

**CLARKE COUNTY PLANNING COMMISSION
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Clarke County Planning Commission

AGENDA – Regular Meeting

Friday, May 5, 2017 – 9:00AM

BERRYVILLE/CLARKE COUNTY Government Center – Main Meeting Room

1. **Approval of Agenda**
2. **Approval of Minutes**
 - a. April 4, 2017 Briefing Meeting
 - b. April 7, 2017 Regular Meeting

Public Hearing Items

3. **TA-17-02, Wireless Communication Facilities (WCFs).** Proposed text amendments to amend §3-A-1 (Agricultural-Open Space-Conservation District – AOC), §3-A-2 (Forestal-Open Space-Conservation District – FOC), §3-A-3 (Rural Residential District – RR), §3-A-12 (Neighborhood Commercial District – CN), §3-A-13 (Highway Commercial District – CH), §3-C-2-u (Monopoles for Telecommunication Antennae), §3-E-3 (Historic District), §3-E-4 (Historic Access Overlay District), §6-H-12 (Monopoles for Telecommunication Antennae), and Article 9 (Definitions) of the Zoning Ordinance. The purpose of the text amendments is to revise the requirements for the siting, construction, and modification of monopoles, towers, stealth structures, support structures, and associated equipment. Specific changes include but are not limited to:

- Maximum allowable height of a new WCF would be increased from 100 feet to 199 feet, subject to special use permit and site plan approval and compliance with new siting regulations.
- Use the County’s Telecommunications Infrastructure and Broadband Study as a guide in locating WCFs to maximize telecommunications service to residents and businesses and to minimize adverse impact on the County’s scenic and historic resources.
- New design requirements for stealth WCFs, including silos, flag poles, bell towers, and tree structures.
- New requirement for review of WCF applications by a third-party wireless telecommunications engineering consultant.
- New regulations for construction of amateur radio antennas consistent with State and Federal law.

Other Requests

4. **Request for Plat Recordation Extension – MS-16-09 (DeHaven)**

Board/Committee Reports

5. **Board of Supervisors (Mary Daniel)**
6. **Board of Septic & Well Appeals (George Ohrstrom, II)**
7. **Board of Zoning Appeals (Anne Caldwell)**
8. **Historic Preservation Commission (Doug Kruhm)**
9. **Conservation Easement Authority (George Ohrstrom, II)**

Other Business

Adjourn

UPCOMING MEETINGS

Tuesday, May 30, 2017 (3:00PM) – Briefing Meeting
Friday, June 2, 2017 (9:00AM) – Regular Meeting

NOTE: The Comprehensive Plan Committee will meet immediately following the May 5 Regular Meeting.

Clarke County



**PLANNING COMMISSION
BRIEFING MEETING MINUTES -- DRAFT
TUESDAY, APRIL 4, 2017**

A briefing meeting of the Planning Commission of Clarke County, Virginia, was held at the Berryville/Clarke County Government Center, Berryville, Virginia, on Tuesday, April 4, 2017.

ATTENDANCE

Present: Robina Bouffault; Randy Buckley (arrived late); Anne Caldwell; Mary Daniel; Scott Kreider; Douglas Kruhm; Frank Lee; Gwendolyn Malone; Cliff Nelson; and Jon Turkel.

Absent: George L. Ohrstrom, II

Staff Present: Brandon Stidham, Planning Director

Others Present: Frank Stearns (Verizon Wireless); Cathy Kuehner (Winchester Star)

CALLED TO ORDER

Vice-Chair Caldwell called the meeting to order at 3:00PM.

AGENDA

The members approved the agenda by consensus as presented.

DISCUSSION, PROPOSED WIRELESS COMMUNICATION FACILITIES REGULATIONS TEXT AMENDMENT (TA-17-02)

Mr. Stidham noted that the proposed wireless communication facilities text amendment has been placed on the April 7 meeting agenda to set public hearing if the Commissioners are comfortable with doing so. He asked the members how they would like to proceed with discussion of the revised draft and they preferred opening the floor for questions and comments.

Ms. Bouffault noted that the revised draft is much better organized and several of the members agreed. Vice-Chair Caldwell said that the addition of 3-C-2-u-9 (Existing monopoles and telecommunication towers) does an excellent job of distinguishing which existing towers may be conforming or nonconforming. Mr. Nelson asked if there are towers in the County that exceed 199 feet. Mr. Stidham replied yes and noted the towers on Springsbury Road, at D.G. Cooley Elementary School, and just across the state line off Raven Rocks Road.

Ms. Bouffault referenced the language in 6-H-12-a-4-a that the Commission worked on regarding prohibiting towers from being located along the topographic crest of the Blue Ridge Mountains and exceeding the maximum height of the tree canopy. She noted that the current draft could be

interpreted as not being limited to the tree canopy on the topographic crest. Mr. Turkel suggested rearranging the sentence to say “shall not exceed the maximum height of the tree canopy on the topographic crest of the Blue Ridge Mountains.” Ms. Bouffault agreed that this would address her concerns. Vice-Chair Caldwell said that she has a concern with the placement of towers on isolated ridge lines west of the Shenandoah River and the potential for adverse visual impacts. She asked whether it would be reasonable to include a prohibition of towers on isolated ridge lines in AOC areas that exceed a certain elevation, and she described a specific isolated ridge line near her home west of the river. Ms. Bouffault said that the Commission would have to study a topographic map of the County to understand how this potential change would be applied. She added that this would be problematic for potential applicants if specific ridges are not identified and Vice-Chair Caldwell agreed that it would have to be further defined. Mr. Turkel asked if this would be limited to the AOC areas and Vice-Chair Caldwell replied that it could include isolated ridges in FOC areas as well. Mr. Turkel noted that it would be problematic to distinguish an isolated ridge on the mountain from one that is part of a ridge line, and added that there are limited isolated ridges in AOC areas that are easier to identify. Mr. Nelson suggested stating that no tower shall be built on any military crest below the topographic crest, and noted that a military crest is the highest point from which you can direct fire on an opposing force. He added that there is only one topographic crest on a ridge line but that there could be multiple military crests depending on your vantage point. Mr. Turkel noted that you could run into the same problems in the AOC areas because the military crests would be spread out over larger areas. Mr. Stidham noted that if you prevent towers from locating on ridges, you could be encouraging taller towers to be located in the same general vicinity to obtain the desired heights. He echoed the concern that a topographic map of the County would have to be studied to determine impact of such a rule. He also noted that there are likely to be several County roads that were constructed along isolated ridges and some may be in areas where we want to encourage tower placement. Regarding the example of an isolated ridge presented by Vice-Chair Caldwell, Ms. Bouffault noted that there are towers in that general vicinity so it would be an unlikely target for an additional tower. Mr. Lee suggested that this issue be looked at in specific cases and Ms. Bouffault added that it would make a difference if the isolated ridge were open or covered with trees. Ms. Bouffault added that Class 3 and 4 WCFs are special uses and that this provides some flexibility to address visual impacts on each application. Mr. Stidham suggested only allowing towers on isolated ridges if they are near a PCTDA. He added that if a tower is proposed in one of these areas, you would want it to serve as many customers as possible to avoid the need for additional towers in the future.

Ms. Bouffault said that there are concerns that we are going to have an excessive number of tower applications but that we may be disappointed because we lack the population density to encourage providers to build new towers. She added that we need to be innovative in our approaches and Vice-Chair Caldwell suggested installing fiber optic cabling on existing above-ground power lines. Ms. Bouffault said that the County may need to start setting aside funds to invest in telecommunications infrastructure. Regarding the issue of towers on isolated ridges, she stated that the special use permit process will give us enough authority to address potential impacts. Vice-Chair Caldwell replied that she would review the County topographic maps in more detail.

On the list of proposed zoning district use assignments, Ms. Bouffault noted that the code references for the AOC, FOC, and CH District special uses are not shown as being deleted. Mr. Stidham replied

that the use will be deleted but the code references will remain in place as the next uses in sequence will use these references.

Vice-Chair Caldwell cited a concern raised by Chair Ohrstrom regarding the 2:1 ratio requirement for stealth silo structures in relation to existing farm structures on a property, and whether this requirement should be included in the text amendment. Mr. Stidham said that Chair Ohrstrom had also noted that the bottom photograph on Page 9 depicts a stealth silo example that appears to be greater than a 3:1 ratio to the adjacent barn. Mr. Stidham suggested deleting the photo but added that the overall question is whether we should have a ratio requirement. He noted that the ratio requirement can help prevent stealth silos that bear no relation to a farm or otherwise stick out in the landscape. Mr. Turkel noted that there is a maximum height requirement for stealth silos so the ratio requirement does not mean a lot and several members agreed. He added that the photo on Page 9 could be retained if the ratio requirement is removed. Mr. Stidham then referenced 6-H-12-a-4-d-1-b on Page 8 which states that a stealth silo cannot be taller than a 2:1 ratio of an existing barn and not to exceed 80 feet. He asked whether the members thought this means you cannot build a stealth silo structure unless it is associated with an existing farm structure. Vice-Chair Caldwell replied that she thought there was language in the text amendment to address this and Mr. Stidham added that former subsection (3) would have required silos to be placed within 50 feet of an existing barn or paddock. Mr. Kruhm said that the language in the introduction to subsection (d) says that stealth silos “should blend harmoniously with the existing farm structures.” Mr. Stidham suggested striking subsection (d)(1)(b) and adding the ratio requirement to the language referenced by Mr. Kruhm, and then asked more broadly whether there should be a ratio requirement when there are existing farm structures. Mr. Krieder said that you cannot go higher than 80 feet so there should not be a problem. Mr. Stidham then asked if you have single-story farm structures, does it matter if you have an 80 foot stealth silo. Several members said no including Mr. Lee, who added that you are limiting the overall height to 80 feet. Mr. Stidham said he would strike the ratio requirement from subsection (d)(1)(b) and retain the maximum height language. He added that the photo on Page 9 would be retained but the ratio language would be deleted from the caption.

Mr. Lee noted at the top of Page 8 in subsection (b) that the last two sentences seem to be redundant. Mr. Stidham said that he would strike the last sentence and reference post and fence mesh in the next to last sentence. Mr. Lee also noted on Page 16 in subsection (f) that you need to qualify what type of soil scientist can submit a Soil Survey Report. There was a question regarding whether a resistivity test is being requested with this report and Mr. Lee said that we do not require resistivity tests if we are placing a structure on top of the ground that does not involve discharging waste water into the ground. Mr. Fincham said the current language is asking for an inventory of the soils and Mr. Stidham asked whether we want to know whether there are voids on the proposed tower site. Mr. Lee said that he did not see this type of construction as different from a house, and that tower construction only involves putting in a foundation. Mr. Stidham said that we should just reference the current Karst plan requirement in Article 6. Mr. Nelson asked how 199 foot monopoles are installed. Mr. Stidham said that he expected it would involve a full foundation and Mr. Stearns said that they typically have a 25 foot deep foundation. Vice-Chair Caldwell said that maybe resistivity studies should be required and Mr. Stearns noted that providers would do them in order to meet building code requirements. Mr. Fincham noted that resistivity tests are necessary to determine structural integrity. Mr. Stidham referenced current 6-H-15 which contains the requirement for Karst plans to be

submitted with all site plans and reiterated his suggestion that the text amendment simply reference this section. Members agreed with this approach.

Vice-Chair Caldwell asked about the requirement that flag pole stealth structures shall be lighted if a flag is flown at night and several members noted that this is a requirement of flag etiquette. She also referenced the setback requirements for buildings and support equipment on Page 13 in Subsection (b) and the perimeter buffer requirements on Page 14 in Subsection (d). She noted that it is confusing to understand how the setbacks and buffer requirements are to be applied when reading these two subsections together. Mr. Stidham stated that the buffering requirement is in addition to the setback requirements, but not all WCFs require a perimeter buffer such as stealth silos and stealth flag poles. Vice-Chair Caldwell said that we still need to clarify these sections. Mr. Stidham suggested referencing the Subsection (d) buffering requirements in Subsection (b) referencing setbacks, and Vice-Chair Caldwell said this would address her concern. She also referenced the language in Subsection (d) that requires trees within a buffer area to be retained and asked whether it should be broadened to include existing vegetation. She noted that existing vegetation would help enhance screening. Mr. Stidham said that requiring all vegetation to be preserved would prevent applicants from removing invasive vegetation or plants that would inhibit the growth of existing and planted trees in the buffer area. Vice-Chair Caldwell also asked for an explanation of equipment cabinets and structures referenced in Subsection 6(b)(1) on Page 14. Mr. Stidham said that the 12 foot height limit would apply to unsheltered equipment cabinets but that equipment shelters housing cabinets would have to meet the maximum height requirement for the district. Vice-Chair Caldwell also asked for item (9) regarding distances to uses and structures on adjacent properties in 6-H-12-b-1-a (Site development plan application requirements) to be moved after item (4) regarding setbacks to make a more logical listing.

Ms. Bouffault asked Mr. Stidham to distribute maps depicting the Historic Overlay Zoning Districts in Millwood and White Post as she was concerned that this could be confused with the Rural Historic Districts which make up a substantial area of the County. She suggested including these maps in the text amendment along with the Appalachian Trail map. Mr. Stidham said that he was not planning to include the maps in the Zoning Ordinance but would definitely make it available on the County website and to potential tower applicants. Mr. Turkel said that he did not see any reference to an Appalachian Trail setback and Mr. Stidham noted that it is on Page 13 in Subsection 5(a).

Mr. Lee asked how many lookout towers are in the County and noted that it is referenced under stealth structures. Mr. Stidham said that he did not know. Mr. Lee added that it could be a good design for stealth WCFs in certain situations.

Mr. Stidham asked if the members were comfortable having the text amendment on the April 7 agenda to set public hearing and the members agreed by consensus. Mr. Stidham said that he would have a revised draft available for the meeting.

OTHER BUSINESS

Ms. Bouffault asked about the scheduling of the Comprehensive Plan Committee meeting and Mr. Stidham said that Alison Teetor was attempting to schedule it for May 2 immediately following the briefing meeting. Mr. Stidham said that the Committee would be meeting to begin work on updating

the Water Resources Plans and the Historic Resources Plan. Members then had a brief discussion about Frederick County's proposed plan to withdraw water from the Opequon Creek.

The meeting was adjourned by consensus at 3:55PM.

Anne Caldwell (Vice-Chair)

Brandon Stidham, Planning Director

Clarke County



**PLANNING COMMISSION
REGULAR MEETING MINUTES -- DRAFT
FRIDAY, APRIL 7, 2017**

A regular meeting of the Planning Commission of Clarke County, Virginia, was held at the Berryville/Clarke County Government Center, Berryville, Virginia, on Friday, April 7, 2017.

ATTENDANCE

George L. Ohrstrom, II, Chair; Anne Caldwell, Vice Chair; Robina Bouffault; Randy Buckley; Mary Daniel (arrived late); Scott Kreider; Doug Kruhm; Frank Lee; Gwendolyn Malone; and Cliff Nelson.

ABSENT: Jon Turkel

STAFF

Brandon Stidham, Planning Director; Ryan Fincham, Senior Planner/Zoning Administrator; and Debbie Bean, Recording Secretary.

CALLED TO ORDER

Chair Ohrstrom called the meeting to order at 9:00 a.m.

APPROVAL OF AGENDA

The Commission voted to approve the Agenda as presented.

Yes: Bouffault, Buckley, Caldwell, Kreider, Kruhm, Lee, Malone (seconded), Nelson (moved), and Ohrstrom

No: No one

Absent: Daniel and Turkel

APPROVAL OF MINUTES

The Commission voted to approve the briefing meeting minutes of January 31, 2017 with a correction to the signature line. The Vice-Chair has to sign the minutes as the Chair was absent at this meeting.

Yes: Bouffault, Buckley, Caldwell (moved), Kruhm (seconded), Lee, and Nelson

No: No one

Absent: Daniel and Turkel

Abstained: Ohrstrom, Kreider and Malone

The Commission voted to approve the regular meeting minutes of February 3, 2017 as presented.

Yes: Bouffault (moved), Buckley, Caldwell (seconded), Kruhm, Lee, Malone, and Ohrstrom

No: No one

Absent: Daniel and Turkel

Abstained: Kreider and Nelson

The Commission voted to approve the briefing meeting minutes of February 28, 2017 as presented.

Yes: Bouffault, Buckley, Caldwell (moved), Kreider, Kruhm (seconded), Lee, Malone, and Nelson

No: No one

Absent: Daniel and Turkel

Abstained: Ohrstrom

Set Public Hearing Items

TA-17-02, Wireless Communications Facilities

Mr. Stidham stated that at the April 2, 2016 briefing meeting the Planning Commission requested changes to the proposed text amendment. He said since the briefing meeting he has made the requested changes and has distributed an updated draft to the Planning Commission.

He said that on page 7, Section 6-H-12-a-4.-a., the corrected language is now, "Class 3 or 4 WCFs shall not exceed the maximum height of the tree canopy on the topographic crest of the Blue Ridge Mountains."

He stated that the next changes appear on pages 8 and 9. He said Section 6-H-12-a-d-(1)-(b), has been changed to, "The silo shall not exceed eighty (80) feet at ground level (AGL)." He said that Vice-Chair Caldwell suggested that the same language be consistent on the footers that are on the other pictures of stealth examples. He stated he changed the wording on page 9 to "Example of well-designed Stealth Silos."

He said that on page 13, Item #5, Subsection b, the following language has been added to clarify setback requirements for buildings and support equipment, "No setback shall be required for private access easements or portions thereof designed exclusively to provide ingress and egress from the WCF compound to a public road."

He stated that on page 14, Subsection d, the following language was added, "The Planning Commission may request additional planting within the remaining 25 feet of the perimeter buffer on a case-by case basis to ensure effective and appropriate screening."

He said that on page 15, 1. (a) Subsection 5 "Distances to uses and structures on adjacent properties" has been moved up in sequence so that it immediately follows number (4) which is dealing with setbacks.

