CHARLOTTE ZONING BYLAWS

Interim Zoning Bylaw
for the

REGULATION OF TOWERS AND TELECOMMUNICATIONS FACILITIES

Adopted by the Board of Selectmen
March 22, 1999

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TOWERS AND TELECOMMUNICATIONS FACILITIES INTERIM ZONING BYLAW

Section 9.1 TITLE

This bylaw shall be known as the Town of Charlotte Interim Zoning Bylaw for the Regulation of Towers and Telecommunications Facilities.

Section 9.2 PURPOSE

The purpose of this Interim Zoning Bylaw is to protect the public health, safety, and general welfare of the citizens of the town of Charlotte and of those who visit this community, while accommodating the telecommunication needs of residents and businesses. This Interim Zoning Bylaw shall:

A. Preserve the character and appearance of the town of Charlotte, while allowing adequate telecommunications services to be developed.

B. Protect the scenic, historic, environmental, and natural resources of the town of Charlotte, and property values therein.

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

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

E. Facilitate the provision of telecommunications services to the residences and businesses of the town of Charlotte.

F. Minimize the adverse aesthetic, health, and interference effects of towers through careful design and siting standards.

G. Require, through performance standards, the location of towers and antennas in non-residential areas and away from other sensitive areas such as schools, hospitals, senior centers, and child care facilities.

Section 9.3 AUTHORITY TO HIRE INDEPENDENT CONSULTANTS

A. Upon review of an application for conditional use approval for a tower or telecommunications facility, the Charlotte Zoning Board of Adjustment may determine that it needs the assistance of an independent consultant or consultants to evaluate the application. Upon making such a determination, it may hire independent consultants, the reasonable costs of whose services shall be paid for by the applicant. Upon such determination, the applicant shall place in escrow sufficient funds to cover such costs, as estimated by said independent consultant. These consultants shall be qualified professionals with an appropriate combination of training, record of service, and/or certification in one of the following fields: 1) telecommunications/radio frequency engineering; 2) structural engineering; 3) assessment of electromagnetic fields; and 4) other fields, if determined necessary by the Charlotte Zoning Board of Adjustment.

B. The Charlotte Zoning Board of Adjustment may provide any independent consultant(s) hired pursuant to this section with the full application for their analysis and review.

Section 9.4 AGREEMENT WITH FEDERAL LAW

In addition to other findings required by this Interim Zoning Bylaw, the Board shall find that its decision regarding

an application is intended to be in agreement with federal law, particularly the Telecommunications Act of 1996. This Interim Zoning 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.

Section 9.5 EXEMPTIONS

The following telecommunications facilities are exempt from the requirements of this Interim Zoning Bylaw: police, fire, ambulance, and other emergency dispatch; amateur (ham) radio, citizens-band radio, single-use local business radio dispatch, and television antennas for home use.

No FCC-licensed telecommunications facility shall be considered exempt from this Interim Zoning Bylaw for any reason, whether or not said facility is proposed to share a tower or other structure with such exempt uses.

Section 9.6 DEFINITIONS

ADEQUATE CAPACITY: Capacity is considered to be adequate if the grade of service is p.05 or better for at least 50 percent of the days in a preceding month, prior to the date of application, as measured using direct traffic measurement of the telecommunications facility in question, where the call blocking is due to frequency contention at the antenna(s).

ADEQUATE COVERAGE: Coverage is 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, transceivers properly installed and operated will be able to communicate with the base station without objectionable noise (or excessive bit-error rate for digital) and without calls being dropped. In the case of cellular communications in a rural environment like Charlotte, this would be a signal strength of at least -90 dBm. It is acceptable for there to be holes within the area of adequate coverage, as long as the signal regains its strength farther away from the base station. The outer boundary of the area of adequate coverage, however, is that location past which the signal does not regain.

AFFILIATE: When used in relation to an operator, an affiliate is another person who directly or indirectly owns or controls, is owned or controlled by, or is under common ownership or common control with the operator, or an operator's principal partners, shareholders, or owners of some other ownership interest. When used in relation to the municipality, an affiliate is any agency, board, authority or political subdivision affiliated with the municipality or other person in which the municipality has legal or financial interest.

ANTENNA: A device for transmitting and/or receiving electromagnetic waves which is attached to a tower or other structure.

ANTENNA HEIGHT: The vertical distance measured from the base of the antenna support structure at grade to the highest point of the structure. If the support structure is on a sloped grade, then the average between the highest and lowest grades shall be used in calculating the antenna height.

ANTENNA SUPPORT STRUCTURE: Any pole, telescoping mast, tower tripod, or any other structure which supports a device used in the transmitting and/or receiving of electromagnetic waves.

APPLICANT: A person who applies for a telecommunications facility siting. An applicant is the telecommunications service provider or its agent of record.

