of the area.

8. To Protect environmentally sensitive or unique areas such as rare and irreplaceable natural areas; rare, threatened and endangered species; and ecologically significant areas.

9. To maintain and enhance the quality and quantity of soil and the benefits it provides.

10. To maintain, and protect existing soil and water resources of high quality and quantity and the benefits they provide, and restore the condition of soil and water resources of existing lesser quality and quantity.

11. To protect critical wildlife habitat, significant natural communities and habitat for rare and threatened species.

12. To preserve Marshfield's historic and archeological heritage.

13. To preserve Marshfield's scenic beauty.

Issue Specific Strategies:

1. Protection of Agricultural and Forestry Lands

a. Encourage the protection of important agricultural and forest land by promoting concentrated settlement patterns, site-sensitive development (i.e., "clustering" or "open space development"), the voluntary purchase of development rights, use-value taxation policies, and other appropriate measures in order to protect agricultural and forest lands. Development that does occur on such lands should be situated so as to leave the most productive portions of the site available for continued agricultural and forestry uses
b. The Selectboard will target public investment, including the construction or expansion of infrastructure, for the Village or other growth areas so as to minimize development pressure on important agricultural and timber lands.
c. Consider adding land use regulations to preserve prime and statewide soils.
d. To encourage best management agricultural and silvicultural practices.

2. Implementation of Marshfield's natural resource protection goals:

a. The Selectboard will consider the acquisition of natural resource lands as deemed appropriate.
b. The Planning Commission, in conjunction with the Conservation Commission, will review the State Agency of Natural Resources' management plans for Groton State Forest.
c. Research options for creating a town conservation fund.
d. The Conservation Commission is encouraged to complete wetland mapping and a town-wide natural resource inventory.
e. Bylaws should be modified to address wetland protection issues.
f. The town should participate in the upcoming state watershed planning. Within this process the town should consider supporting/proposing the reclassification

CHAPTER 4

UTILITIES, FACILITIES, MUNICIPAL PROPERTY AND SERVICES

OVERVIEW

Public and private utilities, facilities and services play a critical role in providing for the health, safety and welfare of Marshfield residents. The location, timing and capacity of such infrastructure can also have a profound influence on growth and development within a community. (see Utilities and Government Facilities map for locations of facilities)

Through thoughtful infrastructure planning and maintenance, Marshfield may encourage growth where it is most suitable and least expensive to the community.

I. UTILITIES

A. SEWAGE TREATMENT

The Marshfield Wastewater Treatment Facility, located near the Schoolhouse Common, serves over 100 residences, 5 commercial establishments, and 6 "other" users in the Village of Marshfield. It has a design capacity of .45 mgd (million gallons per day), an average daily flow of .214 mgd, a committed reserve of .018 mgd, and an uncommitted reserve of .218 mgd. With an uncommitted reserve exceeding its current flow, the system appears to have the capacity to accommodate a significant amount of new development.

The Village system operates under a permit from the State of Vermont. Effluent is monitored daily to ensure that discharges are within allowed limits. According to Village ordinance, no on-site septic systems are allowed within the Village limits. Due to current state law, any new connection or any increase in use (such as adding a bedroom or an apartment) must be approved by the Village and also requires a State permit. A schedule of user rates and connection fees is available from the Village Clerk.

In 2010 and 2011, sludge was removed from the two lagoons and, because it contained uranium that had been captured from the new Village water system during the years 2001-2003, was disposed of at a lined landfill. The cost of this procedure was approximately $74,000. Sludge from the next cleanout, scheduled for approximately 2020, may be disposed of by land application depending on laws and policies in effect at that time. About 5.1 dry ton are produced each year.

Increasing development of the Village sewer system might allow additional development outside of the Village limits; however, this would require additional funding that must be balanced against potential revenue from new users. The institutional capacity of the Village to manage the system is currently adequate. Any take-over by the town would require approval by the Village Trustees and by the State.

areas (Public Water Source Protection Areas or PWSPA) for public water supplies within the Town of Marshfield. One is for the village water supply, which is located on Folsom Hill Road. Wellhead Protection Areas have also been designated for systems within the Groton State Forest, Twinfield Union School and the Onion River Campground. Water systems are also located in the south center portion of Marshfield near the Plainfield line and east of Route 2 on the east side of Maple Hill, and in Plainfield Village. Each PWSPA has a written plan developed by the Water System Operator. Implementation of the plan involves cooperation with landowners of the protected areas, and certain activities within PWSPA's may be restricted in accordance with state and federal regulations.

As mentioned in the previous chapter, wellhead protection areas (WHPA) delineating recharge zones for public water supply aquifers have been prepared by the State. The Town must be vigilant regarding land use within the zones if it is to avoid costly and inconvenient problems in the future.

It is also important to note that any private wells drilled into granite bedrock in the eastern portion of the town may have elevated uranium levels and although private wells are not subject to the same rules as public water sources, residents may wish to have water from such wells tested to determine if the uranium level is safe.

C. ELECTRICITY

Marshfield residents receive their power from Green Mountain Power Corporation (GMP), or Washington Electric Cooperative (WEC). GMP is the region's largest utility. WEC is a member-owned utility managed by an elected, nine-member board. GMP operates a 5 mw hydroelectric station located on the Cabot Road.

D. SOLID WASTE

Marshfield is a member of the Northeast Kingdom Solid Management District which is a cooperative effort among northeastern cities and towns to ensure cost-effective and environmentally sound waste management programs.

E. TELECOMMUNICATIONS

Telephone service is provided by Fairpoint New England. Cellular access is provided by multiple telecommunications companies. With the increasing demand for cellular capabilities comes an increasing demand for cellular towers. It will be important to balance aesthetics, signal quality, health, business and personal needs when deciding whether, and where, to site additional telecommunication towers.

Developers of telecommunications facilities currently have the option of having their projects reviewed by the Marshfield DRB or by the Vermont Public Service Board (PSB). The PSB Section 248 review evaluates the project to see if it merits approval for a Certificate of Public Good. PSB must give substantial deference in making its determination to land conservation measures in the plans of the affected

municipalities, as well as the recommendations of the municipal and regional plans. Marshfield currently has a Wireless Telecommunications Facilities Bylaw. The Telecommunication Bylaw includes the purposes for the bylaw. Said purposes are adopted by reference in this Town Plan and are meant as a guideline for any Section 248 review.

