

**PROPERTY AND INFORMATION TECHNOLOGY COMMITTEE
MEETING MINUTES**

DATE: Monday, November 2, 2020
TIME: 9:30 a.m.
PLACE: Wood County Courthouse – Room 114

PRESENT: Al Breu (via WebEx), Brad Hamilton (via WebEx), Dennis Polach, Laura Valenstein, Bill Winch

OTHERS PRESENT (for part or all of the meeting): Nicole Gessert, Reuben Van Tassel, Lance Pliml (via WebEx), Amy Kaup (via WebEx), Bill Clendenning, Jason Grueneberg, Ted Ashbeck, Susanna Pearson, John Cain -Venture Architects (via WebEx). **See attached list.**

1. The meeting was called to order at 9:30 a.m. by Chair Breu.
2. Public Comments: None.
3. Approve minutes from the previous meeting.

Motion (Hamilton/Valenstein) to approve the minutes from the previous meeting. Motion carried unanimously.

4. Jason Grueneberg shared information regarding a resolution to authorize the Planning and Zoning Director to apply to the State of Wisconsin Public Service Commission for broadband expansion grants in partnership with Hilbert Communications, LLC. Grueneberg shared a handout to the Committee with background information about Bug Tussel Wireless, LLC; a subsidiary broadband wireless internet service provider of Hilbert Communications, LLC. Discussion ensued.

Motion (Hamilton/Valenstein) to approve the Planning and Zoning Director to make application for broadband grants in partnership with Hilbert Communications, LLC. Motion carried. Voting no: Winch.

5. (a) Supervisor Winch asked for clarification on items within the Information Technology vouchers. Amy Kaup answered general questions pertaining to her department's vouchers.

Motion (Hamilton/Valenstein) to approve the vouchers for the Information Technology Department. Motion carried unanimously.

- (b) Information Technology Director, Kaup shared several projects that her department has been working on as indicated in her Monthly Letter of Comments.
6. (a) Supervisor Winch asked for clarification on items within the Maintenance vouchers. Van Tassel answered general questions pertaining to his department's vouchers.

Motion (Hamilton/Valenstein) to approve the vouchers for the Maintenance Department. Motion carried unanimously.

- (b) Van Tassel asked if there were any questions regarding his Monthly Letter of Comments. There were none.

7. Van Tassel shared information from the Renewable and Sustainable (R&S) Committee regarding their recommendation to approve two additional R&S grant applications to use up the remaining grant funds.

Motion (Valenstein/Hamilton) to approve the Renewable and Sustainable grant applications. Motion carried unanimously.

The Committee agreed to move agenda item #9 up in the order.

9. The Committee discussed Venture Architect's recent Jail study and some additional notes compiled by John Cain. Some topics discussed at length were soil boring, discussing bonding affects with the Finance Director, and costs of delaying the project. Van Tassel will bring more information to the next meeting on questions raised.

Motion (Hamilton/Polach) to conduct ten soil boring tests done as related to the jail study. Five soil boring tests on the east side of the Courthouse property and five soil boring tests on the south side of the Courthouse property. Motion carried. Voting no: Winch.

The Committee agreed to move agenda item #10 up in the order.

10. Grueneberg indicated he has been working on a compiling a digital inventory of County owned properties to share with the Committee. He will have a virtual presentation prepared for the next Committee meeting.
8. Van Tassel shared there may be opportunities to get funding from sources outside the County budget for Renewable and Sustainable projects in the future. He is requesting approval from the Committee to allow him to have conversations with outside sources to be able to bring back future recommendations for Committee approval.

Motion (Valenstein/Hamilton) to approve Facilities Director, Van Tassel to pursue outside funding sources for Renewable and Sustainable projects. Motion carried unanimously.

11. Agenda items for the next meeting:
 - Van Tassel will bring additional information and answers for various questions pertaining to the jail study.
 - Virtual presentation from P&Z Director, Grueneberg, of County owned properties
 - Department Head Reviews
12. The next Committee meeting will be Monday, December 7, 2020 at 9:30 a.m.
13. Chair Breu declared the meeting adjourned at 10:48 a.m.

