Frequently Asked Questions:
ZTA 19-07 and Cell Antennas in Montgomery County

What is 5G and how does it work?

Small cell towers, also known as 5G antennas, allow for faster internet speed and more connectivity when compared to existing technology. These new lower-powered antennas serve a smaller area but with higher data volumes and are designed to operate at higher frequencies. They can support faster downloads with more devices connected to the network.

Simply put, the frequency that 5G operates at can carry a lot of information, but the signal travels a short distance. The technology requires many antennas that are closer to the device that is sending and receiving information. While today's technology relies on relatively few but tall macro towers, 5G will requires the use of more, shorter antennas.

Unlike the large installations of previous cell towers, which could be as tall as 100 feet, 5G requires smaller equipment installed closer together and closer to the ground. Unlike the macro towers, which were located on private property, small cell facilities tend to be located in public rights-of-way. For installation, an antenna is installed either on top of or flush with a pole, usually a pre-existing streetlight or utility pole.

What is the federal government's role in 5G and small cell tower deployment?

With the intent of accelerating wireless broadband deployment and removing barriers to infrastructure deployment, the Federal Communications Commission (FCC) issued order FCC 18-133, or the Small Cell Order. The FCC believes that greater capacity is needed to meet future demands. Wireless technology is rapidly changing to offer faster speeds, enhanced reliability, and expanded capabilities.

Notably, the FCC order prohibits local governments, including Montgomery County, from prohibiting cell towers if doing so would prevent the delivery of wireless services to that area. In addition, the order imposes a 90-day "shot clock" to review applications to install small antennas.

What is the purpose of ZTA 19-07?

ZTA 19-07 has two intentions. First, ZTA 19-07 intends to address our community's interest in having increased access to mobile broadband services and the evolving technical needs of the wireless industry while also working to protect the community's interest in managing commercial use of public property and maintaining attractive and safe roads and neighborhoods.

The second is to amend the zoning ordinance to comply with the FCC's order and remove existing barriers to deployment. The County's current regulations for small cell antennas in the

Agricultural, Rural Residential and Residential zones likely do not comply with the FCC's Small Cell order or existing Federal Law.

What happens if ZTA 19-07 is approved?

Telecommunications providers have indicated an interest in creating a 5G network in the County. ZTA 19-07 would allow poles with antennas as a limited use in residential zones where the pole for the antenna would replace a pre-existing utility pole, streetlight pole or site plan-approved parking lot light pole.

The replacement pole must be at least 30 feet from the nearest habitable building, with conditions for screening and design as well as height restrictions based on the width of the right-of-way.

For poles less than 30 feet from the nearest habitable building, ZTA 19-07 establishes a modified conditional use process that will require a public hearing while still meeting the FCC imposed "shot clock."

If ZTA 19-07 is approved, can residents object to the placement of cell towers?

ZTA 19-07 creates a waiver and objection process. This process applies to new poles where no existing pole exists within 150 feet. The waiver and objection process also applies to applications for poles higher than the limited use standards but under 50 feet tall. This waiver and objection process would provide a public hearing only where an objection is filed. Residents will also be able to appear at the public hearings under the modified conditional use process, which are for poles less than 30 feet from the nearest habitable building.

What are the existing restrictions on 5G deployment in the County?

The County Council first reviewed the restrictions on 5G towers in 2018. By approving ZTA 18-02, the Council allowed deployment of 5G antennas in mixed-use and non-residential zones with reduced setbacks. But the Zoning Ordinance did not allow 5G towers in residentially zoned areas except by conditional use approval and the minimum setback from existing dwellings was 300 feet. As these restrictions do not meet the "shot clock" and likely prohibit deployment, revisions to the Zoning Ordinance are necessary to be compliant with federal law.

To clarify, presently all telecommunications towers in residential zones, without regard to the height of the tower, may only be approved as a conditional use, which requires recommendations from Planning Staff and the Planning Board, a public hearing by the Hearing Examiner and the ability to appeal to the Board of Appeals. In Montgomery County, this process may take anywhere from a few months to one year for approval, far exceeding the 90-day shot clock required by the FCC.

How does ZTA 19-07 specifically reduce the timeline of approval to meet the 90- day shot clock requirement?

