



# City of Canby

## *Planning Commission*

### *Work Session Notice*

*Tuesday September 28, 2020*

*7:00 pm*

*Virtual Meeting*

The Planning Commission will be meeting in a Virtual Work Session to discuss the 5G Micro Cell Technology Text Amendment. The public is welcome to view the work session online, although no public comments will be taken. A public hearing will be held in the near future at a properly noticed date. State law requires local governments to notify DLCD at least 35-days prior to holding the first evidentiary hearing. For information regarding this meeting, please contact the Planning Department at 503-266-0685.

A copy of this Work Session Notice can be found on the City's web page at [www.canbyoregon.gov](http://www.canbyoregon.gov).

# TABLE OF CONTENTS

**TELECOMMUNICATIONS FACILITIES  
CODE LANGUAGE & TEXT AMENDMENTS  
(CITY FILE# TA 20-01)  
(PLANNING COMMISSION WORK SESSION 9-28-20)**

Title	Page No.
<b>AGENDA</b>	
Memorandum – Adoption of Code Language and Text Amendments for Telecommunications Facilities	1
Attachment 1 – Proposed Draft Language for Chapter 16.55 Telecommunications Facilities	6
Attachment 2 – Oregon City Public Works Design Guidelines language for microcell deployment in Right-of-Way	29
Attachment 3 – League of Oregon Cities microcell model code	65



# City of Canby

PO Box 930 Phone: 503.266.4021  
222 NE 2nd Ave Fax: 503.266.7961  
Canby, OR 97013 www.canbyoregon.gov

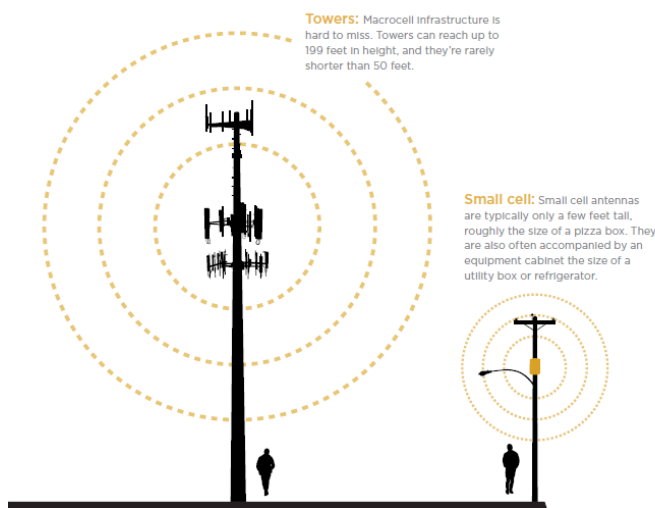
## MEMORANDUM

**DATE:** September 17, 2020 for September 28, 2020 Planning Commission Work Session  
**TO:** Planning Commission  
**FROM:** Erik Forsell, Associate Planner  
**RE:** Adoption of Code Language and Text Amendments for Telecommunications Facilities

### Small Cell Telecommunications

Wireless data usage and prevalence are increasingly common and continue to advance and accelerate in complexity. As part of the increased use and demand, the next generation of wireless technology known as microcells will be deployed throughout cities across Oregon and the United States. According to the Pew Research Center, 96 percent of Americans have a cell phone and 81 percent of those Americans were using a smartphone in 2019.<sup>1</sup> The percentage of Americans using a smartphone has grown by 27 percentage points from 55 percent to 82 percent from 2012 to 2019—this illustrates the explosive growth in the industry and why new telecommunications equipment is rapidly expanding.

**Figure 1 – Macro and Micro Cell Telecommunications Facilities**



2

<sup>1</sup> Per Research Center. *Internet & Technology*. <https://www.pewresearch.org/internet/fact-sheet/mobile/>. 2019

<sup>2</sup> National League of Cities. *Municipal Action Guide - Small Cell Wireless Technology in Cities*. 2018

One of the methods telecommunications providers are using to accommodate the increasing demand for cell phone and smart phone usage is the deployment of additional large macro telecommunications towers that many people associate with cell phone usage. A newer method to accommodate this increase in demand is the deployment of smaller and more numerous microcell telecommunications facilities. The small cell deployment is the focus of this memorandum, work session and the proposed text amendments to the City of Canby's development code.

## **Federal Rules and Regulations on Telecommunications**

The deployment of wireless telecommunications infrastructure and facilities are governed by federal, state and local laws. Federal regulations have traditionally provided significant deference to the local jurisdiction over telecommunications regulations. However, over time, the ability for a jurisdiction like the City of Canby to create and enforce time, place and manner standards for the deployment and siting of telecommunications equipment has been reduced.

The shift in Federal preemption over local jurisdictions has been primarily guided by three federal laws and a Federal Communications Commission (FCC) Order:

- Communications Act of 1934;
- Telecommunications Act of 1996;
- A provisions of the Middle-Class Tax Relief and Job Creation Act of 2012 (Commonly Referred to as the Spectrum Act) and;
- FCC 18-133 (Small Cell Order)

The above bills and order have slowly reduced the ability of the local jurisdiction to deny, delay, reduce, limit, restrict, prohibit, condition or otherwise disallow the deployment of telecommunications facilities within a local jurisdiction. The reality is that barring significant high level court decisions reversing the aforementioned laws and regulations, the City of Canby is faced with a situation in which there is limited opportunity to regulate the development of new telecommunications facilities, including microcell or fifth generation cell technology.

The City of Canby is essentially barred from denying or requiring such conditions that would effectively prohibit telecommunications facilities applications. However, staff believes it still important to set forth a reasonable process and set of standards for new telecommunications facilities that meets the intent of the federal regulations but also provides the City with an ability to manage the development of telecommunication infrastructure. Additionally, the process should be manageable for City staff to navigate and review especially given the time constraints and other requirements of the federal regulations.

### **Background on Telecommunications Act of 1934**

This act applies to the rulemaking activities specific to small cell facilities. Section 253 of the 1934 Act requires that local governments receive 'fair and reasonable compensation from telecommunications providers, on a competitively neutral and nondiscriminatory basis'. This relates to the collection of franchise fees, or other fees implemented and collected by the City of Canby for utilizing City Right-of-Way or other space for deployment of small cell wireless facilities.

### **Background on Telecommunications Act of 1996**

This act makes it unlawful for a local government to prohibit or have the effect of prohibiting the 'provision of personal wireless service'. It also prevents a local jurisdiction from 'unreasonably discriminating among providers of functionally equivalent services. One of the most important aspects

of this act is that it requires local governments ‘act on any authorization to place, construct, or modify personal wireless service facilities within a reasonable amount of time’.

The FCC determined a reasonable amount of time to grant or deny siting requests as **150 days for new facilities and 90 days for collocations (note that these standards applied to traditional cell towers and ancillary equipment)**. This time limitation is commonly referred to as the ‘shot clock’. Fortunately, in Oregon land use planning we have state laws and rules that have similar standards. Timeline requirements for land use actions are something the planning department at the City of Canby is familiar with and operates under for most development review land use proposals.

### **Background on Section 6409(a) – Spectrum Act**

On February 22, 2012, the Middle Class Tax Relief and Job Creation Act of 2012 became law. Although this legislation was primarily implemented to extend payroll tax exemptions, the omnibus act contained many other unrelated provisions. Section 6409(a) of the act, also known as the Spectrum Act, was intended to advance wireless broadband service for public safety and commercial purposes and to provide for the creation of a broadband communications network for first responders. Since 2012, the Spectrum Act has arguably applied to all State and local governments. However, until recently, there was little precedent interpreting the act and the ambiguity of the statute’s language resulted in differing interpretations by industry and local governments. On October 21, 2014, the Federal Communications Commission (FCC) unanimously approved rules (FC14-153) interpreting Section 6409(a). Pertinent elements of FCC order came into effect on April 8, 2015. Along with Section 704 of the Telecommunications Act of 1996 (Public Law 104–104), The Spectrum Act can be viewed as part of the ongoing effort by the wireless industry to achieve federal preemption over local telecommunications zoning regulations.

The Spectrum Act also contains provisions that limit local control over collocated wireless facilities to ensure the swift deployment of wireless technologies. Section 6409(a) of the Act provided 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.’ The FCC created regulations in support of this law, specifying that these collocation requests must be approved within 60 days of application, and that this definition includes distributed antenna system (DAS) and small cell facilities. If a city finds that it received an incomplete application, it has a limited period of time in which to pause, or “toll,” the shot clock by notifying applicants in writing of the missing information and relevant local requirements.

The effect of the Spectrum Act is that it reduces timelines even further for **collocations to 60 days and that in effect, a local government must approve and cannot deny eligible facilities requesting modifications or collocations to existing base stations.**

### **Background on FCC Telecommunications *Small Cell Order***

On January 31, 2017, Federal Communications Commission (“FCC”) Chairman Ajit Pai established a Broadband Deployment Advisory Committee (“BDAC”), which he tasked with making recommendations to the FCC on ways to accelerate the deployment of broadband by reducing or removing regulatory barriers to infrastructure investment. On September 27, 2018, the FCC released a Declaratory Ruling and Third Report and Order (FCC 18-133, referred throughout the document as “Small Cell Order” or “FCC Order”) that significantly limits local authority over small wireless infrastructure deployment and fees for use of the rights-of-way (ROW). The FCC Order took effect January 14, 2019.

Requirements related to land use and zoning ordinances such as time, place, and manner were further limited to local jurisdictions by this order. Rules regarding aesthetics came into effect on April 15, 2019. Under the FCC Order **aesthetic or design standards must be:**

- Reasonable;
- No more burdensome than those applied to other types of infrastructure deployments;
- Objective; and
- Published in advance.

