

**TOWN OF SHELBURNE ORDINANCE FOR
TOWERS AND TELECOMMUNICATION FACILITIES**

PREAMBLE

WHEREAS, the Vermont Legislature, by Act No. 94 of the 1998 Legislative Session, enacted enabling authority, located at 24 V.S.A. § 2291(19), granting Vermont municipalities the power to "regulate the construction, alteration, development, and decommissioning of wireless telecommunications facilities and ancillary improvements where the city, town or village has not adopted zoning or where those activities are not regulated pursuant to a duly adopted zoning bylaw"; and

WHEREAS, pursuant to the authority granted by 24 V.S.A. § 2291(19), the Town of Shelburne Selectboard adopted this Town of Shelburne Ordinance for Towers and Telecommunications Facilities, effective July 10, 2001; and

WHEREAS, this Ordinance was adopted for the purposes stated in Article I, Subsections 1-7, and is intended to be consistent with state and federal law, particularly the federal Telecommunications Act of 1996, as stated in Article II of the Ordinance; and

WHEREAS, by subsequent legislation, enacted pursuant to Act No. 79 of the 2007 Legislative Session, the Legislature added § 248a to Title 30, V.S.A., placing certain telecommunications facilities under the jurisdiction of the Vermont Public Service Board; and

WHEREAS, Act No. 79 included therein language requiring that the Public Service Board, before issuing a certificate of public good for such facilities under § 248a, find that "[u]nless there is good cause to find otherwise, substantial deference has been given to the land conservation measures in the plans of affected municipalities and the recommendations of the municipal and regional planning commissions regarding municipal and regional plans, respectively"; and

WHEREAS, Act No. 79 further included therein language preempting "[o]rdinances adopted pursuant to subdivision 2291(19) of Title 24 or a municipal charter that would otherwise apply to the construction or installation of facilities subject to the provisions of" § 248a; and

WHEREAS, Act No. 54 of the 2009 Legislative Session amended 30 V.S.A. § 248a and required the Public Service Board, "unless there is good cause to find otherwise," to give "substantial deference" to the "recommendations of municipal legislative bodies," and further provided, notwithstanding the preemption of ordinances adopted under 24 V.S.A. § 2291(19), that "[n]othing in this section or other provision of law shall prevent a municipal body from basing its recommendations 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"; and

WHEREAS, the Legislature has not yet amended or repealed its preemption of ordinances adopted under 24 V.S.A. § 2291(19) or a municipal charter in subsequent amendments to 30 V.S.A. § 248a, and has extended the "sunset" date on Public Service Board authority over applications for a certificate of public good for telecommunications facilities; and

WHEREAS, pursuant to Dillon's Rule, Vermont municipalities have only those powers and functions specifically authorized by the Legislature, and such additional functions as may be incident, subordinate or necessary to the exercise thereof; and

WHEREAS, the combined effect of the Legislature's actions and Dillon's Rule is to deprive the Town of authority to regulate telecommunications facilities under this Ordinance, the Town has a vital interest in ensuring that substantial deference is given to the recommendations of municipal bodies during the § 248a review process, including recommendations based on this Ordinance, and that clear written community standards contained in this Ordinance are given full and fair consideration in any evaluation of a proposed telecommunication facility under the criteria of 10 V.S.A. § 6086(a)(8) and such other provisions of law applicable to the Public Service Board's review of a petition for a certificate of public good pursuant to 30 V.S.A. § 248a; and

WHEREAS, this Ordinance shall again regulate the erection, construction, installation and substantial modification of telecommunications facilities in the Town upon the sunset of the Public Service Board's authority under 30 V.S.A. § 248a; and

WHEREAS, the Selectboard finds, on the basis of information made available to the Town and studies developed both prior and subsequent to the adoption of this Ordinance, that while telecommunication facilities can provide a public benefit and

serve the public good, the proliferation of towers and telecommunications facilities, and the siting of the same without full consideration of their potential adverse effects on other public values and investments, results in a public nuisance which it is authorized by law to abate or remove; and

WHEREAS, the Selectboard believes that amendments to this Ordinance are necessary to respond to the changes in Vermont law regarding the municipal regulation of telecommunication facilities that have occurred since the date of the Ordinance's adoption, to ensure that recommendations of municipal bodies based on the Ordinance are given substantial deference in any proceedings under 30 V.S.A. § 248a, to provide clear written community standards related to the siting, construction, installation, and substantial modification of telecommunication facilities, and to improve the Ordinance for the purposes of promoting and protecting the public health, safety, welfare and convenience of the Town;

NOW THEREFORE, the Shelburne Selectboard hereby amends this Ordinance to state:

ARTICLE I AUTHORITY AND PURPOSE

- A. This ordinance is enacted pursuant to the authority set forth in 24 V.S.A., § 2291, subsections 14 and 19, and applicable provisions of the Charter of the Town of Shelburne, Title 24 Appendix, Chapter 147, to regulate, to the full extent permitted by state and federal law, telecommunications facilities within the Town of Shelburne in order to:
1. Preserve the character and appearance of the Town of Shelburne while allowing adequate telecommunications services to be developed.
 2. Protect the aesthetic, scenic, historic, environmental, visual and natural or human resources of Shelburne, including the Town's rural and rural-residential landscapes and open space.
 3. Provide standards and requirements to guide the placement, design, appearance, construction, monitoring, modification and removal of telecommunication facilities and towers.
 4. Preserve property values within the Town.