He said that at the bottom of page 15, Subsection f, the corrected language now reads, "A Karst plan per Section 6-H-15 shall be provided."

Mr. Stidham stated that these are all of the changes the Planning Commission made at the briefing meeting and if the Commission is comfortable with this draft that public hearing can be scheduled for May 5, 2017. After discussion with Staff and the Commission, Chair Ohrstrom called for a motion.

The Commission voted to set public hearing for this proposed text amendment for May 5, 2017.
Yes: Bouffault, Buckley, Caldwell, Kreider (moved), Kruhm, Lee, Malone (seconded), Nelson, Ohrstrom

No: No one

Absent: Daniel and Turkel

Commissioner Bouffault complimented Mr. Stidham, the committee, and staff for their excellent work on this proposed text amendment.

Commissioner Daniel entered the meeting.

Board/Committee Reports

Board of Supervisors (Mary Daniel)

Commissioner Daniel stated that the text amendment for agricultural business uses was adopted on March 21, 2017. She stated that the Board of Supervisors wants businesses that support agriculture.

Board of Septic & Well Appeals (George Ohrstrom, II)

No report.

Board of Zoning Appeals (Anne Caldwell)

No report.

Historic Preservation Commission (Doug Kruhm)

Commissioner Kruhm stated Maral Kalbian is proceeding with the research for the book she is working on and she is on track to complete Phase 1 by the July 1 deadline. Vice Chair Caldwell said the next regular meeting for the HPC is scheduled for 11:00 am on May 17th at the Camino Real Restaurant, the awards luncheon will follow.

Conservation Easement Authority (George Ohrstrom, II)

Commissioner Buckley stated that the solicitations have been sent out and we are trying to employ a couple of interns to do the inspections and monitoring for the summer.

Other Business

Commissioner Bouffault questioned if the Comprehensive Plan Committee meeting is still going to be held after the briefing meeting in May. Mr. Stidham stated that Alison Teetor is handling the scheduling of the meeting and he said he was certain that she will email the committee members (Robina Bouffault, Doug Kruhm, Cliff Nelson and Jon Turkel) of the exact date and time.

Vice-Chair Caldwell complimented staff for doing a good job on the 2016 Annual Report.

On motion by Commissioner Kruhm and seconded by Commissioner Malone the meeting was adjourned at 9:28 a.m.

George L. Ohrstrom, II, Chair

Brandon Stidham, Director of Planning

Minutes prepared by Debbie Bean, Recording Secretary

ZONING ORDINANCE TEXT AMENDMENT (TA-17-02)
Wireless Communication Facilities (WCFs)
May 5, 2017 Planning Commission Meeting – PUBLIC HEARING
STAFF REPORT – Department of Planning

The purpose of this staff report is to provide information to the Planning Commission and Board of Supervisors to assist them in reviewing this proposed ordinance amendment. It may be useful to members of the general public interested in this proposed amendment.

Description:

Proposed text amendments to amend §3-A-1 (Agricultural-Open Space-Conservation District – AOC), §3-A-2 (Forestal-Open Space-Conservation District – FOC), §3-A-3 (Rural Residential District – RR), §3-A-12 (Neighborhood Commercial District – CN), §3-A-13 (Highway Commercial District – CH), §3-C-2-u (Monopoles for Telecommunication Antennae), §3-E-3 (Historic District), §3-E-4 (Historic Access Overlay District), §6-H-12 (Monopoles for Telecommunication Antennae), and Article 9 (Definitions) of the Zoning Ordinance. The purpose of the text amendments is to revise the requirements for the siting, construction, and modification of monopoles, towers, stealth structures, support structures, and associated equipment. Specific changes include but are not limited to:

- Maximum allowable height of a new WCF would be increased from 100 feet to 199 feet, subject to special use permit and site plan approval and compliance with new siting regulations.
- Use the County’s Telecommunications Infrastructure and Broadband Study as a guide in locating WCFs to maximize telecommunications service to residents and businesses and to minimize adverse impact on the County’s scenic and historic resources.
- New design requirements for stealth WCFs, including silos, flag poles, bell towers, and tree structures.
- New requirement for review of WCF applications by a third-party wireless telecommunications engineering consultant.
- New regulations for construction of amateur radio antennas consistent with State and Federal law.

Requested Action:

Conduct advertised public hearing and take action on proposed text amendment.

Background:

This text amendment was developed by the Planning Commission as a follow-up to the July 2015 adoption of a text amendment to bring the County’s monopole regulations into compliance with new Federal regulations regarding co-location of antennas on existing monopoles (TA-15-01).

In fall 2014, the County was contacted by attorney Frank Stearns (representing Verizon Wireless) regarding a possible project to add new antennas to an existing monopole (“co-location”) and at that time made Staff aware of the new Federal co-location requirements. Mr. Stearns also advised of additional concerns with the County’s monopole regulations including

the maximum height requirement of 100 feet for all new monopoles and lack of clarity regarding the process for co-locating antennas on existing structures. He noted that the County's regulations have not been updated in many years and do not take into consideration new technologies for wireless telecommunications and broadband service. These additional concerns were later summarized by Mr. Stearns in a June 2015 letter to Planning Staff.

To address Mr. Stearns's concerns, the Planning Commission formed a Telecommunications Subcommittee in May 2015 consisting of three Commissioners (Robina Bouffault, Douglas Kruhm, and Jon Turkel) to evaluate these issues and recommend potential ordinance amendments. The Subcommittee held several meetings beginning in August 2015. County information technology staff assisted the process by developing a map depicting the location and heights of all existing towers and antenna support structures located within the County or in close proximity to its boundary. The Subcommittee also evaluated studies from Warren and Bedford Counties that were commissioned to help determine the location and heights of future towers in those localities. Mr. Stearns contributed provided a version of Bedford County's tower ordinance that he modified to address the specific concerns he had with Clarke County's regulations. The Subcommittee began their development of the text amendment with Mr. Stearns's draft. Also to help provide direction for a proposed text amendment, the Subcommittee developed a series of "Goals and Objectives" utilizing a similar approach found in Bedford County's study. The resultant Goals and Objectives are as follows:

Goals

1. *Encourage the location of wireless communication facilities to serve residential areas.*
2. *Protect residential areas and land uses from potential adverse impacts of wireless communication facilities.*
3. *Encourage users of wireless communication facilities to locate them, to the extent possible, in areas where the adverse impact on the County is minimal.*
4. *Encourage users of wireless communication facilities to configure them in a way that minimizes the adverse visual impact of the towers and antennas through careful design, siting, landscape screening, and innovative camouflaging techniques.*
5. *Enhance the ability of the providers of telecommunications services to provide such services to County residents quickly, effectively, efficiently, and unobtrusively.*
6. *Consider the public health and safety of wireless communication facilities.*
7. *Avoid potential damage to adjacent properties from tower failure through the engineering and careful siting of wireless communication facilities structures.*

Objectives

1. *All homes and business have access to broadband services and wireless for communication, business, education, and entertainment applications.*
2. *Integrate technology into scenic landscapes so that the natural beauty and quality of life is not compromised.*
3. *Encourage the co-location of antennas and equipment on existing towers and structures as an alternative to the construction of new monopoles. Facilitate co-location projects through regulations that allow for by-right installations and administrative review by Staff.*

By early 2016, the Subcommittee had developed a working draft of a text amendment that would propose, among several other items, increasing the maximum height of new monopoles to 199 feet. This is the maximum height that a tower can be constructed without mandatory safety lighting required by the Federal Aviation Administration. This would be a significant change from the County's current 100 foot maximum height requirement which helps to ensure that all new monopoles are predominantly concealed within tree coverage.

Planning Staff's primary concern with increasing the maximum height requirement was that the current special use permit requirements for monopoles do not include metrics that Staff, the Commission, and ultimately the Board of Supervisors could use to determine whether a new application should be approved or denied. Staff recommended that a third-party telecommunications engineering consultant be procured to establish these metrics through development of a County-wide study similar to those developed by Warren and Bedford Counties. The resultant study would ideally determine locations where new towers are preferred in order to maximize telecommunications and broadband services for County residents and businesses, and also would determine optimal heights and design features for new towers and support structures. The study then could be used to complete the development of the proposed text amendment and also be used as a guidance document in evaluating future applications to construct new towers. Staff further recommended that a telecommunications engineering consultant be retained on an as-needed basis to evaluate new tower applications including their proposed siting, necessity, capacity to serve County customers, and impacts on surrounding properties.

The Subcommittee's working text amendment draft and their Goals and Objectives statement were presented to the full Planning Commission on February 5, 2016 for discussion. Specific questions regarding the proposed increase in maximum tower height and the need for a telecommunications engineering study were also provided to aid the discussion:

Maximum Height Increase

- *What are the Commissioners' opinions of allowing 199 foot monopoles while retaining the prohibition on lighting?*
- *If the maximum height is increased to 199 feet, should more restrictive height requirements be imposed on areas such as the mountain ridge line? Other areas?*
- *If a maximum 199 foot height is not favored, is there support for a lesser maximum height that is higher than the current 100 foot limit?*

Telecommunications Engineering Study

- *What are the Commissioners' opinions of conducting a telecommunications study as described by Staff?*
- *If a study is generally supported, how should it mesh with the consideration of the proposed text amendment? Should the text amendment be evaluated by the engineer as part of the study?*
- *Are Commissioners supportive of retaining a telecommunications engineer to review special use permit applications for new monopoles?*

Commission members provided feedback to the Subcommittee and were generally supportive of the direction in which the members were proceeding with the text amendment and Staff's recommendation for a telecommunications engineering study. Following this meeting, the Subcommittee met on February 22 and agreed to proceed with the working draft text amendment recommending a maximum height of 199 feet. Planning Staff worked with the Board of Supervisors through the annual budget process to fund and select a telecommunications engineering consultant. The Board authorized the release of a request for proposals in April 2016 to conduct a telecommunications and broadband study and in July 2016 a contract was awarded to The Atlantic Group to complete the study within a 90-day time period.

Atlantic Staff worked with Planning Staff and also met with the Subcommittee through late summer and early fall. In addition to developing the study, Atlantic Staff also assisted with review and comment on the Subcommittee's text amendment working draft and suggested language that corresponded to the recommendations that were being developed in the study. Atlantic Staff ultimately completed the County's "Telecommunications Infrastructure and Broadband Study" in November 2016. The Study was presented to the Board of Supervisors on November 29 and accepted by the Board at their meeting on December 20. As part of their action to accept the Study, the Board's motion also requested the Planning Commission to use the Study as the basis for future recommendations that are advanced to the Board as well as for guidance in reviewing future applications for new telecommunications towers.

Of particular relevance to the Subcommittee's text amendment, the Study identified eleven potential locations where new towers in combination with existing towers could provide a potential County-wide network for wireless telecommunications and broadband service. These eleven locations are referred to as "Permitted Commercial Tower Development Areas" (PCTDAs) and are identified on a revised version of the County tower inventory map included in the Study. The PCTDA locations are typically plotted at or near a road intersection with acceptable sites for new towers to be located within a half-mile radius of the location. The Study also recommended a targeted height of 120 feet for each PCTDA but also noted that taller towers up to 199 feet could be needed in some situations. Recommendations were included in the Study to help determine which types of situations warrant towers in excess of 120 feet.

The Subcommittee completed their work on the initial draft of this text amendment in January 2017 and presented it to the full Commission at their February 28 briefing meeting. The presentation included feedback from Mr. Stearns on the initial draft and the degree to which it addresses his original concerns.

Staff Analysis – Proposed Text Amendment Language

The major changes proposed in this text amendment are described separately by topic below:

Wireless Communication Facilities (WCFs) and Ordinance Objectives

The term "monopole" is currently used as the predominant term to describe telecommunications towers in Clarke County – a self-supporting, single-shaft structure as opposed to a tower with a lattice structure. While lattice towers will continue to be prohibited and "monopole" will still be used to describe the allowable antenna support structure, the term "wireless communication facility" or "WCF" will be used as the predominant descriptive term. As defined, "WCF" is a

broader term that includes the antenna support structure (or “tower”), antennas, transmission cables, equipment shelters and cabinets, utility pedestals, ground equipment, fencing, signage, and all other infrastructure that makes up a tower site.

The text amendment also lists four objectives that the proposed WCF regulations attempt to accomplish:

1. *To reduce the adverse impact of such facilities.*
2. *To encourage the placement of WCFs in locations with appropriate vegetative cover and screening, and encourage co-location of antennas as an alternative to construction of new WCFs.*
3. *To promote alternative stealth structure design.*
4. *To facilitate deployment of WCFs to provide coverage to all residents and businesses of Clarke County in a manner consistent with the County’s character.*

These four objectives are consistent with the original list of Goals and Objectives that were developed by the Subcommittee.

Coordination with the Telecommunications Infrastructure and Broadband Study

As requested by the Board of Supervisors, the proposed text amendment utilizes the recommendations of the Study both in terms of the regulations and in evaluating new proposed WCF applications. Language is included in §3-C-2-u to indicate that the text amendment is intended to be used in conjunction with the Study, and that the proposed locations for new WCFs referenced in the Study are a guide to maximize service and minimize impacts. For all new WCF’s over 80 feet in height (Class 3 and Class 4 WCFs – see description below), the proposed location shall be consistent with the Study’s guidance regarding PCTDAs. Furthermore, WCFs in excess of 120 feet in height also have to demonstrate one or more specific conditions that warrant the taller height (addressed in greater detail below).

Maximum Height Requirements and “Class” System

The current maximum height of 100 feet for all new monopoles would be replaced with a system of WCF “Classes” that establish maximum height requirements, application and review requirements, design requirements, zoning district assignments, and permitted or special use designations based on the WCF height or type. The proposed classes are as follows:

- Class 1 WCFs
 - Maximum height – 50 feet.
 - Review/approval authority – Site development plan application reviewed and approved administratively by Zoning Administrator.
 - Zoning Districts
 - Permitted use in the AOC, FOC, CH, CN, RR, and Historic Access Overlay District.
 - Prohibited in the Historic Overlay District.
 - Design – Monopole or stealth structure with surface-mounted antennas

- Class 2 WCFs
 - Maximum height -- 80 feet
 - Review/approval authority – Site development plan application reviewed and approved by Planning Commission. Public hearing required per §6-E-3.
 - Zoning Districts
 - Permitted use in the AOC, FOC, CH, CN, RR, and Historic Access Overlay District.
 - Prohibited in the Historic Overlay District.
 - Design – Monopole or stealth structure with surface-mounted antennas

- Class 3 WCFs
 - Maximum height -- 120 feet
 - Review/approval authority -- Special use permit and site development plan applications reviewed and approved by Board of Supervisors (following Planning Commission review and required public hearings).
 - Zoning Districts
 - Special use in the AOC, FOC, CH, and Historic Access Overlay Districts.
 - Prohibited in the CN, RR, and Historic Overlay Districts.
 - Design – Monopole

- Class 4 WCFs
 - Maximum height -- 199 feet
 - Review/approval authority -- Special use permit and site development plan applications reviewed and approved by Board of Supervisors (following Planning Commission review and required public hearings).
 - Zoning Districts
 - Special use in the AOC, FOC, CH, and Historic Access Overlay Districts.
 - Prohibited in the CN, RR, and Historic Overlay Districts.
 - Design – Monopole

- Class 5 WCFs. This class is designated for privately-owned amateur radio antennas. Maximum height of these structures is governed by State and Federal law and localities are pre-empted from establishing more stringent height requirements or requiring special use permits for their approval. Class 5 WCFs would be reviewed and approved administratively by the Zoning Administrator and are allowed by-right in all districts.

As referenced earlier in this report, applications for Class 4 WCFs (over 120 feet but no greater than 199 feet) are required to demonstrate that one of three situations exist that create the need for a height in excess of 120 feet. These situations are as follows:

1. *The proposed site would provide a demonstrable coverage improvement over a Class 3 tower height and would be consistent with the guidance regarding the County's coverage goals in the Telecommunications and Broadband Study. An example of this situation would be data generated by an applicant that shows a taller WCF will provide greater coverage to an underserved area without providing redundant coverage or unnecessary overlap with other existing towers.*

2. *Need to ensure proper connectivity for microwave “point to point” systems. A path study and evidence of rejection from fiber optic providers shall be submitted with the application. As discussed in detail in the Telecommunications Infrastructure and Broadband Study, all communication towers need to be served by broadband internet access in order to operate. This can be accomplished either by wired broadband extended to the tower or by a wireless “point to point” connection from the proposed tower to an existing tower with microwave antennas. Wired broadband connectivity is the ideal approach but in some cases, it may be infeasible to bring wired broadband to a tower site. If a WCF has to rely on a “point to point” microwave connection, it may have to be constructed at a taller height to connect with the transmitting tower.*
3. *Proposed WCF is required by the property owner to be located in an area with a lower elevation in relation to the overall elevation of the subject property. Setback calculations with ground elevation profile diagrams and property owner requirements shall be submitted with the application. An example of this situation would be a landowner who agrees to lease a portion of their land for a new WCF site but selects a topographically lower area of the property for the site. This could be to avoid losing land that is in active agricultural production or simply to be as far away from the property owner’s residence as possible. A taller height could be approved to accommodate elevation lost if the owner had allowed the WCF to be located on a topographically higher location on the property.*

Setbacks and Perimeter Buffers

Setbacks. The current ordinance requires setbacks of 100% of the monopole’s height from property lines, 200% from public rights of way, and 400% from other natural or scenic features such as the Appalachian Trail, open space easements, scenic byways, Blandy Experimental Farm, and the Shenandoah River.

The new proposed setback from property lines and structures would be a distance equal to the engineered “fall zone,” or the fall zone plus the required perimeter buffer area, whichever is greater. The “fall zone” is the maximum distance from the structure base that the WCF is designed to fall in the event of a structural failure and collapse. All WCF applications will be required to include a diagram from a licensed structural engineer certifying the fall zone for the proposed WCF.