F. HEALTH AND EMERGENCY SERVICES

The Fire Station was constructed in 1990 in the Village almost directly across US Route 2 from the former station now in private ownership. The Fire Department celebrated its 100th anniversary in 2009. In 2016, the Department responded to 47 calls, with the majority (17) being motor vehicle accidents. The Fire Department has one pumper (1991) and one tanker (1996). The firefighters are volunteers, with mutual aid among the towns of Cabot, Plainfield, Walden and East Montpelier. Ambulance service is provided by Cabot Emergency Ambulance Service and the Plainfield FAST squad. The service also responds to calls from Cabot, Walden and Plainfield. East Montpelier Ambulance Service provides backup.

Marshfield is part of the Statewide E-911 program. All roads have official names and all residences a number to allow emergency service providers to find callers even if they are unable to give their location. The state police and the Washington County Sheriff's Department are relied upon to provide services, including speed control, in the town of Marshfield.

The Plainfield Health Center is widely used by Town residents. The Health Center maintains a growing staff of health care professionals and provides comprehensive medical care, dental care, psychological services, medications, laboratory services, physical rehabilitation and health education/community services. Central Vermont Medical Center in Berlin and the Northeastern Vermont Regional Hospital in St. Johnsbury are the two nearest acute care hospitals.

G. COMMUNITY SERVICES

Various area agencies and other organizations serve special groups in Marshfield. These include: Washington County Youth Services Bureau, Central Vermont Council on Aging, Vermont Center for Independent Living, Retired Senior Volunteer Program, Central Vermont Community Action Council, Community Capital of Central Vermont, Battered Women's Services, Central Vermont Home Health Agency, Inc., Sexual Assault Crisis Team, Vermont Green-Up, Inc., and Central Vermont Regional Planning Commission.
The Town of Marshfield is fortunate to be located within easy commuting distance to several institutions of higher education: Goddard College in Plainfield, Vermont Community College, the Vermont College of Fine Arts, and the New England Culinary Institute in Montpelier.

J. RECREATION

Perhaps Marshfield's greatest recreational resource is its outdoor environment. For those who seek it, the landscape offers excellent opportunities for outdoor recreation.

Marshfield possesses ample public lands in which residents and visitors alike may pursue a variety of recreational offerings. Most notable among these is Groton State Forest. About 3,800 acres of this 15,000-acre plus tract of forests, lakes, and mountains is located in Marshfield. The Forest is managed for multiple uses and provides opportunities for swimming, boating, hiking, nature study, cross-country skiing, snowmobiling, hunting, horseback riding, fishing, bicycling, and more. It is an invaluable resource to the community and the State.

While Marshfield has abundant public lands, it is important to note that private lands are still an integral part of the Town's recreation picture. They too support a great variety of recreational uses thanks to the generosity of landowners.

The Recreation Committee has made possible a number of activities over the years. With the goal to fulfill the recreational needs of varied age groups in the community, programs have been organized and conducted with a seasonal perspective. A ball field, walking path, skating rink, playground, and gazebo, where evening concerts take place during the summer, have been built near the Old Schoolhouse Common. Trails and playing fields also exist on the grounds of Twinfield Union School.

A local snowmobile club, the Twinfield Snow Travelers, maintains trails and uses the old railroad right-of-way. Parts of the railroad bed are also used for cross-country skiing and bicycling and there is interest in its use in the creation of a Cross Vermont Trail.

II. MUNICIPAL PROPERTY

The Town owns several properties. The properties were acquired by purchase, bequests from legal owners, legal process (tax sale), and eminent domain.

The Selectboard has overall responsibility for property maintenance and management and makes recommendations on the disposition of town owned real property. Voters make the final decision on such recommendations.

PROPERTY CLASSIFICATIONS

Town owned property is classified into four primary categories:

- Municipal buildings and adjoining land
- Cemeteries
- Natural and scenic areas
- Other properties

A. Municipal Buildings and Adjoining Land

Municipal buildings are the Old Schoolhouse Common, the Town Garage, the Water Treatment Facility, and the Fire Station. The first three of these buildings and the adjoining land consist of approximately fifteen acres and are located within the Village District. The land is bordered on the north and west by the Winooski River, the east by School Street, and the south by Marshfield Brook. The fire station is located at the east end of the Village.

The municipal offices are housed with the Old Schoolhouse Common. Other tenants include the library, historical society, local food shelf, and local businesses. The building also is used for meetings by various organizations, indoor recreation, and is the polling place for elections The building recently had various energy improvements including solar panels, wood pellet heating, weatherization and installing additional insulation.

This area provides a variety of recreation uses which include a ball field, basketball court, play ground, walking path, winter ice rink, community gardens, and a gazebo.

The Fire Station and Town Garage provide facilities for workers and storage of equipment and materials (road sand and salt). The water treatment facility is discussed earlier in this chapter.

The town is well served by these buildings and the surrounding land, and the parcel should be retained.

The land is available to meet future needs for additional municipal buildings and recreational opportunities.

B. Cemeteries

The town owns several modest sized cemeteries which are widely located. Historically these properties were named after a family, geographic location, or adjourning road.

The town cemeteries and their locations are as follows:

Table 19 Cemetery Name and Location	
Dwinell	Beaver Meadow Road
Eaton-Davis	Eaton Cemetery Road
New Discovery	Groton State Forest Road/ Vt. Rt. 232
Rich-Hollister	Hollister Hill Road
Maple Hill	Holt Road
Nasmith	Holt Road
Jaquith/Wooster	US Route 2 Marshfield Village
Pike	Pike Road
Hudson	English Cemetery Road
Bolles	Maple Hill near junction w/Pigeon Pond
Loveland	US Route 2

Several of the town cemeteries are no longer active and provide a place of historic value and quiet repose.

The need for additional cemetery space may continue. The Selectboard should work to monitor and address the need for additional cemetery space.

C. Natural and Scenic Areas

The town owns a forest consisting of 50 acres located just outside the Village District on Folsom Hill Road, and a 120 acre meadow located along the U.S. route 2 corridor, across the Winooski River, where the Martin Covered Bridge is located.

C1. Town Forest

The Town Forest should be evaluated again for potential harvesting opportunities if it is needed for the better health of the forest. If logging is prescribed then recreational trail development should be considered as part of this. Other trail connectors should be evaluated to help provide more access to this town resource.

C2. Martin Covered Bridge

The 120 acre meadow contains a significant historical town asset - the Martin

Covered Bridge. It is the only remaining farm bridge and the last covered bridge in Marshfield, and one of only two covered bridges remaining on the Winooski River; consequently it is a treasured asset of the town and has significant historic value.

The bridge was restored in 2009 and a parking lot was constructed. Funding included $40,000 from the Vermont Housing & Conservation Board, $240,000 from the Vermont Agency of Transportation and local fund raising efforts and donated work. Some trails have also been built in recent years.