Minutes recorded and prepared by Nicole Gessert. Minutes in draft form until approved at the next PIT meeting.

**Property & Information Technology Committee Meeting
November 2, 2020**

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BUG TUSSEL WIRELESS, LLC

COMPANY BACKGROUND AND TOWER SITING INFORMATION

Background

This document is designed to assist local municipalities, county officials, zoning administrators and interested residents in evaluating the merits of a request by Bug Tussel Wireless, LLC or one of its related companies to build a communications tower.

Who is Bug Tussel Wireless, LLC?

Bug Tussel Wireless was formed in 2003 by Steve Schneider. Steve had been an executive at Cellcom, a regional cellular provider based in Pulaski, Wisconsin, for the previous ten years. Bug Tussel was formed to provide cellular service in rural areas where the large national and regional carriers chose not to provide service or could not provide service from an economic or company objective standpoint. Many carriers had much higher returns to report to their shareholders by building in Top 100 cities or any city with significant population density.

Schneider grew up on a dairy farm in Manitowoc County and was distressed by the lack of attention that rural areas received from cellular providers. As time went on, these same rural areas were neglected for upgrades to provide high speed Internet access. Schneider and the management at Bug Tussel came up with an economic model that works to provide service in rural markets with market density as low as 2 to 5 households per square mile.

Why are the services Bug Tussel provides important to the community?

Bug Tussel utilizes its towers for the following purposes:

- A) High Speed Internet Service (512 Kbps up to 100 Mbps)
- B) Mobile voice service (provided through AT&T Mobility primarily with niches for T-Mobile, Verizon, Bell Canada, Viaero Wireless, iWireless and others)
- C) Mobile data service (provided through major national, regional and local carriers[primarily AT&T])
- D) Training (community programs to assist in the adoption of technology)

These services can be used for an array of reasons. While most people think of email and browsing the Internet, a robust wireless communications network is critical for the following applications:

- A) Law enforcement and public safety from local agencies to the FBI/CIA and FEMA
- B) Educational purposes in schools and to reduce costs for school districts through online textbooks and lifelong learning processes

- C) Agricultural purposes such as irrigation controls, mapping of soil conditions, amount of fertilizer needed per square meter or yard, yield mapping, monitoring cows for milk fever or bloat, asset management, logistics for fuel and commodity delivery.
- D) Transportation purposes such as trucking logistics and safety, railroad switching and monitoring of bearings to prevent derailments, package tracking, management of delivery routes and many others.
- E) Home security and automation including childcare oversight, geriatric oversight so people do not have to go into nursing homes, ambient intelligence where personal preferences are automatically implemented in a home or business, security alarms and monitoring, monitoring critical appliances such as freezers and refrigerators, sump pumps, and HVAC controls.
- F) Entertainment purposes such as watching videos, interactive gaming, online poker, childrens' games.
- G) Medical and health purposes such as blood clot monitoring, oversight of insulin and pain pumps, in home cancer treatments, exercise and diet monitoring, heart monitoring and automatic adjustment of pacemakers and other heart monitors, attention and communication tools for those suffering from autism, cerebral palsy or other communication limiting diseases.
- H) Remote delivery and transportation systems such as drones and self-driven vehicles.

In most of rural Wisconsin, these types of services could not be rolled out due to a lack of ubiquitous wireless communications coverage. These services are not futuristic, they are here now and are being implemented in large cities with robust communication networks. Bug Tussel Wireless works to level the playing field so that rural areas are able to utilize the same types of services as urbanized areas and therefore compete economically and socially to retain residents and attract business as that business environment is defined by local consensus. Some communities desire to retain small family owned niche farms while others work to attract corporate farms. In either case, Bug Tussel can support the community's needs and will not allow communications to be a deterrent to planned community development.

If Bug Tussel builds a site, who will use it?

