

A VIDEO RECORDING OF THE MEETING IN ITS ENTIRETY IS AVAILABLE THROUGH VERMONTCAM.ORG. THE WRITTEN MINUTES ARE A SYNOPSIS OF DISCUSSION AT THE MEETING. MOTIONS ARE AS STATED BY THE MOTION MAKER. MINUTES SUBJECT TO CORRECTION BY THE SHELBURNE PLANNING COMMISSION. CHANGES, IF ANY, WILL BE RECORDED IN THE MINUTES OF THE NEXT MEETING OF THE COMMISSION.

**TOWN OF SHELBURNE  
TELECOMMUNICATIONS REVIEW BOARD  
MINUTES OF MEETING  
February 13, 2020**

- MEMBERS PRESENT:** Jason Grignon (Chair); Kate Lalley, Stephen Kendall, Megan McBride, Jean Sirois, Stephen Selin.
- STAFF PRESENT:** Dean Pierce, Planning and Zoning Director; Brian Monaghan, Town Attorney; Kristen Shamis, Town Attorney.
- OTHERS PRESENT:** Applicant Zach Manganello, his attorney Brian Sullivan, and his consultant Louis Hodgetts; the Town’s independent consultants James Stitt [via telephone] and Michael Buscher; and residents Kevin Hawko, Amy Guidice, Maureen O’Brien, Dana Valentine, Todd Sarandos, Ed Nowak, David Hedden, Brian Erwin, and Ruth Hagerman.

**AGENDA:**

1. Call to Order
2. Application(s):
  - Approval for Two Antenna Support Structures, Masts, “Ham” Radio Antenna Pairs, 4450 Dorset Street, Manganello (TEL20-01)
3. Adjournment

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**1. CALL TO ORDER**

Chair Jason Grignon called the TRB meeting to order at 7:10 PM.

**2. APPLICATION(S)**

Chairman Grignon reviewed the rules of procedure for the hearing and confirmed there were no conflicts of interest or ex parte communications. The warning for the hearing was read and those individuals to give testimony were sworn in.

**TEL20-01: Application for two guy-supported antenna support structures 70’ tall capped by 14’ masts and horizontally-mounted “ham” radio antenna pairs at 4450 Dorset Street by Zachary Manganello**

Zach Manganello (applicant), Brian Sullivan (attorney), Louis Hodgetts with Dubois & King, and Michael Buscher with T.J. Boyle Associates appeared on behalf of the application. Attorney Sullivan said the application is submitted as evidence.

Submittals are as listed in the Town of Shelburne Staff Report on the application, dated 2/13/20, and include the following submitted at the 2/13/20 hearing:

- Photo simulations as part of the visibility analysis done by Dubois & King
- Aerial imagery of the towers on the site and viewshed maps done by T.J. Boyle Associates

**STAFF REPORT**

The TRB received a written staff report on the application, dated 2/13/20. Dean Pierce encouraged board members to ask questions about the application.

#### APPLICANT COMMENTS

Brian Sullivan referred to the federal regulation, 47CFR9715, and the FCC ruling, PRB1, which address tower height, setbacks, zoning district restrictions, and discussed the difference between amateur “ham” radio installations and cell towers. It was noted the proposed installation for two-way communication (point-to-point) is at the applicant’s house. The lower frequency requires a higher antenna. Equipment for the operations is in the house. There is no access road or external generator.

Zach Manganello reviewed his degree in electronics and his FCC radio license, and described his “ham” radio hobby that allows communication across the world and even into space. Mr. Manganello mentioned the benefit of “ham” radio communications during an emergency. Mr. Manganello reviewed his goals with his hobby and the need for antenna height of 70’ for 7 megahertz on one and 14 megahertz on the other. The arrays will rotate for the best signal. Having two antennas will allow a single operator with two radios, one to transmit and one to receive. The antennas meet national electric safety codes and are grounded and bonded. The antennas are well within FCC and FAA guidelines. There was further description of the height of the towers, antennas, and transmission range.

Louis Hodgetts, Dubois & King, reviewed the results of the visibility analysis that was done and the photo simulation. Both pieces of information were submitted into evidence.

Michael Buscher, landscape architect with T.J. Boyle Associates, reviewed the aerial imagery of the proposed towers on the site and viewshed maps. The images and maps were submitted as evidence. Mr. Buscher said the viewpoints from the public right-of-way were not provided due to the existing tree lines. Brian Sullivan clarified if photos were taken from the public right-of-way the tower would be less visible than from where the photos were taken.