The intent of ZTA 19-07 is to streamline the current process and avoid a prohibition of service by establishing a "modified conditional use process." This modified process will shorten the

timeline by removing the requirement for Planning Staff and Planning Board recommendations, limiting the findings required by the Hearing Examiner to choosing the least visually obtrusive location and allowing consolidated applications. The ZTA also eliminates the Board of Appeals so that appeals go directly to the Circuit Court and reduces the notice requirement to 300 feet.

The modified conditional use process in the Agricultural, Rural Residential, and Residential zones would be triggered for all pre-existing and replacement towers less than 30 feet from any building intended for human occupation, excluding any setback encroachments.

What does ZTA 19-07 do to reduce the visual impact of the installations?

For a limited use, which are poles at least 30 feet from a habitable building, certain screening and design standards are in place. Antennas must be concealed in an enclosure of the same color as the pole, installed at a minimum height of 15 feet and installed parallel with the tower. The replacement tower must be the same color as the pre-existing pole. The tower must have no exterior wiring; but on wooden or utility poles any exterior wiring must be enclosed in a shielded conduit. Equipment cabinets must be the same color or pattern as the pre-existing tower and may be a stealth design. Signs or illumination are prohibited. The tower must be outside of the roadway clear zone and allow for adequate sight distances. ZTA 19-07 also encourages replacement poles being placed close to intersections, along non-front-facing sides of residential properties, abutting non-residential properties, and not in front of residential front doors whenever possible.

Under ZTA 19-07's modified conditional use process, an applicant must provide an alternative location with their initial application and the alternate location must maximize the setback from any building intended for human occupation, while still providing effective service. The application will be reviewed by a Hearing Examiner, whose primary directive is to minimize the visual impact as compared to any alternative location where the tower could be located to improve service. The Hearing Examiner may also require the use of screening, coloring, or other visual mitigation options and can base this need on existing tree coverage and vegetation as well as the design and presence of nearby poles. In other words, the role of the Hearing Examiner will be to find the least visually obtrusive way to install the equipment.

What role does the state of Maryland have in 5G deployment?

In recent years, industry-sponsored bills have been brought before the Maryland General Assembly which specifically list Montgomery County as being a restrictive jurisdiction. From a legal perspective, if these bills were to moveforward the state could impose rules on the County that are less favorable than ZTA 19-07.

How fast is demand for wireless data increasing?

The 2019 Annual Wireless Industry Survey found U.S. consumers used 82% more mobiledata in 2018 compared to 2017, using a record 28.58 trillion megabytes of mobile data. Some of that rise is due to more devices being connected to mobile networks. This advancement of technology has led to increases in mobile data demandsand, with the resulting need to densify networks. The demand for more wireless capacity is coming from the bandwidth and speed

required for mobile video, driverless cars, and connected appliances. The report found that there were 421.7 million mobile devices connected in 2018. That is an increase of 21.5 million devices compared to the year prior.

Why can't the County Council prohibit cell antennas in residential areas?

Federal law does not permit a total prohibition of cell towers if doing so would prohibit the delivery of wireless services to that area. The placement, construction and modification of cell towers and antennas in cities and counties is subject to federal statutes, laws, regulations and case law.

Based on decisions made by federal courts, cell phone companies have the right to close a significant gap in their cell coverage. The federal case law does not define what constitutes a significant gap in coverage. If it is determined that a significant gap exists, the law allows cities and counties to require that a wireless company close the gap in coverage under applicable zoning.

Can the County Council delay the decision to install additional cell towers?

A moratorium would not stop the FCC shot clock. The FCC's Order went into effect on January 13, 2019. The FCC conceded that it would take some time for local jurisdictions to establish new standards, so gave an additional 180 days. This means that for the last two years, a carrier could submit an application and if not granted in 90 days, could bring suit against the County. The number of actual and expected applications calls into question the County's ability to reach decisions within the time allowed by the FCC, even without any self-imposed delay in the application process.

Can the Council consider health effects of radio frequency waves?

Federal law trumps local law when it comes to wireless communication. Congress and the FCC have preempted any local regulation based on radio frequency (RF) health effects if the proposed site is in compliance with RF emissions standards. The FCC has the first and last word on all RF standards.

National and international public health agencies are continuously reviewing safety standards for wireless emissions. The National Institutes of Health (NIH), U.S. Food and Drug Administration (FDA), Centers for Disease Control and Prevention (CDC), World Health Organization (WHO), American Cancer Society and others have provided guidance on this topic. Currently, these organization believe that wireless devices are safe when Federal guidelines are followed.