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## Public Works Department City of Bellingham

### FREQUENTLY ASKED QUESTIONS (FAQs) ABOUT SMALL CELL DEPLOYMENT IN BELLINGHAM

*September 12, 2019*

The City of Bellingham is managing requests from wireless providers and wireless infrastructure companies to install small cell telecommunications facilities in the public right of way. This document answers some frequently asked questions about small cell deployment in Bellingham, including its potential role in bringing fifth generation (“5G”) network technology to our city.

#### 1. WHAT ARE SMALL CELL FACILITIES?

Small cell facilities are low-powered telecommunications antennas that provide voice and data coverage to relatively small, densely populated geographic areas, supplementing the larger cellular network. They are installed and maintained by wireless service providers or wireless infrastructure providers.

A small cell facility consists of a low-powered antenna and radio mounted to a pole. As the name suggests, they are much smaller than traditional cell towers, typically about three (3) cubic feet in volume. Their coverage area (or “cell”) is also much smaller than a traditional cell tower. Fiber optic cables are typically needed to connect small antennas and a small associated equipment box to network facilities.

Small cell facilities are allowed in the public right of way, just like other utilities, as a matter of state and federal law. Small cell facilities are typically mounted to existing or replacement utility poles and streetlight poles. Small cell facilities may also be placed on private property, but most providers favor use of public rights-of-way where they have additional rights under state and federal law.

#### 2. WHY ARE SMALL CELL FACILITIES NEEDED?

Research shows that wireless data consumption has grown significantly in recent years and is projected to continue to increase at a rapid rate with the proliferation of mobile devices and new technologies, including 5G, driverless cars, and other new concept technology like the Internet of Things. Wireless companies have indicated that existing infrastructure is becoming congested and cannot continue to meet the demands of their customers.

Until recently, wireless phone service has been managed using large antennas mounted on towers located on both public and private property. Those antennas serve relatively large areas

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(or “cells”) that may include several miles. According to wireless carriers, existing cell sites are already becoming congested, and installing more cell towers covering large areas will not keep up with projected demand for high-speed wireless data.

To meet demands for wireless data, carriers have begun using small cell facilities to “offload” data traffic from the larger cell towers. Each of these smaller antennas serves a much smaller area or “cell” (typically 1-2 blocks) but with much higher data volumes.

Small cell equipment will initially meet current 4G wireless technology standards, but city staff understands it may be upgraded or replaced with future 5G higher speed equipment as technology advances.

### **3. WHAT IS 5G WIRELESS?**

The terms “4G” and “5G” are abbreviations for 4<sup>th</sup> and 5<sup>th</sup> generations of wireless technology standards. The standards are differentiated by their performance capabilities – how much and how fast the data moves through the networks and the applications that the network can support. According to the Federal Communications Commission (“FCC”) and industry experts, America is in the midst of a transition to 5G.

Unlike 4G technology, which primarily relies on larger “macro” antennas to send and receive wireless signals at relatively low frequencies in the radio spectrum, 5G will rely on more densely sited small cell facilities to send and receive signals at higher radio frequencies. According to the FCC and industry experts, 5G will provide much faster wireless connections, improve existing wireless uses for voice and data, and facilitate new concept technologies.

### **4. HOW IS SMALL CELL REGULATED?**

Wireless facility siting is governed by federal, state and local law. Local jurisdictions retain some of their traditional authority over the siting of facilities within public rights of way, but that authority is significantly restrained by state and federal law. Specifically, the Telecommunications Act of 1996 provides that local regulation shall not: (1) unreasonably discriminate among providers of functionally equivalent services; (2) prohibit or have the effect of prohibiting the provision of personal wireless services; or (3) regulate the placement of wireless facilities on the basis of the health effects of radio frequency (RF) emissions to the extent that such facilities comply with the FCC’s regulations concerning such emissions.<sup>1</sup>

More recently, the FCC adopted its Declaratory Ruling and Third Report and Order, *In the Matter of Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, FCC-18-133, Released September 27, 2018. In it, the FCC clarified that a local regulation amounts to an unlawful prohibition of wireless services if it “materially inhibits” the provider’s ability to engage in any of a variety of activities related to its provision of wireless

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<sup>1</sup> 47 U.S.C. 332(C)(7).

services, including its ability to fill coverage gaps, densify networks, improve existing services or introduce new services.<sup>2</sup> Small cell technology is intended to meet each of these objectives and, therefore, enjoys substantial federal protection from local regulation.

## **5. WHAT IS THE CITY'S ROLE WITH RESPECT TO SMALL CELL DEPLOYMENT IN BELLINGHAM?**

The City performs two roles with regard to small cell deployment in Bellingham: one as a permitting authority and the other as an asset owner.