For WCFs to be located on parcels adjacent to the Appalachian National Scenic Trail Corridor, a special setback of 400 feet from the footprint of the Appalachian Trail is required.

Perimeter buffers. Under current requirements, monopoles must be located within a wooded area of dense tree cover containing a minimum depth of 120 feet from the area to be cleared for the monopole site. All trees within this area must be preserved.

Under the proposed text amendment, a perimeter buffer would be required for all Class 3 and Class 4 WCFs. An area with a minimum depth of 50 feet from the facility compound fencing must be established and maintained as a buffer area. Within the first 25 feet closest to the

compound fence, the buffer must preserve existing trees and include supplementary planting of evergreen trees to effectively screen the compound and WCF structure base from view. The Planning Commission would have the authority to require additional planting within the remaining 25 feet of the perimeter buffer on a case-by-case basis to ensure effective and appropriate screening. All vegetation within the perimeter buffer would be required to be maintained throughout the lifespan of the WCF.

Co-Location of Antennas and Equipment

Current regulations allow the co-location of telecommunications antennas and equipment on existing monopoles, lattice towers, water tanks, and other structures as an amendment to the site development plan for that facility. Aside from language added recently to address the Federal co-location law change, the current ordinance does not outline a specific process to be followed for co-location applications or for the periodic addition, replacement, and maintenance of equipment and other WCF infrastructure.

The proposed text amendment now includes specific review processes, application requirements, and regulations for co-location of antennas and the addition/replacement/maintenance of WCF infrastructure and equipment. Language is included to clarify that co-location is a by-right activity and that the Zoning Administrator has the authority to waive certain site plan requirements if all additions and changes occur within the facility compound and do not produce a material change in appearance, height, or setbacks.

Stealth Design

The County has long encouraged the use of stealth design techniques to reduce the visual impact of new monopoles and has one example of an effective “tree” stealth monopole located off Mt. Carmel Road.

To further encourage the use of stealth design techniques, new design requirements are included in four formats that are compatible with the agricultural character of the County – silos, bell towers, tree structures, and flag poles. Stealth silo structures are noted as the County’s “highest valued stealth technology” as the design has the greatest potential to blend with the agrarian nature of the County. Class 1 and Class 2 WCFs may employ silo and tree stealth designs, and bell tower and flag pole structures may be used for Class 1 WCFs. Other stealth designs in addition to these four models may be considered on a case-by-case basis.

Third-Party Engineering Review

As recommended by the Telecommunications Infrastructure and Broadband Study, the text amendment also includes language to allow the County to use a third-party wireless telecommunications engineer or consultant to review and provide recommendations on new WCF applications. This is similar to the County’s current practice of using engineering consultants to review site plans and subdivision plats for impacts such as erosion and sediment control, transportation, and Karst. Third-party engineering review would be required for all Class 2, 3, and 4 applications and would be required at the discretion of the Zoning Administrator for all Class 1 and Class 5 applications as well as co-location applications and applications to add/replace/or maintain equipment.

Staff Recommendation:

Staff has no outstanding concerns with the adoption of the text amendment.

History:

April 7, 2017. **Commission voted 9-0-2 (Daniel, Turkel absent) to schedule Public Hearing for the May 5, 2017 meeting.**

May 5, 2017. **Placed on the Commission’s regular meeting agenda and advertised for Public Hearing.**

Ordinance Amendment Text (Changes shown in bold italics with strikethroughs where necessary; changes since April 7 meeting shown in red):

3-C-2-u ~~Monopoles for Telecommunication Antennae:~~
Wireless Communication Facilities (WCFs):

~~1. A site plan, in accord with Section 6 of this ordinance, shall be submitted for Monopoles for Telecommunication Antennae (note: Section 6 H 12, Standards for Monopoles for Telecommunication Antennae, contains additional specific regulations). A monopole is a self-supporting single shaft structure. It does not have guy wires and is not a lattice tower with multiple legs and cross-bracing structure~~

1. Purpose and objectives; Telecommunications Engineering Study.

a. Purpose. The purpose of this section and the design standards in §6-H-12 is to provide for the siting of Wireless Communication Facilities (WCFs) by establishing requirements for the siting, construction and modification of monopoles, towers, stealth structures, support structures, and associated equipment.

b. Objectives. The objectives of this section are:

- (1) To reduce the adverse visual impact of such facilities***
- (2) To encourage the placement of WCFs in locations with appropriate vegetative cover and screening, and encourage co-location of antennas as an alternative to construction of new WCFs***
- (3) To promote alternative stealth structure design***
- (4) To facilitate deployment of WCFs to provide coverage to all residents and businesses of Clarke County in a manner consistent with the County's character***

c. Telecommunications Infrastructure and Broadband Study. This section is intended to be applied in conjunction with the County's Telecommunications Infrastructure and Broadband Study. The Study's proposed locations for new WCFs are a guide to maximize telecommunications service to residents and businesses and to minimize adverse impact on the County's scenic and historic resources.

2. Classes of Wireless Communication Facilities. WCFs shall be divided into the following classes:

a. Class 1. WCFs with a height not to exceed fifty (50) feet above ground level (AGL). Such design shall be limited to a monopole or "stealth" design. Antennas must be surface mounted on the monopole.

- b. ***Class 2. WCFs with a height not to exceed eighty (80) feet above ground level (AGL). Such facilities shall be limited to a monopole or “stealth” design. Antennas must be surface mounted on the monopole.***
 - c. ***Class 3. WCFs with a height not to exceed one hundred and twenty (120) feet above ground level (AGL). Such facilities shall be limited to a monopole design as the support structure.***
 - d. ***Class 4. WCFs with a height not to exceed one hundred and ninety nine (199) feet above ground level (AGL). Such facilities shall be limited to a monopole design as the support structure.***
 - e. ***Class 5. Amateur radio antennas subject to the limitations of Code of Virginia §15.2-2293.1 and Federal Communications Commission (FCC) provisions specified in the Code of Federal Regulations.***
3. ***General Use Standards.***
- a. ***All WCFs must meet current standards and regulations of the Federal Aviation Administration (FAA), FCC, and any other agency of the county, state, or federal government with the authority to regulate WCFs. If regulations change and WCFs are required to comply with such changes, the owners of the WCFs governed by this ordinance shall bring WCFs into compliance within six (6) months of the effective date of such change in standards or regulations. Failure to comply shall constitute grounds for the removal of the WCFs at the owner’s expense.***
 - b. ***WCFs shall be considered either a principal or accessory use.***
4. ***By-right uses. The uses listed in this subsection are deemed to be by-right uses subject to review and approval of a site development plan demonstrating compliance with this section, §6-H-12, and other applicable sections of the Zoning Ordinance:***
- a. ***Co-location. Co-location of new antennas, electronics, cables, and ground support equipment to include cabinets, shelters, power supply transformers, generators, fuel tanks, power meters and other required support equipment on existing WCFs or other structures. The site development plan shall be subject to administrative review and approval by the Zoning Administrator. Third-party engineering review may be required if deemed necessary by the Zoning Administrator.***
 - b. ***Class 1 and Class 5 WCFs. The site development plan shall be subject to administrative review and approval by the Zoning Administrator. Third-party engineering review may be required if deemed necessary by the Zoning Administrator.***

- c. **Class 2 WCFs.** *The site development plan shall be subject to administrative review and approval by the Planning Commission including third-party engineering review.*
- d. **Distributed antenna systems (DAS).** *Installing a DAS (such as a cable microcell network) through the use of multiple low-powered transmitters/receivers attached to existing wireless systems, such as conventional cable or telephone equipment, or similar technology that does not require the use of WCFs. The site development plan shall be subject to administrative review and approval by the Zoning Administrator. Third-party engineering review may be required if deemed necessary by the Zoning Administrator.*
- e. **WCF upgrades/equipment maintenance of an existing wireless provider on a WCF.** *The site development plan shall be subject to administrative review and approval by the Zoning Administrator. Third-party engineering review may be required if deemed necessary by the Zoning Administrator.*

5. **Special Uses.**

- a. *The uses listed in this subsection require issuance of a Special Use Permit including review and approval of a site development plan demonstrating compliance with this section, §6-H-12, and other applicable sections of the Zoning Ordinance:*
 - (1) *Class 3 & 4 WCFs.*
 - (2) *Any Class 3 or Class 4 WCF which is being rebuilt on the same parcel to accommodate the co-location of an additional WCF. The rebuilt WCF shall meet all requirements of this section and §6-H-12. There shall only be one (1) WCF per Special Use Permit in the designated compound area.*
- b. *In granting a Special Use Permit, the Planning Commission may recommend and the Board of Supervisors may impose conditions to the extent that the Board concludes such conditions are necessary to minimize any adverse effect of the proposed WCF on adjoining properties.*

- 6. **Co-location of antennas as required by Federal law.** *Notwithstanding any provision of this Ordinance related to Special Use Permit requirements and procedures on any specific special use condition placed on an approved ~~monopole~~ WCF, the Zoning Administrator shall administratively approve ~~an amendment to the previously approved site development plan for a monopole~~ a site development plan to allow co-location, removal, or replacement of ~~transmission equipment~~ **antennas, electronics, cables, and ground support equipment to include cabinets, shelters, power supply transformers, generators, fuel tanks, power meters and other required support equipment on existing Class 1, 2,***

3, or 4 WCFs, as required by Federal law, that meets all of the following standards:

- a. The co-location, removal, or replacement of equipment does not result in the ~~monopole WCF~~ failing to meet the requirements of ~~§6-H-12-b and §6-H-12-e~~ **§6-H-12-a-5** of this Ordinance.
- b. Installation of the proposed equipment does not increase the height of the ~~monopole WCF~~ by more than 10% of the original approved height or by the height needed to provide 20 feet of separation from the closest antenna array location on the ~~monopole WCF~~, whichever is greater, except that the mounting of the proposed equipment may exceed these limits if necessary to avoid interference with equipment existing on the ~~monopole WCF~~. For any request to exceed height limits to avoid interference with existing equipment on the ~~monopole WCF~~, the applicant shall provide a report by a licensed engineer to justify the request. Such report shall be evaluated by the County's engineering consultant and the applicant shall be responsible for reimbursing the county for all costs associated with the consultant's review.
- c. Installation of the proposed equipment would not involve the installation of more than the standard number of new equipment cabinets for the technology involved, not to exceed four, or more than one new equipment shelter. New equipment shelters and cabinets shall be located within the existing approved compound.
- ~~d. Installation of the proposed equipment would not involve the adding of any appurtenance that would protrude from the edge of the monopole more than 20 feet or protrude more than the width of the largest existing appurtenance, whichever is less. Mounting of the proposed equipment may exceed the foregoing size limits if necessary to provide shelter from inclement weather or to connect the equipment to the monopole via cable.~~
- de. Installation of the proposed equipment would not involve excavation outside the boundaries of the ~~monopole WCF~~ site depicted on the original approved site development plan.

78. ***Compliance with Federal and State regulations required. Compliance with all Federal Aviation Administration and Federal Communication Commission requirements, including review by the Virginia Department of Historic Resources of properties eligible for listing and listed on the National Register of Historic Places in accord with Section 106 procedures, shall be demonstrated in writing if required by statute.***

89. ***Commercial use of Class 5 WCFs prohibited. There shall be no co-location of any commercial antennas or equipment on any Class 5 amateur radio WCF for service other than the owner/operator of the Class 5 structure. If any commercial service is located on the WCF, the Class 5 WCF shall lose its status as a Class 5 WCF and shall become a commercial facility and be treated as such under County, State and Federal regulations.***

9. ***Existing monopoles and telecommunication towers. Monopoles in existence as of the adoption date of this ordinance shall be considered as WCFs with a Class that corresponds to the monopole's height. Existing telecommunication towers in excess of 199 feet in height or having a design other than a monopole shall not be considered WCFs for the purpose of this ordinance.***

ZONING DISTRICTS FOR WIRELESS COMMUNICATION FACILITIES

<i>Class</i>	<i>AOC</i>	<i>FOC</i>	<i>CH</i>	<i>CN</i>	<i>RR</i>	<i>Historic Overlay*</i>	<i>Hist Access Overlay*</i>
<i>Co-Location</i>	<i>A</i>	<i>A</i>	<i>A</i>	<i>A</i>	<i>A</i>	<i>A</i>	<i>A</i>
<i>1 (max 50')</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>X</i>	<i>P</i>
<i>2 (max 80')</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>X</i>	<i>P</i>
<i>3 (max 120')</i>	<i>S</i>	<i>S</i>	<i>S</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>S</i>
<i>4 (max 199')</i>	<i>S</i>	<i>S</i>	<i>S</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>S</i>
<i>5 (am. radio)</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>	<i>P</i>

P – Permitted/by-right

A – Accessory use

S – Special use

X – Prohibited use

** -- Subject to the underlying zoning district regulations and compliance with overlay district review criteria.*

SUMMARY OF WIRELESS COMMUNICATION FACILITY CLASSES

<i>Class</i>	<i>Max Height</i>	<i>Approval Authority</i>	<i>Special Use Permit Required?</i>	<i>Site Plan Required?</i>	<i>Engineering Review Required?</i>	<i>Design</i>
<i>1</i>	<i>50 feet</i>	<i>Zoning Administrator</i>	<i>No – by right use</i>	<i>Yes*</i>	<i>Zoning Administrator’s discretion</i>	<i>Monopole or stealth w/surface mounted antennas</i>
<i>2</i>	<i>80 feet</i>	<i>Planning Commission</i>	<i>No – by right use</i>	<i>Yes</i>	<i>Yes</i>	<i>Monopole or stealth w/surface mounted antennas</i>
<i>3</i>	<i>120 feet</i>	<i>BOS with PC review</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Monopole</i>
<i>4</i>	<i>199 feet</i>	<i>BOS with PC review</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Monopole</i>
<i>5</i>	<i>Per State law</i>	<i>Zoning Administrator</i>	<i>No – by right use</i>	<i>Yes*</i>	<i>Zoning Administrator’s discretion</i>	<i>Amateur radio antenna per State law</i>

** Depending on the nature and design of the Class 1 or Class 5 WCF, the Zoning Administrator has the discretion to waive certain site development plan requirements per §6-C.*

NOTE – Co-location of new antennas and equipment on existing WCFs and other structures are approved administratively by the Zoning Administrator.

6-H-12 ~~Monopoles for Telecommunication Antennae~~
Design Standards for Wireless Communication Facilities (WCFs)

6-H-12-a. *Design Standards*

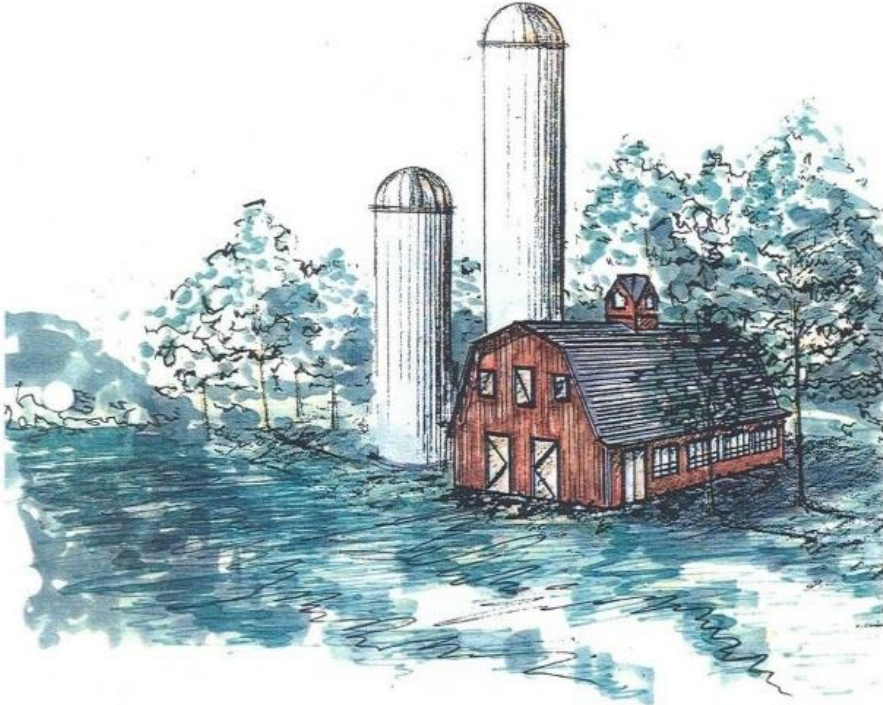
1. *All WCFs shall be a monopole or stealth design.*
2. **Prohibition on lighted WCF.** A ~~monopole~~ WCF shall not trigger a requirement, public or private, that it be lighted nor shall it be lighted on a voluntary basis.
3. **Height requirements.**
 - a. *The maximum height for a Class 1 WCF shall be fifty (50) feet including any attachments.*
 - b. *The maximum height of a Class 2 WCF shall be eighty (80) feet including any attachments.*
 - c. *The maximum height of a Class 3 WCF shall be one hundred and twenty (120) feet including any attachments.*
 - d. *The maximum height of a Class 4 WCF shall be one hundred and ninety nine (199) feet including any attachments.*
 - e. *Class 5 WCFs shall conform to all Federal codes regulating amateur radio Licenses.*
 - f. *Determination of ~~monopole~~ height shall include any attachments to the ~~monopole~~ WCF. Lightning rods shall be exempt from the maximum height calculation.*
4. **Aesthetic requirements.** *WCFs shall meet the following aesthetic requirements:*
 - a. *The visual impact of a ~~monopole~~ WCF and any associated facilities (including ~~attachments, security fencing, utilities, and equipment shelters~~) shall blend with the natural and built environment of the surrounding area using mitigation measures such as: architecture, color, innovative design, landscaping, setbacks greater than the minimum required, materials, siting, topography, and visual screening. The number of existing ~~monopoles~~ **readily apparent Class 2, 3, and 4 WCFs** in an area shall also be considered when determining visual impact of a new ~~monopole~~ WCF. ~~Monopoles Class 3 or 4 WCFs shall not ridge lines, but down slope from the top of ridge lines~~ **exceed the maximum height of the tree canopy on the topographic crest of the Blue Ridge Mountains.***

Administrative Review of the site development plan, including third-party engineering review, will determine if stealth technology shall be used and what

type of stealth technology is required if the WCF design and placement is determined not to meet the objectives stated within this Ordinance.