It is the town's desire to implement the following improvements over time as funding permits:

- Stabilization of eroded stream banks
- Signage, canoe launch, picnic area(s)
- Trail development including nature trails and access to the Cross Vermont Trail
- Preservation of seasonal wetlands
- Preservation of endangered species (mussels)
- Haying or bush hogging of fields to preserve open space and views
- Development of forest management/use plan

For any of these projects related to town properties, the Town should actively seek grants from the State and other sources.

The area around the Martin Bridge will continue to be of interest and have long term value. Removing the barriers to accessing this area is important and should continue to be pursued.

C3. STRANAHAN TOWN FOREST

The Stranahan Property was conveyed to the town of Marshfield on October 12, 2007 and is now known as the Virginia Stranahan Memorial Town Forest (Stranahan Forest). A management plan for the Stranahan Forest was developed by group of stakeholders and was adopted by the Selectboard.

Encompassing 620.3 acres, the Stranahan Forest has been privately owned as farm and forest land since Marshfield was settled. The most recent owner was the Stranahan Trust. The residents of Marshfield and surrounding towns have used the Stranahan Forest for winter and summer recreation with the tacit permission of the owners or their agents. The Stranahan Forest was offered to the Vermont Land Trust for purchase with subsequent conveyance to the town of Marshfield. Knowing that the land would be held in public ownership by the Town, the Stranahan Trust generously offered to sell the Stranahan Forest at a greatly reduced price. Both public monies and private donations were provided to help fund the acquisition, including a large grant from the Vermont Housing and

IV. UTILITIES, FACILITIES, MUNICIPAL PROPERTY AND SERVICES GOALS, OBJECTIVES AND STRATEGIES

GOALS: To realize an efficient system of public utilities, facilities and services to meet future needs.

Evaluate highest and best use of town owned property.

OBJECTIVES:

1. Encourage recycling, source reduction, and composting as ways to reduce the volume and toxicity of solid waste and continue participation in the Northeast Kingdom Solid Waste District.

2. Promote access to a wide range of recreation experiences to all sectors of the population.

3. Marshfield encourages landowners to not post their property when appropriate to allow for additional recreational uses.

4. Support current and future recreational uses of town owned property

5. Study need for additional cemetery space.

6. Engage in the planning of the Cross Vermont Trail through or in close proximity to Marshfield

7. Promote the continued safe and effective operation of the Village of Marshfield water and sewer systems.

ISSUE SPECIFIC STRATEGIES:

Sewage Treatment and Disposal:

a. The Selectboard should continually evaluate the current systems with respect to their ability to accommodate the land use goals of this plan.

Water Supply:

a. The Village Trustees should continue to work to provide a safe and abundant water supply to meet the needs of the residents in Marshfield Village. In addition, the Trustees should continue their work monitoring and addressing the issues of uranium in the water supply.
b. For both water and sewer supply, the Selectboard and Village Trustees should explore whether a merger between the town and village would be in the best interest of operating and maintaining the sewer and water system.

Electric Power:

a. Town policy is to promote transmission and distribution lines which are designed to minimize negative impacts on natural and scenic resources.

Telecommunications:

a. Town policy is to promote and require that proposed commercial satellite dishes, radio towers, antennae, and other transmission and receiving equipment are sited, designed, maintained and operated so as to minimize negative impacts on natural and scenic resources.
b. Encourage the expansion of broadband availability to residents.

Education:

a. The Selectboard should engage in planning activities with the administration at Twinfield Union School to continually plan for providing access to high quality educational and vocational opportunities.

Recreation:

a. The Selectboard should establish a commission to participate in and make a recommendation on the feasibility of connecting the Town's planned or existing transportation/recreation paths, including the old railroad bed, to those of other communities in the region.
b. The Selectboard should work closely with the Department of Forests, Parks and Recreation to ensure that Groton State Forest provides the maximum recreational opportunities for the citizens of Marshfield.
c. Enhance the Town's web site by making available information on the various types of public recreational opportunities available locally.
d. The Selectboard should continue to monitor effort to create a Cross Vermont Trail, and if appropriate form a subcommittee to participate in the development of the initiative.

Municipal Property:

a. The Selectboard will continue to provide funding for present and future development of recreational opportunities on town owned property.
b. The Selectboard will explore the possibility of acquiring additional land abutting present active cemeteries.

Government Services:

a. The Selectboard will ensure adequate and reliable government services are available to Marshfield residents at reasonable costs.

CHAPTER 8

ECONOMIC DEVELOPMENT

I. OVERVIEW

A healthy economy is essential to maintaining Marshfield's quality of life. A diversified, dynamic, and sustainable economy provides employment, stimulates social and cultural interaction, and provides the resources for the provision of community services, education and infrastructure. On the individual level, a diversified economy offers greater opportunity for people to engage in satisfying and meaningful pursuits. Economic vitality is a balance between human, natural and capital resources and it is the interaction of these factors which determines the scale and intensity of growth and development.

Marshfield is a rural community with modest commercial and industrial activity. Like the rest of Vermont, Marshfield has evolved from an almost self-sufficient agricultural/manufacturing economy to a more complex mixture and pattern of economic activity. It is now, by all standards, a "bedroom community" - that is to say much of its resident workforce holds jobs in other cities and towns. Available data seems to indicate that small businesses are still an important element of the Marshfield economy.

Residents have voiced strong support for economic development that retains Marshfield's rural character and protects important natural resources. Economic development in Marshfield should maintain the quality of life provided by a landscape dominated by forests, farming, and many opportunities for outdoor recreation, while supporting the harvesting of forest products and other land based economic development.

In keeping with this philosophy, traditional economic growth should be encouraged in areas where infrastructure already exists or may be easily extended in order to minimize environmental degradation and costs to the taxpayer and developer. Marshfield Village is serviced by municipal water and sewer systems. Community facility planning must address possible infrastructure limitations in order to target the village area as logical traditional growth center. Further growth center analysis is required in town.

Encouraging business activities in the villages/growth centers also helps to reduce the likelihood of strip development along Route 2. Strip development leads to traffic, safety and environmental concerns, contributes to declining economic activity in the villages, and works to destroy the rural character of the Town.

