


MEMORANDUM

September 8, 2016

TO: Planning, Housing, and Economic Development Committee

FROM: Jeff Zyontz  Senior Legislative Analyst

SUBJECT: Zoning Text Amendment 16-05, Telecommunications Towers – Limited Use

Zoning Text Amendment (ZTA) 16-05, introduced on June 14, 2016, would allow poles for telecommunications no higher than 30 feet, in various zones, as a limited use. ZTA 16-05 would also reduce the setback from detached single-family houses required for small cell antennas on existing structures. Council President Floreen is the lead sponsor of ZTA 16-05.

As people “cut the cord” from the traditional wired telephone and use their cell phones for far more than voice communication, there is a greater demand for wireless services in residential areas. The telecommunications industry can meet this need with small antennas on short poles. This new equipment cannot be supported on existing streetlight poles. Some neighborhoods have underground utilities without utility poles. The current Zoning Ordinance requires a conditional use approval for every new pole, no matter how short the pole. Council President Floreen believes that the Council should set the standards for these structures instead of subjecting each pole to the conditional use process.

The Council conducted a public hearing on July 19. The Planning Board supported ZTA 16-05 with amendments to limit the height of antennas and poles to the minimum necessary under FCC regulations and adding a requirement for the minimum distance between poles.

Industry representatives supported ZTA 16-05. One requested an expansion of the size of a small cell antenna. That testimony noted that the current small cell definition would allow a 2 foot antenna but would not allow a 4 foot antenna. There was also a request to allow an 8.6 inch diameter short pole instead of the 8 inch diameter pole that would be allowed by the ZTA as introduced.

Civic representatives opposed the ZTA. Many who testified could not see the justification for eliminating the individual notice and hearings necessary under the conditional use process. The safety of equipment towers due to wireless radiation was raised. Concerns about the placement of new poles was raised relative to houses, mature trees, and bus stops.

What technologies are at issue?

Both small cell antennas and Distributed Antenna Systems (DAS) can be located on short poles. Small cell antennas are typically used by a single wireless carrier to address a specific coverage issue. A DAS consists of multiple sites, covers large areas, and can support multiple wireless providers.

While DAS and small cell systems are two separate wireless technologies, they are perceived as being synonymous because the wireless access points for both employ shorter mounting structures, smaller antennas, and lower transmission power than traditional macro cell towers. DAS network antennas are small relative to the larger antennas that comprise a macro tower site. Macro towers may include as many as 15 antennas. Some of these antennas may be as large as eight feet high.



Photo Simulation

NPE-006

Proposed DAS Antennas
and Associated Equipment
Cabinet on Light Pole

Created by:



Version 1, June 23, 2016



Why are requests for small cell antennas being made?

To meet localized needs for coverage and increased capacity in outdoor and indoor environments, many wireless providers have sometimes turned to DAS and small cell technologies. DAS and small cell networks provide an increasingly important role in facilitating the deployment of broadband infrastructure. Network operators are targeting broadband capacity to the locations where their customers use wireless broadband.

An engineer representing Verizon Wireless has stated that the DAS networks are needed to add capacity for Verizon Wireless 4G services transmitted over the 2.1 GHz Advanced Wireless Services (AWS) band, which is not presently provided to the residential areas where a DAS is being proposed.

The DAS networks will cover a wide area, more akin to the coverage from a traditional cell tower than the coverage from a small cell installation. Each DAS access point will be connected to a central base station in Gaithersburg through fiber optic links.

What are the components of a DAS?

A DAS network generally consists of: (1) a number of remote communications nodes, each including at least one antenna for transmission and reception; (2) a high capacity signal transport medium (typically fiber optic cable) connecting each node to a central communications hub site; and (3) radio transceivers located at the hub site (rather than at each individual node as is the case for small cells) to process or control the communications signals transmitted and received through the antennas.

The physical changes in the right-of-way will include new poles for antennas, which may also be used to support streetlights, equipment at the base of the pole or mounted on the pole, and new buried cable lines.