- b. The design of buildings and related structures within the WCF compound area shall, to the extent possible, use materials and colors that will blend into the natural setting and surrounding trees. Security fencing shall be six (6) feet tall, and dark green or black in color made of chain link.*
- c. If various antennas, cables and electronics are installed on a structure other than another WCF (i.e., water tower, light pole, rooftop, sign or silo), the antenna and supporting electrical and mechanical equipment must be of a neutral color that is identical to, or closely compatible with, the color of the supporting structure so as to make the antenna and related equipment as visually unobtrusive as possible.*
- ~~*d. The monopole shall have the minimum diameter necessary to accommodate the proposed attachments. Attachments to the monopole shall be the same color as the monopole. Attachments to the monopole shall have the minimum dimensions and protrusion for the monopole based on the best available technology or shall be enclosed within the pole. A lightning rod may be mounted as an extension of a monopole and shall be included in determining the height of the monopole. The Board of Supervisors may require attachments to the monopole to be flush-mounted as a means of reducing visibility of the monopole from surrounding properties.*~~
- d. Stealth Technology. Stealth technology may be used on WCFs as set forth below. Because of the agrarian nature and beauty of the County, the silo structure will be the highest valued stealth technology. This technology of silo stealth structures should blend harmoniously with the existing farm structures.*
 - (1) The design standards for the “Silo” stealth structure shall be:*
 - (a) All equipment except for local commercial power service shall be placed inside of the silo. This provision shall not apply to the co-location of antennas on existing silos.*
 - (b) The silo shall not exceed eighty (80) feet at ground level (AGL).*
 - (c) The silo shall match any existing silo on the property in architectural design and colors.*
 - (d) Silo compounds must match existing fencing located on the agricultural property.*

- (e) *Renderings prepared by a licensed landscape architect shall be provided for all stealth silo applications.*
- (f) *The WCF shall be a Class 1 or Class 2.*



***Examples of well-designed stealth silo WCFs
Camouflage screening using existing or new
structures employing a 2:1 and 3:1 ratio***



- (2) *The design standards for the bell tower stealth structure shall be:*
- (a) *All bell tower stealth WCFs shall match architecturally to the existing building's architecture.*
 - (b) *All bell tower stealth WCFs shall be no more than a 2:1 ratio from height of the bell tower to roof line of existing structure not to exceed fifty (50) feet AGL.*
 - (c) *All bell tower stealth WCFs shall be located within twenty (20) feet of the existing match structure.*
 - (d) *Renderings prepared by a licensed landscape architect shall be provided for all bell tower stealth structure applications.*
 - (e) *The WCF shall be a Class 1.*



Example of a well-designed bell tower WCF

- (3) *The design standards for a tree stealth structure shall be:*
- (a) *Must not be higher than twenty (20) feet above the existing tree line measured from trees within a 200 foot radius of the proposed site.*
 - (b) *The tree structure must be designed to resemble an evergreen species native to Clarke County.*
 - (c) *The tree structure must have textured bark, branches and foliage that encapsulate the cables, electronics and antennas.*
 - (d) *The colors of the tree structure must blend with existing trees of that species and variety.*
 - (e) *The structure must meet all design standards for stability and must be maintained for accuracy of the colors and foliage.*
 - (f) *Renderings prepared by a licensed landscape architect shall be provided for all tree stealth structure applications.*
 - (g) *The WCF shall be a Class 1 or 2. May be a Class 3 WCF depending upon topography of site and surrounding properties and the height of surrounding tree coverage.*



Example of a well-designed tree WCF

- (4) *The Design standards for the flag pole stealth structure shall be:*
- (a) *All antennas, cables, electronics and devices must fit within the designed enclosure of the flag pole.*
 - (b) *The flag pole shall be used as a flag pole and fly a flag accordingly. If the flag is flown at night adequate lighting shall be installed.*
 - (c) *The flag pole shall not have reflective paint.*
 - (d) *Renderings prepared by a licensed landscape architect shall be provided for all flag pole stealth structure applications.*
 - (e) *The WCF shall be a Class 1.*



Example of a well-designed flag pole WCF

5. ***Setbacks and Buffering***

- a. ***Setback requirements from property lines and structures. Class 1, 2, 3, and 4 WCFs shall be set back from all property lines and structures a distance equivalent to the WCF's fall zone, or the WCF's fall zone and required perimeter buffer area, whichever distance is greater. The WCF's designed fall zone shall be described in the applicant's site development plan. For parcels located adjacent to the Appalachian National Scenic Trail Corridor, WCFs shall be set back a minimum of 400 feet from the footprint of the Appalachian Trail.***

~~A monopole shall be set back a distance equal to at least 100% of its height from any property line. A monopole shall be set back a distance equal to at least twice its height from any public right of way (except as noted below). A monopole shall not be located on and shall be set back a distance equal to at least four times its height from the following:~~

- ~~(1) Parcels comprising the Appalachian National Scenic Trail corridor~~
- ~~(2) Parcels under permanent open space easement~~
- ~~(3) The State Arboretum of Virginia portion of the University of Virginia's Blandy Farm~~
- ~~(4) State designated Scenic Byways~~
- ~~(5) The Shenandoah River (a state designated scenic river)~~
- ~~(6) State Parks and Wildlife Management Areas.~~

- b. ***Setback requirements for buildings and support equipment. For any building or structure associated with a WCF and inclusive of required perimeter buffer areas per subsection (d), the minimum setback from any property line abutting a public road or shared private access easement right of way shall be fifty (50) feet and in all other instances shall be no less than twenty-five (25) feet. No setback shall be required for private access easements or portions thereof designed exclusively to provide ingress and egress from the WCF compound to a public road.***

- c. ***Method for measuring setback distances. Setbacks shall be measured from the closest structural member on the WCF. Guy lines shall be exempt from the minimum setback requirements in side and rear yards for the respective zoning district but shall comply with the front yard setback requirements.***

- d. ***Perimeter buffer. ~~The monopole~~ Class 3 and 4 WCFs shall be located in a wooded area of dense tree cover referred to as the perimeter buffer. ~~This dense tree cover~~ The perimeter buffer shall have a minimum depth of 50 feet from the compound fencing as a radius around the perimeter of the area to be cleared for the monopole WCF. All trees within 120 feet of the perimeter of the area to be cleared the perimeter buffer for the monopole Class 3 or 4 WCF must be retained, unless specifically approved for removal on the site development plan.***

Within 25 feet of the compound fencing, the perimeter buffer shall be supplemented with evergreen trees planted in a double-staggered row and shrubs as necessary to effectively screen the compound and WCF structure base from view. The Planning Commission may request additional planting within the remaining 25 feet of the perimeter buffer on a case-by case basis to ensure effective and appropriate screening. All vegetation within the perimeter buffer shall be maintained throughout the lifespan of the WCF.

- e. Setbacks for co-location on other support structure. For co-location of antennas and equipment on a support structure other than a WCF (e.g., building, water tower, silo), the governing setbacks shall be the support structure's current setback requirements as enumerated in the Ordinance.*

6. Other Design Requirements

- a. Compound design requirements. The area to be cleared for the compound containing ~~a the~~ monopole Class 1, 2, 3 or 4 WCF and support facilities shall be the minimum necessary to accommodate the facilities and shall not exceed 2,500 square feet. The driveways accessing the compound shall be gated.*
- b. Design requirements for buildings and support equipment.*
 - (1) Equipment cabinets shall not be more than twelve (12) feet in height. Structures designed to house equipment shall not exceed the maximum building height for the zoning district in which the subject property is located.*
 - (2) If the equipment cabinet or structure is located on the roof of a building, the area of the equipment structure and related equipment shall not occupy more than 25% of the roof area. The equipment cabinet or structure and related equipment shall also be completely screened from view on all sides of the building.*
 - (3) Equipment cabinets or structures shall comply with all applicable building codes.*
- c. Advertisement signs are prohibited. Signs compliant to FCC requirements containing ownership, operational, and name plate data shall be allowed.*
- d. All WCFs shall have appropriate FCC signage and contact information for emergency communications.*

6-H-12-b. *Application Requirements*

1. ***Requirements for Class 1 and Class 2 WCF applications. Applicants requesting approval of a Class 1 or Class 2 WCFs shall submit the following information to the Zoning Administrator for review:***
 - a. ***A site development plan consisting of a scaled plan and a scaled elevation view and other supporting drawings, calculations, and other documentation, signed and sealed by a licensed Professional Engineer, Surveyor, Landscape Architect or Architect, showing the following information:***
 - (1) ***Legal description of subject property and proposed lease area (if applicable)***
 - (2) ***Design and height of the proposed WCF;***
 - (3) ***Proposed means of access from the public road to the WCF site***
 - (4) ***Setbacks from the property lines, existing structures on the subject property, and existing private access easements***
 - (5) ***Distances to uses and structures on adjacent properties***
 - (6) ***Elevation of the proposed WCF site and surrounding topography***
 - (7) ***Location of all improvements including but not limited to compound location, equipment cabinets, structures, fencing, and signage***
 - (8) ***Existing tree coverage and vegetation***
 - (9) ***Zoning of subject property and adjacent properties***
 - (10) ***General location of all residences and structures within two-thousand (2,000) feet of the proposed WCF***
 - (11) ***Any other information deemed by the Zoning Administrator to be necessary to assess compliance with this ordinance***
 - b. ***A cover letter that outlines what the applicant is proposing to do on-site.***
 - c. ***Any fees associated with the review of the application by the County and/or its consultant shall be paid by the applicant at submittal.***
 - d. ***Structural engineering documentation shall be provided demonstrating compliance with all applicable building codes and regulations. A diagram and statement certified and sealed by a licensed structural engineer shall also be provided that describes the fall zone for the proposed WCF.***
 - e. ***The Zoning Administrator may request additional information if needed while reviewing an application for administrative approval. Failure to provide the requested information shall result in the denial of the application.***
 - f. ***A Karst plan per §6-H-15 shall be provided.***

- g. A statement justifying the need for the project by a licensed telecommunications provider. In the event that none of the applicants are a telecommunications provider, a letter of intent from a licensed telecommunications provider to operate on the proposed WCF upon its completion shall be provided. This statement shall include the following:***
- (1) A description of how the location of the proposed WCF is consistent with the guidance provided in the County's Telecommunications Engineering Study.***
 - (2) The unsuitability of the use of existing WCFs, other structures or alternative technology not requiring the use of WCFs or structures to provide the services under consideration.***
 - (3) A map depicting all co-location candidates in the search area, along with the RF analysis documentation as to their suitability. These include propagation modeling for the network before the applicant's request and after if approved.***
- h. A description of compliance with all applicable Federal, State, or local laws including the following actual documents addressing the historic site impact review Section 106 Historical Review portion of the approved National Environmental Policy Act (NEPA) statement, and the TOWAIR determination results for FAA registration.***
- i. A landscape plan showing specific landscape materials including proposed plantings to comply with perimeter buffer requirements.***
- j. If required, a method of security fencing (no less than six (6) feet in height) with anti-climbing device and finished color and, if applicable, the method of camouflage and illumination.***
- k. At least 2 (two) actual photographs of the site that include simulated photographic images of the proposed WCF at the proposed construction height and at a height 10% greater than the proposed construction height to simulate future co-location.*** The photographs with the simulated image shall illustrate how the facility will look from adjacent roadways, nearby residential areas, or public buildings such as a school, church, etc. The Zoning Administrator reserves the right to select the location for the photographic images and require additional images. The applicant at the Zoning Administrator's request shall conduct a balloon test to demonstrate the height of a proposed ~~monopole~~ WCF with a potential 10% height increase to simulate future co-location and provide adjoining property owners with a 48-hour notice of the test.
- l. The applicant shall identify the type of construction of the existing WCF(s) and the owner/operator of the existing WCF(s), if known.***

- m. A statement by the applicant as to whether construction of the WCF will accommodate co-location of antennas including the number and dimensions of available co-location positions.*
 - n. Identification of the entities providing the backhaul network for the WCF(s) described in the application and other cellular sites owned or operated by the applicant in the County.*
 - o. A description, including mapping at an appropriate scale, of the search area and coverage objective. A figure depicting the radio frequency coverage (or propagation map) of the proposed facility and all nearby facilities shall also be provided. Propagation maps shall show a minimum of three (3) signal intensities in milliwatts.*
 - p. A cost estimate for removal of the WCF and facilities from the site.*
 - q. An application for a site development plan review shall be signed by the owner(s) of the property on which the WCF is to be sited and by the telecommunications provider or developer of the WCF site.*
2. ***Requirements for Class 3 and 4 WCF applications. In addition to the application requirements for Class 1 and Class 2 WCF applications, applicants requesting a Special Use Permit to construct a new ~~monopole~~ Class 3 or 4 WCF shall submit the following information to the Zoning Administrator for review and action by the Planning Commission and Board of Supervisors:***
- a. Applications for new proposed Class 3 WCFs shall depict a location that is consistent with the guidance regarding the Permitted Commercial Tower Development Areas (PCTDA) depicted in the County's Telecommunications Infrastructure and Broadband Study.*
 - b. Applications for new proposed Class 4 WCFs shall demonstrate the following:*
 - (1) A location that is consistent with the guidance regarding the Permitted Commercial Tower Development Areas (PCTDA) depicted in the County's Telecommunications Infrastructure and Broadband Study.*
 - (2) In order to justify a maximum height in excess of 120 feet, the applicant shall demonstrate one or more of the following conditions:*
 - (a) The proposed site would provide a demonstrable coverage improvement over a Class 3 tower height and would be consistent with the guidance regarding the County's coverage goals in the Telecommunications Infrastructure and Broadband Study.*

- (b) *Need to ensure proper connectivity for microwave “point to point” systems. A Path Study and evidence of rejection from fiber optic providers shall be submitted with the application.*
 - (c) *Proposed WCF is required by the property owner to be located in an area with a lower elevation in relation to the overall elevation of the subject property. Setback calculations with ground elevation profile diagrams and property owner requirements shall be submitted with the application.*
- cf. An application for a ~~monopole~~ Special Use Permit and site *development* plan *review* application shall be signed by the owner(s) of the property on which the ~~monopole~~ WCF is to be sited and by the telecommunications provider or developer of the ~~monopole~~ WCF site.
- dg. At time of submission of a ~~monopole~~ special use permit and site *development* plan application, the applicant shall document that ~~it considered at least two alternative sites~~ *a new WCF is required because there is no existing structure of sufficient height within the Applicant’s search ring available for possible co-location*, and set forth its reasons for selecting the site proposed. After a public hearing on an application, an applicant may be requested to consider alternate sites that in the opinion of the reviewing body will better comply with the *objectives and* regulations for ~~monopole~~ *siting of new WCFs*.
- eh. Verifiable evidence shall be provided in writing showing the lack of antenna space on existing towers, buildings, or other structures suitable for antenna location, or evidence of the unsuitability of existing tower locations for co-location.
- ~~e. A Site development Plan consisting of a scaled plan and a scaled elevation view and other supporting drawings, calculations, and other documentation showing the location and dimensions of all improvements, including topography; existing zoning; existing tree coverage and vegetation; height requirements; setbacks from property line; access drives; fencing; distances to adjacent uses and adjacent buildings, and the general location of all residences and structures within two thousand (2,000) feet of the proposed monopole.~~
- ~~e. A figure depicting the radio frequency coverage (or propagation map) of the proposed facility and all nearby facilities. Propagation maps shall show a minimum of three (3) signal intensities in milliwatts.~~
- ~~d. At least 2 (two) actual photographs of the site that include simulated photographic images of the proposed monopole. The photographs with the simulated image shall illustrate how the facility will look from adjacent roadways, nearby residential areas, or public buildings such as a school, church, etc. The zoning administrator reserves the right to select the location for the photographic images~~

~~and require additional images. The applicant at the zoning administrator's request shall conduct a balloon test to demonstrate the height of a proposed monopole and provide adjoining property owners with a 48-hour notice of the test.~~

- ~~e. The zoning administrator may require other information deemed necessary to assess compliance with this ordinance.~~
- ~~i. To ensure the structural integrity and wind load capacity of monopole, the monopole owner shall ensure that it is designed and maintained in compliance with standards contained in applicable building codes and regulations.~~

3. Requirements for amateur radio antennas (Class 5 WCFs).

- a. A site development plan to be reviewed and acted upon administratively by the Zoning Administrator shall be provided for all Class 5 WCFs. The site development plan shall depict the antenna design, height, and setbacks from property lines, public rights of way, private access easements, and existing structures on the subject property.*
- b. Maximum height. The maximum height of a Class 5 WCF shall be the lowest height limitation permitted by Code of Virginia §15.2-2293.1.*
- c. Setback requirements. Class 5 WCFs shall be set back a minimum distance of 100% of the antenna's height from all property lines and private access easements.*

4. Requirements for co-location applications.

- a. This section shall apply to all applications to co-locate new antennas and required support equipment on existing WCFs and structures, including the installation of distributed antenna systems (DAS).*
- b. A site development plan consisting of a scaled plan and a scaled elevation view and other supporting drawings, calculations, and other documentation, signed and sealed by a licensed Professional Engineer, Surveyor, Landscape Architect or Architect, shall be provided by the Applicant showing the following information:*
 - (1) Legal description of subject property and proposed lease area (if applicable)*
 - (2) Sketch showing the existing WCF or structure, the dimensions and location of the antenna and equipment to be co-located, and the proposed change in the height of the structure as a result of the co-location if applicable*