AVAILABLE SPACE: The space on a tower or structure to which antennas of a telecommunications provider are both structurally able and electromagnetically able to be attached.

BASE STATION: The primary sending and receiving site in a telecommunications facility network. More than one base station and/or more than one variety of telecommunications provider can be located on a single tower or structure.

CELLULAR TELECOMMUNICATIONS: A commercial Low Power Mobile Radio Service bandwidth licensed by the FCC to providers in a specific geographical area in which the radio frequency spectrum is divided into discrete channels which are assigned in groups to geographic cells within a service area and which are capable of being reused in different cells within the service area.

CHANNEL: The segment of the radiation spectrum to or from an antenna which carries one signal. An antenna may radiate on many channels simultaneously.

COLLOCATION: Locating wireless telecommunications equipment from more than one provider on a single site.

COMMON CARRIER: An entity licensed by the FCC or a state agency to supply local and/or long distance telecommunications services to the general public at established and stated rates.

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 a particular frequency, and ambiguous unless all receivers and antenna combinations are identical.

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 dBm) introduced by different receiver configurations. This unit shall be used for coverage prediction plots

FCC: Federal Communications Commission. The government agency responsible for regulating telecommunications in the United States. It is not a health agency.

FREQUENCY: The number of cycles completed each second by an electromagnetic wave measured in hertz (Hz).

HERTZ: (Hz) One hertz is the frequency of an electric or magnetic field which reverses polarity once each second, or one cycle per second.

INTERFERENCE: An undesirable effect caused by electromagnetic signals. Type 1 interference refers to interference regulated by the FCC and affecting other FCC licensees or other entities over which the FCC has jurisdiction. Type 2 interference refers to electromagnetic disturbances to business, institutional, medical, and home electronic equipment.

LOCATION: References to site location shall be the exact longitude and latitude, to the nearest tenth of a second. Bearing or orientation should be referenced to true north.

MODIFICATION OF AN EXISTING TELECOMMUNICATIONS FACILITY: Any change, or proposed change, in power input or output, number of antennas, change in antenna type(s) or model(s), repositioning of antenna(s), or change in number of channels per antenna above the maximum number approved under an existing permit.

MODIFICATION OF AN EXISTING TOWER: Any change, or proposed change, in dimensions of an existing and permitted tower or other structure designed to support telecommunications transmission, receiving and/or relaying antennas and/or equipment.

MONITORING: The measurement, by the use of instruments in the field, of non-ionizing radiation exposure at a site as a whole, or from telecommunications facilities, towers, antennas or repeaters.

MONITORING PROTOCOL: The testing protocol, such as the Cobbs Protocol (or one substantially similar, including compliance determined in accordance with the National Council on Radiation Protection and Measurements, Reports 86 and 119), which is to be used to monitor the emissions and determine exposure risk from existing and new telecommunications facilities.

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.

PERMIT: An official action which sets forth the rights and obligations extended by the municipality to an operator to own, construct, maintain, and operate its telecommunications facility within the boundaries of the municipality.

PERMITTEE: An applicant who is granted a permit for a tower and/or telecommunications facility.

RADIAL 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 uses 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 draw back is the concentration of points close to the antenna and the divergence of points far from the site near the ends of the radials.

REPEATER: A small receiver/relay transmitter and antenna 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.

ROOF AND/OR BUILDING MOUNT TELECOMMUNICATIONS FACILITY: A telecommunications facility in which antennas are mounted to an existing structure on the roof (including rooftop appurtenances) or a building face.

SCENIC VIEW: A scenic view is a wide angle or panoramic field of sight and may include natural and/or manmade structures and activities. A scenic view may be from a stationary viewpoint or be seen as one travels along a roadway, waterway, or path. A view may be to a faraway object, such as a mountain, or a nearby object.

SITE: A property, 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.

STRUCTURALLY ABLE: The determination that a tower or structure is capable of carrying the load imposed by the proposed new antenna(s) under all reasonably predictable conditions as determined by professional structural engineering analysis.

TELECOMMUNICATIONS EQUIPMENT SHELTER: A structure located at a base station designed

principally to enclose equipment used in connection with telecommunications transmissions.

TELECOMMUNICATIONS FACILITY: All equipment (including repeaters) with which a telecommunications provider broadcasts and receives the radio frequency waves which carry their services and all locations of said equipment or any part thereof, and locations of equipment with which a telecommunications provider transmits and receives the waves which carry their services. This facility may be sited on one or more towers or structure(s) owned and permitted by the provider or its agent of record.

TELECOMMUNICATIONS FACILITY SITE: A property, 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 where required landscaping are located. It shall meet minimum lot size and regulations for the zone in which it is to be located.