Non-traditional economic growth, supported by use of the internet, is taking place in Marshfield. An increasing number of residents, many with home based businesses, are using the internet to sell products, services, or in-lieu of driving to the traditional place of work. Such economic growth is highly desirable because it is "clean" and generally provides a higher wage. The success of these non-traditional businesses is highly dependent upon the use of technology, particularly high speed reasonably priced internet access. Some Marshfield residents have enjoyed high speed internet access through their local phone company, Fairpoint Communications, for a number of years. Others are able

Issue Specific Strategies:

To encourage business development that creates jobs that pay a "livable wage".

a. Create an economic development strategy for the town that identifies and encourages development around the villages and growth centers, and explores other opportunities for creating jobs that require the skills and experience of town residents.

b. The Planning Commission will ensure that Town zoning regulations do not impose any unnecessary or inappropriate impediments to reasonable business/industrial activity or development.

c. The Planning Commission will continue to track and report economic/employment statistics and trends in Marshfield in order to chart progress.

d. Seek financial support from state, federal and private sources to support community development programs that includes housing, employment, and public facilities development and coordination.

Economic Development should reinforce traditional settlement patterns:

a. To provide the infrastructure (including automobile and pedestrian facilities) necessary if new growth and development is to be directed to Village and growth centers.

b. To support land use policies that would avoid commercial strip development, maintain open space, and promote "in-fill" development.

c. To encourage adaptive use of existing structures in the Town (for example, the Old Schoolhouse Common project).

d. Consider utilizing state financial and tax incentives for development in the village and growth centers.

e. Encourage the creation and expansion of locally based industries that utilize the region's natural resources and raw materials, with particular emphasis on value-added processing of agricultural and wood products.

f. Encourage natural resources based tourism.

Provide accessible affordable and quality daycare facilities:

a. Encourage the Selectboard to appoint a committee of interested residents to study the childcare needs of Marshfield and make recommendations so that accessible, affordable, and quality childcare is available to parents.
Topics to be addressed by the committee:

i. Conduct a survey of parents to find out their needs for childcare.

ii. Support present childcare providers by listening to their needs for funding, training and facilities.

Conclusions of Build-Out Analysis

Based upon the above analysis, the Planning Commission recommended the following steps be taken:

- Undertake a more extensive parcel-by-parcel evaluation in the Village District before reaching conclusions about potential development in the village.
-
- Obtain public input on whether the four-fold increase of potential development in the Agricultural and Rural Residential District under the current zoning would conflict with the goal in the Town Plan to maintain a rural character in this district.
- Obtain public input on changes in the Agricultural and Rural Residential District including: to change the minimum lot size to 5 acres or to require road frontage for all new lots.
- Obtain public input on whether to change the lands more than 600 feet from roads that are presently in the Agricultural and Rural Residential District to the Forestry and Conservation District (see map classifying Agricultural and Rural Residential District by distance to road).

The Selectboard made the following recommendation:

- Consider developing standards and a process for permitting lots that do not have adequate road frontage under the zoning regulations.

A forum in October 2008 provided some public input on the above changes in the Town land use regulations. Although various views on the possible changes were expressed, there appeared to be a consensus that it was important to preserve the existing rural character of the town while still allowing for limited development. The results of the build-out analysis and comments made at the public forum were taken into consideration when developing this version of the Town Plan.

III. RURAL CHARACTER

Marshfield has been able to maintain a rural character through limited development and due to land use regulations, adopted in 1969, that recognized the need to preserve large portions of the town. There has been discussion in past Town Plans about the importance of rural character and its importance is often mentioned at public forums. The purpose of this section is to define rural character as used in this Town Plan. The rural character exists due to the scenic vistas, large uninterrupted forested areas, open fields, agricultural uses, and limited and scattered development along back roads. Surveys and community forums conducted over the years have repeatedly highlighted the importance of "rural character" to Marshfield residents.. The importance of protecting natural areas, forest lands, and scenic vistas has also been made clear through repeated surveys.

The rural character needs to be evaluated from three perspectives: Route 2, Marshfield Village, and back roads. The first is the vantage from Route 2, the only east-west arterial

road in the northern half of the state. Route 2, outside of the village areas, is characterized by views of fairly open areas adjacent to the Winooski River. More distant views of uninterrupted forested ridgelines are also found. Several large farms along Route 2 add to the rural character. Scattered single family dwellings, some newer and some historic, are also located along this road. Route 2 is used by local residents, tourists, and those traveling to other parts of the state.

A viewshed analysis from Routes 2 and 232 was developed (see Viewshed Analysis map). The map shows the areas that can be viewed from these roads. The viewshed was divided into two categories: those areas that have some protection and those without protection. The protected areas included those areas within the Forestry and Conservation District, Flood Hazard District, conserved lands, and publicly-owned lands. These areas all limit development through more restrictive zoning, through conservation easements, or through direct municipal or state control of the land. As evident from the map, the more distant views have some level of protection from development. The areas adjacent to Route 2 have limited protection. Many of these unprotected areas are open fields and farms where future development would be highly visible. Some more distant areas to the east also have limited protection from development. Development guidelines should be established to help protect the open fields along Route 2 while still allowing controlled development.

The second perspective is from the Marshfield Village. Marshfield has well-defined entry points from the north and south on Route 2 and from Route 214. The lots become smaller and development density quickly changes upon entering the village area. The village is characterized by a mix of residential uses, several churches, the Old Schoolhouse Common, and pockets of commercial uses. The Village Store and adjacent to the Starch Factory building are historic and have served as the commercial center for the village. The density of development allows for residents to walk to village destinations. The Schoolhouse Common serves as the cultural hub of the village. Summertime concerts, movies, childrens activities and readings are hosted by the library; and the park includes playground equipment and a ball field. The small, compact development of the village with defined entry points and the fact that it serves as a center for local commercial and cultural activities defines its rural character. Development guidelines should allow and encourage the continuation of the village-style development. Similar development patterns are also found in the portion of Marshfield immediately adjacent to Plainfield. This area, although in Marshfield, is generally thought of as being part of the Plainfield village area.

The last perspective is from the back roads. These roads are characterized by more limited distant views from the roadway itself due to the existing forested areas. However, distant views are sometimes found from the house sites on the adjacent parcels. Although open fields exist on some sections of back roads, forested areas predominantly exist along these roads. These roads are used mostly by local residents.

The rural character of the back roads is due to limited development, some open fields and farms, the adjacent forested areas, and limited traffic. Development on the back roads

needs to preserve the open fields and farms and provide a visual and functional relationship of structures to the surrounding landscape. Individual lots and building envelopes can be delineated so as to mitigate the visual impact of new development on views from existing roadways, adjacent properties, and off site vantage points. Development review should include the impact of additional traffic on rural back roads not just from a functional carrying capacity, but also in regards to the effect on the rural character of the area.

Certain strategies are recommended later in this chapter to help preserve the rural character within each of the zoning districts.

IV. LAND USE DISTRICTS

Four identifiable land use districts are described below. These districts generally represent present land use patterns. Future development should be limited to densities and types which preserve the identity of these districts, and limited to a scale which is in keeping with the nature of the various districts.

