

Charlie Griffith

From: karpman@aol.com
Sent: Thursday, August 16, 2018 10:53 AM
To: Charlie Griffith
Subject: Fwd: Information regarding conditional use permit - 1116 Green Valley Drive
Attachments: Band Chart 8_5 X 11 Color.pdf

-----Original Message-----

From: karpman <karpman@aol.com>
To: cgriffeth <cgriffeth@waukesha-wi.gov>
Sent: Wed, Aug 15, 2018 9:54 am
Subject: Information regarding conditional use permit - 1116 Green Valley Drive

Good morning Charlie,

Attached is a graphical representation of the current frequency allocations for amateur radio operation by the FCC. I am authorized to use all of them, but my station is not capable of operating on every one. In certain rare cases some frequencies are used on a shared basis with other services but this is by far the exception rather than the rule. Amateur radio transmitting equipment that is commercially available is type-accepted by the FCC after having been tested and found to be free of spurious emissions (unwanted frequencies that could cause interference. There are also well known installation methods within the amateur community body of knowledge to ensure that transmitted signals are in compliance with legal standards and will not interfere with properly functioning equipment.

Having said that, the flip side of all of this is that not every consumer device is particularly well constructed. Virtually all of them are built around FCC part 15 which regulates unlicensed devices that can emit radio frequencies, and that covers a LOT of ground. These devices are afforded no protection against poor design which would render them sensitive to legitimate transmitted signals. Because of this, I cannot absolutely guarantee that nobody will experience a problem with their consumer equipment if and when I am transmitting. However, if they are not having issues now, given that I have been in operation for at least 10 years at this location, I cannot imagine that they will have issues when the antenna is elevated and further away from these devices. Interference can also run both ways. As I said in the meeting, the larger issues hams have been dealing with the last few years is interference FROM consumer devices, including switching power supplies, TVs, computers and monitors and other devices. I actually had to put a suppression device on my washing machine to eliminate some interference to my HF receiver, if you can believe that.

There are steps that can be taken to eliminate interference, should it occur. One of my specialties in my employment in the aviation radio industry is identifying and correcting interference problems in aircraft installations, so I have more than a passing familiarity with dealing with these kinds of problems. The tower itself neither transmits or receives; only the antenna does, so the mere presence of the tower structure will not create interference.

I have also checked with my insurance company and the tower is covered as if it were an out building. I have communicated with my insurance company to ensure that the structure is covered by my homeowners and umbrella policy in the event of a failure, just like if a tree branch broke loose or if a tree fell over. I am waiting for that clarification in case the question comes up again at the meeting on the 22nd.

Let me know if you have any other questions.

Regards,

Jim Karpowitz

Charlie Griffith

From: karpman@aol.com
Sent: Thursday, August 16, 2018 10:52 AM
To: Charlie Griffith
Subject: Fwd: Updated files for tower project (1116 Green Valley Dr)
Attachments: Site Map 1116.pdf; Site Overview 1116.pdf

-----Original Message-----

From: karpman <karpman@aol.com>
To: cgriffeth <cgriffeth@waukesha-wi.gov>
Sent: Wed, Aug 15, 2018 2:41 am
Subject: Updated files for tower project (1116 Green Valley Dr)

Hi Charlie,

These two files show the updated location proposal of the tower. This location should address Bonnie's concerns regarding the original location (sight line from her window and proximity to her property), for it allows for about 50 feet of clearance to her property line if I am interpreting the print correctly. There is no way that it can fall on her property and certainly not on her power lines as she had mentioned in the last meeting (they run about the middle of her property, as mine do). The tower can still only pivot to the north, parallel to my power line, allowing for service access. The swing arc of the antenna should permit the antenna to clear the back lines by a minimum of 15 feet. My proposed height is a total of 40 feet, inclusive of a 30 foot tower height and a 10 foot allowance for a mast plus any vertical antenna component. The location also allows over 60 feet of clear space from the antenna (the active part of the structure - remember, the tower itself does not transmit or receive) to Bonnie's bedroom window, which is more than adequate from an RF safety perspective.

It should be noted with respect to the concern of the potential of the structure to fall that the total weight of the tower is less than 100 pounds and the material is aluminum, which has much more "give" than a steel structure. Most steel towers of this height would weigh upwards of 600+ pounds, which could truly do some serious damage if they were to fall. We have trees in the area that are taller and heavier that worry me a lot more than an aluminum tower. Having said that, remaining within the load limits of the tower as published by the manufacturer and ensuring a proper installation is the best possible assurance that it will not fall in the first place.

I will address the questions regarding operating frequency and potential interference separately.

Regards,

Jim Karpowitz