The FCC Order also defines the size limitations for small wireless facilities (allowing antennas of up to 3 cubic feet each, with additional equipment not to exceed 28 cubic feet), and specifies that such facilities may not result in human exposure to radiofrequency radiation in excess of applicable standards in the FCC's rules (federal law preempts local regulation of RF emissions). Small wireless facilities are sometimes referred to as *small cells* or *micro cells*.

The key takeaway from this order is that local jurisdictions are not lawfully allowed to prevent small cell installation within their boundaries and cannot regulate the deployment of the equipment in a manner that effectively prohibits their placement. It is important that the City of Canby create guidelines that are objective, reasonable and in place before micro cell providers request to install their equipment within the jurisdictional bounds of the City.

#### **47 C.F.R. – Section 1.6003 Reasonable Periods of Time to Act on Siting Applications ‘Shot-Clock’**

The **shot clock** is the colloquial term for amount of time in which the City of Canby has to make a decision regarding an application to install telecommunications facilities. Federal regulations have required that the review for telecommunications applications preempts state and local regulations such as ORS 227.178. This places extra burden on City staff to ensure that the application is reviewed, deemed complete and approved according to guidelines and design standards that are proposed as part of the text amendments discussed in this work session. As such, the Code of Federal Regulations (CFR) generally require that:

- Review of an application to collocate a small wireless facility using an existing structure be processed in 60 days.
- Review of an application to collocate wireless equipment other than a *small wireless facility* using an existing structure be processed in 90 days.
- Review of an application to deploy a *small wireless facility* using a new structure be processed in 90 days.
- Review of an application to deploy wireless infrastructure other than a *small wireless facility* be processed in 150 days.

#### **Policy Implications for City of Canby**

There are a number of policy implications that federal rules along with the increased demand for telecommunications capabilities and coverage present for the city. To summarize, the following list described the impacts on Canby's ability to regulate the implementation and deployment of small cell wireless facilities within the City's rights-of-way as well as within private property located within City jurisdiction.

- Constrained shot clocks for taking action on an application.
- Environmental and health effects cannot be reviewed beyond requesting an Oregon licensed and registered professional engineer providing stamped documents stating that the Non-Ionizing Electromagnetic Radiation (NIER) radiation produced by the deployment of facilities and their collocations is within acceptable FCC limits.
- Franchise fees and other fee limitations.
- Coordination requirements between planning, public works, city engineer and other rights-of-way franchisees and users.
- Conflicts between rights-of-way users.
- Denying applications based on aesthetics or other reasons not permissible by the FCC is not an option.

## **Proposed Telecommunications Policy and Regulation Changes for City of Canby**

The purpose of the proposed changes is to provide general parameters and design guidelines for telecommunication facility placement within City of Canby Right-of-Way (ROW) and private property. The primary objective of these guidelines is to provide the telecommunication providers and their ancillaries with a better sense of what the City and other ROW facility users will accept as reasonable development in the Right-of-Way. Ultimately, planning staff intends to establish standards that are reasonable and objective but also ensure that the City has an opportunity to evaluate new facility deployment to ensure it meets reasonable time, place and manner standards.

Right-of-Way is not zoned. It does not fall under the zoning ordinance development code that would be applicable for private property outside of the ROW. It is prudent for the City to place reasonable time, place and manner restrictions on the deployment of microcell telecommunications equipment within City owned facilities but also on private property.

A summary of the proposed changes is described in the bulleted list below:

- Remove and edit telecommunications code language from Chapter 16.08 General Provisions.
- Create a new code section Chapter 16.55 Telecommunications and incorporate new and existing language.
- Remove and edit definitions related to telecommunications in Chapter 16.04 Definitions and place in newly created Chapter 16.55 Telecommunications.
- Create guidelines and standards for reviewing telecommunications facilities in the public-rights-of-way so that they are consistent with federal regulations but allow Canby to evaluate small cell deployment against the standards as crafted.

### **Attachments:**

1. Proposed draft language for Chapter 16.55 Telecommunications Facilities
2. Oregon City public works design guidelines language for microcell deployment in Right-of-Way.
3. League of Oregon Cities microcell model code.

## **Chapter 16.55**

### **Telecommunications Facilities**

#### **Sections:**

- 16.55.010 Purpose.**
- 16.55.015 Definitions**
- 16.55.020 Applicability**
- 16.55.025 Administration**
- 16.55.030 Permit Requirements**
- 16.55.035 Micro Telecommunications Facility Design Standards**
- 16.55.040 Macro Telecommunications Facility Design Standards**
- 16.55.045 Exemptions**
- 16.55.100 Severability**
- 16.55.010 Purpose.**

#### **A. The purpose this chapter is to:**

- 1. Manage the deployment of wireless telecommunications facilities and ancillary equipment consistent with Federal law and regulations.**
- 2. Place reasonable and appropriate time, place and manner restrictions on telecommunications deployment consistent with federal law and regulations.**
- 3. Encourage the placement of telecommunications facilities in appropriate locations for both the provider and the City.**
- 4. Provide City of Canby residents and businesses with a wide range of telecommunications and wireless options.**
- 5. Provide for the safe construction, location, erection and maintenance of telecommunications equipment.**
- 6. Encourage collocation of telecommunications equipment wherever possible.**
- 7. Contribute to a simple and efficient regulatory process.**
- 8. Develop a consistent and well understood application process for telecommunications providers and for city staff.**



## 16.55.015 Definitions.

- A. Abandoned Telecommunications Equipment. Defined as a facility and / or equipment that has been in disuse continuously for 365 days and no longer has a known owner or FCC licensee.
- B. Antenna. Defined in 47 C.F.R. § 1.6002(b). The term includes an apparatus designed for the purpose of emitting radio frequencies (RF) to be operated or operating from a fixed location pursuant to Federal Communications Commission authorization, for the provision of personal wireless service and any commingled information services. For purposes of this definition, the term antenna does not include an unintentional radiator, mobile station, or device authorized under 47 C.F.R. Part 15
- C. Antenna (Ancillary) Equipment. Defined in 47 C.F.R. § 1.6002(c). The term includes equipment, switches, wiring, cabling, power sources, shelters or cabinets associated with an antenna, located at the same fixed location as the antenna, and, when collocated on a structure, is mounted or installed at the same time as such antenna.
- D. Applicant. Defined as any person who represents and submits an application on behalf of a wireless provider.
- E. Application – Telecommunications. A written request submitted by an applicant (1) for permission to collocate wireless facilities; or (2) to approve the installation, modification or replacement of a structure on which to collocate a small wireless facility in the rights-of-way or on private property where required. The application consists of a form provided by the City with accompanying materials provided by the applicant.
- F. City. Defined as the City of Canby, Oregon. (Ord. 740 section 10.1.20(B)[part], 1984)
- G. City Engineer. The Oregon registered Professional Engineer designated to review development within the city.
- H. City-Owned Infrastructure. Means infrastructure within the city limits and urban growth boundary, public rights-of-way or public easements, including but not limited to street lights, traffic devices and signals, towers, structures, buildings, and utilities that are owned, operated and/or maintained by the City.
- I. Collocation. Defined in 47 C.F.R. § 1.6002(g). Term describes: (1) mounting or installing an antenna facility on a preexisting structure, and/or (2) modifying a structure for the purpose of mounting or installing an antenna facility on that structure. “Collocate” has a corresponding meaning.
- J. Day. A calendar day. For purposes of land use application timelines determined by ORS 227.178(1) and FCC “shot clock” regulations for decisions related to

telecommunications, a terminal day that falls on a holiday or weekend shall be deemed to be the next immediate business day.

- K. Licensee.** A telecommunication utility registered with the City and the Telecommunications Section of the Development Code 16.55.
- L. Macro Cell Wireless Facility.** A telecommunications facility that meets each of the following conditions:

  - 1. Facilities mounted on structures greater than 50 feet including the antennas.
  - 2. Facilities mounted on structures that are more than 10 percent taller than any other adjacent structures.
  - 3. Facilities that extend in height existing structure(s) on which the antennas are located by more than 50 feet or more than 10 percent whichever is greater.
  - 4. The facilities do not result in human exposure to radio frequency in excess of the applicable safety standards specified in 47 C.F.R. § 1.1307(b).
- M. Micro Cell Wireless Facility.** A facility that meets each of the following conditions per 47 C.F.R § 1.6002(l), as may be amended or superseded:

  - 1. Facilities mounted on structures 50 feet or less in height including the antennas.
  - 2. Facilities mounted on structures no more than 10 percent taller than other adjacent structures.
  - 3. Each antenna associated with the deployment, excluding associated antenna equipment, is no more than three cubic feet in volume;
  - 4. All other wireless equipment associated with the structure, including wireless equipment associated with the antenna and any pre-existing associated equipment on the structure, is no more than 28 cubic feet in volume;
  - 5. The facilities do not result in human exposure to radio frequency in excess of the applicable safety standards specified in 47 C.F.R. § 1.1307(b).
- N. Public Rights-of-Way.** Defined as the space in, upon, above, along, across, over or under the public streets, roads, highways, lanes, courts, ways, alleys, boulevards, bridges, trails, paths, sidewalks, bicycle lanes, public utility easements, and all other public ways or areas, including the subsurface under and air space over these areas, excluding parks, parklands and other City property that is not generally open to the

public for the purposes of travel. The definition only applies to the extent of the City's right, title and interest to grant a license to occupy and use such areas for utility facilities.