Table 22

Zoning District	Sq Miles	% Town Area
Village	0.5	1.2%
Flood Hazard	2.1	4.8%
Forestry and Conservation	27.4	62.9%
Agricultural and Rural Residential	13.6	31.2%

on the Town Zoning Map as prime agricultural land. The major exceptions to the 600-foot rule are indicated on the Zoning map. The district is characterized, generally, by a mix of residential uses, agricultural and open land, and forested land.

B. Current Land uses, trends, challenges/issues

While this District contains most of the Town's actively used farmland, it is also where most new residential development is occurring (due to pleasing surroundings, generally favorable soils and terrain, and accessibility). These land uses may conflict with each other and result in the loss of good farmland. In addition, residential "strip development" can place pressure on roads and other infrastructure, and diminish the rural character that attracted residential growth in the first place. Currently, there are approximately 453 homes in this district according to the 2008 build-out analysis. There are 13.6 square miles in this district. The build-out analysis found a potential of approximately 2,049 units additional homes could be built under the current zoning regulations, or approximately a four-fold increase. More intense development of limited areas within this district could result in a loss of rural character for portions of the town unless there are modifications of the existing land use regulations.

C. Desired Future Conditions

In keeping with desire to accommodate new development while protecting important resources within this District, Marshfield would like this zone to exhibit the following characteristics for the foreseeable future:

- The rural character and landscape is maintained. New development is generally residential in nature and sited so as to maintain the productive capacity and visual integrity of the landscape.
- The District will accommodate some portion of new residential growth.
- Curb cuts and strip development along rural sections of Route 2 are effectively controlled.
- New commercial and light industrial uses along Route 2 are encouraged to be clustered together and developed in a manner to preserve the rural character of Route 2.
- New development does not overburden capacity of existing road network or place undue stress on the town's ability to provide public services.
- The regulatory framework is conducive to thriving home occupations.

Forestry and Conservation District

A. Physical characteristics and boundaries

The Forestry and Conservation District is all the land in the Town of Marshfield not included in other districts. This district is the most unsettled part of Marshfield. It is distinguished by rugged topography, mountaintops and ridges, swamps, wetlands, and streams. The steep terrain, shallow soils and lack of public access have preserved the

district in a largely undisturbed and natural condition. It includes all State Forest lands and most land along Class 4 roads.

This district is comprised of many woodland areas, productive and unproductive fields, uplands, steep slopes, and wetlands. The district provides vital wildlife habitat and significant opportunities for outdoor recreation. Disturbance of the land in this district must be done with the utmost care in order to prevent soil erosion, contamination to waters, or the destruction of wildlife habitat and other resources, as well as visual blight.

B. Current Land uses, trends, problems/issues

This district contains the most important forestry resources and some of the most important natural areas in the town. The district remains largely undeveloped. According to the 2008 build-out study, approximately 14 single-family dwellings exist in this district. There are 27.4 square miles in this district. New dwellings are currently not permitted to be built in this district unless they are part of a Planned Unit Development. However, there are limited constraints on Planned Unit Developments in this district. Because of the many natural/ecological resources (including wildlife habitat, wetlands, wellhead protection areas and other unique and fragile areas) and physical limitations (soils, slope and topography) within this district, even small scale, limited development can be problematic. Widespread development in the district could prove costly from a public services and environmental perspective. Consequently, new development in this zone should be considered with great care, limited in scope, and closely monitored.

C. Desired Future Conditions:

- District is devoted primarily to resource production, recreational and ecological uses. The vast majority of the District remains undeveloped.
- Prominent landscape features (i.e., ridgelines, hilltops) remain free, or nearly free, of visible development.
- Class 4 roads and legal trails should not be “thrown up” nor legally upgraded to higher levels.

Flood Hazard District

A. Physical characteristics and boundaries

This District includes land within the 100-year flood hazard area as defined by the Federal Emergency Management Agency (FEMA). In 2009, riparian buffer zones near streams and near ponds over 5 acres in size, previously part of this district, were removed from the Flood Hazard District. The regulations for riparian buffer zones are now contained in a new Water Conservation Overlay District. Much of the Winooski River's flood hazard area is agriculturally productive land.

B. CURRENT LAND USES, TRENDS, PROBLEMS/ISSUES

Shoreline areas, floodways, and flood hazard areas perform many valuable ecological functions which should not be compromised by development. How land is used within these areas can profoundly influence water quality, aquatic habitats, and landscape aesthetics. In addition, undeveloped floodways and flood hazard areas serve to store floodwaters, reducing the severity of downstream flooding and avoiding property damage. There are 2.1 square miles in this district. According to the 2008 build-out study, approximately 30 single-family dwellings exist in this district. New dwellings are currently not permitted to be built in this district.

C. DESIRED FUTURE CONDITIONS

- The Winooski River Floodway remains undeveloped and the various ecological, agricultural and flood storage functions of the flood hazard area be preserved.

- Surface waters are clean and attractive and continue to be protected by development setbacks and vegetative buffers.

III. LAND USE GOALS, OBJECTIVES AND STRATEGIES

GOAL Provide landowners reasonable options for the use of their property and provide local regulators with the flexibility to allow for non-traditional and more site sensitive development proposals.

OBJECTIVES:

1. Continue to develop clearly written zoning regulations that inform the citizens of Marshfield of their rights and responsibilities, and the process they must follow to achieve their development goals.

2. Review lot sizes and regulations in the Village District to ensure they allow for the historical compact village development.

3. Require residential developments of four or more units and all mixed-use development within the Agricultural/Rural Residential District to be developed according to Planned Unit Development (PUD) standards in order to conserve natural resources and protect important landscape features.

4. Ensure zoning regulations continue to meet the minimum requirements of Federal Emergency Management Agency and the National Flood Insurance Program.

ISSUE SPECIFIC STRATEGIES:

Village District

a. Consider existing infrastructure and review physical locations to consider providing for higher density, mixed use development, contiguous to currently built-up areas and serviceable (now or in the future) by public infrastructure.
b. Planning Commission to consider re-development within the Village District through higher density by reviewing the existing density of the district and comparing to current zoning regulations to determine if the regulations are overly restricting infill development.
c. The Selectboard is encouraged to direct future municipal construction projects such as civic buildings to the Village District.
d. Review the benefits of seeking Growth Center state designation.
e. The Selectboard should explore financial/tax incentives for development within the Village District.
f. Study the need for further expanding the, food shelf, and food drop.
g. Study the impact of Route 2 traffic in the village and opportunities to improve traffic calming infrastructure and multimodal transportation facilities.
h. Study potential for developing senior housing.
i. Review opportunities for improvement of rental housing conditions.
j. Support existing and new commercial development consistent with the village character.
k. Review opportunities for village beautification.