5. Promote the siting of telecommunication facilities, towers and/or antennae in a manner which promotes the general safety, health, welfare and quality of life of the citizens of Shelburne and all those who visit this community.
6. Require the use of existing structures whenever and wherever possible.
7. Require the sharing of existing communications facilities, towers, and sites where possible.
8. Prevent the proliferation of telecommunication facilities and towers in the Town, and the indiscriminate siting thereof, from resulting in a public nuisance that undermines the public health, safety, welfare and convenience of residents of and visitors to Shelburne and the public investment in land use planning, including the identification, protection, and preservation of natural, agricultural, scenic and historic features; open space preservation; scenic roads, waterways and views; outdoor recreation; tourism; public facilities and services; and land resources.

B. This ordinance shall constitute a civil ordinance within the meaning of 24 V.S.A., § 1971.

ARTICLE II CONSISTENCY WITH STATE AND FEDERAL LAW

A. This Ordinance is intended to be consistent with state and federal law, including the Telecommunications Act of 1996 in that:

1. It does not prohibit or have the effect of prohibiting the provision of personal wireless services;
2. It is not intended to be used to unreasonably discriminate among providers of functionally equivalent services;
3. It does not 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 FCC's regulations concerning such emissions.

This Ordinance shall be liberally construed to effectuate its purpose. The provisions of this Ordinance are severable; if any phrase, clause, or provision is declared by a tribunal of competent jurisdiction to be invalid, unenforceable or not in accordance with any controlling state or federal law, the validity of the remainder of this Ordinance shall not be affected and all other articles shall remain valid and enforceable.

ARTICLE III ESTABLISHMENT OF TELECOMMUNICATIONS REVIEW BOARD

A. ESTABLISHMENT OF BOARD

The Selectboard shall appoint the Shelburne Planning Commission, or its successor, as the Telecommunications Review Board ("the Board"). The Board shall review all applications for towers and telecommunications facilities within the Town of Shelburne, pursuant to this ordinance for the purpose of evaluating a proposed or existing telecommunication facility's or tower's conformance with this Ordinance, or any other enactments, criteria and standards within the scope of its authority to evaluate, and providing recommendations and comments thereon for the benefit of the Public Service Board.

B. PROVISION FOR HIRING INDEPENDENT CONSULTANTS

In connection with review of an application under this Ordinance, the Board may determine that it needs the assistance of an independent consultant or consultants to evaluate the application. Upon making such determination, the Board may hire independent consultants, the reasonable costs of whose

services shall be paid for by the applicant. These consultants shall be qualified professionals with an appropriate combination of education, training, record of service, and/or certification in one of the following fields:

1. Telecommunications/radiofrequency engineering,
2. Structural engineering,
3. Assessment of electromagnetic fields,
4. Aesthetic evaluation,

5. If determined necessary by the Board, other fields. The Board may provide any independent consultant(s) hired pursuant to this section any application and supporting materials for their analysis and review.

C. Any person seeking to erect, construct, install or substantially modify a tower or a telecommunications facility in the Town of Shelburne, or seeking to solicit recommendations or comments from the Town in support of a petition for a certificate of public good under 30 V.S.A. § 248a, shall first complete an application using a form established by the Telecommunications Review Board. The completed application with supporting documentation as required by Article IX of this Ordinance shall be filed with the Administrative Officer of the Town of Shelburne.

~~D. Upon the filing of such an application, the Board shall hold a public hearing preceded by public notice meeting the requirements of 24 V.S.A. § 4464(a)(1). Upon completion of the public hearing, the Board shall issue a written decision on the application. A written decision on an application shall comply with the requirements of Article IV (B).~~

E. The Board's written decision shall form the basis for any recommendation by the municipality to the Public Service Board in any proceeding initiated by the applicant to obtain a certificate of public good pursuant to 30 V.S.A. § 248a. An applicant's failure or refusal to comply with the requirements of this Article shall result in a negative recommendation to the Public Service Board under 30 V.S.A. §248a(c)(2).

ARTICLE IV REQUIRED DECISION

A. Telecommunications Decision:

No tower or telecommunications facility shall be erected, constructed, installed or substantially modified without first obtaining a written decision on the application from the Board.

B. Documentation of Decision:

Any decision by the Board on an application for a permit under this Ordinance shall be in conformance with 47

U.S.C. § 332(7)(B) (iii) of the Act, in that it shall be in writing and supported by substantial evidence contained in a written record.

ARTICLE V EXEMPTIONS

- A. The following telecommunications facilities (if no higher than 35 feet, as measured from the average elevation of the finished grade to the highest point of the facility) are exempt from this Ordinance.
1. amateur (ham) radio
 2. citizens band radio
 3. local business radio dispatch
 4. personal use antennae.
- B. Telecommunications facilities for municipal dispatch services are exempt, regardless of height.

A temporary facility (tower, pole, antenna, etc. ,intended for testing purposes, for use while a permanent facility is under construction or being repaired, or for a special event or conference) may exceed 35 feet. A temporary facility, utilized for no longer than seven (7) days, is exempt from this Ordinance. A temporary facility permit, describing the temporary facility, stating the purpose for the temporary facility, and establishing the dates during which the temporary facility will be utilized, shall be issued by the Administrative Officer or his/her designee. The Administrative Officer may extend the length of a permit for a temporary facility erected during repairs to a permanent facility if evidence is provided that repair work is proceeding.