TELECOMMUNICATIONS PROVIDER: An entity licensed by the FCC to provide telecommunications services to individuals or institutions.

TELECOMMUNICATIONS TOWER: A guyed, monopole, or self-supporting tower, constructed as a free-standing structure or in association with a building, other permanent structure or equipment, containing one or more antennas intended for transmitting and/or receiving television, AM/FM radio, digital, microwave, cellular, telephone, or similar forms of electronic communication.

TEMPORARY WIRELESS TELECOMMUNICATIONS FACILITIES: Any tower, pole, antenna, or other device designed for use while a permanent wireless telecommunications facility is under construction or for a special event or conference where a majority of people attending are wireless users.

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 site be within the grid or area of interest. As with radial plots, the graphic display or plot can be either signal strength or adequate threshold. This method requires substantially more topographic data and longer (computer) execution time than radial plots, but is preferable for comparative analysis.

TOWER: A lattice structure or framework, either self-supporting or guyed, or monopole, that is designed to support telecommunications antennas and/or equipment.

VIEW CORRIDOR: A three-dimensional area extending out from a viewpoint. The width of the view corridor depends on the focus of the view. The focus of the view may be a single object, such as a mountain, which would result in a narrow corridor, or a group of objects, such as a downtown skyline, which would result in a wide corridor. Panoramic views have very wide corridors and may include a 360-degree perspective. Although the view corridor extends from the viewpoint to the focus of the view, the mapped portion of the corridor extends from the viewpoint and is based on the area where base zone heights must be limited in order to protect the view.

Section 9.7 CONDITIONAL USE

No construction, alteration, modification (including the installation of antennas for new uses) or installation of any tower or telecommunications facility shall commence without a conditional use permit first being obtained from the Zoning Board of Adjustment in accordance with the requirements of Section 6.4 of the Charlotte Zoning Bylaws and this Interim Zoning Bylaw.

Telecommunications towers or facilities may be permitted as conditional uses, upon compliance with the provisions of this Interim Zoning Bylaw and the bylaws of the Town of Charlotte, in all zoning districts where such uses are permitted.

An applicant for a tower or telecommunications facility conditional use permit shall be a telecommunications provider. A conditional use permit shall be granted only for a telecommunications facility with a user that has a current FCC license.

In addition to information otherwise required by the Town of Charlotte's Zoning Bylaws, applicants for telecommunications towers or facilities shall include the following supplemental information:

A. The exact legal name, address, and telephone number of the applicant, the landowners of record, and any agents of the landowners or applicants. If the applicant is not a natural person, the name and address of the business, the type of business entity, and the state in which it is incorporated and has its principal office shall be provided, as well as an applicant's registered agent and registered office.

B. The name, address and telephone number of the person to be contacted. 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.

If this person cannot be contacted in the event of an emergency, the applicant shall also provide the name, address, and telephone number of someone who is available on a 24-hour basis who is authorized to act on behalf of the applicant in the event of an emergency regarding the structure or safety of the telecommunications facility.

C. Owner of the property on which the proposed tower shall be located, and the owner(s) of the tower or structure on which the proposed transmitter shall be located. Written permission of the owner(s) to apply for a conditional use permit shall also be submitted along with written permission from the owner(s) of the proposed property(ies) or facilities site(s) for the Town's independent consultant(s), to conduct any necessary site visit(s).

D. The names and addresses of the landowners of record of all abutting property.

E. A report from qualified and Vermont-licensed professional engineers that:

1. Describes the telecommunications facility height, design and elevation.
2. Documents the height above grade for all proposed mounting positions for antennas to be collocated on a tower or telecommunications facility and the minimum separation distances between antennas.
3. Describes the tower's proposed capacity, including the number, height, and type(s) of antennas, including manufacturer(s) and model number(s) that the applicant expects the tower to accommodate.
4. Provides evidence of need, as described in Section 9.9 of this Interim Zoning Bylaw.
5. Describes the output frequency, number of channels and power output per channel for each proposed antenna.
6. For each antenna, describes the antenna gain (projected and maximum), polarization and radiation pattern (composite pattern for an antenna array), the power input to antenna(s), including power input in normal use and at maximum output for each antenna and all antennas as an aggregate.
7. Describes the output frequency of the transmitter(s).
8. For a telecommunications facility with multiple emitters, describes the results of an intermodulation study to predict the interaction of the additional equipment with existing equipment.
9. Demonstrates the tower's compliance with the municipality's structural standards and setbacks for towers and support structures (see Section 9.12.E).
10. Provides proof that at the proposed site the applicant will be in at least minimum compliance with all federal, state, and local regulations, standards and requirements, and includes a statement that the applicant commits to continue to maintain such compliance regarding both radio frequency interference (RFI) and radio frequency radiation (RFR).
11. Includes other information required by the Board that is necessary to evaluate the request and its impact upon the health and safety of the residents of Charlotte.