Agricultural and Rural Residential District

a. The Planning Commission will consider revising PUD criteria and requirements to make sure they clearly provide the appropriate protections, incentives, and review process. Included in this review should be an evaluation of the minimum number of units required for a PUD and whether a PUD should be required for developments with over a certain number of units.
a. The Development Review Board when considering development proposals should seek to minimize development impacts on municipal services, limit fragmentation of land, and protect the Town's important natural resources.
b. Consider standards for screening, landscaping and façade materials for commercial development that help preserve the rural character of the district.
c.
d. Study the pros and cons of expanding the Rural and Residential District areas that are 600 feet from roads to include some areas more than 600 feet from the road.
e. Consider developing regulations that the scale and siting of new structures are in keeping with the surrounding rural character, landscape and architecture.
f. Consider developing regulations that ensure large open fields and farms along arterial roads are preserved through either conservation easements or through requirements to cluster and screen new development to preserve large open space areas.

g. Identify scenic views that are of particular significance and consider means to ensure that they will remain in the future.
h. Consider developing regulations to ensure that individual lots and building envelopes are delineated so as to mitigate the visual impact of new development on views from existing roadways, adjacent properties, and off site vantage points in order to preserve the rural character of the district.
i. Consider developing regulations to allow for flexibility in subdivision development to promote the most appropriate use of land and the protection of productive agricultural or forest land, scenic views, historic sites, shorelines, wetlands, important habitat areas, and other resources of importance to the community, while minimizing the alteration of the natural topography of the land.
j. Consider developing regulations to discourage ridgeline development or conspicuous development on locally prominent landscape features unless it is effectively screened or clearly in the best interest of the public.

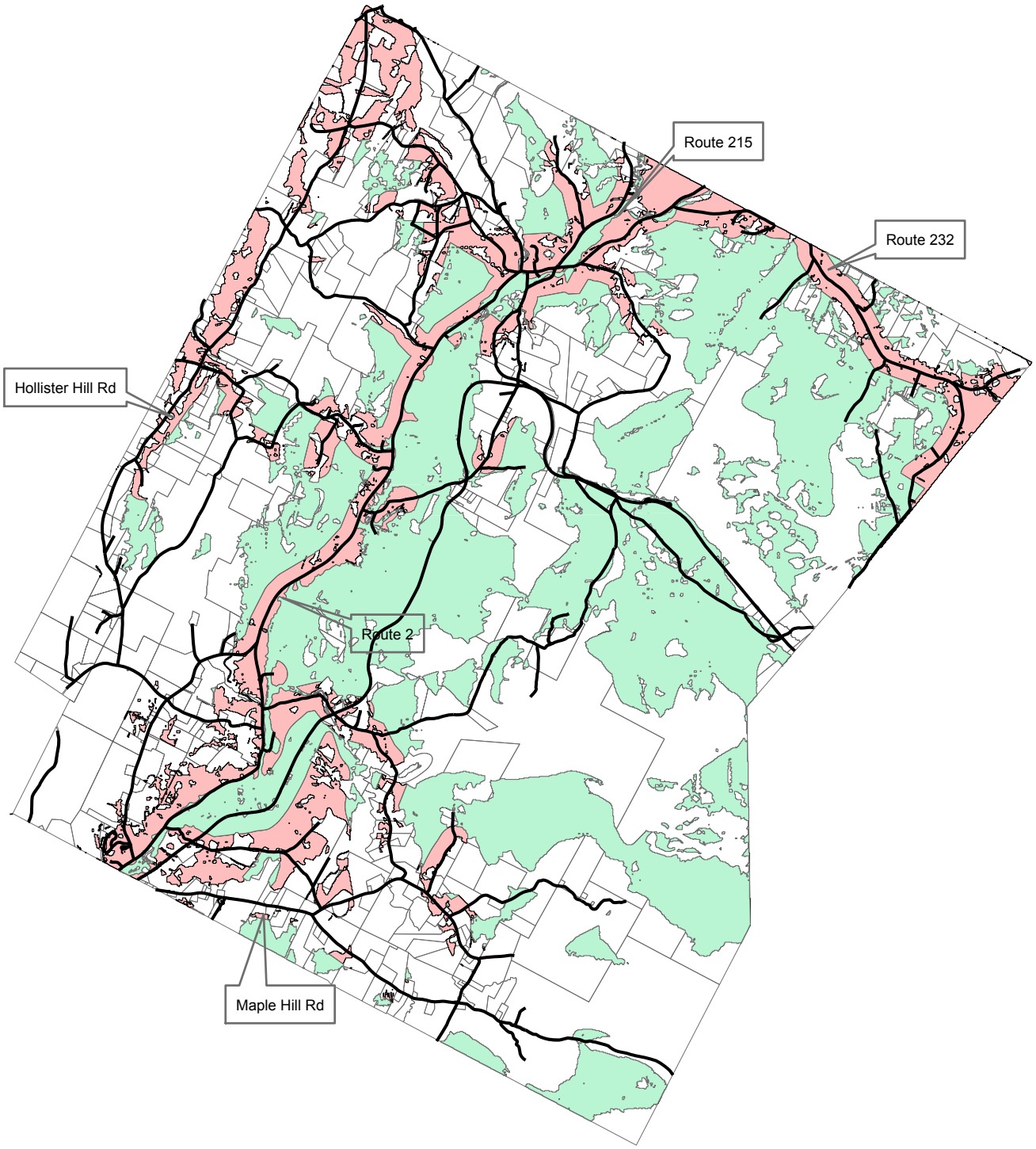
Forestry and Conservation District

a. Maintain, at a minimum, the current zoning regulations in the Forestry and Conservation zoning districts in order to limit development which helps protect the rural character of Marshfield.
b. Remove the allowance for PUD's within the Forestry and Conservation District.
c. Consider modifications of the boundary between the Agricultural and Rural Residential District and the Forestry and Conservation District (see Agricultural and Rural Residential District strategies).

Flood Hazard District

a. Maintain basic requirements of the Town's flood hazard regulations while updating them to comply with changes in the requirements of FEMA and the National Federal Flood Insurance Program.
b. Maintain, at a minimum, the current zoning regulations in the Flood Hazard zoning district in order to limit development which helps protect the rural character of Marshfield.
c. Explore options for adopting Fluvial Erosion Hazard regulations.