**16.55.020 Applicability**

- A. The Telecommunications Chapter applies to the following:
1. Proposed new telecommunications facilities, collocations, antennas, equipment, poles, towers, and ancillary facilities typically associated with telecommunications equipment.
  2. Replacement poles, towers, collocations and antennas and equipment.
  3. Modifications to existing or proposed telecommunications facilities, collocations, antennas, equipment, poles and ancillary facilities typically associated with telecommunications equipment.

**16.55.025 Administration.**

- A. Permit Required. All telecommunications equipment deployed, collocated, placed, replaced, installed and erected after the effective date of this chapter, other than telecommunications equipment that is exempt from permit requirements per 16.55.50 shall require a permit. Applications shall be made on forms provided by the Planning Director with attached required information stated in the application form.
- B. Fee. A fee as established by resolution of the City Council shall be paid to the City of Canby upon the filing of an application. Such fees shall not be refundable.
- C. Construction and Maintenance. All telecommunications equipment and ancillaries, including: poles, cabinets, power supplies whether above or underground shall meet all applicable requirements of building, structural, mechanical and electrical codes.
1. All telecommunications equipment shall be kept in good repair and maintained in a safe, neat, clean condition. Telecommunications equipment shall be designed and deployed to reduce the impact of visual appearance.
  2. No telecommunications equipment shall be erected or maintained in such a manner that any portion of its surface will interfere with the free use of, or any access to any fire escape, exit or standpipe.
  3. No telecommunications equipment shall be deployed in a location that creates an immediate danger to the safety and welfare of the public by blocking vision for either pedestrians or motorists, at public and/or private roadways, intersections, driveways, paths, sidewalks or railroad crossings.

- D. Appeal. Appeals are limited to procedures set forth in Chapter 16.89 for land use decisions pursuant to requirements in Chapter 16.89. Appeals of building permit decisions are decided by the Clackamas County Building Official.
- E. Permit Expiration. Every permit issued by the Clackamas County Building Official under the provisions of this chapter shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within 180 days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days. Before such work can be recommenced, a new permit shall be first obtained to do so, and the fee therefore shall be one-half of the amount required for a new permit for such work, provided no changes have been made or will be made in the original plans and specifications for such work; and provided further, that such suspension or abandonment has not exceeded one year.
- F. Permit Suspension or Revocation. The Planning Director and City Engineer or duly authorized representative may, in writing, suspend or revoke a permit issued under provisions of this chapter whenever the permit is issued on the basis of incorrect information supplied, or in violation of applicable ordinance or regulation or any of the provisions of this chapter.
- G. Variance / Deviation from Standards. The procedures which allow variations from the strict application of the regulations of this Title, by reason of exceptional circumstances and other specified conditions, are set forth in 16.55(H) and when applicable Chapter 16.53.
- H. Conditional Use Telecommunications Equipment and Design Review. Telecommunications equipment that is proposed and does not meet the Type I Review Process shall be processed under a Design Review Type II or III process at the discretion of the City Engineer or Planning Director. A Conditional Use Permit for certain major installations of macro telecommunications equipment shall be required.
- I. Timelines 'Shot Clock' for Processing Telecommunications Equipment. Pursuant to the Telecommunications Act of 1996, provisions of the Middle-Class Tax Relief and Job Creation Act of 2012 (Commonly Referred to as the Spectrum Act) and; FCC 18-133 (Small Cell Order), applications to permit telecommunications shall be consistent with 47 CFR Section 1.6003 – Reasonable Periods of Time to Act of Siting Applications.

**A. Review Periods for Individual Applications**

- 1. Micro Telecommunications Facility Minor Installation Permit** – Collocations on existing infrastructure. Applications shall comply with regulation and documentations/permissions as set forth by federal, state, and city standards. The review period for applications will be 60 days following

reception of a materially complete application. These applications will be reviewed through a Type I Site / Design Review process.

- 2. Micro Telecommunications Facility Major Installation Permit** – Deployment and construction of proposed new infrastructure. Applications for compliant sizes, locations, and aesthetics with necessary supportive documentation permissions as set forth by Federal, State, and City standards. The review period for these applications will be 90 days following reception of a materially complete application. These applications will be reviewed through a Type I Site / Design Review process.
- 3. Macro Telecommunications Minor Installation Permit** – Collocations on existing infrastructure. Applications shall comply with regulation and documentations/permissions as set forth by federal, state, and city standards. The review period for applications will be 90 days following reception of a materially complete application. These applications will be reviewed through a Type I Site / Design Review process.
- 4. Macro Telecommunications Tower / Structure Major Installation Permit** – Deployment and construction of a macro telecommunications tower and associated equipment. Applications shall comply with regulation and documentation/permissions as set forth by federal, state and city standards. The review period for applications shall be 150 days following reception of a materially complete application. These applications will be reviewed through a Type II or III Site / Design Review and under certain proposals with a Conditional Use Permit process.

**B. Incomplete Applications.**

- 1.** For an initial application to deploy Small Wireless Facilities, if the Planning Director / City Engineer or designee notifies the applicant on or before the 10th day after submission that the application is materially incomplete, and clearly and specifically identifies the missing documents or information and the specific rule or regulation creating the obligation to submit such documents or information, the shot clock date calculation shall restart at zero on the date on which the applicant submits all the documents and information identified by the siting authority to render the application complete.
- 2.** For an initial application to Deploy a Macro Telecommunications Tower / Structure incomplete applications shall treated the same as described in ORS 227.178.

**C. Complete Applications**

1. Applications shall be deemed complete when the Planning Director and/or City Engineer or designee(s) have determined that the applicant has supplied sufficient information as required by Section 16.55.30 and that the application materials are accurate, true and addresses the criteria of this division and all other applicable sections of Canby Municipal Code.

**16.55.30 Telecommunications Equipment Permit Applications**

- A. Telecommunications facilities within the Public rights-of-way are reviewed by the City Engineer and/or Planning Director, or authorized designee(s), in accordance with the process described below:
  1. Micro Telecommunications Facility Minor Installation Permit – installations on existing third-party infrastructure. Applications shall comply with regulation and documentations/permissions as set forth by federal, state, and city standards. Applications shall clearly denote the below outlined requirements.
  2. Micro Telecommunications Facility Major Installation Permit – installations on existing City-owned infrastructure or proposed new infrastructure. Applications for compliant sizes, locations, and aesthetics with necessary supportive documentation permissions as set forth by Federal, State, and City standards.
- B. Telecommunications facilities within private and public property that are outside the public rights-of-way are reviewed by the Planning Director, or authorized designee(s), in accordance with the process described below:
  1. Macro Telecommunications Minor Installation Permit – installations on existing third-party infrastructure and certain new deployments. Applications shall comply with regulation and documentations/permissions as set forth by federal, state, and city standards. Applications shall clearly denote the below outlined requirements.
  2. Macro Telecommunications Major Installation Permit – installations on existing third party infrastructure or proposed new infrastructure. Applications for compliant sizes, locations, and aesthetics with necessary supportive documentation permissions as set forth by Federal, State, and City standards.

**C. Application Requirements**

- 1.** Aerial vicinity map indicating the location of the existing and/or proposed wireless support tower/structure to which the telecommunications facility will be attached. The vicinity map shall also indicate all known telecommunications facilities within a 1000 foot radius centered on the proposed deployment area.
- 2.** Street view images, rendering or photographs showing the existing and proposed conditions of the project site.
- 3.** A scaled site plan, prepared by a professional engineer or surveyor licensed in the State of Oregon indicating at a minimum:
  - a.** Proposed tower, pole or structure to which the small cell equipment will be attached; including: lease area (if applicable).
  - b.** Location of supporting ancillary equipment, including: power supply, cooling equipment, cable, etc.
  - c.** Street names and addresses.
  - d.** Right-of-way lines, property lines, proposed utilities (above and below grade), curb, sidewalks, driveways, streets, paths, structures, street lights, traffic signals. All conflicts with existing structure shall be indicated on the plan with a description on how the anticipated conflict will be remediated;
  - e.** If equipment is placed below grade, the nearest location to access the equipment placed below grade.
- 4.** Structural analysis, prepared and stamped by a professional engineer licensed in the State of Oregon, shall include evaluation of the existing and/or proposed wireless support structure and foundation structurally adequate to safely support the proposed telecommunications facilities and comply with NESC for structural stability to determine whether the structure can carry the proposed telecommunications facility and comply with applicable NESC and structural safety code.
- 5.** Engineered details of proposed telecommunications facilities, including elevations/profiles, plans and sections, clearly indicating the following:
  - a.** Height, width, depth, and volume (in cubic feet) of all proposed antenna and exposed elements and/or proposed antenna enclosures.



- b. Height, width, depth, and volume (in cubic feet) of proposed wireless equipment associated with the facility including electric meters, concealment elements, telecommunications demarcation boxes, grounding equipment, power transfer switches, cut-off switches, and vertical cable runs for the connection of power and other services as applicable.
  - c. Method of installation/connection.
  - d. Color specifications for proposed wireless support structures and associated exposed equipment, cabinets, and concealment elements.
  - e. Electrical plans and wiring diagrams.
  - f. Footing and foundation drawings and structural analysis, sealed and signed by a professional engineer licensed in the State of Oregon.
6. Permission to use utility pole or alternative antenna structure: The operator of a wireless telecommunication facility shall submit to the City a copy of the written approval from the owner of an existing utility pole, monopole, or an alternative antenna structure, to mount the wireless telecommunication facility on that specific pole, tower, or structure, prior to issuance of the City permit. This permission can be provided in a form that clearly indicates authorized permission, such as a:
- a. Lease or franchise agreement, memorandum of understanding, signed authorization form or other format deemed acceptable to the City Engineer / Planning Director or designee.
7. Manufacturer's specification sheets for proposed telecommunications facility equipment, including wireless support structures, equipment cabinets, shrouds or concealment devices, antennas, meters, radios, switches, telecommunications demarcation boxes, and grounding equipment.
8. Certification by an Oregon-registered professional engineer that the telecommunication facility, as amended by the proposed collocation, complies with the non-ionizing electromagnetic radiation (NIER) emission standards as set forth by the Federal Communications Commission (FCC).
9. A signed statement of the equipment and owner's removal responsibilities should the equipment no longer be used or operated. The statement shall indicate that after 365 days of continuous non-use that the equipment is subject to removal by the City of Canby or utility provider.