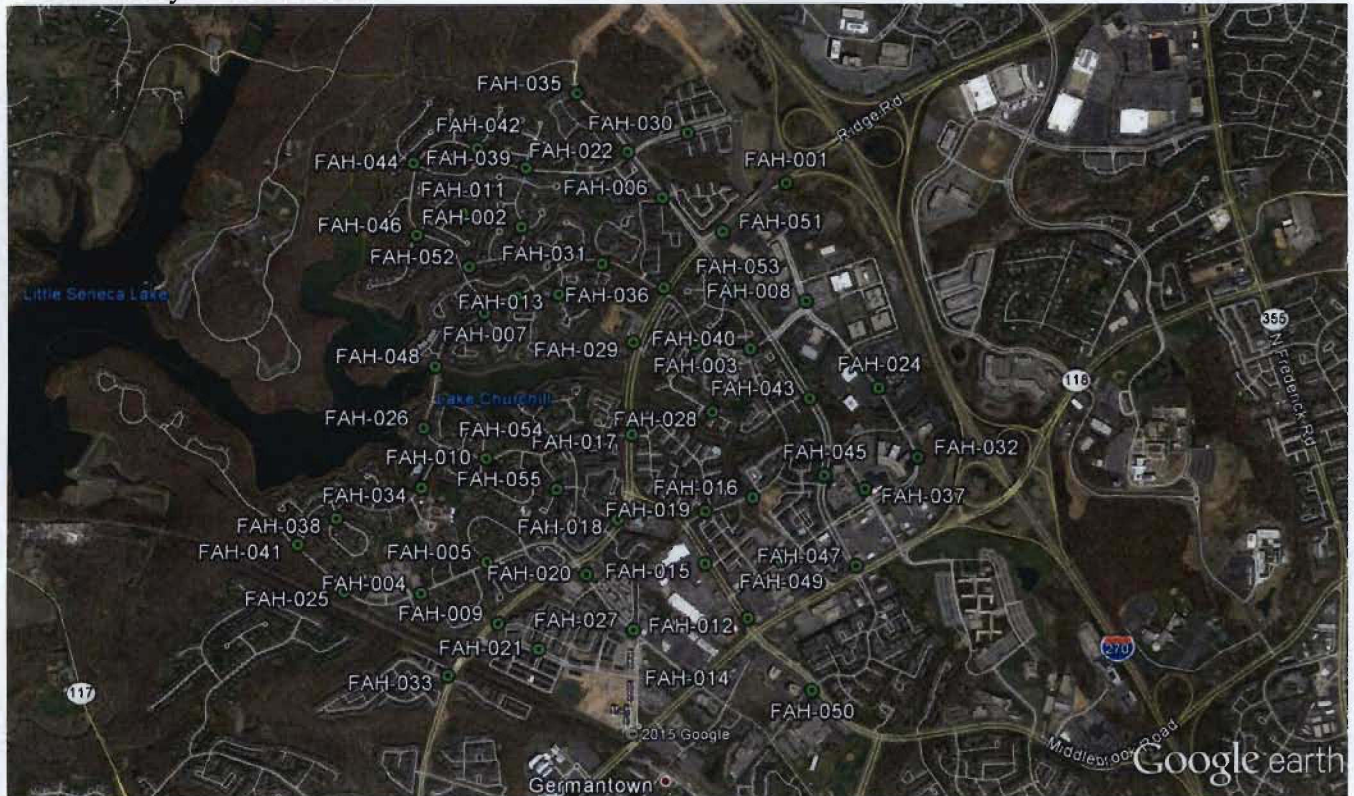
Many residential areas of the County were developed with underground utilities; utility poles are absent. The existing poles for streetlights are not sufficiently substantial to support the antennas required for a DAS. New poles will be required even when there are existing streetlight poles. There are no streetlights and no utility poles at some locations where a DAS system is proposed for deployment.

What applications are pending?

As of August 15, Crown Castle filed 95 of approximately 120 planned applications for antenna locations that comprise access points for several separate DAS networks. The DAS networks are designed to serve largely single-family residential areas (north Potomac, the Washingtonian area, and north Germantown) where there are no large buildings, towers, utility poles, or other suitable structures to support antennas.

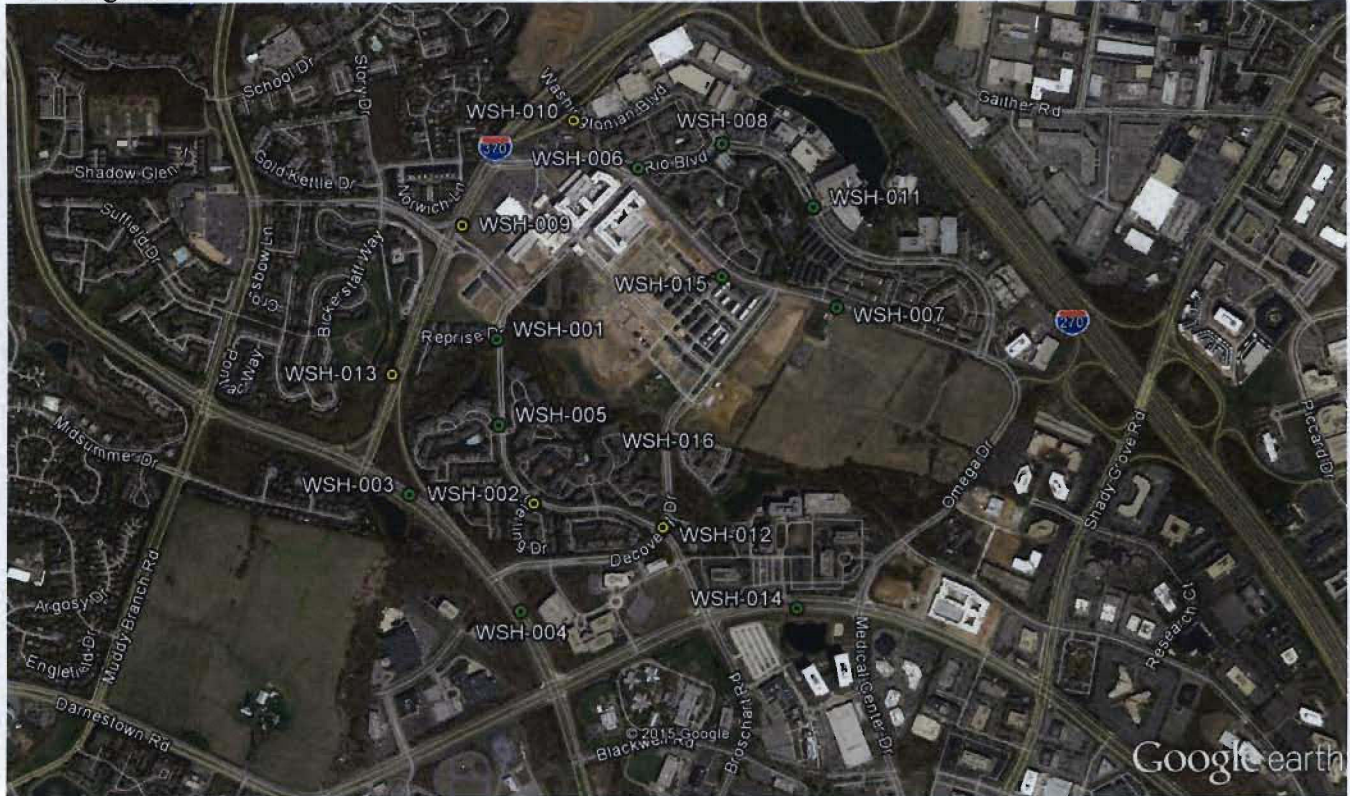
Initially, Crown Castle filed co-location applications to attach antennas and related equipment to existing PEPCO poles. Crown Castle then filed applications to attach antennas to replacement poles. Those applications proposed replacing shorter poles (which, because of either structural issues or lack of clearance from utility lines, could not support the antennas) with new, taller poles that could accommodate the antennas. Crown Castle then filed applications to install new poles where there are either none today or where the new pole would replace a 12 to 14 foot County streetlight pole with a taller pole. Most recently, Crown Castle has filed applications to replace County streetlights in the County rights-of-way with new poles. Color versions of the following maps can be viewed in the online version of this packet.