Bug Tussel is first and foremost building the tower to provide wireless broadband services to residents in a 3-5 mile radius of the tower. This will typically cover 35- 75 square miles or a township or two in rural terms. Bug Tussel's service typically sells for \$25 to \$100+ depending on the uplink and downlink speeds. Bug Tussel's network and rate plans accommodate from 1 Mbps plans up to 25 Mbps plans. The average user with significant video needs is typically looking at a 3-6 Mbps plan while businesses and "super users" may require a more dedicated 25 Mbps plan. Bug Tussel also offers a 100 Mbps plan for users requiring those speeds and can provide up to 1 Gbps on a contract basis.

However, service does not stop with the provision of broadband. Each Bug Tussel tower typically is also equipped with 4G-LTE service capable of mobile broadband at 1-15 Mbps speeds while on the go, in a corn field, at school or in the local coffee shop. Recent surveys show that nearly 70 percent of data is now consumed in mobile applications and "IoT" or the Internet of Things is accelerating the growth of mobile data. Bug Tussel has agreements to allow AT&T Mobility, T-Mobile, Verizon and others to use their network. Bug Tussel also provides space to those and other carriers on their towers for the provision of service at reasonable rates. In addition to those three well recognized names, Bug Tussel

has agreements with other smaller domestic and international carriers such as Bell Canada, Union Wireless, Vodafone, Corr Wireless, Viero Wireless and others who may do business or vacation in the rural areas of Wisconsin.

By working with these carriers instead of competing with them, Bug Tussel tries to reduce the proliferation of towers and works to identify sites that can be used by multiple carriers and fits in their long term coverage needs and designs.

Theoretically, to provide solid wireless cellular coverage and broadband in homes, down in the valleys and at the end of the road; there is about one tower per township required. Bug Tussel analyzes our frequency propagation along with our partner carriers' needs so that there is a single plan to serve an entire county.

How much will your service cost?

Bug Tussel has a variety of rate plans to meet different users' needs. Rate plans do change from time to time, typically either moving down in price or increasing the amount of data or voice included in a particular package. Back in the 1980's, rates were as high as \$1.00 per minute and data was not available. Just a few years ago, minutes dropped to \$.10 per minute for voice and \$2.00 to \$3.00 per Kilobyte. Now rates are typically \$.02 to \$.04 per minute for voice and about \$10.00 per Gigabyte of data (1024 Kilobytes = 1 Megabyte; 1024 Megabytes = 1 Gigabyte; 1024 Gigabytes = 1 Terrabyte)

Our current rates as of February 14, 2017 are:

\$14.99 per month	512 Kilobytes per second for unlimited data (Checking email)
\$24.99 per month	768 Kilobytes per second for unlimited data (Limited surfing)
\$34.99 per month	1.5 Megabytes per second for unlimited data (Sending static graphics)
\$44.99 per month	2.0 Megabytes per second for unlimited data (Sending video files)
\$54.99 per month	4.0 Megabytes per second for unlimited data (Streaming Netflix)
\$69.99 per month	8.0 Megabytes per second for unlimited data (Streaming Netflix plus)
\$79.99 per month	12.0 Megabytes per second for unlimited data
\$99.99 per month	25.0 Megabytes per second for unlimited data (Business speed)

Equipment rental varies from Free at higher rate plans to \$15 per month or can be purchased for \$259. Installation and activation varies by location and type of installation.

What does "Up to 25 Mbps" mean? Does that mean I only can use 25 Megabytes? If Bug Tussel and another provider both say "Up to 25 Mbps," are they both providing the same speed of service?

Service quality varies significantly between carriers, the type of equipment they use, how they throttle traffic and how much traffic they allow on the highway.

Bug Tussel strives for a 2:1 subscription ratio on its network (if this were a highway, this is how many cars are allowed on the highway). This means that Bug Tussel's fixed broadband service has radios that transmit 100 Megabytes per second and the most customers we would configure on a radio at one time on the 25.0 Mbps plan/\$99.99 plan is eight whereas other carriers may allow up to 200. With Bug

Bug Tussel, any time of day a customer should come close to reaching the advertised rate. Theoretically, if all of our customers were on the 2.0 Mbps plan/\$44.99 plan; we would configure for 100 users.