- 10.** Documentation showing that the applicant has an FCC license for the geographic region and for the service proposed by the collocation.
- 11.** A secured bond providing for the required tower or pole removal cost and replacement and repair of lease or deployment area to pre-deployment condition.
- 12.** A statement with accompanying diagrams and plans that describes visual shrouding design techniques for antennas and ancillary equipment.
- 13.** Other information requested in the application form provided by the City Engineer / Planning Director and their designee(s), such as but not limited to, peer review by an independent engineering firm of the proposed telecommunications facility system design. During the review and approval process, the Director may request additional information including but not limited to, balloon tests, photo simulations, and other measures of visual impact.
- 14.** For micro telecommunications facilities, provide a detailed narrative describing how the proposed collocation meets the definition of Small Wireless Facilities established with FCC 18-133, listed below.
  - a.** The facilities:
    - i.** Are mounted on structures 50 feet or less in height including their antennas as defined in § 1.1320(d)ii; or
    - ii.** Are mounted on structures no more than 10 percent taller than other adjacent structures; or
    - iii.** Do not extend existing structures on which they are located to a height of more than 50 feet or by more than 10 percent, whichever is greater.
  - b.** Each antenna associated with the deployment, excluding associated antenna equipment (as defined in the definition of “antenna” in § 1.1320(d)), is no more than three (3) cubic feet in volume.
  - c.** All other wireless equipment associated with the structure, including the wireless equipment associated with the antenna and any pre-existing associated equipment on the structure, is no more than 28 cubic feet in volume.

- d. The facilities do not require antenna structure registration.
- e. The facilities do not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in § 1.1307(b).

#### **16.55.035     Micro Telecommunications Facility Design Standards**

- A.** The purpose of this section is provide review procedures and acceptable time, place, and manner constraints on the installation, placement and deployment of micro cell wireless telecommunications facilities within the public-rights-of-way in the City of Canby.
- B. General Requirements.**
  - 1.** Ground-mounted equipment in the right-of-way is discouraged, unless the applicant can demonstrate that pole-mounted equipment is not technically feasible, or the electric utility requires placement of equipment on the ground (such as an electric meter). If ground mounted equipment is necessary, then the applicant shall conceal the equipment from the public in a cabinet, in street furniture or with landscaping.
  - 2.** Replacement poles, new poles and all antenna equipment shall comply with the Americans with Disabilities Act (“ADA”), city construction and sidewalk clearance standards and city, state and federal laws and regulations in order to provide a clear and safe passage within, through and across the right-of-way. Further, the location of any replacement pole, new pole, and/or antenna equipment must comply with applicable traffic requirements, not interfere with utility or safety fixtures (e.g., fire hydrants, traffic control devices), and not adversely affect public health, safety or welfare.
  - 3.** Replacement poles shall be located as near as feasible to the existing pole. The abandoned pole must be removed within 90 days.
  - 4.** Any replacement pole shall substantially conform to the material and design of the existing pole or adjacent poles located within the contiguous right-of-way unless a different design is requested and approved pursuant to Section H.
  - 5.** No advertising, branding or other signage is allowed unless approved by the City Engineer or the City Engineer’s designee(s) as a concealment technique or as follows:

- a. Safety signage as required by applicable laws, regulations, and standards.
    - b. Identifying information and 24-hour emergency telephone number (such as the telephone number for the operator's network operations center) on wireless equipment in an area that is visible.
  - 6. The total volume of multiple antennas on one structure shall not exceed fifteen (15) cubic feet, unless additional antenna volume is requested and approved pursuant to Section H.
  - 7. Antennas and antenna equipment shall not be illuminated, except as required by municipal, federal or state authority, provided this shall not preclude deployment on a new or replacement street light.
  - 8. Small wireless facilities may not displace any existing street tree or landscape features unless:
    - a. Such displaced street tree or landscaping is replaced with native and/or drought-resistant trees, plants or other landscape features approved by the City.
      - i. The replaced trees shall be maintained for a minimum of 2 years from initial planting. Any trees that do not survive shall be replanted subject to the same 2 year survivor standards.
    - b. The applicant submits and adheres to a landscape maintenance plan or agrees to pay an appropriate in-lieu fee for the maintenance costs.
- C. Microcell Facilities Attached to Wooden Poles, Non-Wooden Poles and Structures with Overhead Lines. Small wireless facilities located on wooden utility poles, non-wooden utility poles and structures with overhead lines shall conform to the following design criteria unless a deviation is requested and approved pursuant to Section H:
- 1. Proposed antenna and related equipment shall meet:
    - a. The City's design standards for small wireless facilities.
    - b. The pole owner requirements.
    - c. National Electric Safety Code (NESC) and National Electric Code (NEC) standards.

2. The pole at the proposed location may be replaced with a taller pole or extended for the purpose of accommodating a small wireless facility; provided that the replacement or extended pole, together with any small wireless facility, does not exceed 50 feet in height or 10 percent taller than adjacent poles, whichever is greater. The replacement or extended pole height may be increased if required by the pole owner, and such height increase is the minimum necessary to provide sufficient separation and/or clearance from electrical and wireline facilities. Such replacement poles may either match the approximate color and materials of the replaced pole or shall be the standard new pole used by the pole owner in the city.
3. To the extent technically feasible, antennas, equipment enclosures, and all ancillary equipment, boxes, and conduit shall match the approximate material and design of the surface of the pole or existing equipment on which they are attached, or adjacent poles located within the contiguous right-of-way. Near matches may be permitted by the City when options are limited by technical feasibility considerations, such as when high-frequency antennas cannot be placed within an opaque shroud but could be wrapped with a tinted film.
4. Antennas which are mounted on poles shall be mounted as close to the pole as technically feasible and allowed by the pole owner.
5. No antenna shall extend horizontally more than 20 inches past the outermost mounting point (where the mounting hardware connects to the antenna), unless additional antenna space is requested and approved pursuant to Section H.
6. Antenna equipment, including but not limited to radios, cables, associated shrouding, disconnect boxes, meters, microwaves and conduit, which is mounted on poles shall be mounted as close to the pole as technically feasible and allowed by the pole owner.
7. Antenna equipment for small wireless facilities must be attached to the pole, unless otherwise required by the pole owner or permitted to be ground-mounted pursuant to subsection (C)(1) above. The equipment must be placed in an enclosure reasonably related in size to the intended purpose of the facility.
8. All cables and wiring shall be covered by conduits and cabinets to the extent that it is technically feasible, if allowed by pole owner. The number of conduits shall be minimized to the extent technically feasible.

**D. Small Wireless Facilities Attached to Non-Wooden Light Poles, Non-Wooden Utility Poles and Structures without Overhead Utility Lines.** Small wireless facilities attached to

existing or replacement non-wooden light poles, non-wooden utility poles and structures without overhead lines shall conform to the following design criteria unless a deviation is requested and approved pursuant to Section H.

1. **External Equipment.** The antennas and associated equipment enclosures must be camouflaged to appear as an integral part of the pole or be mounted as close to the pole as feasible and must be reasonably related in size to the intended purpose of the facility and reasonable expansion for future frequencies and/or technologies, not to exceed the volumetric requirements described in Section A. If the equipment enclosure(s) is mounted on the exterior of the pole, the applicant is encouraged to place the equipment enclosure(s) behind any decorations, banners or signs that may be on the pole. Conduit and fiber must be fully concealed within the pole.
  2. **Concealed Equipment.** All equipment (excluding disconnect switches), conduit and fiber must be fully concealed within the pole. The antennas must be camouflaged to appear as an integral part of the pole or be mounted as close to the pole as feasible.
  3. Any replacement pole shall substantially conform to the material and design of the existing pole or adjacent poles located within the contiguous right-of-way unless a different design is requested and approved pursuant to Section H.
  4. The height of any replacement pole may not extend more than 10 feet above the height of the existing pole, unless such further height increase is required in writing by the pole owner.
- E. **New Poles.** Small wireless facilities may be attached to new poles that are not replacement poles under sections C or D, installed by the wireless provider, subject to the following criteria:
1. Antennas, antenna equipment and associated equipment enclosures (excluding disconnect switches), conduit and fiber shall be fully concealed within the structure. If such concealment is not technically feasible, or is incompatible with the pole design, then the antennas and associated equipment enclosures must be camouflaged to appear as an integral part of the structure or mounted as close to the pole as feasible, and must be reasonably related in size to the intended purpose of the facility, not to exceed the volumetric requirements in Section (B)(6) above.
  2. To the extent technically feasible, all new poles and pole-mounted antennas and equipment shall substantially conform to the material and design of adjacent

poles located within the contiguous right-of-way unless a different design is requested and approved pursuant to Section H.

3. New poles shall be no more than forty (40) feet in height unless additional height is requested and approved pursuant to Section H.
4. The city requires whenever feasible that wireless providers install small wireless facilities on existing or replacement poles instead of installing new poles, unless the wireless provider can document that installation on an existing or replacement pole is not technically feasible or otherwise not possible (due to a lack of owner authorization, safety considerations, or other reasons acceptable to the City Engineer or Planning Director or the designee).