The City's small cell regulations were adopted in 2018 and are currently codified in BMC 13.15 (Utilities and Telecommunications Franchises) and BMC 13.16 (Small Cell Permits). The City's small cell regulations address public safety and aesthetic values by:

- i. Requiring providers to obtain a franchise agreement approved by City Council ordinance, which sets forth the general terms and conditions of the provider's use of City rights of way (requiring insurance, bonding, etc.);
- ii. Requiring providers to obtain a small cell permit for each site installation, including the submission of detailed engineering project plans for review by city staff to ensure compliance with City regulations; and
- iii. Establishing design requirements relating to aesthetics and public safety.<sup>3</sup>

The City also plays a role in small cell deployment in its capacity as an asset owner. The City owns and maintains thousands of city streetlight poles. Allowing wireless providers to lease space on city streetlight poles for the attachment of small cell facilities will reduce the number of new poles being installed within the right of way.

## **6. IS SMALL CELL SAFE?**

The FCC requires all FCC-regulated transmitters, including small cell, to comply with its radio frequency exposure standards. The FCC sets RF emissions limits in close consultation with the FDA and other health agencies. Compliance with these guidelines ensures exposure levels remain well below those generally believed to cause adverse health effects. The FCC's authority and responsibility to set RF emissions levels for FCC-regulated transmitters is found in the National Environmental Policy Act of 1969. FCC rules governing RF emissions exposure are contained in 47 C.F.R. §§ 1.1307, 1.1310. For more information, please visit the FCC's web page on Radio Frequency Safety at <https://www.fcc.gov/general/radio-frequency-safety-0>.

Questions or concerns regarding human exposure to RF emissions from FCC-regulated transmitters can be directed to the Federal Communications Commission, Consumer &

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<sup>2</sup> FCC-18-133, p. 17, ¶ 37.

<sup>3</sup> BMC 13.16.070.

Governmental Affairs Bureau, 445 12<sup>th</sup> Street SW, Washington, DC 20554; phone 1-888-225-5322.

## **7. CAN THE CITY ESTABLISH LOCAL LIMITS ON RF EMISSIONS OR OTHERWISE REGULATE THE PLACEMENT OF SMALL CELL FACILITIES ON THE BASIS OF THE ENVIRONMENTAL (HEALTH) EFFECTS OF RF EMISSIONS?**

No. The FCC has exclusive jurisdiction over the establishment of RF emissions standards for FCC-regulated transmitters, including small cell. The Telecommunications Act of 1996 provides that “No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission’s regulations concerning such emissions.”<sup>4</sup>

The City can and does, however, require all permit applicants to certify that each proposed small cell installation complies with FCC emissions standards.<sup>5</sup> The certification process requires a signed statement from a registered engineer.

City staff recognize that some level of public concern exists over the adequacy of the FCC’s existing RF emissions standards as they pertain to small cell and 5G. Those concerns should be addressed to the FCC. The City has no authority over the issue.

## **8. CAN THE CITY SIMPLY REFUSE TO ALLOW SMALL CELL IN THE RIGHT OF WAY?**

No. Small cell facilities are allowed in the public right of way per state and federal law, just like other utilities.

The Telecommunications Act of 1996 provides that local regulations “shall not unreasonably discriminate among providers of functionally equivalent services.”<sup>6</sup> Allowing traditional wireline telephone service providers to install their facilities in the right of way—while denying similar access to wireless providers—would run afoul of the Act.

The Act also provides that local regulations “shall not prohibit or have the effect of prohibiting the provision of wireless services.”<sup>7</sup> According to the FCC, a local regulation “has the effect of prohibiting” wireless service if it “materially inhibits” the provider’s ability to engage in any of a variety of activities related to its provision of services, including activities designed to fill coverage gaps, densify networks, improve existing services, or introduce new services.<sup>8</sup> Small cell is intended to fulfill each of these objectives. Therefore, an outright ban on small cell within the right of way would violate the Act.

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<sup>4</sup> 47 U.S.C. Section 332(c)(7).

<sup>5</sup> BMC 13.16.070(J).

<sup>6</sup> Id.

<sup>7</sup> Id.

<sup>8</sup> FCC-18-133, p. 17, ¶ 37.

## **9. WHICH COMPANIES HOLD A SMALL CELL FRANCHISE IN BELLINGHAM?**

As of the date of this FAQ (September 12, 2019), the following companies currently possess a franchise to use City rights of way for the construction and operation of small cell facilities:

- i. Mobilitie, LLC - Franchise Ordinance No. 2019-02-002
- ii. Verizon Wireless (VAW) LLC – Franchise Ordinance No. 2019-07-023

## **10. WHAT LOCATIONS IN BELLINGHAM HAVE BEEN ISSUED PERMITS?**

As of the date of this FAQ (September 12, 2019), the City has not yet issued any small cell permits.

## **11. WHEN IS 5G COMING TO BELLINGHAM?**

As of the date of this FAQ (September 12, 2019), the City is not aware of any specific plans to bring 5G to Bellingham.

Questions or comments may be directed to: [askpw@cob.org](mailto:askpw@cob.org).