We currently configure our towers for an "Internet highway" speed of 400 Mbps and aim at 80 users per tower – meaning that there may be one 25.0 Mbps plan; three 12.0 Mbps plans; ten 8.0 Mbps plans; twenty 4.0 Mbps plans; forty 2.0 Mbps plans; and six 1.5 Mbps plans and everyone would operate at their optimal speed. Bug Tussel could add another 80 customers on that tower but if everyone was using the optimal speed at the exact same time, some would experience a degradation of service. If Bug Tussel has more than one or two customers on the 25 Mbps service, it will add an additional radio and dedicate one radio to the 25 Mbps service to assure that no one's speed is degraded high volume users

If a competitor provides a 100 Mbps highway and allows 200 users on rate plans of 25 Mbps, then their subscription ratio is 50:1 and they will have 1/25th the speed of Bug Tussel during peak times even though both carriers advertise "Up to 25 Mbps." This is important to realize when selecting a carrier to buy service from or for your community to partner with.

Bug Tussel, like most carriers, advertises rates that are "UP TO" the maximum for that rate plan. Bug Tussel prides itself on making sure that customers get those speeds not just at 3 a.m. but all day long. You will need to judge your experience with our competitors based on their subscription ratios which may be as high as 50:1 versus our 2:1 standard.

Bug Tussel also provides lower speed mobile data services where the "highway speed" is 57 Mbps. Typically, mobility users such as AT&T cell phones will operate at much lower speeds than what your fixed wireless service at home will operate at. Bug Tussel does not provide service directly to customers but integrates its network in rural areas to allow AT&T users to use its mobility network at their home rates if those carriers set up their rate plans in that manner.

What else can these towers be used for?

We build our towers to be able to support 3 large carrier arrays plus 1-3 smaller antenna installations.

In many cases, we work special deals with the county to provide space as needed for emergency management radios for police, sheriff's departments, ambulance districts, volunteer fire departments, school systems and other governmental entities requiring radio communications. Bug Tussel also works with paging providers and two way providers to provide a reasonably priced location on structures where needed.

Finally, our towers can also support what is known as Interexchange Traffic (IXC) or "Long Distance" where companies may pass through your community to combine traffic from different sources to get to the main Internet hubs or switching facilities of major carriers. Often this traffic is transported with a combination of fiber optics which may go to our tower in some cases and microwave which are dishes on our towers.

Bug Tussel operates its own long distance network to transport traffic to its switching center in Madison, Wisconsin and on to the primary Internet drop point in Chicago. Bug Tussel also partners with Wisconsin Independent Networks Corp or "WIN" which provides rural IXC services through its phone

cooperative and independent telephone partners as well as connections to major cities through its own facilities going into major communities such as Milwaukee, Chicago, Minneapolis and with partners nationwide.

We already have good service in my area, why would we want more service?

Bug Tussel believes that competition is a good thing and that when you have 3 or more carriers, rates become more competitive and carriers are forced to have reasonable margins, be efficient and provide better service. Often where there is one carrier, a person may be paying \$75 to \$100 for cellular service and when a second or third competitive carrier come in those rates go down to \$50 to \$60 or less.

Another issue is that people often become accustomed to poor service where the phone doesn't work in this building or drops when you go over that hill. After a period of time, it may not bother you but when someone starts providing great service, you will notice the difference.

I never heard of Bug Tussel, why should our community trust you to do right by us?

Bug Tussel has been around for 14 years. The Company is owned by people from rural communities who understand the importance of great communications in rural areas.

We have a track record of taking unserved areas and bringing high speed services and economic development to those areas. Often our service is then bought by a larger carrier who continues to provide that service and integrates your service with their national offerings. That may happen. Our commitment is to bring the service to your community and assure that someone continues to provide that service for the long term.