**F. Undergrounding Requirements. [ACCORDING TO THE FCC ORDER, UNDERGROUNDING REQUIREMENTS ARE SUBJECT TO THE SAME CRITERIA AS OTHER AESTHETIC STANDARDS.]**

SOME COMPONENTS OF SMALL WIRELESS FACILITIES WILL OFTEN NOT WORK UNDERGROUND. THEREFORE, CITIES UNDERGROUNDING REQUIREMENTS OR UNDERGROUND DISTRICTS MAY CREATE AN EFFECTIVE PROHIBITION. CITIES ARE ENCOURAGED TO REVIEW CURRENT UNDERGROUNDING REQUIREMENTS AND WORK WITH THEIR ATTORNEYS/ROW SPECIALISTS TO MAKE SURE THOSE REQUIREMENTS ARE NOT IN CONFLICT WITH THE FCC ORDER.]

**G. Strand Mounted Equipment. Strand mounted small wireless facilities are permitted, subject to the following criteria:**

1. Each strand mounted antenna shall not exceed 3 cubic feet in volume, unless a deviation is requested and approved pursuant to Section H.
2. Only 2 strand mounted antennas are permitted between any two existing poles.
3. Strand mounted devices shall be placed as close as possible to the nearest pole and in no event more than five feet from the pole unless a greater distance is required by the pole owner.
4. No strand mounted device will be located in or above the portion of the roadway open to vehicular traffic.
5. Strand mounted devices must be installed with the minimum excess exterior cabling or wires (other than original strand) to meet the technological needs of the facility.

## H. Deviation from Design Standards.

1. An applicant may obtain a deviation from these design standards if compliance with the standard:
  - a. Is not technically feasible.
  - b. Impedes the effective operation of the small wireless facility.
  - c. Significantly impairs a desired network performance objective.
  - d. Conflicts with pole owner requirements.
  - e. Materially inhibits or limits the provision of wireless service.

[NOTE: SINCE DEVIATIONS FROM THE DESIGN STANDARDS MAY LEAD TO QUESTIONS FOR WHY ONE PROVIDER WAS ALLOWED AN EXCEPTION AND ANOTHER WAS NOT, IT IS ADVISED THAT CANBY DOCUMENT REASONS FOR DEVIATIONS.]

2. When requests for deviation are sought under subsections (H)(1)(a)-(e), the request must be narrowly tailored to minimize deviation from the requirements of these design standards, and the City Engineer / Planning Director or designee must find the applicant's proposed design provides similar aesthetic value when compared to strict compliance with these standards.
3. The City Engineer / Planning Director or designee may also allow for a deviation from these standards when it finds the applicant's proposed design provides equivalent or superior aesthetic value when compared to strict compliance with these standards.
4. The small wireless facility design approved under this Section H must meet the conditions of 47 C.F.R. Sec. 1.6002(l).
5. The City Engineer / Planning Director or designee will review and may approve a request for deviation to the minimum extent required to address the applicant's needs or facilitate a superior design.

[NOTE: THE CITY OF CANBY MAY RECOMMEND A PRE-MEETING WITH PROVIDERS IF A DEVIATION FROM STANDARDS IS BEING CONSIDERED. HOWEVER, PRE- MEETINGS MUST BE OPTIONAL. MANDATORY PRE-MEETINGS,

**16.55.40 Macro Telecommunications Facilities Design Standards**

- A. The purpose of this section is provide review procedures and acceptable time, place, and manner constraints on the installation, placement and deployment of macro wireless telecommunications facilities within public and private property in the City of Canby. The section is intended to:
1. Regulate the placement, appearance and number of macro wireless telecommunications systems facilities.
  2. Ensure that the ~~citizens of Canby~~public will have access to a variety of wireless telecommunications systems and providers.
  3. Reduce the visual impact of certain wireless telecommunications systems facilities by encouraging collocation;
  4. Establish a graduated system of review that will expedite facilities placement in preferred locations;
  5. Implement the applicable provision of the Federal Telecommunications Act of 1996;
  6. Implement Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012, 47 U.S.C. § 1455(a), commonly referred to as the *Spectrum Act* and;
  7. Implement FCC Order 18-133, effective August 15, 2019.
- B. The siting and review process for **Macro** telecommunications facilities is based on the type of facility (lattice, monopole, attached, stealth design or collocation) and its proposed location in a Preferred Site (M-1 or M-2 zoning districts), Acceptable Site (C-2 or C-M zoning districts), or Conditionally Suitable Site (C-R, C-C or C-1 zoning districts).
- C. Macro Telecommunications Permit Applications.
1. Minor Permit (Type I – Site Plan Review):
    - a. An attached macro telecommunications facility (existing structure, including collocation on cell tower), including equipment shelters, buildings and cabinets housing land line switching/connection equipment, on a Preferred



Site or Acceptable Site, where the height of the attached facility is no more than 10 feet higher than the existing structure.

- b.** A detached macro telecommunications facility (monopole), including equipment shelters, buildings and cabinets housing telecommunications land line switching/connection equipment, on a Preferred Site, set back at least 660 feet from Highway 99E or land either planned or zoned for residential use, and less than 150 feet in height, including antennas.
  - c.** A detached, stealth design macro telecommunications facility (monopole), including equipment shelters, buildings and cabinets housing land line switching/connection equipment, on an Acceptable Site, set back from all property lines a distance equal to or greater than the height of the tower, and less than 60 feet high.
  - d.** An attached telecommunications facility (existing structure, including collocation on cell tower), including equipment shelters, buildings and cabinets housing land line switching/connection equipment, on a Preferred Site or Acceptable Site, where the height of the attached telecommunications facility is more than 10 feet higher than the existing structure.
- 2. Major Permit (Type II/III – Site and Design Review):**
- a.** A detached telecommunications facility (monopole), including equipment shelters, buildings and cabinets housing land line switching/connection equipment, on a Preferred Site, set back at least 660 feet from Highway 99E or land either planned or zoned for residential use, and equal to or over 150 feet in height, including antennas.
  - b.** A detached telecommunications facility (monopole), including equipment shelters, buildings and cabinets housing land line switching/connection equipment, on a Preferred Site, within 660 feet from Highway 99E or land either planned or zoned for residential use, and under 100 feet in height, including antennas.
  - c.** A detached telecommunications facility (lattice tower), including equipment shelters, buildings and cabinets housing telecommunications land line switching/connection equipment, on a Preferred Site, set back at least 660 feet from Highway 99E or land either planned or zoned for residential use, and under 150 feet in height, including antennas.
  - d.** A detached, stealth design telecommunications facility (monopole), including equipment shelters, buildings and cabinets housing land line

switching/connection equipment, on an Acceptable Site, set back from all property lines a distance equal to or greater than the height of the tower, and less than 100 feet high, including antennas.

- e. An attached telecommunications facility (existing structure, including collocation on cell tower), including equipment shelters, buildings and cabinets housing telecommunications land line switching/connection equipment, on a Preferred Site or Acceptable Site, where the height of the attached telecommunications facility is more than 10 feet higher than the existing structure.
  - f. A detached telecommunications facility (monopole), including equipment shelters, buildings and cabinets housing telecommunications land line switching/connection equipment, on a Preferred Site, set back at least 660 feet from Highway 99E or land either planned or zoned for residential use, and equal to or over 150 feet in height, including antennas.
  - g. A detached telecommunications facility (monopole), including equipment shelters, buildings and cabinets housing telecommunications land line switching/connection equipment, on a Preferred Site, within 660 feet from Highway 99E or land either planned or zoned for residential use, and under 100 feet in height, including antennas.
  - h. A detached telecommunications facility (lattice tower), including equipment shelters, buildings and cabinets housing telecommunications land line switching/connection equipment, on a Preferred Site, set back at least 660 feet from Highway 99E or land either planned or zoned for residential use, and under 150 feet in height, including antennas.
  - i. A detached, stealth design telecommunications facility (monopole), including equipment shelters, buildings and cabinets housing telecommunications land line switching/connection equipment, on an Acceptable Site, set back from all property lines a distance equal to or greater than the height of the tower, and less than 100 feet high, including antennas.
1. Major Permit (Type II/III – Site and Design Review and Conditional Use Permit)
- a. A detached telecommunications facility (monopole), including equipment shelters, buildings and cabinets housing telecommunications land line switching/connection equipment, on a Preferred Site, within 660 feet from Highway 99E or land either planned or zoned for residential use, and equal to or over 100 feet in height, including antennas.

- b.** A detached telecommunications facility (lattice tower), including equipment shelters, buildings and cabinets housing telecommunications land line switching/connection equipment, on a Preferred Site, set back at least 660 feet from Highway 99E or land either planned or zoned for residential use, and equal to or over 150 feet in height, including antennas.
- c.** A detached, stealth design telecommunications facility (monopole), including equipment shelters, buildings and cabinets housing telecommunications land line switching/connection equipment, on an Acceptable Site, set back from all property lines a distance equal to or greater than the height of the tower, including, unless it is demonstrated that locating the proposed facility within the required setback area will take advantage of an existing natural or artificial feature to conceal the facility or minimize its visual impacts, and equal to or over 100 feet high, with a maximum height of 130 feet.
- d.** An attached telecommunications facility (existing structure, including collocation on cell tower) on a Conditionally Suitable Site, including equipment shelters, buildings and cabinets housing telecommunications land line switching/connection equipment, where the height of the attached telecommunications facility is no more than 10 feet higher than the existing structure.