No other Telecommunications Facility shall be considered exempt from this ordinance for any reason whether or not said Facility is proposed to share a Tower or other structure with such exempt uses.

ARTICLE VI FEES

A schedule of fees for telecommunications facility and tower applications, any monitoring of exposure and inspection of structures, and any other fees shall be established by the Shelburne Selectboard. This schedule may be amended from time to

time. Upon written request, fees may be waived by the Selectboard for good cause shown.

ARTICLE VII PROJECT REVIEW CRITERIA

The Board shall evaluate an application under all of the following criteria which are applicable before rendering a decision on the application:

- A. Applicant is not already providing adequate coverage and/or adequate capacity to the area to be served; and
- B. Applicant is not able to use existing tower/facility sites either with or without the use of repeaters or similar technology to provide adequate coverage and/or adequate capacity to the area to be served; and
- C. Applicant has endeavored to provide adequate coverage and capacity to the area to be served with the least number of facilities and/or towers, and/or least obtrusive design; and
- D. Efforts have been made to locate new towers adjacent existing towers, and
- E. Applicant has agreed to rent or lease available space on the tower, under the terms of a fair market lease, with reasonable conditions and without discrimination to other telecommunications providers; and
- F. Applicant attempted to or is making use of available municipal lands and suitable existing municipal and privately owned structures; and
- G. The proposed facility will be built and maintained in compliance with FCC Rules, and the transmission of radiofrequency energy shall be such that human exposure is in compliance with Rules & Regulations specified in 47 C.F.R. Part 1-Practice and Procedure, Subpart I-Procedures Implementing the National Environmental Policy Act of 1969; and
- H. The proposed facility will be located so as to minimize the following potential impacts:
 - 1. Visual/Aesthetic: Telecommunications facilities shall be sited off hillsides and ridge lines and where their visual impact is least detrimental to the scenic or natural

beauty of rural, rural residential and open space areas, as identified in the municipal plan and any maps incorporated therein. In determining whether or not a telecommunication facility will have the least detrimental impact on the scenic or natural beauty of an identified rural, rural residential or open space area, the Board shall consider:

- a. The period of time during which the proposed telecommunication facility would be viewed by the public on a public road, highway, path or body of water;
 - b. The frequency of the view of the proposed telecommunication facility as experienced by the public;
 - c. The degree to which the view of the telecommunication facility is screened by topographic features;
 - d. The degree to which background features in the line of sight to the proposed telecommunication facility obscure the facility or make it less conspicuous;
 - e. The distance of the proposed telecommunication facility from the viewing vantage point and the proportion of the facility that is visible above the skyline or treeline; the number of vehicles and/or viewers traveling on a public road highway, path or waterway at or near the critical vantage point; and
 - f. The sensitivity or unique value of the particular view affected by the proposed tower or telecommunications facility. In evaluating the sensitivity of a view, the Board shall consider composition, including iconic features, the presence of intact views, and the presence of non-intact views, where the addition of atypical visual elements result in a substantial change to or compromise the viewshed.
2. Property values: The facility will not have an undue adverse impact on surrounding property values.
 3. Safety hazards: In cases of structural failure, ice accumulation and discharge, and attractive nuisance.
 4. Electromagnetic radiation: In case the telecommunications facility is found to exceed the FCC guidelines.

5. Location

- a. Telecommunication facilities and towers shall not be located in the Rural Area or the Conservation Area, as identified in the Composite Future Land Use Map (Map 5) of the duly adopted municipal plan. Telecommunications facilities and towers shall not be located within the habitat of any state listed rare or endangered wildlife or plant species.
 - b. Telecommunication facilities and towers may be located in one of the following districts, as identified on the Shelburne "Zoning Districts" Map or on one of the following structures:
 - Commerce & Industry
 - Commerce & Industry South
 - Any existing structure which exceeds 40' in height
 - c. Repeaters and cable microcell integrators may be located within any zoning district.
6. Alternate locations: Towers and telecommunication facilities shall not be located within any other zoning district under the Zoning Bylaws, unless location in another district has been clearly demonstrated to be the only feasible way to provide adequate coverage.

ARTICLE VIII GENERAL PROJECT REQUIREMENTS

A. ACCESS ROADS AND ABOVE GROUND UTILITIES

Where new towers and telecommunication facilities require construction of or improvement to access roads, to the extent practicable, roads shall follow the contour of the land, and be constructed or improved within existing forest or forest fringe areas, 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. Such utility and service lines shall be installed underground whenever reasonably feasible.

B. LANDSCAPING/SCREENING

Screening shall be required at the perimeter of the site. A natural or planted vegetative screen of a minimum of 20 feet in depth and 6 feet in height shall be maintained at all times. Vegetation shall be of a type that has the potential to reach a height of at least 15 feet at maturity. Existing vegetation surrounding the site shall be preserved and maintained to the greatest extent possible. Applicant shall obtain a financial surety to cover the cost of the remediation of any damage to the landscape which occurs during the clearing of the site.

C. FENCING AND SIGNS

The area around the tower and communication equipment shelter(s) shall be completely fenced for security to a minimum height of six feet and gated. Use of razor wire is not permitted. A sign no greater than two (2) square feet indicating the name of the facility owner(2) and a 24 hour emergency telephone number, either local or toll-free, shall be posted adjacent to the entry gate. In addition, "No Trespassing" or other warning signs, and the federal tower registration plate, where applicable, may be posted on the fence or as required to meet federal requirements.