F. A letter of intent committing the tower owner and future tenant(s) to permit shared use of the tower, without

discrimination to other telecommunications providers, if the additional user agrees to meet reasonable terms and conditions for shared use, including compliance with all applicable FCC regulations, standards, and requirements and the provisions of this Interim Zoning Bylaw.

G. For a telecommunications facility to be installed on an existing structure, a copy of the applicant's letter of intent or executed contract with the owner of the existing structure.

H. To the extent required by the National Environmental Policy Act (NEPA) and as administered by the FCC, a complete Environmental Assessment (EA) draft or final report describing the probable impacts of the proposed telecommunications facility.

I. A copy of the application for an Act 250 permit, if it has been filed with the District Environmental Commission.

J. Detailed plans for emergency power generation, including:

1. Demonstration of percent of electrical demand being proposed in event of loss of commercial power.
2. Type of fuel, storage method, and expected means and frequency of fuel delivery to the site for power generation.
3. Amount of generator time, based on historical power reliability for the area of the telecommunications facility, proposed frequency and duration of tests, and description of muffler system and methods for noise abatement.
4. Feasibility of wind and/or solar power in conjunction with storage batteries.

K. Two cross-sections through proposed tower, drawn at right angles to each other and showing the ground profile to at least 500 feet beyond the limit of clearing and showing any guy wires or supports. This shall show the proposed height of the tower above average grade at lower base. This shall also show all proposed antennas, including their location on the tower.

L. Illustration 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 telecommunications conditions or demands.

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

N. 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.

O. An existing conditions plan and proposed site plan as defined in Section 9.8 of this Interim Zoning Bylaw.

Section 9.8 SITE PLAN REQUIREMENTS

No construction, alteration, modification (including the installation of antennas for new uses) or installation of any tower or telecommunications facility shall commence without site plan approval first being obtained from the Planning Commission in accordance with the requirements of Section 6.5 of the Charlotte Zoning Bylaws and this Interim Zoning Bylaw.

In addition to site plan requirements found in Section 6.5 of the Charlotte Zoning Bylaws, site plans for telecommunications facilities shall include the following supplemental information:

A. Location Map: a copy of a portion of the most recent USGS Quadrangle map showing the area within at least

a two-mile radius of the proposed tower site. It shall indicate the tower location and the exact latitude and longitude (degrees, minutes, seconds to the nearest tenth).

B. Vicinity Map at a scale of no smaller than 1 inch = 416 feet (or metric equivalent 1:5,000) with contour intervals no greater than 10 feet (or metric equivalent 3 meters) showing the entire vicinity within a 2,500-foot radius of the tower site, including the telecommunications facility or tower, topography, public and private roads and driveways, buildings and structures, water bodies, wetlands, landscape features, historic sites, and habitats for endangered species. It shall indicate the property lines of the proposed tower site parcel and all access easements or rights 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.

C. Telecommunications Facility Site Map: A recent survey of the telecommunications 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.

D. Existing Conditions Plan: A recent survey of the area within 500 feet of the telecommunications facility 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 meters) contour intervals, showing existing utilities, property lines, existing buildings or structures, stone walls or fence lines, wooded areas, existing water wells and springs. It shall 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 shall have been completed, on the ground, by a Vermont-registered land surveyor no more than two years prior to the application date.

E. Proposed Site Plans of the entire telecommunications facility site, indicating all improvements, including landscaping, utility lines, guy wires, screening, and roads, at the same scale as or larger than the Existing Conditions Plan.

1. Proposed tower location and any appurtenances, including supports and guy wires, if any, and any accessory building (telecommunications facility or other). It shall indicate property boundaries and setback distances to the base(s) of the tower and the nearest corners of each of the appurtenant structures to those boundaries, and dimensions of all proposed improvements. Where protective fencing is proposed, it shall indicate setback distances from the edge of the fencing.
2. 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.
3. Proposed utilities, including distance from source of power, sizes of service available and required, locations of any proposed utility of telecommunications lines, and whether underground or above ground.
4. Any direct or indirect wetlands alteration proposed.
5. Detailed plans for drainage of surface and sub-surface water, to control erosion and sedimentation both during construction and as a permanent measure.
6. Plans indicating locations and specifics of proposed screening, landscaping, grading, ground cover, fencing, and additional information that may be required; any exterior light(s) or sign(s).
7. Plans of proposed access driveway or roadway and parking area at the tower site. This shall include grading, drainage, traveled width. This shall also include a cross-section of the access drive indicating the width, depth of gravel, paving or surface materials.
8. Plans showing any changes to be made to an existing telecommunications facility's landscaping, screening, fencing, lighting, drainage, wetlands, grading, driveways or roadways, parking or other infrastructure as a result of a proposed modification of said facility.