Marshfield Town Plan 2017
Viewshed Areas From Route 2 and Route 232



Legend

- Road Network
- Protected Viewshed
- Unprotected Viewshed
- Parcels (2010)

Protected Viewshed includes areas publicly owned, conserved areas, or areas within the Forestry and Conservation District

N

0 2 Miles

MARSHFIELD WIRELESS TELECOMMUNICATIONS FACILITIES BYLAW

Adopted March 4, 2003

TABLE OF CONTENTS

1.1 Title

This bylaw shall be known as the Wireless Telecommunications Facilities Bylaw of the Town of Marshfield. Wireless telecommunication facilities shall include all wireless telecommunication providers, licensed and/or regulated by the Federal Communications Commission, and associated equipment and buildings. Nothing in this bylaw shall be construed to restrict amateur ham radio operators and town municipal services, beyond that already covered by the Marshfield Zoning Regulations.

1.2 Purposes

The purpose of this bylaw is to protect the public health, safety and general welfare of the Town of Marshfield while accommodating the communication needs of residents and businesses. This bylaw shall:

A. Preserve the character and appearance of the Town of Marshfield while allowing adequate wireless telecommunications services to be developed.

B. Protect the scenic, historic, environmental, and natural resources of the Town of Marshfield.

C. Provide standards and requirements for the operation, siting, design, appearance, construction, monitoring, modification, and removal of wireless telecommunications facilities and towers.

D. Minimize tower and antenna proliferation by requiring the sharing of existing communications facilities, towers, and sites where possible and appropriate.

E. Promote the use of existing structures to provide these services.

F. Facilitate the provision of telecommunications services to the residences and businesses of the Town of Marshfield.

G. Minimize the adverse visual effects of towers and other facilities through careful design and siting standards.

H. Encourage, through performance standards and incentives, the location of towers away from higher density residential areas and from other sensitive areas such as schools, hospitals and childcare facilities.

I. Follow the guidelines and regulations set forth in the Marshfield Town Plan and Zoning Regulations.

1.3 Authority

Pursuant to 24 V.S.A. §4401 et seq. the Development Review Board of the Town of Marshfield is authorized to review, approve, conditionally approve, and deny applications for wireless telecommunications facilities, including sketch, preliminary and final plans, and installation. Pursuant to 24 V.S.A. §4407, the Board is authorized to hire qualified persons to conduct an independent technical review of applications and to require the applicant to pay for all reasonable costs thereof.

1.4 Consistency With Federal Law

In addition to other findings required by this bylaw, the Board shall find that its decision regarding an application is intended to be consistent with federal law, particularly the Telecommunications Act of 1996. The bylaw does not:

A. Prohibit or have the effect of prohibiting the provision of personal wireless services;

B. Unreasonably discriminate among providers of functionally equivalent services; or

C. Regulate personal wireless services on the basis of the environmental effects of radio frequency emissions to the extent that the regulated services and facilities comply with the Federal Communications Commission (FCC) regulations concerning such emissions.

1.5 Definitions

[See Glossary of Terms included with this packet .]

1.6 Permitted and Prohibited Locations

Wireless telecommunications towers or facilities may be permitted as conditional uses upon compliance with the provisions of this bylaw in the following zoning districts:

Village Residential
Agricultural and Rural Residential

In addition, within the Village Residential district, only small scale facilities will be allowed as defined below.

Additionally, freestanding telecommunications towers or antennas not defined as small scale facilities, may not be located in any of the following locations:

A. Within 100' or the height of the tower, which ever is greater, of a State or Federally designated wetland.

B. The habitat of any State listed Rare or Endangered Species.

C. Within 300' horizontally from any Historic District or property eligible to be listed on the Federal Historic Register.

D. Closer than 200' horizontally to the boundary of the property on which the tower is located.

E. Closer than 500' horizontally to any structure existing at the time of the application which is used as either a primary or secondary residence, to the property of any school, or to any other building.

F. Within 100' or the height of the tower, which ever is greater, horizontally of any river or perennial stream.

G. Within 500' horizontally of any known archeological site.

H. Within 1,000' horizontally of a designated scenic road or highway.

1.7 Small Scale Facilities

The placement of wireless telecommunications antennas, repeaters or microcells on existing buildings, structures, roofs, or walls, and not extending more than 10 feet from the same, or the installation of ground based facilities less than 30 feet in height, may be approved by the Development Review Board, provided the antennas meet the applicable requirements of this bylaw, upon submission of:

A. A final site and building plan.

B. A report prepared by a qualified engineer indicating the structure's suitability for the telecommunications facility, and that the proposed method of affixing the antenna or other device to the structure complies with standard engineering practices. Complete details of all fixtures and couplings and the exact point(s) of attachment shall be indicated, as well as any additional supporting equipment or facilities.

C. For a facility to be installed on or within an existing structure, a copy of the applicant's executed contract with the owner of the existing structure.

D. However, no such device may be located closer than 50' to an existing residence.

1.8 Application Requirements for Wireless Telecommunications Facilities not Covered Under Section 1.7

An applicant for a permit must be a personal wireless service provider or FCC licensee, or must provide a copy of its executed contract to provide land or facilities to such an entity, to the Development Review Board at the time that an application is submitted. A permit shall not be granted for a tower or facility to be built on speculation.

A. The proposed antennas and equipment would exceed the structural or spatial capacity of the existing or approved tower or facility, as documented by a qualified engineer licensed to practice in the State of Vermont. Additionally, the existing or approved tower cannot be reinforced, modified or replaced to accommodate planned or equivalent equipment, at a reasonable cost, to provide coverage and capacity comparable to that of the proposed facility.

B. The proposed antennas and equipment would cause interference materially impacting the usefulness of other existing or permitted equipment at the existing or approved tower or facility as documented by a qualified engineer and such interference cannot be mitigated at a reasonable cost.

C. The proposed antennas and equipment, either alone or together with existing facilities, equipment or antennas, would create excessive radio frequency exposure.

D. Existing or approved towers and structures cannot accommodate the planned equipment at a height necessary to function reasonably or are too far from the area of needed coverage to function reasonably as documented by a qualified engineer.

E. Aesthetic reasons make it unreasonable to locate the planned telecommunications equipment upon an existing or approved tower or building.

F. There is no existing or approved tower in the area in which coverage is sought.

G. Other unforeseen specific reasons make it unreasonable to locate the planned telecommunications equipment upon an existing or approved tower or building.

Towers must be designed to reasonably provide for future placement of antennas upon the tower and to accept antennas mounted at varying heights when overall permitted height allows. Towers shall be designed structurally and in all other respects to reasonably provide for both the applicant's antennas and additional antennas when overall permitted height allows.