**D.** Standards for siting telecommunications facilities shall be as follows:

- 1.** Site and Design Review standards and criteria (section 16.49.040) shall apply to all telecommunications facilities requiring Site and Design approval.
- 2.** Conditional Use Permit standards and criteria (section 16.50.010) shall apply to all telecommunications facilities requiring Conditional Use Permit approval.
- 3.** All telecommunications facilities shall observe minimum lot size, lot coverage, building height and building setback requirements of the underlying zoning district unless specifically exempted or otherwise regulated by this section. Underground facilities may encroach upon required yards or may be placed in appropriate easements.
- 4.** All detached telecommunications facilities shall be landscaped at the base of the towers/poles, and completely around the equipment shelters. The landscaping shall conform to the ODOT standards for plant size and spacing.

5. Lighting for all telecommunications facilities shall be as required by the FAA or recommended by ODOT Aeronautics Division. All other lighting must be deflected away from adjoining property.
6. All detached telecommunications facilities shall be screened from the public right-of-way and abutting property by a security fence or wall at least 6 feet in height consisting of chain link fencing with vinyl slats, solid wood fencing, concrete masonry unit block, or brick.
7. Attached telecommunications facilities shall be painted to match the color of the mechanical screen wall or building to which it is attached.
8. Equipment shelters, buildings and cabinets housing telecommunications ancillary equipment shall be concealed, camouflaged or placed underground.
9. Any telecommunications facility sited on or designed with any of the following attributes shall first receive FCC approval, as specified in FCC Rules 1.1301 - 1.1319, as a condition of city approval prior to construction; Wilderness Area; Wildlife Preserve; Endangered Species; Historical Site; Indian Religious Site; Flood Plain; Wetlands; High Intensity White lights in residential neighborhoods; Excessive radio frequency radiation exposure.

**E. Macro Telecommunications Application Requirements.**

1. Minor Permit Applications shall be completed on a form provided by the Planning Director and with the following information:
  - a. A copy of that portion of the lease agreement (or lease memo) with the property owner, facility removal within 90 days of the abandonment and a bond to guarantee removal shall be submitted for review prior to development permit approval.
  - b. A map of the city showing the approximate geographic limits of the cell to be created by the facility. This map shall include the same information for all other facilities owned or operated by the applicant within the city, or extending within the city from a distant location, and any existing detached WTS facilities of another provider within 1,000 feet of the proposed site.
  - c. An engineer scaled site-plan showing:

- i.** The lease area;
  - ii.** Antenna structure;
  - iii.** Height above grade and setback from property lines;
  - iv.** Equipment shelters and setback from property lines;
  - v.** Access;
  - vi.** Connection point with land line system; and
  - vii.** All landscape areas associated with the telecommunications facility.
- d.** Anticipated capacity of the telecommunications facility (including number and types of antennas which can be accommodated).
  - e.** The method(s) of stealth design (where applicable).
  - f.** An engineer's statement that the radio frequency emissions at grade, or at the nearest habitable space when attached to an existing structure comply with FCC rules for such emissions; the cumulative radio frequency emissions if collocated.
  - g.** The radio frequency range in megahertz and the wattage output of the equipment.
  - h.** A description of the type of service offered (voice, data, video, etc.) and the consumer receiving equipment.
  - i.** Identification of the provider and backhaul provider, if different.
  - j.** A facilities maintenance regimen.
  - k.** The zoning and comprehensive plan designation of the proposed site.
  - l.** The FAA determination.

m. The distance from the nearest telecommunications facility.

**2. Major Permit Applications Additional Requirements:**

- a. Items in section (E) above.
- b. Alternatives for locating/relocating support structures within 250 feet of the proposed site.
- c. Photo simulations of the proposed telecommunications facility from the four cardinal compass points and/or abutting right-of-way, whichever provides the most accurate representation of the proposed facility from a variety of vantage points.
- d. An engineer's statement demonstrating the reasons why the telecommunications facility must be located at the proposed site (service demands, topography, dropped coverage, etc.).
- e. An engineer's statement demonstrating the reasons why the telecommunications facility must be constructed at the proposed height.
- f. Verification of good faith efforts made to locate or design the proposed telecommunications facility to qualify for a less rigorous approval process (building permit and/or building permit and site and design review approval).

**16.55.045 Exemptions**

- A. Private amateur radio (HAM) antennas, their support structures, and direct to home satellite receiving antennas are exempt from this section (16.08.120), but shall otherwise comply with the applicable provisions of the underlying zoning district in which they are located to the extent that such provisions comply with Federal Communications Commission policy. (Ord. 981 section 19, 1997)

**16.55.100 Severability**

- A. Invalidity of a section of this ordinance shall not affect the validity and application of the remaining sections or parts of sections of this ordinance or prohibit the regulation of telecommunications facilities within rights-of-way, public and private real property.

City of Oregon City Public Notice  
Proposed Resolution Adoption

Table of Contents

Resolution 19-03

Staff Report: Resolution 19-03 – Establish Management and Deployment Standards for Small Cell Within City of Oregon City Rights-of-Way

Resolution 19-03

Resolution 19-03 Appendix A – Small Cell Design and Construction Standard Guidelines for Public Rights-of-Way

Resolution 19-02

Staff Report: Resolution 19-02 – Amending the Rights-of-Way Fee Schedule to Include Fee Provisions for Small Cell Facilities Installed in the Public Rights-of-Way and Within the City of Oregon City

Resolution 19-02

Resolution 19-02 Appendix A – Rights of Way Usage Fee Schedule

Resolution 19-05

Staff Report: Resolution 19-05 – Modify Public Works Engineering Fee Schedule and Amend Resolution 18-16

Resolution 19-05

Resolution 19-05 Appendix A – Engineering Fee Schedule

PROPOSED: Adopt New Resolutions, Amend Rights-of-Way Usage Fees, and Adopt Design and Construction Standards Specific to Small Cell in the Rights-of-Way

**This is to notify you that the City of Oregon City will be discussing proposals for the adoption of Resolutions to amend current Rights-of-Way Usage Fees and adoption of new design and construction standard guidelines for Small Cell in the rights-of-way. City Commission adoption of Resolutions 19-02, 19-03, and 19-05 will establish fees and standards regarding Small Cell deployment and management.**

Public Works Department will present Resolutions 19-02, 19-03, and 19-05 to City Commission for consideration the adoption at their meeting on February 20, 2019, at City Hall, 625 Center Street, Oregon City, at 7 pm unless otherwise noticed. Any interested party may testify at the meeting or submit written comments at or prior to the meeting while the record is open. All meeting materials are available at [www.orcity.org](http://www.orcity.org) seven days prior to the public meeting. These documents may be revised during the review process until final adoption by the City Commission. For additional information, call the Oregon City Public Works Right-of-Way and Construction Manager, Dante Posadas, at 503.974.5521.

Clarification for licensing and term definitions should be directed to Oregon City Municipal Code (OCMC) Chapters 13.24 and 13.34 found here: <https://www.orcity.org/RightOfWay> and/or [https://library.municode.com/or/oregon\\_city/codes/code\\_of\\_ordinances](https://library.municode.com/or/oregon_city/codes/code_of_ordinances).

For your information, “**Small Cell Facility**” is equipment used to enhance cellular data capacity within the public ROW; comprised of an antenna no larger than 3 cubic feet and equipment no larger than 28 cubic feet; attached to infrastructure within the public ROW.



Resolution 19-03 to Establish Management and Deployment Standards for Small Cell within the City of Oregon City Rights-of-Way

**RECOMMENDED ACTION (Motion):**

Adopt Resolution 19-03 Small Cell Design and Construction Standards Guidelines for the Public Rights-of-Way.

**Background**

The topic of Small Cell management and deployment within Oregon City Rights-of-Way (ROW) was introduced during the September 19, 2018, City Commission meeting. At that time, staff was given the direction to pursue standards and fees for reasonable management of Small Cell facilities within City ROW.

Under the direction of the City Commission, City staff invested time into understanding industry needs, federal regulations, and Oregon City historical data compiled regarding utility use of City rights-of-way. City staff found the following information.

Industry projects a 50% increase in deployment of Small Cell facilities between 2018-2020. An estimation of 40% of telecommunication providers will have 100-350 Small Cells per square mile by 2020. The use of data processing and wireless communication devices has skyrocketed. Industry projects a \$275 billion investment in the deployment of 5G network capabilities.

The telecommunication industry is a changing/advancing utility and has become a vital part of building prosperous communities. The demand for data processing capacity has led industry to seek solutions in Small Cell deployments along Oregon City's ROW. Pursuant to the changing demands of the telecommunication industry, the Federal Communication Commission published new rulings on January 14, 2019, regarding the management and deployment of Small Cell Facilities within City ROW. FCC regulations limit the City's local authority and require fees that allow for reasonable reimbursement but not over assessment of fees.

In consideration, City staff has reviewed the five years of history the City has with franchisees, licensees, and users of the Public Rights-of-Way. Staff reviewed compliance with established City Code, and State and Federal regulations. Staff have also been working with other Oregon Agencies including Oregon Association of Telecommunication Officers and Advisors, local agencies and other industry experts to develop standards that reflect Oregon City's local needs while respecting the direction of other adopted national, state, and local regulation.

The purpose of these recommended standards is to ensure that Small Cell wireless communication facilities within the public rights-of-way are designed and constructed in a manner that protects and preserves the physical capacity and aesthetic value of

the public rights-of-way. These guidelines shall provide requirements and permitting processes that allow for reasonable access to the public rights-of-way for Small Cell w facilities consistent with applicable federal, state, and applicable City ordinances. Finally, the standards guidelines seek to facilitate and streamline the rollout of Small Cell infrastructure while at the same time safeguard the public rights-of-way and prevent undue hazards to property, the environment, public health, welfare, and safety.

The attached Small Cell Design and Construction Standard Guidelines for Public Rights-of-Way (Exhibit A) outlines Oregon City's standards for this quickly developing industry.