F. Proposed Tower and Appurtenances

1. Plans, elevations, sections and details at appropriate scales but no smaller than 1 inch = 10 feet.

2. Details of proposed tower foundation, including cross-sections and details. This shall show all ground attachments, specifications for anchor bolts and other anchoring hardware.
3. Detail proposed exterior finish and color of the tower (see Section 9.11.F).
4. The 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 10 years.

G. Plans of Proposed Telecommunications Facility Shelter, including

1. Floor plans, elevations, and cross-sections at a scale of no smaller than ¼ inch = 1 foot (1:48) of any proposed appurtenant structure, and
2. Representative elevation views, indicating the roof, facades, doors, and other exterior appearance and materials.

H. Proposed Equipment Plan

1. Plans, elevations, sections and details at appropriate scales but no smaller than 1 inch = 10 feet.
2. Number of antennas and repeaters, as well as the exact locations of antenna(s) and of all repeaters (if any) located on a map, as well as by degrees, minutes, and seconds to the nearest tenth of latitude and longitude.
3. Mounting locations on tower or structure, including height above ground.

I. Visibility Maps and Visual Analysis

1. A map of view corridors in a zero-to-two-mile radius from the site, shown beginning at true north and continuing clockwise at forty-five-degree intervals. In other words, a minimum of eight views should be presented.
2. A map of the town of Charlotte, on which any visibility of the proposed tower from a public way (including all existing public rights-of-way) shall be indicated.

The applicant shall also develop and submit to the Planning Commission a written analysis of the visual impact of the proposed tower. This analysis shall include photographs of the balloon test, as described in Section 9.8.J., taken from at least 10 different perspectives within the town of Charlotte.

J. Balloon Test: Within thirty-five days of submitting an application, applicant shall arrange to fly, or raise upon a temporary mast, a three-foot-diameter, brightly colored balloon at the maximum height of the proposed 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 *Charlotte News* and in the *Burlington Free Press.* The applicant shall inform the Charlotte Zoning Board of Adjustment, the Planning Commission, and abutting property owners in writing of the dates and times of the test, at least 14 days in advance. The balloon shall be flown for at least six consecutive hours, between 7 a.m. and 5 p.m. (and/or at least two hours before sunset as posted for the test dates by the National Weather Service) on the dates chosen. In the event of application for collocation at an existing telecommunications facility, the applicant shall be exempt from this balloon test.

K. Construction sequence and time schedule for completion of each phase of the entire project.

L. A copy of the information submitted as part of the conditional use permit application.

Section 9.9 EVIDENCE OF NEED

A. Existing Coverage: Applicant shall provide written documentation to the Zoning Board of Adjustment demonstrating that existing telecommunications facility sites in Charlotte, in abutting towns, and within a 30-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 telecommunications 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, type of antennas, antenna gain, height of antennas on tower or structure, output frequency, number of channels, power input and maximum power output per channel. Potential adjustments to these existing telecommunications facility sites, including changes in antenna type, orientation, gain, height or power output shall be specified. Tiled coverage plots showing each of these telecommunications facility sites, as they exist, and with adjustments as above, shall be provided as part of the application.

B. Repeaters: Applicant shall demonstrate with written documentation that they have analyzed the feasibility of repeaters in conjunction with all telecommunications facility sites listed in compliance with Section 9.9.A (above) to provide adequate coverage and/or adequate capacity to areas lacking such coverage and/or capacity. Tiled coverage plots of all repeaters considered for use in conjunction with these facilities sites shall be provided as part of the application.

C. Indirect Service: Applicant shall demonstrate which portion of a tower or structure and which antennas, if any, are to reduce or eliminate reliance on land-lines, or otherwise provide telecommunications 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 Section 9.2 (Purpose) of this Interim Zoning Bylaw.

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.

Section 9.10 LEGAL AND TECHNICAL DOCUMENTATION

A. Federal Permits: Applicant shall submit to the Zoning Board of Adjustment copies of all pertinent submittals and showings pertaining to: FCC permitting/licensing; Environmental Assessments and Environmental Impact Statements; FAA Notice of Construction or Alteration; aeronautical studies; all pertinent data, assumptions, and calculations relating to service coverage; and all pertinent calculations and/or measurement data related to non-ionizing radiation emissions and exposure, regardless of whether categorical exemption from routine environmental evaluation under the FCC rules is claimed.

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 telecommunications in regard to the application are 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 telecommunications 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. An emergency plan to be implemented in the event that the tower structure is deemed unsafe through inspection as described in Section 9.13.E and F. The plan shall include measures to warn abutting landowners of an unsafe situation, to evacuate a zone where injury or property damage may occur, and to notify local authorities.
5. Owner of the property on which the proposed tower shall be located, and of the owner(s) of the tower or structure on which the proposed telecommunications facility shall be located. Written permission of the owner(s) to apply for a conditional use permit shall also be submitted along with written permission from the owner(s) of the proposed property(ies) or facility site(s) for the Town's independent consultant(s), to conduct any necessary site visit(s).