1.11 Access Roads and Above Ground Facilities

Where the construction of new wireless telecommunications towers and facilities requires construction of or improvement to access roads, to the extent practicable, roads shall take into consideration the contour of the land, and be constructed or improved within forest fringe areas, along the edge of open fields, and not in open fields. Utility or service lines shall be designed and located so as to minimize or prevent disruption to the scenic character or beauty of the area. The Town may require closure of access roads to vehicles following facility construction where it is determined that site conditions warrant the same and where maintenance can reasonably access the facility site on foot.

1.12 Tower and Antenna Design Requirements

Proposed facilities shall not unreasonably interfere with the view from any public park, natural scenic vista, historic building or district, or major view corridor. Height and mass of facilities shall not exceed that which is essential for the intended use and public safety.

A. Towers, antennas and any necessary support structures shall be designed to blend into the surrounding environment through the use of color camouflaging and architectural treatment, except in cases in which the Federal Aviation Authority (FAA), state or federal authorities have dictated color. Use of stealth design, including those which imitate natural features may be required in visually sensitive locations, and are highly recommended for all installations.

B. In order to protect public safety and to preserve the scenic character and appearance of the area, the height limit for towers, antennas and tower-related fixtures shall be not more than 20 feet above the average height of the tree line measured within 100 feet of the highest vertical element of the telecommunications facility. Notwithstanding the above, additional height may be approved upon a finding by the Development Review Board that the additional height is necessary in order to provide adequate coverage in the Town of Marshfield or to accomplish collocation of facilities and that the additional height will not cause an undue visual impact on the scenic character or appearance of the area.

C. Towers, antennas and any necessary support structures shall be designed to avoid having an undue adverse aesthetic impact on prominent ridgelines and hilltops. In determining whether a tower's aesthetic impact would be undue and adverse, the Board will consider:

i. the period of time during which the proposed tower would be viewed by the traveling public on a public highway;

ii. the frequency of the view experienced by the traveling public;

iii. the degree to which the tower would be screened by existing vegetation, the topography of the land, and existing structures;

iv. background features in the line of sight to the proposed tower that obscure the facility or make it more conspicuous;

v. the distance of the proposed tower from the view point and the proportion of the facility that is visible above the skyline;

vi. the sensitivity or unique value of a particular view affected by the proposed tower;

vii. significant disruption of a viewshed that provides context to a historic or

scenic resource.

The Board shall have the authority to impose conditions consistent with the purpose of this section in approving a proposed facility. Furthermore, the Board may designate an alternative location for the tower to be evaluated by the applicant if it is determined that the proposed location would result in undue adverse aesthetic impacts. In consideration of this, the applicant may revise its application to include such a site, assuming it is available to the applicant and reasonably technically feasible to meet the applicant's communication objectives.

D. All buildings and structures accessory to a tower (except for electric power poles where specifically exempted by the Board) shall meet the minimum setback requirements of the underlying zoning district or setback requirements specified in this bylaw. If the minimum setbacks of the underlying zoning district are less than the height of the tower, including antennas or other vertical appurtenances, the minimum distance from the tower to any property line shall be no less than the height of the tower, including antennas and other vertical appurtenances.

E. Ground mounted equipment or antennas as well as buildings and structures accessory to a tower shall be screened from view by suitable vegetation, except where a design of non-vegetative screening better complements the architectural character of the surrounding neighborhood. A planted or vegetative screen shall be a minimum of ten feet in depth with a minimum height of six feet and shall have the potential to grow to a height of at least 15 feet at maturity. Existing on-site vegetation outside the immediate site for the wireless facility shall be preserved or improved. Disturbance to existing topography shall be minimized unless the disturbance is demonstrated to result in less visual impact of the facility from surrounding properties and other vantage points.

1.13 Amendments to Existing Wireless Telecommunications Facility Permit

An alteration or addition to a previously approved wireless telecommunications facility shall require a permit amendment when any of the following are proposed:

A. Change in the number of buildings or facilities permitted on the site;

B. Addition or change of any equipment resulting in greater visibility or structural windloading, or additional height of the tower, including profile of additional antennas, not specified in the original application.

1.14 Tower Lighting and Signage; Noise Generated by Facility

Unless required by the Federal Aviation Administration ("FAA"), no lighting of towers is permitted. In any case where a tower is determined to need obstruction marking or lighting, the applicant must demonstrate that it has or will request the least visually obtrusive marking and/or lighting scheme in FAA applications. Copies of required FAA applications shall be submitted by the applicant. Heights

Marshfield Vermont Current Zoning Adopted March 1, 2016

Legend

Roads

- Town Highway
- State Forest Highway
- Legal Trail
- Private
- Vermont State Highway
- US Highway
- Discontinued
- Structure
- E911 Points

Surface waters

- USGS Rivers, Lakes, and Ponds
- USGS Streams
- 75-Foot Stream Setback
- Parcels

Marshfield Zoning 2016

- Agricultural & Rural Residential
- Forestry & Conservation
- Flood Hazard District
- Village

0 0.25 0.5 1 Kilometers

0 0.25 0.5 1 Miles

N

The exact boundaries for the Flood Hazard District includes all areas identified as areas of special flood hazard in and on the most current flood insurance studies and maps published Federal Management Agency (FEMA), National Flood Insurance Program (NFIP). If the flood insurance maps are modified and areas are removed from the published map, those areas shall be considered as part of the closest adjacent zoning district.

The Watercourse Conservation Overlay District includes all lands along all streams (as defined in this ordinance) that are within 75 feet horizontal distance measured from the top of slope, where the channel runs adjacent to a valley wall or high terrace, or top of bank, where the channel has access to its floodplain, or within 125 feet of these waters if the slopes of the water or area to be developed is 15 degrees or more. The District also includes all lands along ponds over 5 acres in size that are within 75 feet horizontal distance measured from the mean water level, or within 125 feet of these waters if the slopes of the affected area is 15 degrees or more. Streams are defined as those areas where surface waters produce a defined channel or bed. A defined channel or bed is an area that demonstrates clear evidence of the passage of water. The channel or bed need not contain water year-round. This definition does not include artificially created ditches, canals or stormwater runoff devices.

SOURCE:
E911 Building Points - VCGI Updated by CTI 2007
Impervious - CVRPC 2006 digitized from 1997 1:5000 Orthos
Surface Water - NHD USGS 2004
Parcels: CVRPC -Town of Marshfield 2013
Roads: VCGI - 1:5000 E911 Rds 2014
Watercourse Conservation Overlay District - 75ft Buffer off of NHD USGS Stream Centerline 2004
Zoning: CVRPC - Town of Marshfield 2016

Map Created 6/10/04 by CVRPC.
Edited by CVRPC 03/20/09.
Edited by CVRPC 03/07/16.
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