Staff recommend the adoption of these standards in compliance with both State and Federal regulations and for a reasonable management and deployment of Small Cells in Oregon City Public Rights-of-Way.

**BUDGET IMPACT:**

Amount: N/A

**RESOLUTION NO. 19-03**

---

**A RESOLUTION TO ESTABLISH SMALL CELL MANAGEMENT AND DEPLOYMENT  
STANDARDS FOR ATTACHMENTS WITHIN THE CITY OF OREGON CITY  
RIGHTS-OF-WAY**

**WHEREAS**, the City of Oregon City has statutory and constitutional authority to manage its Rights-of-Way (“ROW”) in accordance with Oregon Revised Statutes 221.510 Municipal Regulation of Telecommunication Carriers, and

**WHEREAS**, on November 6, 2013, the City enacted Ordinance No. 13-1014 which established Chapter 13.34 of the Oregon City Municipal Code, Utility Facilities in Public Rights-of-Way, and exercised the City’s authority to manage and to secure compensation to the City and its residents for utility use of the ROW (“Ordinance”), and

**WHEREAS**, on January 14, 2019, the regulatory rulings of the Federal Communication Commission became effective regarding the City’s authority to regulate Small Cell facilities in the ROW; providing guidance on certain state and local non-fee requirements including aesthetic and underground requirements. FCC concludes aesthetics are not pre-emptive if (1) reasonable, (2) no more burdensome than those applied to other types of infrastructure deployments, and (3) published in advance.

**NOW, THEREFORE, OREGON CITY RESOLVES AS FOLLOWS:**

**Section 1:** Pursuant to ORS 221.510 and the Federal Communication Commission regulatory rulings, the City of Oregon City adopts Small Cell Design and Construction Standard Guidelines for the Public Rights-of-Way. These standards establish reasonable, nonburdensome, and published standards for the deployment and management of Small Cells within the Public Rights-of-Way.

**Section 2:** The resolution shall be in effect upon adoption by City Commission.

Approved and adopted at a regular meeting of the City Commission held on the 20<sup>th</sup> day of February 2019.

\_\_\_\_\_  
Dan Holiday, Mayor

Attested to this 20<sup>th</sup> day of February 2019:

Approved as to legal sufficiency:

\_\_\_\_\_  
Kattie Riggs, City Recorder

\_\_\_\_\_  
City Attorney

**City of Oregon City****Small Cell Design and Construction Standard Guidelines for Public Rights-of-Way****Intent and Purpose**

The purpose of these standards is to ensure that Small Cell wireless communication facilities within the public rights-of-way are designed and constructed in a manner that protects and preserves the physical capacity and aesthetic value of the public rights-of-way intended use. These guidelines shall provide requirements and permitting processes that allow for reasonable access to the public rights-of-way for Small Cell wireless communications facilities consistent with applicable federal, state, and applicable City ordinances. Oregon City seeks to facilitate and streamline the rollout of Small Cell infrastructure while at the same time safeguard the public rights-of-way and prevent undue hazards to property, the environment, public health, welfare, and safety.

These Standards and Guidelines are for Small Cell deployment in City Rights-of-Way. Oregon City Municipal Code 17.80 – Communication Facilities – outlines the deployment and land use considerations required for communication facilities other than Small Cells within Oregon City ROW. In the future, City staff will initiate amendments to OCMC 17.80.030 to exclude Small Cell Facilities meeting the Design standards established in the Small Cell Design and Construction Standard Guidelines for Public Rights-of-Way. OCMC 17.80.030 shall regulate Small Cell facilities deployed within private property.

**Definitions**

For purposes of these standards, the following definitions shall control:

**“Alternative antenna structure” (monopole)** means an existing pole or new proposed structure within the public rights-of-way that can be used to support an antenna and is not a City facility or third-party wood utility pole.

**“Antenna”** means communications equipment that transmits or receives electromagnetic radio signals used in the provision of any type of wireless communications services.

**“Applicant”** means any person or entity submitting an application to install Small Cell wireless telecommunication facilities or structures to support the facilities within a public rights-of-way.

**“City”** means the City of Oregon City, an Oregon municipal corporation, or individuals authorized and designated to act on behalf of the City.

**“City Commission”** means the elected governing body of the City of Oregon City, Oregon.

**“City-owned infrastructure”** means infrastructure in the public rights-of-way within the boundaries of the City public rights-of-way and/or public easement, including but not limited to street lights, traffic signals, towers, structures, buildings, and utilities that are owned, operated, and/or maintained by the City.

**“Federal Communications Commission (FCC)”** means the federal administrative agency, or its lawful successor, authorized to regulate and oversee telecommunication carriers, services, and providers on a national level.

**“Landscape screening”** means plantings, shrubbery, bushes or other foliage intended to screen the base of a wireless telecommunication facility from public view.

**“Licensee”** means a telecommunication utility registered with the City pursuant to Oregon City Municipal Code Chapter 13.24 Telecommunication Facilities and Chapter 13.34 Utility Facilities in Public Rights-of-Way.

**“Macro-Site telecommunication”** means a telecommunication facility designed to support multiple cell sites. Macro-Sites include an array of antennas, transmission equipment, and multiple coax and hybrid cable connections. Oregon City Municipal Code 17.80 Communication Facilities governs the deployment of Macro-Sites.

**“Public Rights-of-Way”** means and includes the space in, upon, above, along, across, over or under the public streets, roads, highways, lanes, courts, ways, alleys, boulevards, bridges, trails, paths, sidewalks, bicycle lanes, public utility easements, and all other public ways or areas, including the subsurface under and air space over these areas, excluding parks, parkland, municipal elevator or other City property that is not generally open to the public for travel. This definition applies only to the extent of the City’s right, title, interest and authority to grant a license to occupy and use such areas for utility facilities.

**“Small Cell wireless telecommunication antenna”** means an antenna that is part of a private wireless telecommunications facility.

**“Small Cell wireless telecommunication equipment”** means equipment, exclusive of an antenna, that is part of a private wireless telecommunications facility.

**“Small Cell wireless telecommunication facility”** means a Small Cell wireless telecommunications facility consisting of an antenna and related equipment, either installed individually or as part of a network, to provide coverage or enhance capacity in a limited defined area. Generally, it is a single-service provider installation.

**“Third party utility pole”** means an upright pole designed and used to support electric cables, telephone cables, telecommunication cables, cable service cables, and other utility facilities and/or which is used to provide lighting, traffic control, signage, or a similar function. Third party utility poles specifically constitute Non-City owned infrastructure within the Public Rights-of-Way.

**“Usable Space”** means all the space on a pole except the portion below ground level, the twenty feet of safety clearance space above ground level, and the safety clearance space between communications and power circuits; there is a rebuttable presumption that six feet of a pole is buried below ground level.

## **General**

Oregon Revised Statutes 221.510 (Municipal Regulation of Telecommunication Carriers) authorizes municipalities to:

- (a) Determine by contract, or prescribe by ordinance or otherwise, the terms and conditions, including payment of privilege tax to the extent authorized by ORS 221.515 and other charges and fees, upon which any telecommunications carrier may be permitted to occupy the streets, highways, or other public property within such municipality and exclude or eject any telecommunications carrier therefrom.
- (b) Require any telecommunications carrier, by ordinance or otherwise, to make such modifications, additions, and extensions to its physical equipment, facilities or plant, or service within such municipality as shall be reasonable or necessary in the interest of the public, and designate the location and nature of all additions and extensions, the time within which they must be completed, and all conditions under which they must be constructed.
- (c) Provide for a penalty for noncompliance with the provisions of any charter provision, ordinance, or resolution adopted by the municipality in furtherance of the powers specified in this subsection.

The City established a Rights-of-way Ordinance 13-1014 in 2013 establishing registration, permitting, usage fees, and general management of the Public Rights-of-Way. Pertinent to the ordinance, Oregon City Municipal Code Chapter 13.24 Telecommunication Facilities and 13.34 Utility Facilities in the Public Rights-of-Way govern all telecommunication provider access to public rights-of-way, and Oregon City Municipal Code 17.80 Communication Facilities governs the deployment of Communication Facilities outside the City rights-of-way. The Small Cell Design and Construction Standard Guidelines are supplemental standards and processes regarding the installation of Small Cell wireless telecommunication equipment within the public rights-of-way. Provisions pertaining to Small Cell installations, in City rights-of-way not expressly stated within these standards, will default to Oregon City Municipal Code 13.24 and 13.34.

### **Permit Process**

Small Cell facilities within the Public Rights-of-Way are reviewed by the City Engineer, or authorized designee, in accordance with the process below:

- **Small Cell Facility Minor Installation Permit** – installations on existing third-party infrastructure-applications shall comply with regulation and documentations/permissions as set forth by federal, state, and City standards. Applications shall clearly denote the below outlined requirements. The review period for applications will be 60 days following reception of completed application.
- **Small Cell Facility Major Installation Permit** – installations on existing City-owned infrastructure or proposed new infrastructure – applications for compliant sizes, locations, and aesthetics with necessary supportive documentation permissions as set forth by Federal, State, and City standards. The review period for applications will be 90 days following reception of completed application.

### **Application Requirements**

Complete Licensee applications for both Small Cell Facility Minor and Small Cell Facility Major Installations shall include the following materials:

1. Aerial vicinity map showing the location of the existing and/or proposed wireless support structure to which the Small Cell facility will be attached.
2. Street view image or photographs showing existing and proposed site conditions including all proposed Small Cell facility infrastructure.
3. Scaled engineered plans or drawings, prepared by a professional engineer licensed in the State of Oregon, showing at a minimum:
  - a. The height of a wireless support: Small Cell Facilities height as defined by the FCC
    - i. The overall height of the wireless support structure and Small Cell facility, including shrouding and concealment.
    - ii. Existing wireless support structure: the increase in height due to the collocated antenna, including shrouding and concealment, height at which all Small Cell wireless telecommunication facility equipment is placed, clearance requirements to other attached utilities denoting each clearance regulated by OJUA and NESC.
  - b. The height from the base of the wireless support structure to the lowest point proposed Small Cell facility equipment to be installed on the structure.