6. Names and addresses of the owner(s) of record of all abutting properties.

B. Surety: Details of proposed method of financial surety as required in sections 9.11.B (Landscaping/Screening) and 9.18 (Abandoned, Unused, Obsolete, Damaged, or Dangerous Towers or Portions of Towers) of this Interim Zoning Bylaw.

Section 9.11 GENERAL PROJECT REQUIREMENTS

A. Access Roads and Above-Ground Utilities: Where new telecommunications towers and 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.

B. Landscaping/Screening: Natural or planted vegetative screening or other screening should be considered at the perimeter of the site as needed to ensure that ground equipment and structures associated with the tower or telecommunications facility are normally hidden from adjacent public roadways. Existing on-site vegetation outside the immediate site for the telecommunications facility shall be preserved. Disturbance to existing topography shall be minimized, unless the disturbance is demonstrated to result in less visual impact on the telecommunications facility from surrounding properties and other vantage points. 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 telecommunications facilities shelter(s) shall be completely fenced and gated for security to a height of six feet. Use of razor wire is not permitted. A sign no greater than two (2) square feet indicating the name of the telecommunications facility owner(s) and a 24-hour emergency telephone number, either local or toll-free, shall be posted adjacent to the entry gate. In addition, radio frequency radiation (RFR) warning signs, and the federal tower registration plate, where applicable, shall be posted on the fence or as required to meet federal requirements. No Trespassing signs may be posted at the discretion of the telecommunications facility/tower owner(s).

D. Building Design: Telecommunications facilities shelters and accessory buildings shall be designed to be architecturally similar and compatible with each other, and shall be no more than 12 feet high. The buildings 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. Height of Towers: New towers shall not exceed the minimum height necessary to provide adequate coverage for the telecommunications facilities proposed for use on the tower. Applicant may submit a request for additional height to accommodate future sharing, or to provide indirect service as described in Section 9.9.C and shall provide design information to justify such additional height. Repeaters shall not be closer than 25 feet to the ground.

F. Tower Finish: New towers shall have a galvanized finish unless otherwise required. The Charlotte Zoning Board of Adjustment may require the tower(s) to be painted or otherwise camouflaged to minimize the adverse visual impact.

G. Tower Sharing: Tower(s) shall be of a type which will maximize potential sharing. Lattice-type structures are preferred, but where a monopole is required, the applicant shall demonstrate through submissions to the Zoning Board of Adjustment the future utility of such structure for expansion of service for applicant and other future applicants.

Section 9.12 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 or other special features as described in the Charlotte Town Plan (see sections 4.4, The Land, and 4.45, Special Features, in the Charlotte Zoning Bylaws). Height and mass of facilities shall not exceed that which is essential for its 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 Administration (FAA) or other state or federal authorities have dictated color.

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 Zoning Board of Adjustment that the additional height is necessary in order to provide adequate coverage in the town of Charlotte 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. 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 Section 9.12.E of this Interim Zoning Bylaw, if those are stricter. In no case shall the minimum distance from the tower to any property line be less than the height of the tower, including antennas and other vertical appurtenances.

D. Ground-mounted equipment or antennas associated with the tower or telecommunications facility, as well as buildings and structures accessory to a tower, shall be hidden from adjacent public roadways through the use of natural or planted vegetative screening, except where a design of non-vegetative screening would better complement the architectural character of the surrounding neighborhood. Existing on-site vegetation outside the immediate site for the telecommunications facility shall be preserved. Disturbance to existing topography shall be minimized unless the disturbance is demonstrated to result in less visual impact on the telecommunications facility from surrounding properties and other vantage points.

E. Setback Requirements: No repeater shall be located closer than 300 feet to a dwelling unit or closer than 25 feet to the ground. No other telecommunications facility or tower, including guy-wire anchors and protective fencing, if any, shall be located:

1. Closer than 300 feet horizontally to any boundary of the site on which the tower is located, or the height of the tower, whichever is greater.
2. Closer than 1,500 feet horizontally to any structure existing at the time of application which is used as a primary or secondary residence, to the property of any school (both public and private), hospitals, senior centers, schools, child care facilities, or to any other public building. Primary or secondary residences are those dwelling units that include toilet facilities and facilities for food preparation and sleeping.
3. Within the habitat of any state-listed rare or endangered wildlife or plant species.
4. Within 300 feet horizontally of any Vermont or federally regulated wetland.
5. Within the 300 feet horizontally of the outer riparian zone, measured horizontally from any river or perennial stream.