D. BUILDING DESIGN

Communication equipment shelters and accessory buildings located on the telecommunication property shall be designed to be architecturally similar and compatible with each other, and shall be no more than 12 feet high, unless the Board determines that a higher structure would be more comparable with the surroundings. The building shall be used only for the housing of equipment related to this particular site. Whenever possible, the buildings shall be joined or clustered so as to appear as one building.

E. TOWER FINISH

New towers shall have a galvanized finish unless otherwise required. The Board may request that the tower(s) be painted or otherwise camouflaged to minimize the adverse visual impact.

F. COMMERCIAL ADVERTISING

Commercial advertising shall not be allowed on any antenna,

tower, or accessory building or communication equipment shelter.

G. LIGHTING

No external lighting is permitted, except for manually operated emergency lights for use only when operating personnel are on site, and as excepted in I, below.

H. NOISE

The sustained (for a period of one hour) sound pressure level of any telecommunication facility equipment shall not exceed the 70 dbA decibel level at the property line between the hours of 7:00 a.m. and 7:00 p.m., and shall not exceed the 60 dbA decibel level at the property line between the hours of 7:00 p.m. and 7:00 a.m. If the noise is impulsive (i.e. hammering), intermittent (i.e. machine sounds) or periodic (i.e. hums or screeches), the maximum sound pressure levels described above shall be reduced by five (5) dbA.

I. AIR NAVIGATION

No tower or telecommunications facility that would be classified as a hazard to air navigation, as defined by the Federal Aviation regulations (Title 14 CFR) is permitted. In the event of subsequent FAA determination that obstruction lighting or painting is required, Permittees under this ordinance agree to apply for the least obtrusive means of satisfying FAA regulations.

J. HEIGHT OF TOWERS

New towers shall not exceed 30 feet above treetops within a 200 foot radius. Applicant may submit a request for additional height to provide adequate service, to accommodate future sharing, or to provide indirect service as described in Article VIII, A, of this article, and shall provide design information to justify such additional height.

K. SETBACK REQUIREMENTS

1. No repeater or cable microcell integrator shall be

located closer than 100 feet to a structure intended for human occupancy or principal use.

2. No other telecommunications facility, including guy-wire anchors and protective fencing, if any, shall be located:
 - a. closer than 300 feet horizontally to any boundary of the site on which the tower is located, or 1.5 times the height of the facility, whichever is greater.
 - b. within 200 feet horizontally of any Vermont or federally regulated wetland.
 - c. within 200 feet horizontally of the riparian zone measured horizontally from any river or perennial stream.
3. Exception: When the telecommunications facility is on an existing structure, the setback requirement will be 100 feet from any structure intended for human occupancy or principal use.

L. REMOVAL REQUIREMENTS

Any telecommunications facility which ceases to operate for a period of one (1) year shall be removed. Cease to operate is defined as not performing the permitted functions associated with the telecommunications facility and its equipment on a continuous and ongoing basis for a period of one year. At the time of removal, the facility site shall be remediated such that all telecommunications facility improvements which are no longer utilized are removed. If all facilities on a tower have ceased to operate, the tower shall also be removed, and the site shall be re-vegetated. Existing trees shall only be removed if necessary to complete the required removal.

Applicant shall, as a condition of the permit, provide a financial surety bond payable to the Town of Shelburne and acceptable to the Board to cover the cost of removal of the telecommunications facility and the remediation of the landscape, should the facility cease to operate. Such bond shall be executed prior to construction of the facility. In order to provide for potential increases in cost the bond

shall be in an amount equal to 150% of the estimated cost of removal and site remediation.

ARTICLE IX LEGAL AND TECHNICAL DOCUMENTATION

A. Federal Permits

In connection with its review, the Board may request copies of all pertinent submittals and showings including, but not limited to: FCC permitting/licensing; Environmental Assessments and Environmental Impact Statements; FAA Notice of Construction or Alteration; aeronautical studies; all pertinent data, assumptions and calculations related to service coverage; and all pertinent calculations and/or measurement data related to non-ionizing radiation emissions and exposure.

B. Contacts: Applicant shall submit the exact legal name, address or principal place of business and phone number of the following:

1. Applicant: If any applicant is not a natural person, it shall also give the type of business entity and the state in which it is registered.
2. Person to whom correspondence or communications in regard to the application is to be sent. Notice, orders and other papers may be served upon the person so named, and such service shall be deemed to be service upon the applicant.
3. Person to be contacted in the event of an emergency involving the facility. This should be someone available on a 24-hour basis who is authorized by the applicant to act on behalf of the applicant regarding an emergency situation.

4. Owner of the property on which the proposed tower shall be located, and the owner(s) of the proposed facility. Written permission of the owner(s) of the proposed property(s) or facility site(s) for town's independent consultant(s) to conduct any necessary site visit(s).
5. Names and addresses of the record owners of all abutting properties.

C. Surety

Details of proposed method of financial surety as required in Article VIII, L of this document, Removal Requirements.

D. Commitment to Available Space

Applicants for new tower or telecommunication facility construction or modification shall provide a written, irrevocable commitment valid for the duration of the existence of the tower, to rent or lease available space for collocation on the tower at fair market prices and terms, without discrimination to other telecommunication providers.