Father Hurley – Germantown



North Potomac





To what extent are Council actions preempted by the FCC?

The FCC expressed the situation as follows:

Section 332(c)(7) of the Communications Act preserves state and local authority over zoning and land use decisions for personal wireless service facilities, but sets forth specific limitations on that authority. Specifically, a state or local government may not unreasonably discriminate among providers of functionally equivalent services, may not regulate in a manner that prohibits or has the effect of prohibiting the provision of personal wireless services, must act on applications within a reasonable period of time, and must make any denial of an application in writing supported by substantial evidence in a written record. The statute also preempts local decisions premised directly or indirectly on the environmental effects of radio frequency (RF) emissions, assuming that the provider is in compliance with the Commission's RF rules.

Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012 (Spectrum Act) provides, in part, that "a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station."¹

¹ The County joined an unsuccessful class action suit to reduce the FCC's interference with our local authority.

Within a right-of-way, the FCC defined a “substantial change” as one that increases the height of the tower by more than 10% or 10 feet, whichever is greater.² The “substantial change” rule applies to existing structures such as utility poles, but does not apply to new poles.

The poles required for the proposed DAS system are new poles. Once those poles exist, they become existing for the purpose of FCC substantial change rules; however, in most instances, the County will be the owner of the pole and can completely regulate the height of the pole and antenna.

Who owns poles in the right-of-way?

Wood utility poles are owned by utility companies. Generally, the County owns and maintains streetlights and their poles.³ In some northern areas of the County, streetlights are either owned by First Energy or Baltimore Gas and Electric.

Where the County owns streetlights, the County intends on being the owner of the new poles constructed to accommodate DAS antennas with streetlights. Where there are streetlights not owned by the County, the County will not accept ownership of the replacement streetlight pole constructed for a DAS system.

The County will also not own poles constructed solely for the purpose of mounting DAS antennas that do not have a streetlight.

How can a wireless service provider place anything in County right-of-way (ROW)?

The County has franchise agreements with several carriers. Crown Castle is operating under the NextG franchise. That franchise does not specify where the telecommunications facilities must be located. The agreement does not expressly state that Crown Castle may install poles. That authority is implied in the definition of telecommunications facilities. The Montgomery County Department of Transportation (MCDOT) determined that Crown Castle may install poles in the ROW under a verbal agreement.

Poles may not be located in the ROW at the whim of the franchisee. MCDOT is responsible for safety in the ROW. To that end, MCDOT must ensure that:

- 1) streetlights must be located in a manner that sufficiently illuminates the street;
- 2) obstructions generally must not interfere with a clear zone for traffic; and
- 3) obstructions near a street intersection must allow an adequate sight distance for safe travel.

A permit from the Department of Permitting Services is required for the construction of all DAS poles.

Should the Council change the current process for the approval of telecommunications poles?

The Zoning Ordinance currently treats all telecommunications towers the same, without regard to the proposed height of the “tower”. In the absence of ZTA 16-05, all poles, no matter how short, would require conditional use approval. This process requires notice to abutting property owners, a hearing process, and a finding by the Hearing Examiner that would be subject to review by the Board of

² The FCC rule defined “substantial changes to physical dimensions” outside of the right-of-way as changes that increases the height of a tower outside the public rights-of-way by more than 10% or 20 feet, whichever is greater.