- (3) *Sketch showing dimensions and location of all proposed equipment, cabinets, and structures to be added to the WCF compound. For co-location on structures other than a WCF, setback distances from property lines and adjacent structures shall be shown.*
 - (4) *All proposed changes to existing landscaping, buffering, fencing, signage, and other material site features.*
 - (5) *Any other information deemed by the Zoning Administrator to be necessary to assess compliance with this ordinance*
- c. *Co-location applications shall be signed by the property owner or by the owner or lessee of the WCF or structure.*
 - d. *Applications to co-locate a new antenna and equipment on an existing WCF shall be considered an amendment of the existing site development plan for the WCF and shall be acted upon administratively by the Zoning Administrator. For co-location on Class 3 or Class 4 WCFs, such applications shall demonstrate compliance with any special conditions imposed in conjunction with the special use permit.*

5. **Requirements for applications to upgrade/maintain existing equipment.**

- a. *This section shall apply to all applications to upgrade, change, modify, or maintain existing equipment on a WCF or a structure containing antennas for telecommunications. This section shall also apply to applications to upgrade, change, modify, or maintain structural elements of existing WCFs or structures containing antennas for telecommunications.*
- b. *A site development plan consisting of a scaled plan and a scaled elevation view and other supporting drawings, calculations, and other documentation, signed and sealed by a licensed Professional Engineer, Surveyor, Landscape Architect or Architect, shall be provided by the Applicant showing the following information:*
 - (1) *Legal description of subject property and proposed lease area (if applicable)*
 - (2) *Sketch showing dimensions and location of all proposed equipment, cabinets, and structures to be added, changed, or otherwise altered and their position on the WCF compound. For changes to existing equipment on structures other than a WCF, changes to setback distances from property lines and adjacent structures shall be shown.*
 - (3) *All proposed changes to existing landscaping, buffering, fencing, signage, and other material site features.*
 - (4) *Any other information deemed by the Zoning Administrator to be necessary to assess compliance with this ordinance*

- c. *Applications to upgrade/maintain existing equipment shall be signed by the property owner or by the owner or lessee of the WCF or structure.*
- d. *Applications to replace equipment on an existing WCF shall be considered an amendment of the existing site plan for the WCF and shall be acted upon administratively by the Zoning Administrator. For co-location on Class 3 or Class 4 WCFs, such applications shall demonstrate compliance with any special conditions imposed in conjunction with the special use permit.*

6-H-12-c. *Inactive WCFs; Removal Bond Required*

1. *Inactive WCFs. The owner of the ~~monopole~~ **an inactive WCF** shall dismantle the ~~monopole support structure, antennas,~~ and all associated structures if no functioning privately owned telecommunication antenna is attached to the monopole for 12 consecutive months **WCF is operated for a continuous period of six (6) months**, and restore the site as nearly as possible to preexisting site conditions. **The owner of the WCF shall remove the same within ninety (90) days of receipt of notice from the County notifying the owner of the inactive WCF. If there are two or more users of a single WCF, then this provision shall not become effective until all users cease using the WCF.***
2. *Annual user reports. The owner of a Class 1, 2, 3 or Class 4 WCF shall provide, by July 1 annually to the Zoning Administrator, an inventory of all active and inactive users on the WCF.*
3. *A bond **or letter of credit** ~~must~~ **shall** be posted at the time of ~~monopole~~ **WCF** approval, in the event the County must remove the ~~monopole~~ **WCF** upon abandonment. This bond **or letter of credit** shall be equal to the cost to remove the ~~monopole~~ **WCF**, all ~~monopole~~ **WCF** and fence footers, underground cables, and support buildings, plus 25%. The bond **or letter of credit** shall ~~be renewed every five years~~ **remain in effect** for the life of the ~~monopole~~ **WCF**.*

6-H-12-d. *Third-Party Engineering Review*

The County reserves the right to employ the services of a third-party wireless telecommunications engineer or consultant to review all WCF applications. All applicable costs for the third-party review shall be the responsibility of the applicant.

6-H-12-e. *Engineering Information Provided by Applicant*

Any information of an engineering nature that the applicant submits, whether civil, mechanical, or electrical, shall be certified by a licensed professional engineer.

~~6-H-12-f~~ Monopoles, antennas, and equipment mounted to or located at the base of the monopole shall either maintain a flat, non-glossy, non-reflective galvanized steel finish or be painted a neutral color so as to reduce visual obtrusiveness.

REVIEW PROCEDURES BY CLASS

Class	Approval Authority	Review Process
Co-location*	Zoning Administrator/ By-right	<ol style="list-style-type: none"> 1. Pre-application meeting held with Zoning Administrator, who determines whether engineering review will be required as well as whether any Article 6 requirements may be waived. 2. Site Development Plan application filed with Zoning Administrator. 3. Zoning Administrator acts on application within 60 days.
1 (50' max)	Zoning Administrator/ By-right	<ol style="list-style-type: none"> 1. Pre-application meeting held with Zoning Administrator, who determines whether engineering review will be required as well as whether any Article 6 requirements may be waived. 2. Site Development Plan application filed with Zoning Administrator. 3. Zoning Administrator acts on application within 60 days.
2 (80' max)	Planning Commission/ By-right	<ol style="list-style-type: none"> 1. Site Development Plan application filed with Zoning Administrator following required pre-application meeting. 2. Application is routed to Planning Commission's Plans Review Committee, engineering consultant, Karst engineer, and other applicable agencies for review. 3. Application forwarded to Planning Commission to schedule/hold public hearing once all reviewers have commented. 4. Planning Commission acts on application within 60 days.
3 (120' max)	Board of Supervisors with Planning Commission review/ Special Use	<ol style="list-style-type: none"> 1. Special use permit and site development plan applications filed with Zoning Administrator following required pre-application meeting. 2. Application is routed to the engineering consultant, to the Planning Commission's Plans Review Committee, Karst engineer, and other applicable agencies for review. 3. Application forwarded to Planning Commission to schedule/hold public hearing once all reviewers have commented. 4. Planning Commission makes formal recommendation on application. 5. Application forwarded to Board of Supervisors to schedule/hold public hearing. 6. Board of Supervisors takes formal action on special use permit/site plan application.
4 (199' max)	Board of Supervisors with Planning Commission review/ Special Use	<ol style="list-style-type: none"> 1. Special use permit and site development plan applications filed with Zoning Administrator following required pre-application meeting. 2. Application is routed to the engineering consultant, to the Planning Commission's Plans Review Committee, Karst engineer, and other applicable agencies for review. 3. Application forwarded to Planning Commission to schedule/hold public hearing once all reviewers have commented. 4. Planning Commission makes formal recommendation on application.

		5. Application forwarded to Board of Supervisors to schedule/hold public hearing. 6. Board of Supervisors takes formal action on special use permit/site plan application.
5 (amateur radio)	Zoning Administrator/ By-right	1. Pre-application meeting held with Zoning Administrator, who determines whether engineering review will be required as well as whether any Article 6 requirements may be waived. 2. Site Development Plan application filed with Zoning Administrator. 3. Zoning Administrator acts on application within 60 days.

* Review procedure is the same for new distributed antenna systems (DAS) and upgrades/equipment maintenance on an existing WCF.

PROPOSED NEW DEFINITIONS (ARTICLE 9)

Compound area – *The area located at the base of the WCF, defined by a fenced boundary, that contains support structures, generators, equipment cabinets or shelters, and other accessory items necessary to the function of the WCF and the antennas located on it.*

Co-location -- *The shared use of an antenna support structure by two or more wireless service providers or other entities that operate antennas. Co-location may occur on structures other than wireless communication facilities (WCFs) including but not limited to water tanks, lattice towers, rooftops, utility poles, silos, and similar structures. The use of a non-WCF structure by one wireless service provider or other entity that operates antennas shall also be considered co-location.*

Distributed Antenna System (DAS) – *A network of spatially separated antenna nodes connected to a common source via a transport medium that provides wireless service within a geographic area or structure.*

Fall zone – *The maximum distance from the structure base of a wireless communications facility (WCF) that the WCF is designed to fall in the event of a structural failure and collapse.*

Monopole -- *A hollow or solid, cylindrical self-supporting structure which is made of steel, wood or concrete.*

Permitted Commercial Tower Development Area (PCTDA) – *Pre-planned location areas where it is recommended that WCFs be constructed to provide for commercial wireless carriers. PCTDAs are designated in the County’s Telecommunications Infrastructure and Broadband Study and are plotted at road intersections with a ½ mile radius for proposed WCF locations.*

Stealth technology -- *A design method to conceal or disguise antenna structures and antennas associated with wireless communication facilities including, but not limited to, tree poles, flag poles, bell towers, silos, and lookout towers.*

Wireless Communication Facility (WCF) – *All infrastructures and equipment including, but not limited to, antenna support structures, antennas, transmission cables, equipment shelters, equipment cabinets, utility pedestals, ground equipment, fencing, signage, and other ancillary equipment associated with the transmission or reception of wireless communications.*

PROPOSED ZONING DISTRICT USE ASSIGNMENTS (ARTICLE 3)

Agricultural-Open Space-Conservation (AOC) District

Permitted Uses

3-A-1-a-1-i *Wireless Communication Facilities – Class 1, 2, and 5*

Accessory Uses

3-A-1-a-2-f *Co-location of antennas on existing approved antenna support structure*

Special Uses

3-A-1-a-3-m ~~Monopoles greater than 50 feet in height for commercial telecommunications- antennae~~

3-A-1-a-3-w *Wireless Communication Facilities – Class 3 and 4*

Forestal-Open Space-Conservation (FOC) District

Permitted Uses

3-A-2-a-1-i *Wireless Communication Facilities – Class 1, 2, and 5*

Accessory Uses

3-A-2-a-2-f *Co-location of antennas on existing approved antenna support structure*

Special Uses

3-A-2-a-3-j ~~Monopoles greater than 50 feet in height for commercial telecommunications- antennae~~

3-A-2-a-3-s *Wireless Communication Facilities – Class 3 and 4*

Rural Residential (RR) District

Permitted Uses

3-A-3-a-1-e *Wireless Communication Facilities – Class 1, 2, and 5*

Accessory Uses

3-A-3-a-2-d Co-location of antennas on existing approved antenna support structure

Neighborhood Commercial (CN) District

Permitted Uses

3-A-12-a-1-p Wireless Communication Facilities – Class 1, 2, and 5

Accessory Uses

3-A-12-a-2-f Co-location of antennas on existing approved antenna support structure

Highway Commercial (CH) District

Permitted Uses

3-A-13-a-1-w Wireless Communication Facilities – Class 1, 2, and 5

Accessory Uses

3-A-13-a-2-c Co-location of antennas on existing approved antenna support structure

Special Uses

3-A-13-a-3-h ~~Monopoles greater than 50 feet in height for commercial telecommunications- antennae~~

3-A-13-a-3-s Wireless Communication Facilities – Class 3 and 4

Historic (H) District

3-E-3-h Class 5 wireless communication facilities (WCFs) and co-location on existing structures may be permitted subject to compliance with the requirements of this section 3-E-3. Class 1, 2, 3 and 4 WCFs shall be prohibited.

Historic Access Overlay District

3-E-4-f Wireless communication facilities (WCFs) may be permitted as allowed by the regulations of the underlying zoning district and subject to compliance with the requirements of this section 3-E-4.



DONOHUE & STEARNS, PLC

July 2, 2015

Brandon Stidham
Director of Planning
Clarke County, Virginia
101 Chalmers Court
Berryville, VA 22611

Re: Clarke County Zoning Ordinance (“Ordinance”)
Commercial Telecommunications Facilities

Dear Brandon:

As you may recall, the undersigned represents many of the wireless telecommunications providers in the Northern Virginia area. At the May 1 Planning Commission hearing, I indicated to the Planning Commission that many of the local counties, cities and towns in the Northern Virginia area are in the process of amending their ordinance as Clarke County (“County”) is doing. This is to not only address the Federal Taxpayer Relief Act Section 6409, but to also update their ordinances to address new technology in the wireless field. I suggested that the Planning Commission for Clarke County might want to form a Committee with providers and Staff included to study the County’s Ordinance as it relates to wireless telecommunications and to make recommendations to the Board of Supervisors regarding amending the Ordinance to facilitate provision of wireless communication throughout Clarke County.

The demand for wireless service has increased substantially over the last few years. This is particularly true with wireless broadband services. Nationwide more than 40 percent of residences now have only wireless service and that is growing. Particularly there is a demand for wireless broadband service where cable is not available in rural areas and will not be for the foreseeable future. The only way many residents and businesses will be able to access broadband capabilities for educational, health and safety, emergency services and commerce will be through wireless facilities.

The County Ordinance has not had a major overhaul in many years. It currently addresses only monopoles not less than 50 feet and no more than 100 feet and limits them to two zones in the entire County. This severely limits deployment of an efficient and effective network. It greatly restricts collocation as the antenna must be above tree level which approach

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July 2, 2015
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100 feet in some places. There is one reference in Zoning Districts CN and CH for towers less than 50 feet but there is little other directive as to how such facilities can be located. Many of the providers are using what is referred to as small cells to address high density areas where there is a need for more spectrum. Providers are also installing distributive antenna systems (DAS) which are antennas mounted on existing electric distribution poles (as opposed to transmission towers) generally 40 to 50 feet high to serve areas that due to topography are hard to reach from the macro cells. Neither option is available to County constituents should it be needed. The County Ordinance should be amended to reorganize and facilitate the installation of these facilities where they are desired.

The Ordinance also provides little guidance for installation of antennas by extending existing structures or replacement of existing poles with slightly taller ones, such as light poles at high schools or major power transmission towers, to accommodate telecommunications antennas. The new language proposed for the Ordinance addressing 6409 requires the existing structure to already be a telecomm facility so it would not apply for new structures. Given that more of these facilities are necessary, it is strongly urged that the Ordinance be more conducive to opening appropriate locations and designs in all zones for these facilities. With the protection of a Special Use Permit requirement for location in every zone, the County would continue to have control over height, design and screening concerns to assure proper siting while making available areas for the providers to enhance their networks in the locations where they will fit within the existing network to cover the desired area. If the County were to make some locations and designs by right, it would encourage providers to find areas where the County would prefer these facilities in return for faster permit and construction completion.

Additionally, as I mentioned to you, there is a reference in your Ordinance today about the sunset clause applying to commercial telecommunications facilities and this causes confusion and it should be removed. The setback limitation in the proposed 6409 language is also unenforceable. It might not be relevant today given that the 5 or 6 existing sites can be raised and still meet setback requirements, but it could arise in the future with new sites and be a problem.

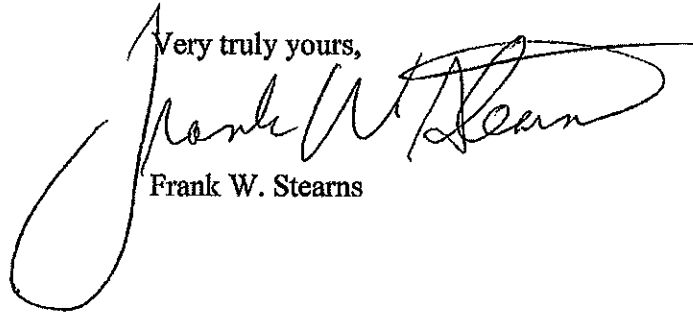
Further, many of the County zones such as the B-C Zone, the B Zone, the B-P Zone, and the ITL Zone, all provide for research and development facilities, conference centers and retreat houses, none of which will locate in areas where there is no wireless coverage, but currently telecommunications facilities on new poles are prohibited. Additionally, as noted above, many residences have only wireless service and many jurisdictions are addressing the need by opening up residential zones that were formerly off limits. Again, if it is done through the protection of the Special Use Permit review, the County should continue to have sufficient control.

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I have attached sample ordinances from other jurisdictions dealing with small cell telecommunications deployment, addressing the 6409 requirements, and an overall approach to handling telecommunications facilities through the Zoning Ordinance which addresses antennas on existing and replacement structures, monopoles and towers. Also attached is an ordinance addressing the installation of a distributive antenna system (DAS).

I look forward to working with the Clarke County Planning Office to facilitate an informative Zoning Ordinance section on telecommunications with reasonable standards for installation. I remain,

Very truly yours,

A handwritten signature in black ink, appearing to read "Frank W. Stearns". The signature is written in a cursive style with a large, looping initial "F".

Frank W. Stearns

DEFINITIONS

Wireless Communication Facility (WCF): All infrastructure and equipment including, but not limited to, antenna support structures, antennas, transmission cables, equipment shelters, equipment cabinets, utility pedestals, ground equipment, fencing, signage and other ancillary equipment associated with the transmission or reception of wireless communications.

Class 1 – Wireless communication facilities with a height less than or equal to forty (40) feet above ground level (AGL).

Class 2 – Wireless communication facilities with a height greater than forty (40) feet but less than or equal to eighty (80) feet above ground level (AGL).

Class 3 – Wireless communication facilities with a height greater than eighty (80) feet but less than or equal to one hundred twenty (120) feet above ground level (AGL).

Class 4 – Wireless communication facilities with a height greater than one hundred twenty (120) feet but less than or equal to two hundred (200) feet above ground level (AGL).

Wireless Communication Facility (WCF), Class 1, Class 2, Class 3 and Class 4

- (a) Intent: To provide for the siting of wireless communication facilities (WCFs) by establishing guidelines for the construction and modification of towers and associated equipment. The established guidelines are designed to reduce the adverse impacts and encourage stealth techniques through the placement of towers in locations with appropriate vegetative cover or through alternative tower designs.
- (b) For purposes of this section:
 - (1) A “distributed antenna system (DAS)” is a network of spatially separated antenna nodes connected to a common source via a transport medium that provides wireless service within a geographic area or structure.
 - (2) A “stealth structure” is any structure designed to conceal or disguise antenna structures and antennas associated with wireless communication facilities including, but not limited to, tree poles, flag poles, silos and “lookout” towers.
 - (3) Wireless communication system: A system providing communication functions such as, radio, radiotelephone, television, cellular phone, personal communications systems (PCS), specialized mobile radio systems (SMR), and similar functions, that does not utilize a standard line system, usually including a network of communication facilities providing coverage to a specific area or region.