E. Lease of Tower

Applicants for a tower or telecommunication facility to be installed on an existing structure shall provide a copy of their lease/contract with the owner of the existing structure.

F. Contract with Provider

Applicants for a telecommunications tower or facility permit must be a telecommunications provider or must provide a copy of its lease/contract with an existing telecommunications provider. An application shall not be submitted for a tower to be built on speculation.

G. Plans and Maps

Required physical plant plans, prepared, stamped and signed by a professional engineer licensed to practice in Vermont shall be submitted. Survey plans shall also be stamped and signed by a land surveyor registered in Vermont. Signal

propagation and radio-frequency studies, plots and related material shall be prepared, clearly identified and signed by a qualified radio-frequency engineer. Plans shall be on 24" X 36" sheets, on as many sheets as necessary, and at scales which are no smaller (i.e. no less precise) than listed below. Each plan sheet shall have a title block indicating the project title, sheet title, sheet number, date, revision dates, scale(s), and original seal(s) and signature(s) of the professional(s) who prepared the plan.

1. Location Map: Copy of a portion of the most recent U.S.G.S. Quadrangle map, at a scale of 1:25,000 or 1:24,000, and showing the area within at least two miles from the proposed tower site. Indicate the tower location and the exact latitude and longitude (degrees, minutes, and seconds to the nearest tenth).
2. Vicinity Map at a scale of 1 inch = 416 feet (1:5000) with contour intervals no greater than ten feet (three meter) showing the entire vicinity within a 2500 foot radius of the tower site, and include the topography, public and private roads and driveways, buildings and structures, bodies of water, wetlands, landscape features, historic sites, habitats for endangered species. Indicate the property lines of the proposed tower site parcel and of all abutters to the tower site parcel (from assessors' maps or available surveys). Indicate any access easement or right of way needed for access from a public way to the tower, and the names of all abutters or property owners along the access easement or who have deeded rights to the easement.
3. Existing Conditions Plan: A recent survey of the area within 500 feet of the tower site at a scale no smaller than 1 inch = 40 feet (1:480 or metric equivalent 1:500) with topography drawn with a minimum of 5 feet (1.5 meter) contour intervals, showing existing utilities, property lines, existing buildings or structures, stone walls or fence lines, wooded areas, existing water wells and springs. Show the boundary of any wetlands or flood plains or watercourses, and of any bodies of water included in the Official Flood Hazard Area within 500 feet from the tower or any related facilities or access ways or appurtenances. The survey plan must have been completed, on the ground, by a land surveyor

(registered in Vermont) within two years prior to the application date.

4. Proposed Site Plans: Proposed facility site layout, grading and utilities at the same scale or larger than the existing conditions plan, and including:

Proposed tower location and any appurtenances, including supports and guy wires, if any, and any accessory building (communication equipment shelter or other). Indicate property boundaries and setback distances to the base(s) of the tower and to the nearest corners of each of the appurtenant structures to those boundaries, and dimensions of all proposed improvements. Where protective fencing is proposed, indicate setback distances from the edge of the fencing.

Indicate proposed spot elevations at the base of the proposed tower and at the base of any guy wires, and the corners of all appurtenant structures. Proposed utilities, including distance from source of power, sizes of service available and required, locations of any proposed utility or communication lines, and whether underground or above ground. Detailed plans for emergency power generation, including:

- i. Percent of electrical power demand being proposed in event of loss of commercial power.
- ii. Type of fuel, storage method, and expected means and frequency of fuel delivery to the site for power generation.
- iii. Level of noise created by any emergency power generation equipment, measured at the property line.
- iv. Amount of generator time based on historical power reliability for the area of the facility, proposed frequency and duration of tests, and description of muffler system and methods for noise abatement.
- v. Feasibility of alternative solar power in conjunction with storage batteries.

- d. Any direct or indirect wetlands alteration proposed.
- e. Detailed plans for drainage of surface and/or subsurface water; plans to control erosion and sedimentation both during construction and as a permanent measure.
- f. Plans indicating locations and specifics of proposed screening, landscaping, ground cover, fencing, etc.; any exterior light or signs.

Plans of proposed access driveway or roadway and parking area at the tower site. Include grading, drainage, traveled width. Include a cross section of the access drive indicating the width, depth of gravel, paving or surface materials.

Plans showing any changes to be made to an existing facility's landscaping, screening, fencing, lighting, drainage, wetlands, grading, driveways or roadways, parking, or other infrastructure as a result of a proposed modification of the facility.

- 5. Proposed Tower and Appurtenances:
 - a. Plans, elevations, sections and details at appropriate scales but no smaller than 1 inch = 10 feet.
 - b. Two cross sections through proposed tower drawn at right angles to each other, and showing the ground profile to at least 100 feet beyond the limit of clearing, and showing any guy wires or supports. Dimension of the proposed height of tower above grade at tower base. Show all proposed antennae, including their location on the tower.
 - c. Details of proposed tower foundation, including cross sections and details. Show all ground attachments, specifications for anchor bolts and other anchoring hardware.
 - d. Details of proposed exterior finish of the tower.

- e. Relative height of the tower to the tops of surrounding trees as they presently exist, and the height to which they are expected to grow in ten years.
- f. Illustrations of the modular structure of the proposed tower indicating the heights of sections which could be removed or added in the future to adapt to changing communications conditions or demands.