³ “All generalizations are false, including this one.” Mark Twain.

Appeals. If the process is not complete within the 60 day shot-clock mandated by the FCC, a court can declare the application approved as submitted.⁴

The current approval procedures for towers contemplate few very tall towers. The advent of small cell and DAS technology allow for lower power smaller antennas on relatively short poles. The issues for each short pole will be identical: Is it too close to a house? Is it too close to a corner? Is it too tall? Will the pole inhibit the safety of the right-of-way? Even though the County is prohibited from making a decision on the basis of radio frequency exposure, residents are likely to raise health concerns in the course of each hearing.⁵

The Council's legislative decision, when clear, are more efficiently enforced through administrative decision making than by a quasi-judicial process. If the anticipated issues are the same, then the answers should be the same for everyone. The costs in time and money for hearings and reports are high. The towers that would be allowed under ZTA 16-05 are relatively low. A legislative solution would certainly avoid decision made due to a shot clock violation.

The notice provided to abutting home owners was raised as an issue in testimony. A conditional use requires notice to abutting and confronting property owners. A permit to construct a pole and antenna would not require notice to abutting property owners. The franchise agreement does not require notice to any property owners.

Would permitting larger small cell antennas reduce the number of antennas (and new poles) required for their deployment?

Testimony from an industry representative suggested allowing a larger antenna than the size that currently defines a small cell antenna. The request was to effectively allow a 4 foot long antenna (with attachments). Currently, only a two foot antenna is allowed as a small cell antenna.⁶ **As introduced, ZTA 16-05 did not limit the size of an antenna on short towers to the dimension of a small cell antenna.**

Permitting larger small cell antennas would not reduce the number of antennas. The location of small cell antennas is based on customer demand—specifically, the coverage needs in localized “hot spots” where demand exceeds the capacity of existing antennas, such as busy shopping centers, high-volume intersections, or areas where there are often special events.

In theory, although doubling the antenna's size can double the antenna's power gain, it may increase the coverage area by only 16 to 20 percent as compared to an antenna half the size. In most cases, however,

⁴ The FCC created a shot clock (60 days) for the review of applications. The shot clock begins to run upon the submission of the application, with the tolling upon notice of incompleteness. When a jurisdiction fails to rule on an application within the new 60 day shot clock period (accounting for tolling), the request will be deemed granted. The approval takes effect after written notice to the jurisdiction that the approval time period has elapsed. If the jurisdiction disagrees with this result, it is the jurisdiction that must seek relief in the courts.

⁵ Dan Collins, a radio frequency exposure expert, testified at the Council's public hearing that the small antennas use a fairly low amount of electricity and emit radio frequency amounts that are 30 to 50 times below the maximum allowed by the Federal Communications Commission. He found that the amounts of radiation are also less than the routine level of radio frequency emissions in most homes and offices with plugged-in electronics and appliances. Collins said, “You can leave your home and actually reduce your [radio frequency] exposure. That's how low the radio frequency levels are from these facilities.”

⁶ Section 59-3.5.14 allows small cell antennas with a maximum height of 3 feet and a maximum width of 2 feet on existing structures. Once a new pole is constructed, it becomes an existing structure.

small cells are deployed to address a specific coverage issue, not to serve a large area. Practically speaking, then, the number of small cell locations will not change as a result of deploying larger antennas.

For DAS networks, permitting larger antennas would also not reduce the number of telecommunications poles in the County. Like small cells, DAS networks are designed so that antennas are strategically placed at locations selected to meet carriers' potential customer demand. Ultimately, antenna (and pole) spacing requirements are based on each particular carrier's coverage needs.

What would larger antennas allow if not a reduced number of antennas? Verizon provided the following information:

The need for 4.5 foot antennas has to do with the ability to pinpoint the signal and to provide multiple bandwidths/frequencies. The 2 foot antenna in many cases does not allow for radio frequency precision required to cover a location. It is not the case that a larger antenna will increase coverage area. It is the case that limiting Verizon Wireless to a 2 foot antenna in many cases would eliminate our ability to increase throughput and therefore effectively negate the benefits of small cell technology.

Radio frequency control is paramount to an effective cellular design. Uncontrolled signals are viewed as system noise or interference by neighboring nodes / sites. The lower the interference is, the faster the throughput will be. Faster throughput equals higher capacity, which equals fewer sites. A reduction in interference can be facilitated by having the ability to down tilt or up tilt antennas. An antenna's downtilt angle can now be handled electronically (using Remote Electrical Downtilt - RET) as traffic needs change, in real time.

The RET hardware now incorporated into an antenna's radome has increased the antenna's overall size. With the added Remote Electrical Downtilt equipment now incorporated into these antennas, an additional six (6) inches has been requested to accommodate this hardware. When added to the 4 foot antenna designed to pinpoint the signal, the result is the 4 foot 6 inch antenna.

Changing the definition of the size of small cell antennas would then allow the larger size antenna on existing structures. With regard to poles under 30 feet high, the height would include the antenna dimension.

Under FCC regulations, the County may not regulate in a manner that prohibits or has the effect of prohibiting the provision of personal wireless services. Staff does not believe that retaining the current limitations on a defined small cell antenna (3 feet by 2 feet) would have the effect of prohibiting wireless services.