Section 9.13 MONITORING PROTOCOL

A. Monitoring Protocol: The Board of Selectmen may, as the technology changes, amend this bylaw to require the use of testing protocols other than the Cobbs Protocol. A copy of the currently approved monitoring protocol

shall be on file with the Town Clerk.

B. Pre-transmission Testing: After the granting of a conditional use permit and before applicant's telecommunications facilities begin transmission, the applicant shall submit a report, prepared by an independent qualified telecommunications or radio frequency engineer, on the cumulative background levels of non-ionizing radio frequency radiation around the proposed telecommunications facility site and/or any repeater locations to be utilized for applicant's telecommunications facilities. The independent engineer shall use the monitoring protocol, or one substantially similar. This report shall be submitted to the Zoning Board of Adjustment and the Town Deputy Health Officer.

C. Post-transmission Testing: After transmission begins, the owner(s) of any telecommunications facility(s) located on any telecommunications facility site shall submit reports prepared by an independent qualified telecommunications or radio frequency engineer regarding any non-ionizing radio frequency radiation emission or exposure from said site, and to report results as follows:

1. There shall be routine annual monitoring of emissions/exposure by the independent engineer using actual field measurement of radiation, utilizing the monitoring protocol. This monitoring shall measure levels of non-ionizing radio frequency radiation (RFR) exposure at the telecommunications facility site as well as from repeaters (if any). The permittee shall provide a list of the most recent RFR readings at the site, their distances from the tower/transmitter, dates of the readings, and the name of the person or company who took the readings. In addition, the permittee shall provide additional RFR readings taken at sensitive areas (as defined at Section 9.2.G.) within 3 miles of the proposed tower.
   A report of the monitoring results shall be prepared by the independent engineer and submitted to the Zoning Board of Adjustment, the Deputy Health Officer, and abutting property owners, as identified in Section 9.7.D (above). In the case of collocated telecommunications equipment, the Deputy Health Officer shall have monitoring performed and reported and shall bill all telecommunications providers and the telecommunications facility's owner(s) equally or according to a predetermined proportionality. This monitoring shall include actual field measurement of cumulative RFR emission at the site.
2. In the event of any major modification of existing telecommunications facility, or the activation of any additional permitted channels, the telecommunications facility owner(s) shall immediately perform new monitoring, as described in Section 9.13.A, B, and C, above. Minor changes, such as slight changes in frequency, shall not require additional monitoring.
3. Permittee shall have the opportunity to demonstrate reasons for inability to comply with these provisions.

D. Excessive Exposure: Should the monitoring of a telecommunications facility site reveal that the site exceeds the current FCC standard and guidelines, the owner(s) of all telecommunications facilities utilizing that site shall be so notified. In accordance with FCC requirements, the telecommunications facility owner(s) shall immediately reduce power or cease operation as necessary to protect persons having access to the site, tower, or antennas. Additionally, the telecommunications facility owner(s) shall submit to the Deputy Health Officer a plan for the correction of the situation that resulted in excessive exposure. Failure to act as described above shall be a violation of this Interim Zoning Bylaw.

E. Structural Inspection: Tower owner(s) shall arrange for an independent consultant (a licensed professional structural engineer) to conduct inspections of the tower's structural integrity and safety. Guyed towers shall be inspected every three years. Monopoles and non-guyed lattice towers shall be inspected every five years. A report of the inspection results shall be prepared by the independent consultant, and a copy shall sent to the Zoning Administrative Officer within 10 business days, in addition to any notification required under Section 9.13.F.1 (below). In the event of any major modification of the existing tower which includes changes to tower dimensions or number or types of antennas, the tower owner(s) shall immediately perform a new structural inspection.

F. Unsafe Towers: 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 tower owner(s) shall undertake the following actions:

1. Immediately upon notification of any structural defect(s) which render(s) a tower unsafe, post warnings of same at access points to the tower; notify appropriate emergency authorities; notify the Zoning Administrative Officer, and notify the owners of record of the abutting properties within the unsafe area (minimally a 360-degree area the radius of the height of the tower); when appropriate, in consultation with emergency authorities, restrict access to the unsafe area and/or encourage evacuation of residents.
2. Within 10 business days of notification of any structural defect(s) which render(s) a tower unsafe, submit to the Zoning Administrative Officer a plan to remediate the structural defect(s) as soon as reasonably possible. The tower owner(s) shall initiate this remediation plan within 10 business days of its submission.