We have partnered with other communities and entities who we believe are very happy with our partnerships with the community. We encourage you to ask some of our current partners if we lived up to our promises – people like Al Buechel, County Executive from Fond du Lac County; Marty Krueger, County Board Chairman from Sauk County; Dave Peterson, retired sheriff from Waushara County; Jerry Korinek, Town Board Chair from the Town of Franklin in Manitowoc County; Kriss Marion, County Board Supervisor and local business owner from LaFayette County and we could go on and on.

Also, take a look at some of the unsolicited media articles that have been written about us from within the communities we serve – a 1/26/17 article in the Brillion News, many articles in Sauk County, a cover story in 2009 in Insight Magazine and again, the list goes on.

What else is in it for our communities?

Bug Tussel believes that economic development in rural areas is largely dependent on the ability of those communities to provide services that are different but competitive with urban communities. Key among those services is broadband and cellular service. People will give up their car, they will give up eating one meal a day ... but do NOT take away their cell phone or Internet service because it is the most basic of needs to communicate with their friends and family. If you have broadband and competitive

cellular, it does not guarantee economic development. If you do NOT have broadband and competitive cellular, it guarantees that you will NOT have economic development and will eventually begin losing population and tax base.

Bug Tussel strives to partner with their served communities – before, during and after construction of a tower and site. We use local contractors whenever we can to pour our foundations, do our road work, and market our services. Once in the community, we have a budget to participate in local events – the Fourth of July parades, the Duck Run, the Kiwanis Thanksgiving dinner, the Run to Stop Breast Cancer, local blood drives. We are not based in Chicago or New York or Seattle – we are based in Wisconsin and we are here to promote Wisconsin businesses and development ... however the local community defines that development.

Bug Tussel also has an educational component through our Bug Tussel University programs where we will provide seminars for how to use the Internet, how to use Social Media, and other ways to connect technology with your community and the lives of your citizens.

Some of the neighbors don't want a tower near them and I don't want to go against what my neighbors want.

Towers have to go somewhere. We will try to find landowners and neighbors who are forward looking and want to have strong communities. Sometimes we use contractors who don't fully embrace our philosophy and in that case, we make changes. Sometimes our employees don't fully understand our mission – we strive to teach them what we are doing and how to get there. We are not always perfect, but we will strive to provide the best possible service we can for your community. We are driven not by quarterly earnings reports, but by the long-term growth of our served communities and the value created when customers stay with you not because your force them into a contract, but because they know you are looking out for their best interest. To do that, we need the help of the community to find the right locations for towers that work for our network design and also fit into your community.

What about this state law that says we must approve towers?

There is such a law in Wisconsin. It does not indicate that you "must" approve towers, but it does indicate that you cannot disapprove a tower for no reason. It was created because of significant lobbying from our industry from large carriers that had difficulty getting towers zoned just because they were towers versus legitimate planning and zoning requirements. There are cases where municipalities are unreasonable and in those cases, we may invoke the provisions of that law. However, we have found it much more valuable to work with communities to a resolution that works and creates a partnership versus friction and stress.

We view the law as a reason to for the governmental zoning and planning authorities and governance boards and the wireless carrier to sit down together and plan what works best for the community. It creates a "level playing field" where carriers are held accountable but local zoning cannot simply say "no" without a valid reason supported by FAA, FCC, EPA and other compliance rules that we must meet.

I heard that cell towers can have negative health effects. I'm afraid I'll get sick from a tower nearby.

Cell towers are made of steel and concrete and have no more health effect than the home you live in. The antennae at the top of the tower broadcast a relatively low wattage (in our case, 40 watts) that is far less impactful than the focused radiation that you get from the sun or from a tanning bed or medical Xrays and treatments or many other sources. After 30 years of cell phone use with radiation in your pocket or against your head, the incidence of brain cancer has actually decreased.

There are no proven studies at this time by reputable researchers that prove ANY negative health impacts from cell towers or phones.

My friend is a pilot and I'm afraid he will hit your tower.

Our towers are typically 150 feet up to 295 feet. Agricultural silos can go as high as 140 feet and many electric transmission lines are at 200 feet. Other than upon approach to landing, even private aviation does not and cannot fly below 500 feet unless doing crop dusting.