Staff did not include a change to the size definition of a small cell antenna in the attached redrafted ZTA.

Is allowing wider poles a good idea?

ZTA 16-05 as introduced would limit the width of shorter pole to 8 inches. That number was the minimum required to support a small cell antenna. Testimony from an industry representative suggested that a pole of 8.6 inches be allowed. That would be a 7.5% increase in diameter but a 15.6% increase in the volume of a 25 foot pole.

The purpose of the wider pole would be to allow for wooden poles in addition to metal poles. Metal poles can be designed to break away from their ground support upon impact and can contain the wiring necessary to connect the antenna to the cable. Wooden poles cannot do either of these things.

Staff does not recommend increasing the allowed diameter of shorter poles and recommends that ZTA16-05 require metal poles.

Should only shorter poles be allowed?

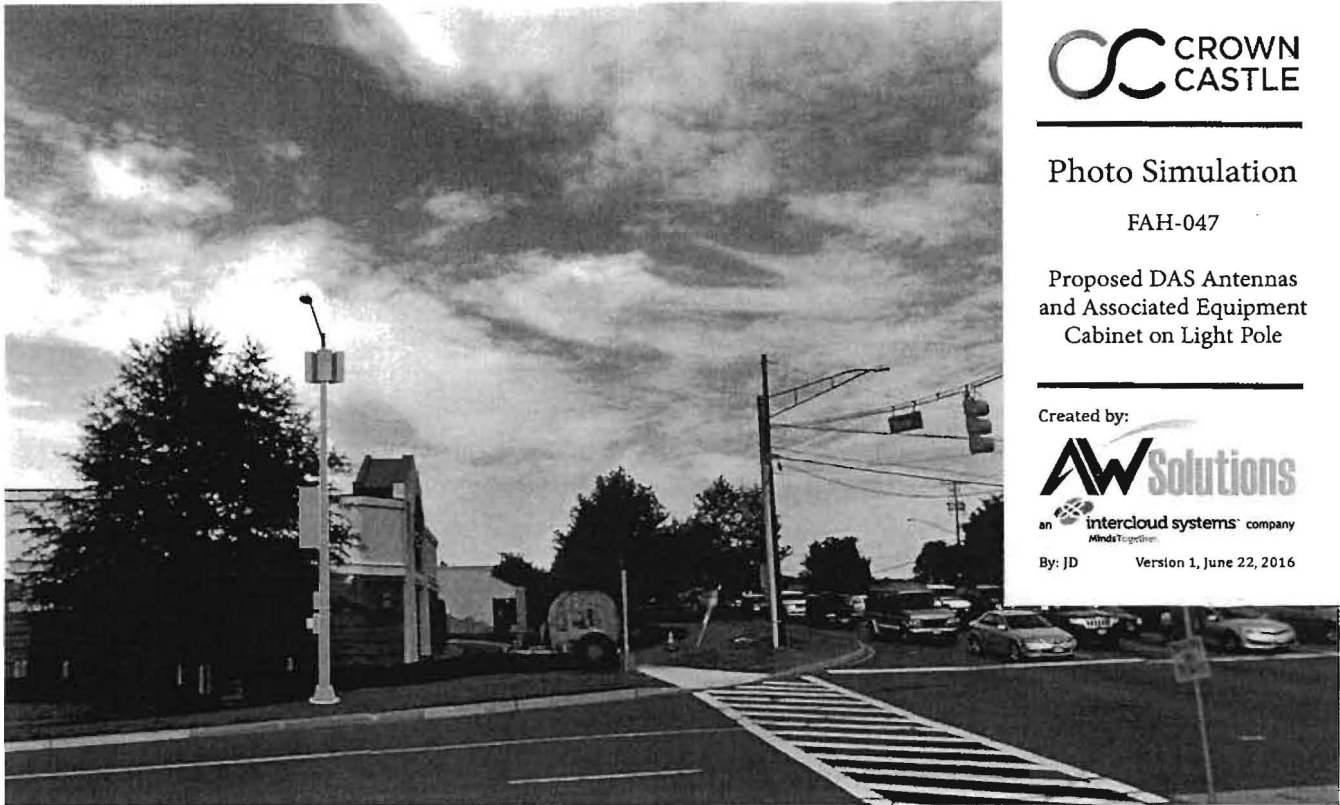
Approximately 70% of residential streetlights are more than 12 feet tall but less than 16 feet. ZTA 16-05 would allow a new pole, including the antenna, to be no taller than the height of the nearest pre-existing streetlight or utility pole, plus the greater of 20 percent of the height of the existing pole or 10 feet. If the pole is greater than 30 feet, it would require conditional use approval.

Once a pole exists, the FCC regulations would generally preempt the County from considering an additional 10 feet a substantial change. On a private structure, an extension after construction would be allowed as of right. Under the FCC rules, the fact that the County allowed a new pole to be 10 feet higher than the existing pole would be irrelevant in the face of a proposed extension.