A professional structural engineer's written description of the proposed tower structure and its capacity to support additional antennae or other communications facilities at different heights and the ability of the tower to be shortened if future communications facilities no longer require the original height.

A description of available space on the tower, providing illustrations and examples of the type and number of telecommunications facilities which could be mounted on the structure.

Plans of Proposed Communications Equipment Shelter including:

- a. Floor plans, elevations and cross sections at a scale of no smaller than 1/4" = 1' (1:48) of any proposed appurtenant structure, and
- b. Representative elevation views, indicating the roof, facades, doors, and other exterior appearance and materials.

7. Proposed Equipment Plan:

- a. Plans, elevations, sections, and details as appropriate scales but no smaller than 1 inch = 10 feet.
- b. Number and locations of any antennae and repeaters, located on a map as well as by degrees, minutes, and seconds to the nearest tenth of latitude and longitude.

- c. Mounting locations on tower or structure, including heights above ground.
- d. A recent survey of the facility site at a scale no smaller than 1 inch = 40 feet (1:480 or metric equivalent 1:500) showing horizontal and radial distances of antenna(s) to nearest point on property line, and to the nearest dwelling unit.
- e. Antenna type(s), manufacturer(s), model number(s).
- f. For each antenna, the antenna gain, polarization and radiation pattern (composite pattern for an antenna array).

Number of channels per antenna, projected and maximum power input to the antenna(s).

Power output, in normal use and at maximum output for each antenna and all antennae as an aggregate.

Output frequency of the transmitter(s).

For a facility with multiple emitters, the results of an intermodulation study that predicts the interaction of the additional equipment with existing equipment.

8. Visibility Maps:

- a. A minimum of eight (8) view lines in a zero (0) to two (2) mile radius from the site shown beginning at True North and continuing clock-wise at forty-five degree intervals.
- b. A map of the Town of Shelburne on which any visibility of the proposed tower from a public way (including all existing public rights of way) shall be indicated.

9. Balloon Test:

Within 35 days of submitting an application, the applicant shall arrange to fly, or raise upon a temporary mast, a three foot diameter brightly colored balloon at the maximum height of the tower and within fifty horizontal feet of the center of the proposed tower. The date, time, and location of this balloon test shall be advertised by the applicant, at 7 and 14 days in advance of the test date in the *Shelburne News* and the *Burlington Free Press*. The applicant shall inform the Board of the dates and times of the test, at least 14 days in advance. The balloon shall be flown for at least four consecutive hours between 9:00 a.m. and 5:00 p.m. (and at least two hours before sunset) on the dates chosen.

10. Visual Analysis:

The applicant shall develop and submit to the Board a written analysis of the visual impact of the proposed tower, describing its conformance under Article VII.H.1.

This analysis shall include photographs of the balloon test taken from at least 10 different perspectives within the Town of Shelburne.

ARTICLE X EVIDENCE OF NEED

A. Existing Coverage

Applicant shall provide written documentation demonstrating that existing telecommunications facility sites and other existing structures of suitable height in Shelburne and abutting towns in Vermont, including area within a five (5) mile radius of the proposed site, cannot reasonably be made to provide adequate coverage and/or adequate capacity to areas lacking such coverage and/or capacity. The documentation shall include, for each facility site listed which is owned or operated by the applicant, the exact location (in longitude and latitude, to degrees, minutes and seconds to the nearest tenth), ground elevation, height of tower or structure, output frequency, number of channels, power input and maximum power output per channel. Potential adjustments to these existing facility sites, including changes in antenna type, orientation, gain, height or power output shall be specified. Radial or tiled coverage plots showing each of

these existing facility sites, as they exist, and with adjustments as above, shall be provided as part of the application.

B. USE OF REPEATERS

The use of repeaters to assure adequate coverage, or to fill holes within areas of otherwise adequate coverage, while minimizing the number of required towers is permitted and encouraged. The use of cable microcell integrators is considered a use of repeaters and one application may be submitted which covers all such units. Applicants shall detail the number, location, power output, and coverage of any proposed repeaters in their systems and provide engineering data to justify their use.

Applicant shall demonstrate with written documentation that they have analyzed the feasibility of repeaters in conjunction with all facility sites listed in compliance with Article X, A (above) to provide adequate coverage and/or adequate capacity to the town of Shelburne. Radial or tiled coverage plots of all repeaters considered for use in conjunction with these facility sites shall be provided as part of the application.

C. INDIRECT SERVICE

Applicant shall demonstrate which portion of a tower or structure and which antennae, if any, are to reduce or eliminate reliance on land-lines, or otherwise provide communications capability to the applicant, as opposed to providing direct service to customers. Such provision of indirect service may be considered if reasonable alternatives are not available and the incremental effect is consistent with the purposes set forth in this ordinance.

D. Five-Year Plan

All applications shall be accompanied by a written five-year plan for the utilization of the proposed facilities. This plan should include justification for capacity in excess of immediate needs, as well as plans for any further development within the town.