(c) General standards:

- (1) All WCFs must meet or exceed current standards and regulations of the FAA, the FCC, and any other agency of the county, state or federal government with the authority to regulate WCFs. If regulations change and WCFs are required to comply with such changes, the owners of the WCFs governed by this ordinance shall bring WCF(s) into compliance within six (6) months of the effective date of such change in standards or regulations. Failure to comply shall constitute grounds for the removal of the WCFs at the owner's expense.
- (2) WCFs shall be considered either a principal or accessory use.
- (3) WCFs shall not be artificially lighted, unless required by the FAA or other applicable authority. If lighting is required, the lighting alternatives and designs chosen must cause the least disturbance to the surrounding view.
- (4) WCFs shall meet the following aesthetic requirements:
 - a. WCFs shall, subject to any applicable FAA standard, be of a neutral color and subject to staff approval so as to reduce visual obtrusiveness. The appearance shall be maintained in the approved neutral color.
 - b. The design of buildings and related structures within the WCF compound area shall, to the extent possible, use materials and colors that will blend into the natural setting and surrounding trees.
 - c. If a WCF is installed on a structure other than a tower (i.e., water tower, light pole, etc.), the antenna and supporting electrical and mechanical equipment must be of a neutral color that is identical to, or closely compatible with, the color of the supporting structure so as to make the antenna and related equipment as visually unobtrusive as possible.
- (5) The County reserves the right to employ the services of a wireless telecommunications consultant to review all WCF applications. All applicable costs will be the responsibility of the applicant.
- (6) WCFs shall meet the following setback requirements:
 - a. The minimum setback requirement from the base of the tower to any primary or occupied structure on the subject parcel shall be at least equal to forty (40) percent of the height of the tower measured from the closest structural member of the tower. Guy lines shall be exempt from the minimum setback requirement in side and rear yards for the respective zoning district, but shall comply with the setback requirements for the front yard.

- b. Certification shall be provided that the tower will not fall onto any adjoining property in the event of failure or collapse of the structure.
 - c. For any building or structure associated with a WCF, the minimum setback from any property line abutting a road right-of-way shall be fifty (50) feet and in all other instances shall be no less than twenty-five (25) feet.
 - d. More than one (1) tower shall be permitted provided all setback requirements have been met.
- (7) Buildings and support equipment associated with WCFs shall comply with the following requirements:
- a. The cabinet or structure shall not be more than twelve (12) feet in height. In addition, for buildings and structures which are less than sixty-five (65) feet in height, the related unmanned equipment structure shall be located on the ground and shall not be located on the roof of the structure.
 - b. If the equipment structure is located on the roof of a building, the area of the equipment structure and other equipment and structures shall not occupy more than twenty-five (25) percent of the roof area.
 - c. Equipment storage buildings or cabinets shall comply with all applicable building codes.
- (8) No advertisement signs shall be allowed on a WCF. Signs of no more than one (1) square foot containing ownership, operational and name plat data shall be allowed.
- (d) Uses by right: The uses listed in this section are deemed to be uses by right subject to Zoning Administrator administrative approval. The following provisions shall govern the issuance of approvals for WCFs:
- (1) WCFs located on property owned, leased, or otherwise controlled by Clarke County provided a license or lease authorizing such WCF(s) has been approved by Clarke County or collocated on an existing WCF(s).
 - (2) The collocation of WCFs on existing WCFs. The collocation must be accomplished in a manner consistent with the following:
 - a. The WCF which is modified or reconstructed to accommodate the collocation of an additional WCF shall be of the same WCF type as the existing WCF(s).

- b. A WCF which is being rebuilt to accommodate the collocation of an additional WCF may be moved on-site within fifty (50) feet of its existing location. Once the WCF is rebuilt to accommodate the collocation, only one (1) WCF may remain on the site.
- (3) Installing a cable microcell network (distributed antenna system or DAS) through the use of multiple low-powered transmitters/receivers attached to existing wireless systems, such as conventional cable or telephone wires, or similar technology that does not require the use of WCFs.
- (4) WCF upgrades/equipment maintenance of existing wireless provider on WCF.
- (5) Notwithstanding any provision of this Ordinance related to special use permit requirements and procedures on any specific special use condition placed on an approved monopole, the Zoning Administrator shall administratively approve an amendment to the previously approved site development plan for a monopole to allow collocation, removal, or replacement of transmission equipment, as required by Federal law, that meets all of the following standards:
 - a. The collocation, removal or replacement of equipment does not result in the monopole failing to meet the requirements of this Ordinance.
 - b. Installation of the proposed equipment does not increase the height of the monopole by more than ten percent (10%) of the original approved height or by the height needed to provide twenty (20) feet of separation from the closest antenna array location on the monopole, whichever is greater, except that the mounting of the proposed equipment may exceed these limits if necessary to avoid interference with equipment existing on the monopole. For any request to exceed height limits to avoid interference with existing equipment on the monopole, the applicant shall provide a report by a licensed engineer to justify the request. Such report shall be evaluated by the County's engineering consultant and the applicant shall be responsible for reimbursing the County for all costs associated with the consultant's review.
 - c. Installation of the proposed equipment would not involve the installation of more than the standard number of new equipment cabinets for the technology involved, not to exceed four (4), or more than one (1) new equipment shelter. New equipment shelters and cabinets shall be located within the existing approved compound.
 - d. Installation of the proposed equipment would not involve the adding of any appurtenance that would protrude from the edge of the monopole more than twenty (20) feet or protrude more than the width of the largest existing appurtenance, whichever is less. Mounting of the proposed equipment may exceed the foregoing size limits if necessary to provide

shelter from inclement weather or to connect the equipment to the monopole via cable.

- e. Installation of the proposed equipment would not involve excavation outside the boundaries of the monopole site depicted on the original approved site development plan.

(e) Special application requirements for uses by right:

- (1) Sufficient copies of the wireless facility site development plan that show the type and height of the proposed WCF, proposed means of access, setbacks from the property lines, elevation drawing of the proposed WCF and any other structures and any other information deemed by the Zoning Administrator to be necessary to assess compliance with this ordinance.
- (2) A cover letter that outlines what the applicant is proposing to do on-site.
- (3) Any cost associated with the review of the application by the County and/or its consultant shall be paid by the applicant at submittal.
- (4) A structural analysis may be requested by the Zoning Administrator in order to complete a review of an application.
- (5) The Zoning Administrator may request additional information if needed while reviewing an application for administrative approval. Failure to provide the requested information shall result in the denial of the application.

(f) Uses permitted through special use permits:

- (1) Applications for special use permits under this section shall be subject to the procedures and requirements for allowable uses under this Ordinance.
- (2) In granting a special use permit, the Planning Commission may recommend and the Board of Supervisors may impose conditions to the extent the Board concludes such conditions are necessary to minimize any adverse effect of the proposed WCF on adjoining properties.
- (3) Any information of an engineering nature that the applicant submits, whether civil, mechanical, or electrical shall be certified by a licensed professional engineer.
- (4) The maximum height of any WCF shall be made a condition of approved special use permits. Lightning rods shall be exempt from the maximum height calculation.

- (g) Application requirements for special use permits: In addition to any information required for applications pursuant to the Clarke County Zoning Ordinance, applicants for a Special Use Permit for WCFs shall submit the following information:
- (1) A scaled site plan clearly indicating the location, type and height of the proposed WCF, on-site land uses, adjacent land uses (including when adjacent to other jurisdictions), master plan classification of the site, adjacent roadways, proposed means of access, setbacks from property lines, elevation drawings of the proposed WCF and any other structures, topography, parking, and other information deemed by the Zoning Administrator to be necessary to assess compliance with this ordinance.
 - (2) Legal description of the parent tract and leased parcel (if applicable).
 - (3) The setback distance between the proposed WCF and the nearest residential unit and platted residential properties.
 - (4) The applicant shall also identify the type of construction of the existing WCF(s) and the owner/operator of the existing WCF(s), if known.
 - (5) A landscape plan showing specific landscape materials. The Board of Supervisors may waive this requirement if it deems appropriate upon applicant request with sufficient justification.
 - (6) Method of security fencing (no less than six (6) feet in height) with anti-climbing device, and finished color and, if applicable, the method of camouflage and illumination. The Board of Supervisors may waive this requirement if it deems appropriate upon applicant request.
 - (7) A description of compliance with all applicable federal, state or local laws.
 - (8) A statement by the applicant as to whether construction of the WCF will accommodate collocation of additional antennas.
 - (9) Identification of the entities providing the backhaul network for the WCF(s) described in the application and other cellular sites owned or operated by the applicant in the county.
 - (10) A description of the unsuitability of the use of existing WCFs, other structures or alternative technology not requiring the use of WCFs or structures to provide the services under consideration.
 - (11) A cost estimate for removal of the WCF and facilities from the site.
 - (12) A description, including mapping at an appropriate scale, of the search area and coverage objective.

- (13) A map depicting all collocation candidates in search area, along with the RF analysis documentation as to their suitability.
 - (14) High quality photo simulations of the site and proposed WCF.
 - (15) TOWAIR Determination results for FAA registration.
- (h) Additional standards for Class 1 wireless communication facilities in districts where permitted by right:
- (1) WCF antenna support structures shall be constructed of wood in the residential and mixed-use zoning districts.
 - (2) The siting of any new antenna support structure associated with by right WCFs shall follow the application requirements listed in Subsection (g). Such towers would be exempt from any requirements for a special use permit.
- (i) Additional standards in small cell telecommunication facilities:
- (1) WCFs shall be reviewed administratively if less than ten (10) feet above the surrounding tree line. WCFs that are sited in open areas would not meet the requirement of “stealth techniques” in Subsection (i)(2) below, and would be subject to the special use permit approval process for WCFs.
 - (2) If the Zoning Administrator through administrative review determines the proposed WCF does not use stealth techniques to reduce the impact of the WCF on surrounding properties and view sheds, a special use permit shall be required.
 - (3) The siting of any new antenna support structure associated with by right WCFs shall follow the application requirements listed in Subsection (g). Such towers would be exempt from any other requirements for a special use permit.
- (j) Removal of abandoned WCFs: Any WCF that is not operated for a continuous period of six (6) months shall be considered abandoned, and the owner of such WCF shall remove the same within ninety (90) days of receipt of notice from Clarke County notifying the owner of such abandonment. If there are two (2) or more users of a single WCF, then this provision shall not become effective until all users cease using the WCF.
- (k) Nonconforming WCFs:
- (1) WCFs that are constructed, and/or installed, in accordance with the provisions of this ordinance shall not be deemed to constitute the expansion of a nonconforming use or structure.

- (2) Pre-existing WCFs shall be allowed to continue their usage as they presently exist. Routine maintenance (including replacement with a new tower of like construction and height) shall be permitted on such pre-existing WCFs. New construction other than routine maintenance on pre-existing WCFs shall comply with the requirements of this ordinance.
- (3) Notwithstanding Subsection (j), bona fide nonconforming WCFs that are damaged or destroyed may be rebuilt without having to first obtain a special use permit. The type, height, and location of the WCFs on-site shall be of the same type and intensity as the original facility approval. Building permits to rebuild the facility shall comply with the then-applicable building codes and shall be obtained within one hundred eighty (180) days from the date the facility is damaged or destroyed. If no permit is obtained or if said permit expires, the WCFs shall be deemed abandoned as specified in Subsection (j).



Clarke County Planning Department
101 Chalmers Court, Suite B
Berryville, Virginia 22611
(540) 955-5132

TO: Planning Commission members

FROM: Brandon Stidham, Planning Director

RE: Discussion, Telecommunications Subcommittee Work on Monopole Regulations

DATE: January 27, 2016

Under “Other Business” is a discussion of the Telecommunications Subcommittee’s work on a possible text amendment to the monopole regulations. The Subcommittee has held four meetings dating back to August with attendance and participation by Verizon Wireless representatives Frank Stearns and Shari Saslaw. The Subcommittee proposes discussing specific policy issues with the full Commission at the February 5 meeting prior to completing the draft text amendment and presenting their final recommendations. The issues for discussion are addressed separately below.

- **Increasing the maximum height of monopoles to 199 feet.** One of the concerns raised by Verizon Wireless is that our current 100 foot limit on the height of new monopoles limits their ability to adequately serve the County with wireless coverage. In the first two meetings, a potential increase to 120 feet was discussed in order to address a specific new monopole application that Verizon Wireless is considering. At the October 27 meeting, members discussed increasing the maximum height to 150 feet as a means of providing better coverage and additional co-location opportunities. At the January 8 meeting, it was further proposed that maximum height should be 199 feet – the maximum allowable height without lighting required by the Federal Aviation Administration (FAA). Members noted that any maximum height established between 100 feet (the maximum tree canopy height) and 199 feet would be arbitrary and not based on any referenced criteria. Members also noted that applicants would still have to justify the need for the maximum height and lesser heights could be approved via the special use permit process if they fail to prove such need.

Questions for discussion are as follows:

- What are the Commissioners’ opinions of allowing 199 foot monopoles while retaining the prohibition on lighting?
- If the maximum height is increased to 199 feet, should more restrictive height requirements be imposed on areas such as the mountain ridge line? Other areas?
- If a maximum 199 foot height is not favored, is there support for a lesser maximum height that is higher than the current 100 foot limit?

- **Telecommunications engineering study.** In conjunction with their work, the Subcommittee also reviewed two telecommunications studies used by Warren and Bedford Counties to aid in the siting of new towers. Planning Staff has recommended that the County consider hiring an engineer or engineering firm with expertise in telecommunications to conduct a similar study to accomplish the following:
 - Analyze the County’s current network of telecommunications facilities and its capacity for expansion both for cellular communications and high-speed data for internet applications.
 - Determine where current and future communications needs are in the County and the optimal locations and heights for new monopoles to meet these needs.
 - Identify new or emerging technologies to provide telecommunications and high-speed internet access based on Clarke County’s unique characteristics and recommend detailed strategies for facilitating their development.

Staff believes that such a study not only would aid in reviewing applications for new monopoles, it would also provide detailed information to support approval of new monopoles at lesser heights or denials of applications if the applicants fail to justify need. Staff is also recommending retaining a telecommunications engineer (to be paid by monopole applicants) to review all special use permit applications for new monopoles and provide recommendations based on the ordinance requirements and study recommendations. While the Subcommittee is supportive of retaining a specialty engineer to review monopole applications as we currently do with site plans, members have concerns with conducting a County-wide telecommunications study. They are specifically concerned with the potential for the study to become outdated quickly or to be able to influence the providers’ decisions when looking for new tower sites.

Questions for discussion are as follows:

- What are the Commissioners’ opinions of conducting a telecommunications study as described above?
- If a study is generally supported, how should it mesh with the consideration of the proposed text amendment? Should the text amendment be evaluated by the engineer as part of the study?
- Are Commissioners supportive of retaining a telecommunications engineer to review special use permit applications for new monopoles?

To aid you in your preparation for this discussion, Staff has enclosed a copy of the Subcommittee’s draft Goals and Objectives Statement, the current text amendment draft, and copies of the Subcommittee’s meeting minutes. You will also find a map of all towers and structures containing antennas that are located in Clarke County or close to our borders along with height and structure type information. If you are interested in reviewing the Warren or Bedford County studies, please let me know and I will provide you with a copy.

If you have any questions or concerns in advance of the meeting, please do not hesitate to contact me.



DONOHUE & STEARNS, PLC

February 17, 2017

Brandon Stidham
Director of Planning
Clarke County, Virginia
101 Chalmers Court
Berryville, VA 22611

Re: Draft of Wireless Communication Facilities Zoning Ordinance

Dear Brandon:

Thank you for the opportunity to comment on the recent draft of the amendment to the Clarke County Zoning Ordinance concerning Wireless Community Facilities (“WCF”). First let me say that I appreciate the hard work that Staff and the Subcommittee have put into this proposed draft. It shows careful study and consideration. My following comments are meant only to be helpful and not critical.

Under “Purpose and Objectives” in Paragraph 1(b), I would suggest a fourth objective as follows:

- (4) Facilitate deployment of WCFs to provide coverage to all residents and businesses of Clarke County.

The purpose being that the Zoning Administrator is given direction to work with Applicants to bring the proposed facility into compliance with the spirit of the Ordinance not with the intent to block entry.

Paragraph 2 could be made more informative by indicating that colocation on existing structures (which would not fit within any of the classes set forth) is encouraged and permitted. It does not seem clear though there are references to it in later sections that telecommunications antennas and microwave for backhaul are permitted to be located on existing structures that are not WCFs. The reference to colocation in Paragraph 4A states new antennas are permitted on “existing” Class 1, 2, 3 or 4 WCFs. Absent is any reference to existing water tanks, buildings, telephone poles, etc.

Paragraph 4D seems somewhat contradictory. It talks about attaching DAS antennas to “existing wireless systems” and by way of example references telephone wires. I would suggest that most DAS systems are now being installed not solely on telephone wires but on telephone poles as well.

Paragraph 6 again refers to attaching antenna to existing WCFs. It does not reference existing structures such as telephone poles, light stanchions, water tanks or silos. Perhaps Clarke County does not want antenna attached to the outside of a silo as opposed to inside the dome of a stealth structure, but I would note that it is permitted in other rural counties such as Loudoun and Fauquier and reduces the number of new WCFs that are necessary. This also allows silos to be used for the intended purpose, namely agricultural storage, if appropriate. If the antenna are painted to match the dome of the existing silo, the visibility is substantially reduced.