All of our locations are approved by the FAA and those that are near an airport or over 200 feet are lit appropriately. All of our sites have battery backup to assure that the lighting continues in the event of a power outage and all of our sites are monitored 24 hours a day to assure lighting is operational.

How many airplane versus tower accidents have you read about in the newspaper?

There was an accident in June of 2015 in California where a small plane ran into a tower designed to look like a tree. The FAA ruled that the pilot either had a medical issue or errored. The tower was not tall enough to even be registered by the FAA. The airplane was homemade. The pilot died.

There was also an incident in 2009 in Springfield, Missouri where a private 4 seater clipped a tower near a college campus. There were no injuries. The pilot was fined for not following procedure.

There was also an incident in California in 2009 where a small plane with 5 passengers including the pilot hit a guy wire in dense fog. The tower was lit and functional and not near an airport. All 5 passengers died.

That is 6 deaths in 8 years from cell towers and all involved what could arguably be pilot error versus tower siting. Last year (2016) in Wisconsin, 588 people died in motor vehicle accidents and 35,092 died nationally in 2015. In the same 8 years that 6 people died nationally from cell tower versus airplane accidents, over 200,000 people died in car accidents... and yet we continue to allow cars on the road and ban cell towers.

It is projected that by 2025, just 8 years from now, over half of those deaths will be preventable through the use of wireless technology and vehicle sensors made possible by these cell towers.

We hope you will support the development of ubiquitous cell service to prevent accidents and provide safety in your communities.

But what about the environment? Don't cell towers hurt our wildlife and their habitats?

We try to use as little space as possible to provide broad wireless communications from a single point. Cell towers are arguably far less impactful than the buying of fiberoptic cables to each home, the impact of phosphorous from fertilizers, the emissions of motor vehicles and agricultural run off.

Our Company and every tower constructor is subject to stringent regulations on protection of the habitat of lupines to assure that rare breeds of butterflies thrive and examine each tower location for the presence of long-eared bats that are threatened in Wisconsin. We do soil testing and conduct many tests in compliance with the National Environmental Protection Act. We also evaluate each site for any historical structures, any artifacts from at least 17 native American tribes who each do their own investigation at our cost (between \$5,000 and \$25,000 per site), as well as any impact to migratory birds.

In many cases, our structures actually become homes for Osprey and have encouraged their propagation in Wisconsin and other suitable habitats.

While there are situations where we can go on an existing structure, often grain elevators and silos simply do not have the height required to provide solid service in valleys and in buildings. Another consideration is that some tower owners try to prevent competition by not allowing them on their towers through exorbitant colocation rates that make it uneconomical to use a certain tower owner's location. We try to do our part by keeping our colocation on our tower rates at a reasonable level with low annual escalators.

We want to be and believe we are good stewards of the planet with nominal negative impact and significant positive impact.

What are your plans? Why are you approaching us now?

Bug Tussel has been building sites in Wisconsin since 2003 based on where large carriers have network "holes" and based on where people wanted service, often petitioning us or offering public funding to provided broadband and cellular for economic development reasons.

In 2012, we issued a series of Midwest Disaster Area bonds funded in the public markets to build a number of counties. That kept us busy through 2015. During 2016, we negotiated an agreement with a large national carrier to use our towers and expand coverage in 22 counties in Western and Southern Wisconsin that have low population density and were not economically attractive to the national carriers. A second carrier has agreed to use our service thereby adding two cellular companies plus our own broadband service plus roaming service for other carriers throughout this 22 county area.

We have arranged financing to invest from \$3 to \$6 million in each of these 22 counties over the next three years. We believe that our initiative will have very positive impacts on tourism, on maintaining family farms, on retaining population in rural markets and on spurring appropriate rural home businesses and small businesses that respect the environment, the rural lifestyle and will perpetuate the great quality of life we have come to know in rural Wisconsin.

We hope you will partner with us in this initiative.

Written personally by Steve Schneider; president, CEO and founder of Bug Tussel Wireless, LLC for the information of the communities we hope to serve.

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