ARTICLE XI MONITORING AND EVALUATION OF COMPLIANCE

- A. The applicant shall submit a statement that the proposed facility will not exceed the FCC guidelines for Maximum Permissible Exposure ("MPE") levels for radiofrequency (non-ionizing) radiation. Upon completion of construction and prior to regular use, and annually thereafter, the applicant shall certify that the facility meets the applicable FCC MPE guidelines for radio frequency (non-ionizing) radiation. The Board may require, where applicable and allowed by federal law, site testing, at the applicant's expense, to demonstrate compliance. Such testing shall utilize methods in accordance with National Council on Radiation Protection and Measurements Reports 86 and 119, FCC Office of Engineering & Technology Bulletin 65, relevant decisions at the FCC web site (www.fcc.gov/oet/rfsafety), and Rules & Regulations specified in 47 C.F.R. Part 1-Practice and Procedure, Subpart I-Procedures Implementing the National Environmental Policy Act of 1969. The Board may, at its discretion and in compliance with FCC policy, allow worst-case calculations by a qualified radiofrequency engineer in lieu of actual measurements.

Compliance certification by a site user, since it will demonstrate compliance of all emitters at the site, may be submitted on behalf of all collocated facilities provided there is annual demonstration of compliance. Financial responsibility shall be in accordance with RIPE compliance responsibility outlined in FCC policy related to collocation sites.

- B. Excessive Exposure

Should the monitoring of a facility site reveal that the site exceeds the current FCC standard and guidelines, the owner(s) of all facilities utilizing that site shall be so notified. In accordance with FCC requirements, the owner(s) must immediately reduce power or cease operation as necessary to protect persons having access to the site, tower, or antennae. Additionally, the owner(s) shall submit to the Board a plan for the correction of the situation that resulted in excessive exposure. Failure to act as described above shall be a violation of the permit.

C. Structural Inspection

Tower owner(s) shall pay for an independent consultant (a licensed professional structural engineer), hired by the Town, to conduct inspections of the tower's structural integrity and safety. Guyed towers shall be inspected at least every three years. Monopoles and non-guyed lattice towers shall be inspected at least every five years. A report of the inspection results shall be prepared by the independent consultant and submitted to the Board and the Town Clerk. Any major modification of existing facility which includes changes to tower dimensions or antenna numbers or type shall require new structural inspection.

D. Unsafe Structure

Should the inspection of any tower reveal any structural defect(s) which, in the opinion of the independent consultant render(s) that tower unsafe, the following actions must be taken: Within ten (10) business days of notification of unsafe structure, the owner(s) of the tower shall submit a plan to remediate the structural defect(s). The plan shall be submitted to the Zoning Administrator, or his/her designee, who shall review the plan and issue a written statement to the owner(s) to proceed. This plan shall be initiated within ten (10) days of the letter to proceed, and completed as soon as reasonably possible. Failure to accomplish this remediation of structural defect(s) within ten (10) business days of initial notification shall be a violation of the permit.

ARTICLE XII ENFORCEMENT

This ordinance shall be enforced as a civil ordinance in accordance with 24 V.S.A., Chapter 59, and applicable provisions of the Shelburne Charter.

ARTICLE XIII DEFINITIONS AND WORD USAGE

The following terms shall have the meanings indicated. The word "shall" or "will" indicate mandatory requirements; "may" is advisory and indicates recommendations which are not mandatory.

1. ADEQUATE COVERAGE: Coverage is considered to be "adequate" within that area surrounding a base station where the

predicted or measured median field strength of the transmitted signal is such that the majority of the time, commonly used transceivers properly installed and operated will be able to communicate within the base station without objectionable noise and/or without calls being dropped. It is acceptable for there to be holes within the area of adequate coverage as long as the signal regains its strength to allow functional use of a typical transceiver. It is acceptable for there to be holes within the area of adequate coverage as long as the signal regains its strength further away from the base station. For the limited purpose of determining whether the use of a repeater is necessary or desirable, there shall be deemed not to be adequate coverage within said holes. The outer boundary of the area of adequate coverage, however, is that location past which the signal does not regain.

2. ADEQUATE CAPACITY: Capacity is considered to be "adequate" if the grade of service ("GOS") is p.05 or better for median teletraffic levels offered during the typical busy hour, as assessed by direct measurement of the facility in question. The GOS shall be determined by the use of standard Erlang B calculations. As call blocking may occur in either the land line or radio portions of a wireless network, Adequate Capacity for this regulation shall apply only to the capacity of the radio components. Where capacity must be determined prior to the installation of the personal wireless services facility in question, Adequate Capacity shall be determined on the basis of a 20% busy hour (20% of all offered traffic occurring within the busiest hour of the day), with total daily traffic based on aggregate estimates of the expected traffic in the coverage area.
3. ANTENNA: A device which is attached to a tower, or other structure for transmitting and/or receiving electromagnetic waves.
4. AVAILABLE SPACE: The space on a tower or structure to which antennae of a telecommunications provider are both structurally able to be attached.
5. BASE STATION: The primary sending and receiving site in a wireless telecommunications network. More than one base station and/or more than one variety of telecommunications provider can be located on a single tower or structure.