Section 9.14 AMENDMENTS TO EXISTING TELECOMMUNICATIONS FACILITY PERMIT

In the event of an alteration or addition to a previously approved telecommunications facility, the tower owner(s) shall submit to the Zoning Board of Adjustment an application for a permit amendment when any of the following are proposed:

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

B. Material change in technology used by the telecommunications facility; or

C. 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.

Section 9.15 TOWER LIGHTING AND SIGNAGE; NOISE GENERATED BY TELECOMMUNICATIONS FACILITY

A. Towers shall not be illuminated by artificial means and shall not display lights unless such lighting is specifically required by the FAA or other federal or state authority, without alternative, for a particular tower because of its height. In the event that any lighting is required solely as a result of height and where more than one type of lighting may be used, the owner(s) of the tower shall ask for a review by the Planning Commission. The Planning Commission may require that tower heights be reduced to eliminate the need for such lighting or that another suitable location be selected.

B. No commercial signs or lettering shall be placed on towers.

C. Manually operated emergency lights are permitted for use only when telecommunications facility operating personnel are on site.

D. The owner(s) of the facilities shall take reasonable measures to minimize noise from the operation of any machinery or equipment, as detected at the site perimeter.

Section 9.16 ANTENNAS MOUNTED ON STRUCTURES, ROOFS AND WALLS, AND ON EXISTING TOWERS

Antennas mounted on structures, roofs, and walls, and on existing towers shall be subject to this Interim Zoning Bylaw, except as exempted under Section 9.5 of this Interim Zoning Bylaw.

Section 9.17 TEMPORARY WIRELESS TELECOMMUNICATIONS FACILITIES

Any telecommunications facility designed for temporary use is subject to the following:

A. Use of a temporary telecommunications facility is permitted only if the owner has received a temporary use

permit from the Zoning Board of Adjustment.

B. Temporary telecommunications facilities are permitted for no longer than five days' use during a special event.

C. The maximum height of a temporary telecommunications facility is 50 feet from grade.

D. Temporary telecommunications facilities shall comply with all applicable sections of this Interim Zoning Bylaw.

Section 9.18 ABANDONED, UNUSED, OBSOLETE, DAMAGED, OR DANGEROUS TOWERS OR PORTIONS OF TOWERS

Abandoned or unused towers or portions of towers and their facilities shall be removed as follows:

A. The owner of a telecommunications facility/tower shall annually, on January 15, file a declaration with the Town of Charlotte's Zoning Administrative Officer certifying the continuing safe operation of every telecommunications facility/tower installed subject to this Interim Zoning Bylaw. Failure to file a declaration shall mean that the telecommunications facility/tower is no longer in use and considered abandoned.

B. Abandoned or unused towers and associated facilities shall be removed within 180 days of cessation of operations at the site, unless a time extension is approved by the Zoning Board of Adjustment. In the event the tower is not removed within 180 days of the cessation of operations at a site, the Zoning Administrative Officer shall send the owner(s) of the tower a Notice of Zoning Violation and, following the expiration of the period for remediation of the violation, shall request the Town of Charlotte to remove the tower and all associated facilities. Costs of removal shall be assessed against the tower owner.

C. Unused portions of towers shall be removed by tower owner(s) within 180 days of the time that such portion is no longer used for antennas. The replacement of portions of a tower previously removed shall require the issuance of a new telecommunications facility conditional-use permit by the Zoning Board of Adjustment.

D. An owner who has failed to file an annual declaration with the Zoning Administrative Officer by January 15 may, by February 15, file a declaration of use or intended use and may request the ability to continue use of the telecommunications facility/tower.

Section 9.19 MAINTENANCE OF TELECOMMUNICATIONS FACILITIES INSURANCE

The telecommunications facility owner shall maintain adequate property and liability insurance on all telecommunications facilities within the town of Charlotte. The permittee shall arrange with the insurance carrier(s) for original certificates of insurance for all renewals or cancellations of said insurance coverage to be delivered to the Zoning Administrative Officer.

Section 9.20 FEES

A schedule of fees for towers and telecommunications facilities permitting and renewal, for any monitoring of exposure, for inspection of structures, or for other related purposes shall be established by the Charlotte Board of Selectmen, as provided for in 24 V.S.A. §4446. This schedule may be amended from time to time.

Section 9.21 ENFORCEMENT

This Interim Zoning Bylaw shall be enforced in accordance with the provisions of 24 V.S.A. §4444 and §4445.

Section 9.22 SEVERABILITY AND EFFECT

The invalidity of any section or provision of this Interim Zoning Bylaw shall not invalidate any other section or provision hereof. This Interim Zoning Bylaw shall not repeal or amend the Charlotte Zoning Bylaws presently in effect or hereafter amended. This Interim Zoning Bylaw establishes permit requirements and standards that are in addition to those contained in the Charlotte Zoning Bylaws.

Section 9.23 EFFECTIVE DATE

This Interim Zoning Bylaw shall take effect immediately after adoption by the Board of Selectmen, pursuant to 24 V.S.A. §4410.

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