#### BOARD QUESTIONS/COMMENTS

- Would more antennas be added to the towers - Zach Manganello said the configuration is two stacks that are up high and rotatable. Technically it is possible to have more antennas, but it would be expensive.
- What is the number of ham operators in the U.S. - Zach Manganello said he does not know the number.
- How do ham operators function in cities or where they do not have room for a tower - Zach Manganello said his installation is a base station. Smaller stations rely on larger stations. There is a range of stations.
- What limits the number of antennas on a tower – Zach Manganello said there are limits on kilowatts and frequency bands.
- What is the power needed to operate – Zach Manganello said he has a solar array and battery backup for power.

- Will a wire antenna be added – Zach Manganello said he is not planning to add any more antennas to the structures. Wire antennas are less efficient than beam antennas which is what is proposed.
- Can there be co-locating on an existing antenna elsewhere – Zach Manganello said the antennas are connected by a feed line to his station so it would be expensive and physically difficult to connect. It is possible to remotely control a station, but without the same level of control. [Jim Stitt commented co-location works for cellular communications, but not “ham” radio which is not compatible. Regarding multiple antennas on a single tower, the tower must be able to support this and the applicant’s tower could not.]
- What is the danger to neighbors – Zach Manganello said the FCC has specific rules and regulations on safety. The EMI and RF signals for the installation are below the FCC calculations. [Jim Stitt said the applicant’s tower meets all the safety standards.]
- Further explain the experimentation goal – Zach Manganello said his goals includes different antenna design and construction techniques, digital compass to ensure VHF antenna are accurately pointed, and propagation evaluation.
- Is the 14’ mast on the antenna collapsible – Zach Manganello said he is not considering a telescoping or collapsible array, but rather to have a robust antenna with few moving parts.
- Plan for the existing 30’ tower – Zach Manganello said there are no plans right now, but the tower will likely be sold or the structure taken down if no longer in use.

#### PUBLIC COMMENTS

A resident on Sutton Farm Road asked about the radio frequency and exposure, and commented on the impact on the view by the towers. Zach Manganello said the calculation was done for two towers and from the closest structure to the nearest property line (i.e. worst-case scenario). It is not envisioned to use both transmitters at the same time. Jim Stitt pointed out even operating on all bands the transmissions would be below the acceptable level.

David Hedden, Barstow Road, said both towers will be visible from their house and negatively affect the view. There is also concern about radio frequency exposure and the detriment to property value.

Kevin Hawko, Sutton Farm Road, asked if the FAA has been notified and assured there will be no interference with the navigational aid for airplanes using the airport. Mr. Hawko also noted there has been clearing of vegetation on the applicant’s property so the photos are not of current conditions. Louis Hodgetts said the photos were taken when the clearing was nearly complete. Zach Manganello said the navigational aid acts on a different frequency from “ham” radio. Jim Stitt said he will contact the FAA for a definitive answer on the navigational aid interference question.

Maureen O’Brien, Barstow Road, commented on the impact on the view by the towers which will be fully visible from her house and on the impact on the market value of the

houses in the area. There are no power poles in the area and now two towers are proposed.

Amy Guidice, Sutton Farm Road, urged consideration of the impact on property values and asked about the height of tower. Zach Manganello said the tower lattice is 70' high with a 14' mast on top for a total of 84' in height.

Ed Nowak, Sheridan Court, spoke of the requirement to use minimum power to sustain two-way communications and that the proposal lowers the RF exposure to people on the ground and uses less power to transmit because the antennas are higher off the ground.

Brian Irwin, Sutton Farm Road, said he bought his property for the iconic mountain views and one of the towers will be directly in the view of Mount Mansfield.

Zach Manganello expressed appreciation for the comments from neighbors and the aesthetic concerns, but pointed out the proposal is modest for a "ham" radio operator set up.

**MOTION by Stephen Kendall, SECOND by Jean Sirois, to continue the hearing for TEL20-01 (towers and antennas at 4450 Dorset Street by Zachary Manganello) to March 26, 2020. VOTING: unanimous (7-0); motion carried.**

### **3. ADJOURNMENT**

Without objection the TRB meeting was adjourned at 9:32 PM.

*RScty: MERiordan*