Thirty feet is lower than the building height limit in residential zones. In many zones, that height limit is 35 feet. In some zones, the building limit is 50 feet. Thirty feet is higher than the 20 foot limit for accessory structures in some zones. Planning Board testimony recommended limiting the height to the minimum size necessary under FCC regulations. Staff could not identify any minimum height required by the FCC. There are practical limits to height standards. Most jurisdictions state a maximum height of antennas. A height too low increases radiation exposure and invites vandalism.

The City of Rockville is considering changes to require a **minimum** height in residential areas of 25 feet.⁷ A 15 foot minimum height may be required in Rockville in non-residential areas.

⁷ The Rockville staff recommendation to the Planning Commission would only allow antennas on existing structures. Virtually all areas of Rockville have existing utility poles that could support small cell antennas. The proposed installation in the County would be on new structures.



Staff does not recommend reducing the height proposed in ZTA 16-05.

Base on simple mathematics, for poles 30 feet in height or less, 10 feet in addition to the height of the pre-existing height of a street pole will always be greater than 20 percent of the height of the existing pole.⁸ The provision that allows the greater of 10 feet or 20% addition to height is unnecessarily complicated. *The percentage change should be deleted.*

Should the ZTA be amended to require more specifics on the location of poles?

As introduced, ZTA 16-05 has one provision that relates to the location of poles in the right-of-way. (The pole must be located such that the nearest building is a distance from the pole equal to the pole's height.) Testimony from residents indicated concern over the location of the poles relative to houses. MCDOT also has concerns about pole location that can be addressed in the ZTA.

To a large extent, new poles will replace existing streetlight poles. The existing streetlight poles, although smaller in diameter, are already part of the neighborhood landscape. Pre-existing poles were located to provide adequate light coverage to the road. Significantly changing a pole's location would cause problems. Adding a new pole where streetlight poles already exist would add unnecessary clutter.

Staff recommends adding a provision to locate replacement poles within 3 feet of any existing streetlight pole when streetlight poles are already in the right-of-way, and avoiding multiple poles.

⁸ The higher a pole is, the more that is allowed by 20% above that height. With a 25 foot pole, a 20% addition allows 5 feet. If the pre-existing streetlight pole is 30 feet or higher, any addition in height would require approval as a conditional use.

Where streetlight poles are absent, more provisions are required. New poles that are perpendicular to a front door or front window are undesirable. This can be avoided by locating poles in line with the property line between lots.

Staff recommends adding a provision to locate poles, when streetlights are not provided, to a location at the mid-point of the abutting properties' side yards.

The County is responsible for maintaining a safe right-of-way. This mandate should be recognized in code.

Staff recommends a requirement allowing DPS to reject permits for locations that do not meet their standards for a clear zone or site distance.

The Planning Board recommended a minimum distance between poles along a block face. City of Rockville staff recommend a minimum 500 feet between antennas. This was suggested to avoid visual clutter. Staff believes that the fear of visual clutter will be far greater than the reality. The coverage area of these antennas is between 650 and 1,150 feet.⁹ The Tower Committee reviews all applications. The group looks to ensure that there is a need for the facility and that co-location is not feasible. Each new pole costs money. The industry itself has a built-in bias to reduce the number of new poles. *Staff does not recommend a change to require a minimum distance between poles.*

How can the number of poles in the right-of-way be minimized?

When a telecommunications pole is proposed in an area where there are pre-existing streetlight poles, the new pole should be required to replace the removed streetlight on the new pole. This would avoid increasing the number of poles in the ROW. Where there are streetlights not owned by the County, the County will not accept ownership of the replacement streetlight pole constructed for a DAS system. The requirement to make the new pole replace a streetlight will mean that the pole owner and the replacement pole applicant must reach an accommodation with each other that does not result in additional poles.

Staff recommends requiring the new pole to replace a streetlight pole when such poles are nearby.

Will these antennas produce noise?

Some antennas use a fan for cooling. These fans give off a sound something like a residential HVAC fan. There are also antennas that use passive cooling. Passively cooled antennas do not create noise.

Staff recommends a requirement that residential antennas be passively cooled.

What happens to street trees?

All poles constructed under ZTA 16-05 will require a permit from the Department of Permitting Services. When DPS issues a permit that results in the trimming, cutting, removal, or injury of any roadside tree, the Director must not issue that permit until a tree protection plan is approved.¹⁰ That plan

⁹ The City of Gaithersburg's frequently asked questions included a statement that the range for Crown Castle installations will be between 200 and 350 meters.

¹⁰ §19-71.

must provide for the protection of trees and the replacement of removed trees at a rate of up to 3 to 1, depending upon the circumstance.¹¹

A public utility is not subject to roadside tree requirements. Those companies working in the right-of-way under a franchise agreement with the County are subject to the requirement.

This Packet Contains

ZTA 16-05 as recommended by staff

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¹¹ §49-36A.

Zoning Text Amendment No.: 16-05
Concerning: Telecommunications
Towers – Limited Use
Draft No. & Date: 4 – 8/24/16
Introduced: June 14, 2016
Public Hearing:
Adopted:
Effective:
Ordinance No.:

**COUNTY COUNCIL FOR MONTGOMERY COUNTY, MARYLAND
SITTING AS THE DISTRICT COUNCIL FOR THAT PORTION OF
THE MARYLAND-WASHINGTON REGIONAL DISTRICT WITHIN
MONTGOMERY COUNTY, MARYLAND**

Lead Sponsor: Councilmember Floreen

AN AMENDMENT to the Montgomery County Zoning Ordinance to:

- allow short telecommunications towers as a limited use under certain circumstances;
- revise the use standards for small cell antennas;
- allow short telecommunications towers in public rights-of-way in the RNC, TS, and residential detached zones as a limited use; and
- generally amend telecommunications tower and small cell antenna provisions.