6. BROADCASTING: The dissemination of radio communications intended to be received by the public, directly or by the intermediary of relay stations.
7. BULLETIN 65: Published by the FCC Office of Engineering and Technology specifying radio frequency radiation levels and methods to determine compliance.
8. CABLE MICROCELL INTEGRATOR: A very low power (typically one or two watt output per channel) transceiver (transmitter/receiver) attached to, and interfaced with, the cable TV infrastructure.
9. CHANNEL: The segment of electromagnetic spectrum which comprises a distinct audio, video or data signal. An antenna may simultaneously transmit and receive multiple channels.
10. COMMUNICATIONS EQUIPMENT SHELTER: A structure designed exclusively to enclose equipment used in connection with telecommunications transmissions.
11. dBm: Unit of measure of the power level of an electromagnetic signal at the input of a receiver, given its antenna system gain at a particular frequency, expressed as decibels (dB) above one milliwatt. Signal predictions with this measure are valid at one particular frequency, and ambiguous unless all receivers and antenna combinations are identical.
12. dBu: Unit of measure of the field intensity of an electromagnetic signal, expressed as decibels (dB) above one microvolt per meter, an absolute measure for describing and comparing service areas, independent of the many variables (see d) introduced by different receiver configurations.
13. FEDERAL COMMUNICATIONS COMMISSION (FCC): The government agency responsible for regulating telecommunications in the United States.
14. GIGAHERTZ (GHz): One billion Hertz.
15. HERTZ: One Hertz is the frequency of electric or magnetic field which reverses polarity once each second, or one cycle per second.

16. LOCATION: References to site location shall be the exact longitude and latitude, to the nearest tenth of a second; the datum employed shall be specified.
17. MEGAHERTZ (MHZ): One million Hertz.
18. MONITORING: The measurement, by the use of instruments in the field, of non-ionizing radiation exposure at a site as a whole, or from individual telecommunications facilities, towers, antennae, or repeaters.
19. MONOPOLE: A single self-supporting vertical pole with no guy wire anchors, usually consisting of a galvanized or other unpainted metal, or a wooden pole with below grade foundations.
20. PERSONAL WIRELESS SERVICES: Commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services. These services include: cellular services, personal communication services, specialized mobile radio services, and paging services.
21. RADIAL COVERAGE PLOTS: Radial plots are the result of drawing equally-spaced lines (radials) from the point of the antenna, calculating the expected signal and indicating this graphically on a map. The relative signal strength may be indicated by varying the size or color at each point being studied along the radial; a threshold plot would use a mark to indicate whether that point would be strong enough to provide adequate coverage - i.e. the points meeting the threshold of adequate coverage. The drawback is the concentration of points close to the antenna and the divergence of points far from the site near the ends of the radials.
22. RADIATED-SIGNAL PROPAGATION STUDIES OR COVERAGE PLOTS: Computer generated estimates of the signal emanating, and prediction of coverage, from Antennas or Repeaters sited on a specific tower or structure. The height above ground, power input and output, frequency output, type of antenna, antenna gain, topography of the site and its surroundings are all taken into account to create these simulations. They are the primarily tool for determining whether a site will provide adequate coverage for the telecommunications facility proposed for that site.

23. RADIO COMMUNICATIONS: The transmission by radio of writing, signs, signals, pictures and sounds of all kinds, including all instrumentalities, facilities, apparatus and services (among other things, the receipt, forwarding and delivery of communications) incidental to such transmission.
24. REPEATER: A small receiver/relay transmitter of relatively low power output designed to provide service to areas which are not able to receive adequate coverage directly from a base or primary station.
25. STRUCTURALLY ABLE: The determination that a tower or structure is capable of carrying the load imposed by the proposed new antennae under all reasonable predictable conditions as determined by professional structure engineering analysis.
26. STRUCTURE: An assembly of materials for occupancy or use, including, but not limited to, a building, mobile home or trailer, billboard, sign, wall or fence, except for a wall or fence on a working farm.
27. SUBSTANTIAL MODIFICATION OF A TELECOMMUNICATION FACILITY: Any change, or proposed change in power input or output, number of antennae, frequency, change in antenna type or model, repositioning of antenna(s), change in number of channels per antenna above the maximum number approved under a telecommunication permit. Also, any change, or proposed change in dimension of a tower or other structure designed to support telecommunications equipment.
28. TELECOMMUNICATIONS FACILITY: Any structure and/or equipment which is used for the transmission into the atmosphere or transmission and reception from the atmosphere of radio frequency waves of a telecommunications provider, including any tower or structure on which such equipment is located, whether owned by the provider or some other entity, and also including any accessory structure located on the telecommunications property. For the purposes of this ordinance, this definition shall include facilities for the broadcasting of radio communications.
29. TELECOMMUNICATIONS PROPERTY: A lot, or any part thereof, which is owned or leased by one or more telecommunications providers and upon which one or more telecommunications facility(s) and required landscaping are located. It shall

meet minimum lot size regulations for the zone in which it is to be located.


30. TELECOMMUNICATIONS PROVIDER: An entity licensed by the FCC to provide telecommunications services.
31. TILED COVERAGE PLOTS: Tiled plots result from calculating the signal at uniformly-spaced locations on a rectangular grid, or tile, of the area of concern. Unlike radial plots, tiled plots provide a uniform distribution of points over the area of interest; usually the same grid will be used as different sites are examined, and it is not necessary that the transmitter be within the grid area of interest. As with radial plots (see RADIAL COVERAGE PLOTS), the graphic display or plot can be either signal strength or adequate threshold. This method is preferable for comparative analysis and shall normally be used for coverage prediction plots.
32. TOWER: A lattice structure of framework, either self-supporting or guyed, or monopole, that is designed to support telecommunications antennae, and/or equipment.

This Ordinance shall take effect immediately upon its adoption by the Selectboard (24 V.S.A. App. § 147-1.6).

Adopted this 8th day of April March, 2014, at the Town of Shelburne, Vermont.



Gary von Stange, Chair



Allison Cranmer



Timothy Pudvar



Antoinette Supple

Colleen Parker