Section 6-H-12(a)(4) refers to “visible” Class 2, 3 and 4 WCFs. Since none of these structures are invisible, it is not clear what the point is of that descriptive adjective “visible”. Secondly, the statement Class 3 or 4 WCFs shall not be located along ridgelines can be somewhat problematic without defining specific ridgelines. By way of example in another jurisdiction, some have tried to suggest a mere change in elevation on a piece of property constitutes a ridgeline. If the intent is to keep those facilities off scenic ranges such as the Blue Ridge, I would suggest those ridge lines running through Clarke County be named or defined in some way to differentiate it from a mere topographical difference.

Paragraph 4C references attachment of antenna to existing structures. As noted above, that is not clear in those paragraphs referenced herein earlier.

Paragraph 4D is very informative and helpful. I would point out from prior experience that many silos today are taller than 80 feet. Fauquier County has several in the Elk Run area that are approximately 120 feet. I know Loudoun County has some at 120 feet and I have been informed by the company that makes the stealth silos, which also makes working farm silos, that most of their working farm silos today are ordered in excess of 100 feet. Also, the requirement that the silo be placed within 50 feet of an existing barn or paddock has proved problematic in other counties. A working farm may not have leasable space next to an existing barn or paddock. I have also had one instance where the farmer wanted the silo out in a field where his grazing cattle are located at some distance from his barn and he wanted to store grain for the livestock. A working stealth silo was built for him in the field and it required a waiver of the requirement that it be next to a farm structure. Also, would it be possible to construct next to a stealth silo a stealth barn to house the equipment which for all intents and purposes would appear to be part of the agricultural setting? This would also require an amendment to Section 6-H-12(C)(b)(1) limiting equipment cabinet or structure to no more than 12 feet in height. Perhaps

that should be amended to say that stealth equipment buildings can be constructed to the height permitted of the use that they appear to be.

The design standards for the bell tower are also appreciated. However, does a bell tower include a church steeple? I have seen separate freestanding bell towers next to churches and I have also seen steeples extended to accommodate the antenna inside. The requirement that all landscaping must match the existing landscaping could also be a problem in terms of interfering with the religious institution's normal activities if the required landscaping takes away usable outdoor area. If the telecommunications facility is totally inside of the religious institution, what is the purpose of landscaping? Screening the existing structure?

The stealth design for a flagpole also contains some potential issues. For instance, it states the surrounding grounds shall be landscaped but there are some instances where flagpoles have been put on existing buildings. Obviously, those cannot be landscaped. I also note that the photo provided in your draft Ordinance shows a flagpole that does not appear to have landscaping at the base. Further, equipment for telecommunications being required to be in an underground controlled vault could be problematic. There are stealth designs that can be put next to the flagpole that people would not know was a telecommunications equipment structure. I would like to see some flexibility there as most telecommunications providers will not underground their equipment due to problems with environmental controls, and this would prevent the use of a stealth flagpole.

The changes to the setbacks and buffering would allow for a great deal of flexibility provided the foregoing comments are addressed and is greatly appreciated. I would suggest that, within the definition section, the fall zone be better defined so that it is clear how it will be determined.

Paragraph 5B requires a 100 percent setback from habitable structures on the same parcel. I would note that it would be the landlord's house in most instances, but in any event, the owner of the property would have control over whether or not it was endangering a habitable structure. I only note this because in some instances what that may do is push the WCF closer to a property line with an adjacent residence which may not be what is desired.

Paragraph C talks about a setback from a private access easement. This has proved to be a problem in other jurisdictions where the access road to the site on the property caused the equipment and pole to be a long distance from where the vehicles are allowed for the technician who visits occasionally or for repairs. I would suggest language to make it clear that the setback from a private access easement does not include the access easement to the WCF.

Paragraph F addresses the issue of setbacks when antenna go on an existing structure but not the buffer requirements. Thus, would a perimeter buffer be required around a water tank, bell tower, light stanchion at a stadium, or on the side of a silo?

Paragraph 6-H-12(b)(1)(a) provides the definition of the fall zone. I think it would be helpful to provide that definition in the Article 9 amendments. Paragraph 2 beginning on page 14 again uses a term (“guidance”) that is rather subjective. Paragraph 2(a) talks about consistent with guidance regarding PCTDAs. Perhaps it would be better to say the Applicant should show that any PCTDA in the vicinity was looked at as an alternative and the reason why it was not selected. The same would be appropriate in 2(b)(1). This would also be appropriate in Paragraph 2(k)(1) on page 16.

Section 2(q) is somewhat unclear. The selected site may be for a new WCF. If the requirement is to provide two alternative sites for possible colocation (emphasis added) that indicates there are two alternative sites with a structure of sufficient height to hold the antenna. If that is the case, there may not be two such sites within the search ring. If the purpose of that section is that the Applicant must demonstrate no possible colocation sites, then I would suggest it simply say that, e.g., a new structure is required because there is no existing structure of sufficient height within the search ring available.

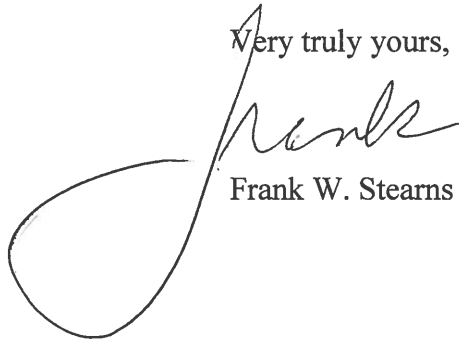
As noted above, I would suggest that Article 9 definitions include a definition for fall zone for WCFs. The chart for the summary of WCF classes is very helpful but I believe the category for colocation should be added when colocation is to occur on an existing structure other than a WCF. This was done on the review procedures chart and I find it very helpful.

Lastly, I would also suggest that a colocation column be added to the proposed zoning districts for WCFs. Addressing the proposed chart on page 22, I would note that if a Class 3 WCF was a Special Exception in the “NC and RR zones” that the County would be well-protected to be sure that any siting in those zones meets strict expectations through the Special Exception process. I suggest that those zones might come in to play in the not too distant future as more and more residential areas become reliant on wireless connectivity for broadband in their homes as well as voice. Additionally, be mindful that throughout Virginia and other jurisdictions, wireless providers have located in historic districts using stealth structures that have met the requirements of the State Historic Preservation Officer as well as the local Historic Office. Allowing any wireless facility in a historic district by Special Exception does not open the County to uncontrolled uses in a very protected area. It would give the flexibility to do so if demonstrated that it can be done in a nondisruptive manner. A number of custodians of historic sites have reached out to providers for better coverage due to the number of tourists putting demand on the spectrum by using mobile tablets to enhance their experience.

Brandon Stidham
February 17, 2017
Page 5

Again, thank you for the opportunity to comment on the above. I look forward to continuing to work with you on this proposed draft ordinance. I remain,

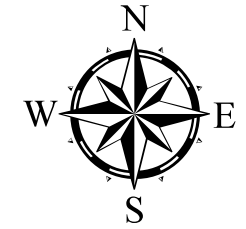
Very truly yours,

A handwritten signature in black ink, appearing to read "Frank W. Stearns". The signature is written in a cursive style with a large, prominent loop at the beginning.

Frank W. Stearns

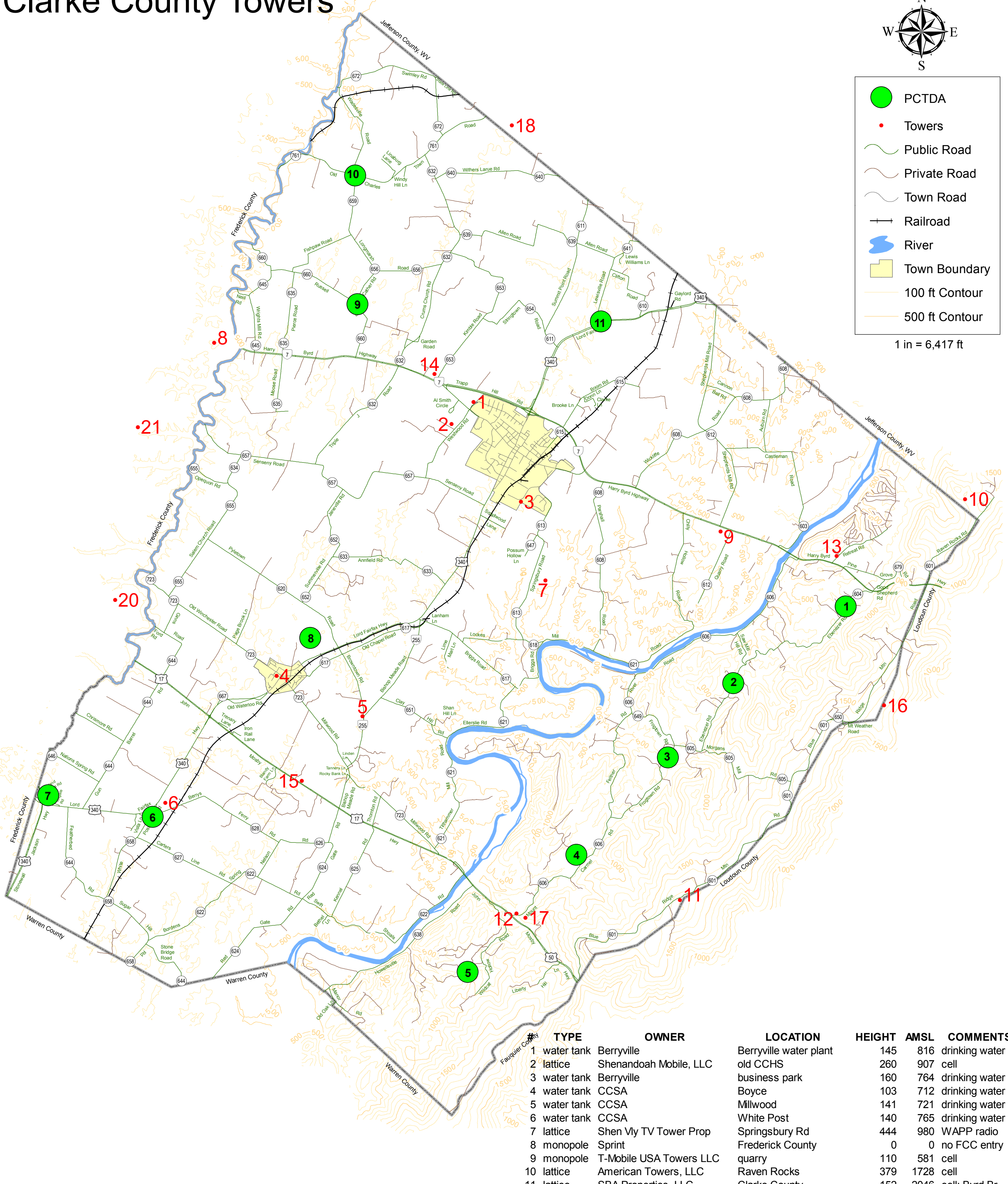
cc: Sherry Saslaw
Brian Stover

Clarke County Towers



- PCTDA
- Towers
- Public Road
- Private Road
- Town Road
- Railroad
- River
- Town Boundary
- 100 ft Contour
- 500 ft Contour

1 in = 6,417 ft



#	TYPE	OWNER	LOCATION	HEIGHT	AMSL	COMMENTS
1	water tank	Berryville	Berryville water plant	145	816	drinking water
2	lattice	Shenandoah Mobile, LLC	old CCHS	260	907	cell
3	water tank	Berryville	business park	160	764	drinking water
4	water tank	CCSA	Boyce	103	712	drinking water
5	water tank	CCSA	Millwood	141	721	drinking water
6	water tank	CCSA	White Post	140	765	drinking water
7	lattice	Shen My TV Tower Prop	Springsbury Rd	444	980	WAPP radio
8	monopole	Sprint	Frederick County	0	0	no FCC entry
9	monopole	T-Mobile USA Towers LLC	quarry	110	581	cell
10	lattice	American Towers, LLC	Raven Rocks	379	1728	cell
11	lattice	SBA Properties, LLC	Clarke County	152	2046	cell; Byrd Br.
12	monopole	T-Mobile USA Towers LLC	west of Mount Carmel R	84	737	cell
13	monopole	SBA 2012 TC Assets, LLC	Blue Ridge Fire	115	774	cell
14	monopole	Berryville TV Cable Co	west of Berryville	120	767	cable TV
15	monopole	T-Mobile USA Towers LLC	Rose Airy Ln	87	675	cell
16	monopole	SBA Properties, LLC	Loudoun County	165	1908	cell
17	monopole	Verizon Wireless	east of Mount Carmel R	99	923	cell
18	lattice	American Towers, LLC	Summit Point Motorspor	199	808	cell
19	lattice	WINC-FM	Freezeland Rd	160	2361	12 more here
20	lattice	Crown Communications Inc	Izaak Walton Park	167	839	cell
21	lattice	SBC Tower Holdings LLC	Burning Knolls	270	912	cell
22	water tank	Warren County	Fairgrounds	115	718	drinking water



Clarke County Mapping Office
 101 Chalmers Court, Suite B
 Berryville, VA 22611
 540-955-5133

September 30, 2016
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Clarke County Planning Department
101 Chalmers Court, Suite B
Berryville, Virginia 22611
(540) 955-5132

TO: Clarke County Planning Commission

FROM: Ryan Fincham, Senior Planner / Zoning Administrator

**RE: Request for plat recordation extension
MS-16-09 DeHaven**

DATE: April 26, 2017

Staff has received a written request from Ronald DeHaven, Sr. to extend the six month requirement for plat recordation of the DeHaven Minor Subdivision (MS-16-09). The reason for the request is that the mortgage holder for the farm (Ditech Financial, LLC) has not yet signed the Deed of Subdivision and Dedication. A Deed of Dedication is not always required for approval of minor subdivisions, but in this case a deed was required because the proposed lot is accessed by a newly created private access easement. A copy of the deed, plat, and the applicant's request are enclosed.

For reference, Clarke County Subdivision Ordinance 4-K-4 states:

"A record Plat shall become null and void if it is not submitted to the Clerk of the Circuit Court of Clarke County for recordation within six months from the date evidencing approval by the Planning Commission. The Commission may approve a longer period before recordation is required. The owner of the property being subdivided must submit a written request to the Zoning Administrator for such a longer period within six months of the date of the Commission's original approval."

The "date evidencing approval" by the Planning Commission could be determined to be the date of the regular meeting that the subdivision was approved on November 4, 2016 or the date that the Planning Commission Chairman signed the final plats, which was on November 18, 2016. In either case, this written request has been made within the six months of the date of original approval.

The owner is hopeful that the Plat and Deed will be recorded soon, but he wants to have an extension so that, in the event the recordation does not occur before May 18th, he will not have to pay the \$4,000 subdivision fee and go back thru the subdivision process.

Staff is recommending approval of a one-time six month extension.

To: Clarke County Planning / Zoning

We are in need to file an extension on our subdivision request. I have completed all needed documents and paid all of the required fees. I was unaware of the need of the Deed of Dedication for a 30 foot easement for access to the 3 acre lot being subdivided. We have since had attorney Joshua Hummer draw up all documents and have acquired all parties to sign off, however the main lien holder on the 47 acres, Ditech financial has a fee and extensive paper work that has since been submitted but I am at their mercy to receive the completed documents in a timely fashion to record everything before our deadline is met in May. Thank you for your time and please consider this extension for my family and I, this is a lot for my son and will not be sold or used for investment.

Sincerely, Ronald E DeHaven



04/24/17

Tax Map No. 6-A-16
Consideration: N/A

Document prepared without the
benefit of title examination by:

Declarant Address:
191 Neill Rd
Berryville, Virginia 22611

Joshua E. Hummer, Esq.
Post Office Box 3070
Winchester, VA 22604

DEED OF SUBDIVISION AND DEDICATION

THIS DEED OF SUBDIVISION AND DEDICATION, is made and entered into on this the ____ day of April, 2017, by RONALD E. DEHAVEN, SR. (hereinafter "DECLARANT"), ALEXANDER TITLE AGENCY, INCORPORATED, sole acting trustee, DITECH FINANCIAL, LLC, beneficiary, JOHN S. FRIANT, JR., sole acting trustee, and BANK OF CLARKE COUNTY, beneficiary.

WITNESSETH:

WHEREAS, Declarant is the proprietor of that certain tract or parcel of land situated in Clarke County, Virginia ("Property") and described as follows:

All that certain tract or parcel of land, together with the improvements thereon and appurtenances thereunto belonging, located on the west side of Virginia Route No. 664 (Neill Road) and the east side of the Opequon Creek in Longmarsh Magisterial District, Clarke County, Virginia, containing 47.933 acres according to plat and survey hereof prepared by David M. Furstenau, Land Surveyor, dated January 22, 1999 and recorded in Deed Book 295 at Pages 594-595 in the Office of the Clerk of the Circuit Court of Clarke County, Virginia.

AND BEING the same property conveyed to Ronald E. DeHaven by Deed from Ronald E. DeHaven and Alice M. DeHaven, his wife, dated March 13, 2008 and recorded March 18, 2008 in Deed Book 494 at Page 951 in the aforesaid Clerk's Office.

WHEREAS, Declarant wishes to divide the Property into parcels in accordance with the plat of the Minor Lot Subdivision thereof prepared by W. Stuart Dunn, Land Surveyor, dated June 23, 2016, entitled Minor Subdivision of the Land of Ronald E. DeHaven ("Dunn Plat").

WHEREAS, the Property is subject to a Deed of Trust dated July 19, 2016 in the land records of Clarke County, Virginia in Book 605, Page 322 and at Instrument No. 16-1398, to secure Ditech Financial, LLC, a certain indebtedness described therein, with Alexander Title Agency, Incorporated designated as a trustee, who can act alone.

WHEREAS, the property is subject to a Credit Line Deed of Trust dated June 22, 2009, in the land records of County of Clarke, Virginia in Book 511, Page 633 to secure Bank of Clarke County, a certain indebtedness described therein, with John S. Friant, Jr., designated as one of the Trustees, who can act alone.