By amending the following sections of the Montgomery County Zoning Ordinance, Chapter 59 of the Montgomery County Code:

DIVISION 59-3.1. "Use Table"
Section 3.1.6. "Use Table"
DIVISION 59-3.5. "Commercial Uses"
Section 3.5.2. "Communication Facility"
Section 3.5.14 "Accessory Commercial Uses"
DIVISION 59-8.3 "Planned Unit Development Zones"
Section 59-8.3.3. "T-S Zone"

EXPLANATION: ***Boldface** indicates a Heading or a defined term.*

Underlining indicates text that is added to existing law by the original text amendment or by ZTA 14-09.

[Single boldface brackets] indicate text that is deleted from existing law by original text amendment.

Double underlining indicates text that is added to the text amendment by amendment or text added by this amendment in addition to ZTA 14-09.

[[Double boldface brackets]] indicate text that is deleted from the text amendment by amendment or indicates a change from ZTA 14-09.

** * * indicates existing law unaffected by the text amendment.*

ORDINANCE

The County Council for Montgomery County, Maryland, sitting as the District Council for that portion of the Maryland-Washington Regional District in Montgomery County, Maryland, approves the following ordinance:

Sec. 1. DIVISION 59-3.1 is amended as follows:

DIVISION 59-3.1. Use Table

* * *

Section 3.1.6. Use Table

The following Use Table identifies uses allowed in each zone. Uses may be modified in Overlay zones under Division 4.9.

USE OR USE GROUP	Definitions and Standards	Ag	Rural Residential				Residential											
							Residential Detached						Residential Townhouse			Residential Multi-Unit		
		AR	R	RC	RNC	RE-2	RE-2C	RE-1	R-200	R-90	R-60	R-40	TLD	TMD	THD	R-30	R-20	R-10
* * *																		
COMMERCIAL																		
Animal Services	3.5.1																	
Animal Boarding and Care	3.5.1.B	C	C	C	C	C	C	C	C									
Veterinary Office/Hospital	3.5.1.C	C	C	C	C	C	C	C	C	C	C							
Communication Facility	3.5.2																	
Cable Communications System	3.5.2.A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Media Broadcast Tower	3.5.2.B	C	C	C		C	C	C	C	C	C	C				C	C	C
Telecommunications Tower	3.5.2.C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L	L	L	L	L	L
* * *																		

Key: P = Permitted Use L = Limited Use C = Conditional Use Blank Cell = Use Not Allowed

Sec. 2. DIVISION 59-3.5 is amended as follows:

DIVISION 3.5 Commercial Uses

* * *

Section 3.5.2. Communication Facility

* * *

C. Telecommunications Tower

1. Defined

Telecommunications Tower means any structure other than a building, providing wireless voice, data or image transmission within a designated service area. Telecommunications Tower consists of one or more antennas attached to a support structure and related equipment, but does not include amateur radio antenna (see Section 3.5.14.A and Section 3.5.14.B, Amateur Radio Facility), radio or TV tower (see Section 3.5.2.B, Media Broadcast Tower), or an antenna on an existing structure (See Section 3.5.14.C, Antenna on Existing Structure).

2. Use Standards

a. Where a Telecommunications Tower is allowed as a limited use and the tower is taller than 30 feet in height as measured from the base to the highest point on the tower, including the antenna, it must satisfy the following standards:

- i. It must not be staffed.
- ii. Antennas are limited to the following types and dimensions:

- (a) omni-directional (whip) antennas with a maximum height of 15 feet and a maximum diameter of 3 inches;

(b) directional or panel antennas with a maximum height of 8 feet and a maximum width of 2 feet; and

(c) satellite or microwave dish antennas with a maximum diameter of 8 feet.

iii. Signs or illumination on the antennas or support structure are prohibited unless required by the Federal Communications Commission, the Federal Aviation Administration, or the County.

iv. In the AR, R, and RC zones, the tower must be located within an overhead transmission line right-of-way and is a maximum height of 199 feet. The tower must be a minimum of 300 feet from any residence. A Telecommunications Tower conditional use application may be filed with the Hearing Examiner to deviate from this standard.

v. In the LSC, IL, IM, and IH zones, the tower is a maximum height of 199 feet with a setback of one foot for every foot of height from all properties zoned Agricultural, Rural Residential, or Residential.

vi. In the GR and EOF zones, the tower is a maximum height of 150 feet with a setback of one foot for every foot of height from all properties zoned Agricultural, Rural Residential, or Residential. A Telecommunications Tower conditional use application may be filed with the Hearing Examiner to deviate from this standard.

vii. In the RNC and all residential zones, all towers taller than 30 feet as measured from the base of the structure to the highest point are only allowed as a conditional use under subsection c.

b. Where a Telecommunications Tower is allowed as a limited use and the tower is 30 feet in height or shorter as measured from the base to the highest point on the tower, including the antenna, it must satisfy the following standards:

i. The tower must be located:

(A) in a public right-of-way;

(B) within 3 feet of a pre-existing streetlight pole, at the same distance from the curb line as the existing light pole;

(C) at the mid-point between the side yards of abutting properties, when there are no pre-existing street light poles within 300 feet of the proposed location;

(D) outside of the right-of-way's clear zone; and

(E) in a manner that allows for adequate site distances.

ii. The height of the structure, including the antenna, must not exceed the height of the nearest pre-existing street light or utility pole, plus [[the greater of:

(A) 20 percent of the height of the existing pole; or

(B)]] 10 feet.

iii. The tower must be set back a distance of one foot for every foot in height, including the antenna, from any off-site dwelling unit.

iv. The tower must be made of metal and must not be more than 8 inches in diameter.

v. Any equipment cabinet at the base of the tower must not exceed 25 cubic feet of volume.

vi. When there is any pre-existing street light pole within 300 feet of a proposed new pole, the new pole must replace the pre-existing street light pole and provide a replacement street light on the new pole.

vii. The antenna and equipment must be passively cooled.

viii. The tower must not be staffed.

[[vii]] ix. Signs or illumination on the antennas or support structure, with the exception of a street light, are prohibited unless required by the Federal Communications Commission, the Federal Aviation Administration, or the County.

[[viii]] x. Each owner of the tower must accept responsibility for maintaining the tower in a safe condition.

[[ix]] xi. The tower must be removed at the cost of the owner of the tower when the tower is no longer in use by any wireless communication carrier for more than 12 months.

[b]c. Where a Telecommunications Tower is allowed as a conditional use, it may be permitted by the Hearing Examiner under all applicable limited use standards, Section 7.3.1, Conditional Use, and the following standards:

* * *

Section 3.5.14. Accessory Commercial Uses

115 * * *

116 C. Antenna on Existing Structure

117 1. Defined

118 Antenna on Existing Structure means one or more antennas attached to an
 119 existing support structure, such as a building, a transmission tower, a
 120 monopole, a light pole, a water tank, a silo, a barn, or an overhead
 121 transmission line support structure. Antenna on Existing Structure includes
 122 related equipment.

123 2. Use Standards

124 Where an Antenna on Existing Structure is allowed as a limited use, it must
 125 satisfy the following standards:

126 a. Antennas are limited to the following types and dimensions:

- 127 i. omni-directional (whip) antennas with a maximum height of 15
 128 feet and a maximum diameter of 3 inches ;
- 129 ii. directional or panel antennas with a maximum height of 8 feet
 130 and a maximum width of 2 feet;
- 131 iii. satellite or microwave dish antennas with a maximum diameter
 132 of 8 feet; and
- 133 iv. small cell antennas with a maximum height of 3 feet and a
 134 maximum width of 2 feet.

135 * * *

136 e. When located on a structure at least [60] 30 feet from a detached house or a
 137 duplex building type, a small cell antenna that satisfies Section
 138 3.5.14.C.2.a.iv may be installed on any existing structure, at a minimum
 139 height of 15 feet, in any zone where an antenna on an existing structure is
 140 allowed.

141 * * *

Sec. 3. DIVISION 59-8.3 is amended as follows:

DIVISION 8.3. Planned Unit Development Zones

* * *

Section 8.3.3. T-S Zone

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B. Land Uses

1. A use described on the approved development plan is allowed by right in the T-S zone.
2. All uses authorized in any zone, by right or as conditional uses, may also be authorized in the T-S zone if the use is shown on the approved site plan or the site plan is first amended under Section 7.3.4.J.
3. An amendment to the site plan is not required for construction of accessory buildings and additions or modifications to existing detached houses, townhouses, and accessory buildings if:
 - a. the Planning Board has approved homeowners association documents establishing a procedure to review such development prior to construction; and
 - b. the development is approved under this procedure.
4. No use may occupy a location other than indicated on the approved site plan.

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6. An Antenna on an Existing Structure that satisfies the limited use standards in Section. 3.5.14.C is allowed.
7. If the provisions of Section 3.5.2.C.2.b are satisfied, a [[telecommunications tower]] Telecommunications Tower that is 30 [[foot]] feet tall or shorter, including the antenna, is allowed and a site plan amendment is not required.

169 8. Privately owned roads and community open spaces may be held in
170 perpetuity by the developer or by an approved home owners
171 association with substantial membership and duration if the Planning
172 Board approves easements for such uses granted to the County and
173 recorded in the land records of the County.

174 [8] 9. All utility lines in the T-S zone must be placed underground. The
175 developer or subdivider must ensure final and proper completion and
176 installation of utility lines under Section 50-40(c). The developer must
177 provide street lighting satisfying the standards contained in the
178 approved site plan. A use-and-occupancy permit must not be issued
179 for any building [which is] not served by an approved sewer and water
180 supply.

181
182 **Sec. 4. Effective date.** This ordinance becomes effective 20 days after
183 approval.

184
185 This is a correct copy of Council action.

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187 _____
188 Linda M. Lauer, Clerk of the Council