NOW, THEREFORE, for and consideration of the premises, Declarant hereby divides the property into parcels as shown on the Dunn Plat, which plat is recorded simultaneously herewith in Plat Book ___ at Page ____ in the Office of the Clerk of the Circuit Court of Clarke County, Virginia, and does hereby create the thirty foot (30') private access easement depicted on the aforesaid plat, subject to various covenants in respect to the construction and maintenance thereof as hereinafter more particularly set forth and also does hereby create the fifty foot (50') right-of-way depicted on the aforesaid plat (for emergency vehicle turn-around) for public use.

This dedication is made with the free consent and desires of the Declaration, proprietor as aforesaid, and is in accordance with the statutes of Virginia and the ordinances of Clarke County, Virginia, governing the platting of land, as is evidenced by the signature of the Clarke County Zoning Administrator on the Dunn Plat.

The following restrictive covenants shall apply to Lot 1 containing 3.000 acres and the Residue Lot containing 44.933 acres:

The owner of Lot 1, containing 3.000 acres, shall be responsible for the construction, upgrading and/or maintenance (including snow removal) of the private access easement and this private access easement is not a part of any public road system and at no time will the County of Clarke accept responsibility for the construction, upgrading and/or maintenance of such private access easement. The owners of the Residue Lot reserve the right to use the easement area as an additional means of access to their land, in common with the owners of Lot 1; in the event that the owners of the Residue Lot shall hereafter use the easement area as aforesaid, then they agree that they shall share on a prorate basis with the owners of Lot 1 any future expenses attributable to maintenance of the roadway to be constructed within the easement area, to the extent of their respective usage of the same.

The parties agree that this thirty (30') foot private access easement as shown on the Dunn Plat, shall be a means of ingress and egress to and from the aforesaid lots.

This dedication and agreement shall be binding upon and inure to the benefit of the owners of the respective tracts, their heirs, personal representatives, successors and assigns and shall run with the land.

WITNESS the following signatures and seals:

RONALD E. DEHAVEN

_____ (SEAL)

COMMONWEALTH OF VIRGINIA
CITY/COUNTY OF _____, to-wit:

The foregoing instrument was acknowledged before me in the above jurisdiction this ____ day of _____, 2017 by Ronald E. Dehaven.

Notary Public

My commission expires: _____
Registration No.: _____

ALEXANDER TITLE AGENCY, INCORPORATED

By: _____
Its: _____

COMMONWEALTH OF VIRGINIA
CITY/COUNTY OF _____, to-wit:

The foregoing instrument was acknowledged before me in the above jurisdiction this ____ day of _____, 2017 by _____, _____ of Alexander Title Agency, Incorporated, whose name is signed to the aforementioned Deed of Trust.

Notary Public

My commission expires: _____
Registration No.: _____

DITECH FINANCIAL, LLC

By: _____
Its: _____

COMMONWEALTH OF VIRGINIA
CITY/COUNTY OF _____, to-wit:

The foregoing instrument was acknowledged before me in the above jurisdiction this ____ day of _____, 2017 by _____, _____ of Ditech Financial, LLC whose name is signed to the aforementioned Deed of Trust.

Notary Public

My commission expires: _____
Registration No.: _____

JOHN S. FRIANT, JR.

_____ (SEAL)

COMMONWEALTH OF VIRGINIA
CITY/COUNTY OF _____, to-wit:

The foregoing instrument was acknowledged before me in the above jurisdiction this ____ day of _____, 2017 by John S. Friant, Jr, Trustee whose name is signed to the aforementioned Credit Line Deed of Trust.

Notary Public

My commission expires: _____
Registration No.: _____

BANK OF CLARKE COUNTY

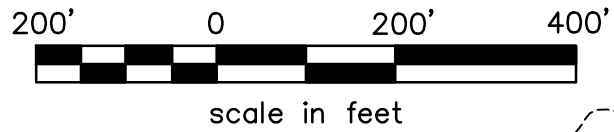
_____ (SEAL)
By: _____
Its: _____

COMMONWEALTH OF VIRGINIA
CITY/COUNTY OF _____, to-wit:

The foregoing instrument was acknowledged before me in the above jurisdiction this ____ day of _____, 2017 by _____, _____ of Bank of Clarke County, whose name is signed to aforementioned Credit Line Deed of Trust.

Notary Public

My commission expires: _____
Registration No.: _____



Surveyor's Certificate: I, W. Stuart Dunn, a duly licensed Land Surveyor in the Commonwealth of Virginia, do hereby certify that the land herein subdivided is in the name of Ronald E. DeHaven, and was acquired by him as stated in the Owner's Certificate. I further certify that these parcels are properly and accurately described and are within the boundary of the original tract and are referenced to the meridian established in Deed Book 295, Page 594. I further certify that the monuments designated hereon have been set in accordance with the Subdivision Ordinance of Clarke County, Virginia.

W. Stuart Dunn, CLS #2000
Berryville, Virginia

Owner's Certificate: The undersigned fee simple owner hereby certifies that the foregoing Minor Subdivision of 47.933 acres, being Tax Map 6-A-12, recorded in the name of Ronald E. DeHaven in deed recorded in Deed Book 494, Page 951, is made with the free consent and in accordance with the desires of the undersigned owner of said land, and trustees if any, and the same is hereby confirmed and submitted for record in the Clerk's Office of the Circuit Court of Clarke County, Virginia.

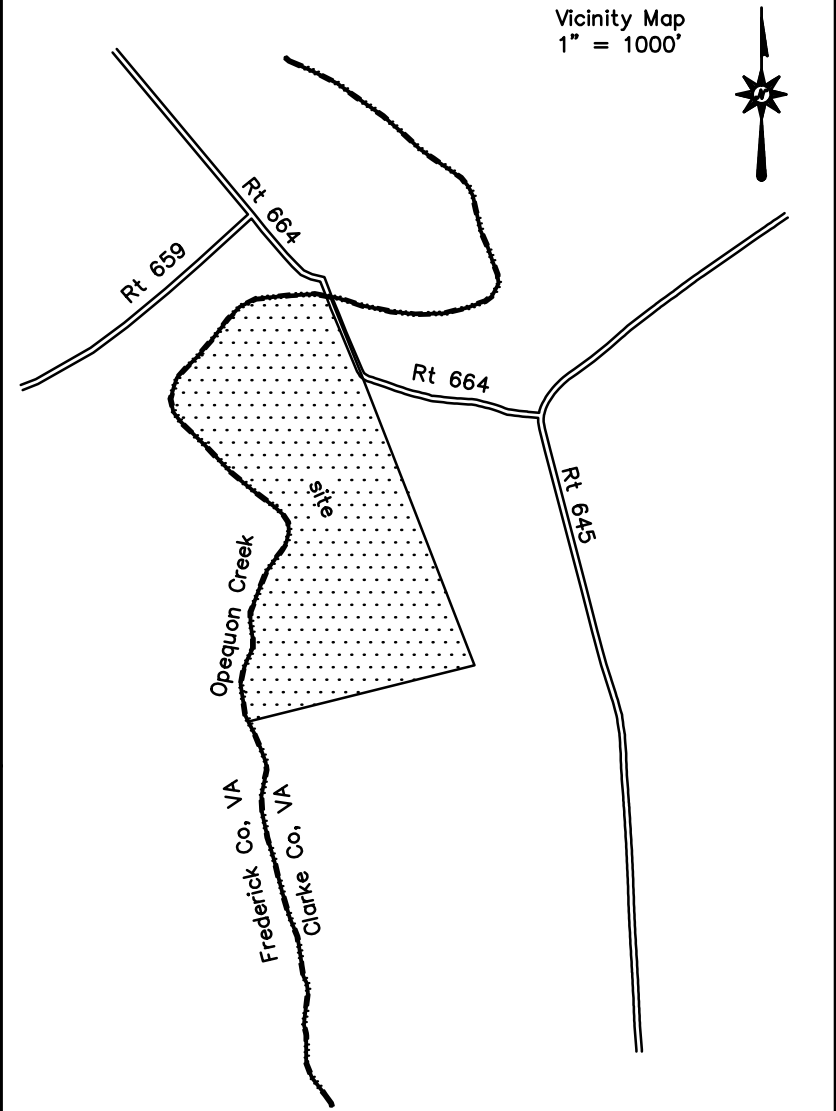
Ronald E. DeHaven

Commonwealth of Virginia, County of Clarke, to wit: The foregoing Owners' Certificate was acknowledged before me in my State and County aforesaid this _____ day of _____, 2016.

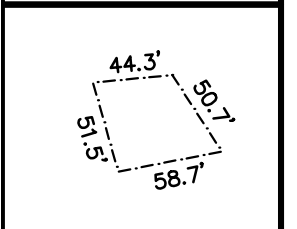
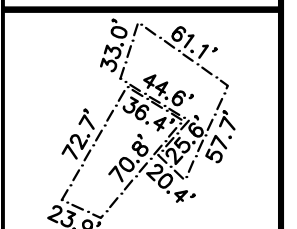
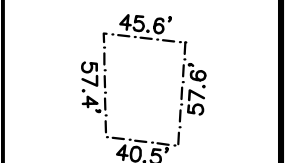
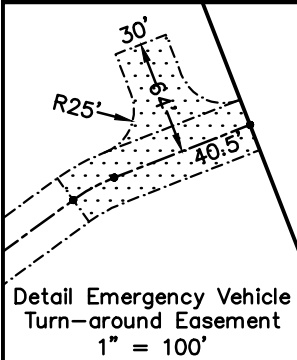
Notary Public: _____ My commission expires: _____

Approval:

Clarke County Zoning Administrator date: _____
 Chairman of Planning Commission date: _____
 Clarke County Health Department date: _____



LINE	BEARING	DISTANCE
L1	N 19°04'54" W	81.02'
L2	N 03°22'55" W	223.95'
L3	N 28°34'46" E	115.00'
L4	N 02°57'40" W	180.00'
L5	N 20°20'36" E	212.33'
L6	N 26°12'32" E	280.00'
L7	N 07°03'58" W	109.85'
L8	N 48°26'51" W	640.00'
L9	N 38°14'26" W	210.62'
L10	N 05°33'53" E	172.70'
L11	N 39°03'42" E	507.75'
L12	N 58°47'06" E	105.41'
L13	N 86°37'46" E	420.17'
L15	S 68°46'53" W	80.99'
L16	S 53°49'42" W	103.92'
L17	N 42°02'53" W	109.20'



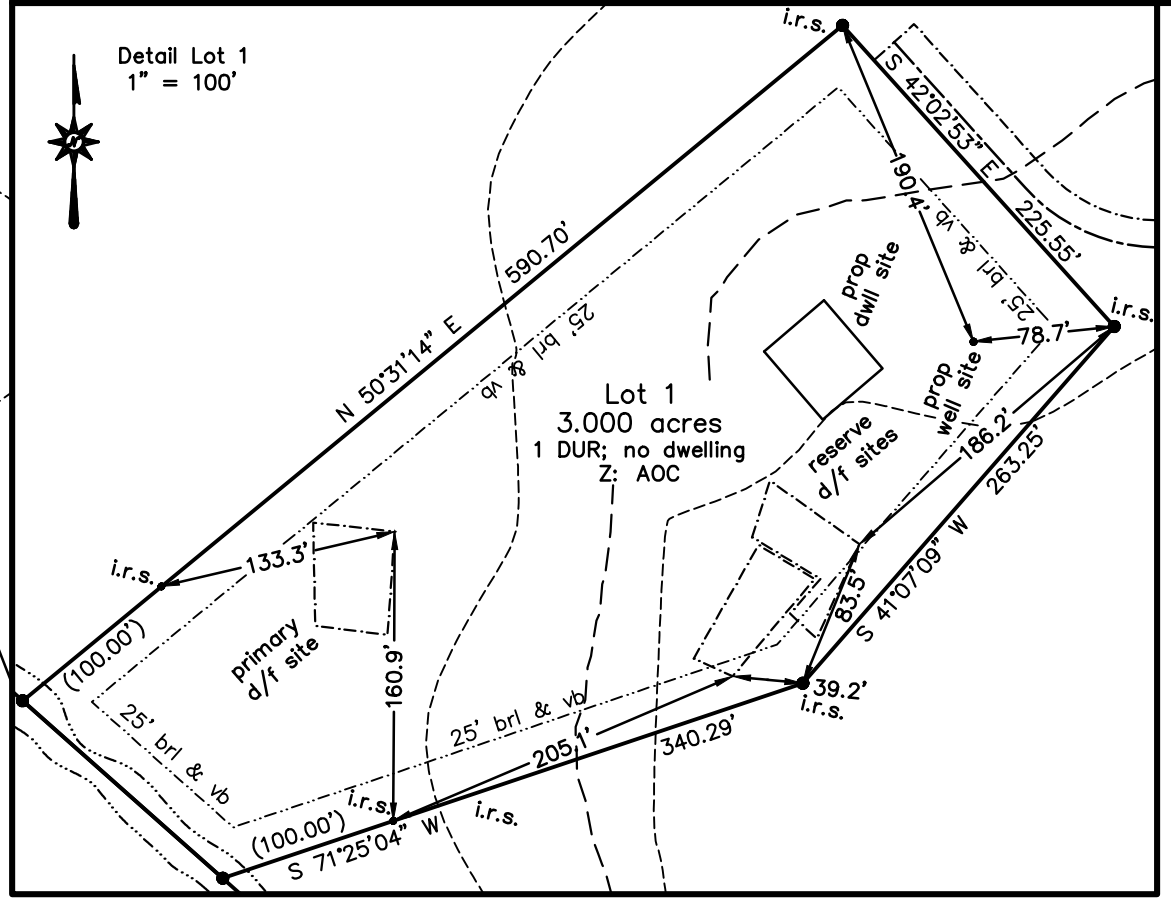
Area Table:

47.933 acres	area of TM 6-A-12	(1 existing dwelling, 1 DUR)
44.933 acres	area of Residue Lot	(1 existing dwelling, no DUR)
3.000 acres	area of Lot 1	(no existing dwelling, 1 DUR)
0.000 acres	area dedicated for public use	

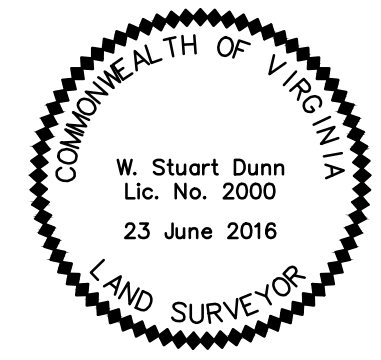
CURVE	RADIUS	ARC	DELTA	CHORD	CHORD	TANGENT
C1	100.00'	26.10'	14°57'11"	26.02'	S 61°18'18" W	13.12'
C2	100.00'	146.82'	84°07'24"	133.99'	N 84°06'36" W	90.24'

Notes:

- Lot 1, 3.000 acres, has no existing dwelling and 1 DUR. Residue Lot, 44.933 acres, has 1 existing dwelling and no DUR.
- Setbacks as follows:
 Lot 1: 25' from the edge of the 30' private access easement, 25' all property lines, 50' from any intermittent stream, 100' from any perennial stream, spring and/or sinkhole.
 Residue Lot: 100' from the edge of Route no. 664, 75' from the edge of the 30' private access easement, 75' all property lines, 50' from any intermittent stream, 100' from any perennial stream, spring and/or sinkhole.
- Tracts are in AOC Zoning District (agricultural - open space - conservation); use is agricultural/residential.
- i.r.s. = iron rod set; i.r.f. = iron rod found; bri = building restriction line; vb = vegetated property buffer; d/field = drainfield; DUR = dwelling unit right
- These tracts are in the AOC (agricultural - open space - conservation) zoning district. Agriculture is the primary economic activity of this Zoning District. Owners, residents, other users of property in the AOC district may be subjected to inconvenience, discomfort and the possibility of injury to property and health arising from agricultural operations even though conducted in accordance with best management practices and/or in accordance with existing laws and regulations of the Commonwealth and County. Such agricultural operations may generate noise, odors and dust, may involve the operation of machinery including aircraft, the storage and disposal of manure and the application of fertilizer, soil amendments and pesticides. Owners, occupants and users of land in the AOC District should be prepared to accept such inconveniences or discomfort as a normal and necessary aspect of living in a Zoning District in a County with a strong rural character and an active agricultural sector.
- The approximate limits of Flood Zone A and X were established from FIRM Community Panel no. 51043C0030D, effective September 28, 2007.
- The drainfield sites on Lot 1 are approved by the Clarke County Health Department for a 2 bedroom system with a maximum capacity of 4 people and 300 gpd, see VDH construction permit #043-16-0058. The reserve site on the Residue Lot is approved as a 3 bedroom system with a maximum capacity of 6 people and 450 gpd. The approximate location of the existing drainfield on Residue Lot was established by the consulting AOSE.
- Vegetated property buffer except for those land uses listed as exempt, existing woody vegetation within 25' of all property lines shall be retained on parcels of less than 20 acres, as per Section 3-A-1-f of the Clarke County Zoning Ordinance.
- Before fertilizers and pesticides are used for lawn or landscaping purposes, a soil test should be conducted. The application of such chemicals shall be limited due to the potential for groundwater contamination and should not exceed that determined necessary by the soil test.
- The private road shown on this plat will not be paved or maintained with funds of the County or VDOT. In the event that owners of these lots subsequently desire the addition of such private road to the secondary system of State Highways for maintenance, the cost to upgrade it to the prescribed standards must be provided from funds other than those administered by VDOT or the County.



Minor Subdivision of the Land of
Ronald E. DeHaven
 Deed Book 494, Page 951 Tax Map 6-A-16
 Longmarsh Magisterial District, Clarke County, Virginia



Dunn Land Surveys, Inc.
 106 North Church Street
 Berryville, Virginia 22611
 Tel: 540-955-3388
 June 23, 2016