- c. The distance from the outer edge of the wireless support structure parallel to the outer edge of all equipment associated with the Small Cell facility to be installed on the structure.
4. Structural analysis, prepared and stamped by a professional engineer licensed in the State of Oregon, shall include evaluation of the existing and/or proposed wireless support structure and foundation structurally adequate to safely support the proposed Small Cell wireless facilities and comply with NESC for structural stability to determine whether the structure can carry the proposed Small Cell wireless facility and comply with applicable NESC and structural safety code.
5. Engineered plans shall show the right-of-way lines, property lines, proposed utilities (above and below grade), and existing curbs, driveways, sidewalks, streets, paths, buildings, and structures. Any conflicts with existing infrastructure shall be noted, along with a description of how the conflicts will be resolved.
6. Engineered details of proposed Small Cell facilities, including elevations/profiles, plans and sections, clearly indicating the following:
  - a. Height, width, depth, and volume (in cubic feet) of all proposed antenna and exposed elements and/or proposed antenna enclosures.
  - b. Height, width, depth, and volume (in cubic feet) of proposed wireless equipment associated with the facility including electric meters, concealment elements, telecommunications demarcation boxes, grounding equipment, power transfer switches, cut-off switches, and vertical cable runs for the connection of power and other services as applicable.
  - c. Method of installation/connection.
  - d. Color specifications for proposed wireless support structures and associated exposed equipment, cabinets, and concealment elements.
  - e. Electrical plans and wiring diagrams.
  - f. Footing and foundation drawings and structural analysis, sealed and signed by a professional engineer licensed in the State of Oregon.
7. Permission to use utility pole or alternative antenna structure: The operator of a Small Cell wireless telecommunication facility shall submit to the City a copy of the written approval from the owner of an existing utility pole, monopole, or an alternative antenna structure, to mount the Small Cell wireless telecommunication facility on that specific pole, tower, or structure, prior to issuance of the City permit.
8. Manufacturer's specification sheets for proposed Small Cell facility equipment, including wireless support structures, equipment cabinets, shrouds or concealment devices, antennas, meters, radios, switches, telecommunications demarcation boxes, and grounding equipment.
9. For removal of wireless support structures or ground-mounted equipment, an engineered drawing that shows the item(s) being removed and the details of restoration to be completed. Restoration shall be completed in accordance with the applicable City of Oregon City Municipal Code and shall restore the site to pre-construction conditions.
10. Letter stating the Applicant has performed an analysis to verify that the Small Cell facility will not cause any interference with City public safety radios, traffic signal light system, or other communications equipment. It shall be the responsibility of the Operator to evaluate the

11. A letter from an Oregon Registered Engineer that the telecommunications facility complies with the non-ionizing electromagnetic radiation (NIER) emissions standards set forth by the Federal Communications Commission (FCC).



12. A signed statement from the facility owner of the telecommunications equipment indicating awareness of removal responsibilities of (XXX).

compatibility between the existing City infrastructure and the Operator's proposed infrastructure.

13. Documentation demonstrating that the applicant has an FCC license for the geographic area and for the service proposed by the microcell installation.

*Control Devices.*

Applications shall include all materials as listed. Additionally, the City may require significant analysis of the impacts and/or replacement of Small Cell Major installations. The City reserves the right to deny, when in the public's best interest, the installation of Small Cell facilities attached to City infrastructure. Macro-Sites are not allowed within the City Public Rights-of-Way. The review period for Small Cell Facility Major installation applications will be 90 days following reception of completed application.

### **Standards**

Licensees or other such entities shall obtain applicable City permit(s) and comply with applicable Oregon City Municipal Code.

1. *Number limitation:*
  - a. maximum of one Small Cell wireless facility shall be attached to an alternative antenna structure.
  - b. maximum of one Small Cell wireless antenna shall be installed as part of one Small Cell wireless facility.
2. *Separation and clearance requirements.* A Small Cell wireless telecommunications antenna shall be separated from:
  - a. An existing residential structure by a minimum horizontal distance of the total above-ground height of the pole or structure that the antenna is attached to, and
  - b. Small Cell wireless telecommunication antenna installed and maintained by the same licensee shall be a minimum of 300 horizontal feet apart.
3. *Locations:* The City reserves the right to deny, when in the public's best interest, the deployment of Small Cell wireless telecommunication facilities within the public rights-of-way. Providers shall provide engineered coverage maps showing coverage laps in areas where location priorities, set below, are bypassed. Small Cell installations triggering the bypass of the below priorities will be considered Small Cell Major Installations, and Licensees will be required to provide additional information justifying the need of facilities at proposed locations.

Licensees shall install facilities according to priority sets below:

- a. Street Classification
  1. Expressway
  2. Major Arterial
  3. Minor Arterial
  4. Collector
  5. Local
- b. Support Structure
  1. Third Party Utility Pole
  2. Third Party Street Light



3. City-Owned Infrastructure
- c. Prohibited locations
  1. Municipal Elevator
  2. City owned decorative street lighting
  3. City Scenic Views
  4. Street Frontage along Historical Points
  5. Signage support structures

If licensee requests to bypass Street Classification or Support Structure priorities, the City will take consideration of existing infrastructure and locations and will review requests and applications in compliance with Standards and FCC regulations. Small Cell Facility Major Installation review criteria shall apply.


4. *Attachment limitations:*

- a. **Small Cell wireless telecommunication antenna** – attached to a support structure within the public rights-of-way shall have a maximum surface area of 3 cubic feet.
- b. **Small Cell wireless telecommunication facilities** – total combined volume of all above-ground equipment comprising a Small Cell wireless telecommunication facility, exclusive of the antenna, shall be a maximum of 28 cubic feet.
- c. **Small Cell Wireless telecommunication equipment** – shall locate the base of the facilities at a height in compliance with National Electric Safety Code, Americans with Disabilities Act, and Oregon City Municipal Code. Equipment shall be placed in the usable space and shall not inhibit the use of the Right-of-Way by City residents in any way.
- d. **Height** – The highest point of the antenna shall extend no more than seven feet above the highest point of the utility pole, alternative antenna support structure, tower or City-owned infrastructure. A replacement or new utility pole, alternative support structure, third party utility pole, or City-owned infrastructure shall be no more than ten percent higher than an existing adjacent pole or a maximum of the zoning designated height allowance, in height above the ground surface, whichever height is the lesser of the two.
- e. **Color** – A Small Cell wireless telecommunication facility, including all related equipment and appurtenances, shall be a color that matches the pole, blends with the surroundings of the pole, structure tower, or infrastructure on which it is mounted, and uses non-reflective materials.
- f. **Wiring** – All connections and wiring shall be shrouded.
- g. Providers shall not attach or mount any Small Cell Wireless telecommunication equipment onto aerial cable spans.
- h. All Small Cell wireless telecommunication equipment shall be located to avoid any physical or visual obstruction to pedestrian or vehicle traffic, or in any manner create safety hazards to pedestrians, bicyclist, or motorists.

5. *Electrical Service:* Service providers shall be responsible for electrical service coordination to wireless facility. Providers shall not receive power via metered service used to supply power to any street light or other City-owned infrastructure. All electrical service equipment shall match the attaching structure. Electric meters and disconnects shall be located per NESC and NEC code. Providers shall not install generators in the public rights-of-way. All Communication Facilities installed on private property will require review per Oregon City Municipal Standards 17.80 Communication Facilities.
6. *Signage:* Small Cell wireless telecommunication equipment shall not have any signage other than required federal law identification markings.
7. *Noise Reduction:* Noise-generating equipment shall be baffled to reduce sound level measured at the property line to the following levels, except during short durations for testing and operations of generators in emergency situations:
  - a. For any property where no adjacent parcel is zoned residential, the sound level at the property line shall not be greater than fifty dB;
  - b. For all other cases, the sound level shall not be greater than forty dB when measured at the nearest residential parcel's property line.
8. *Lighting:* All lights shall be shrouded.
9. *Screening:* Shall be natural landscaping material subject to the approval of the City and shall comply with all codes, standards and regulations of the City. Provider shall shroud all wiring, connections, and Small Cell wireless telecommunication equipment.
10. *Abandonment and removal:* A Small Cell wireless telecommunication facility located within the corporate limits of the City that is not operated for a continuous period of 12 months, shall be considered abandoned and the owner of the facility, at the owner's sole expense, shall be responsible for the removal of the facility, including its antenna and equipment, within 30 days of receipt of written notice from the City notifying the owner of such facility abandonment. Such notice shall be sent by certified or registered mail, return-receipt-requested, by the City to such owner at the last known address of such owner.
11. *Placement:* No facilities shall be located on sidewalk, bike lane, or street pavement. Facilities shall not inhibit the transportation or access of Oregon City residents to any City-owned Rights-of -Way. Facilities shall be mounted to support structures.
12. Small Cell wireless telecommunication equipment and facilities shall comply with National Electric Safety Code, Americans with Disability Act, Oregon City Small Cell Design and Construction Guidelines for Public Rights-of-Way.

Many jurisdictions require a bulk power purchase agreement to limit the amount of equipment on a pole. No metered power purchase agreement is a bulk purchase agreement.

//////



# Small Cell Wireless/5G An Oregon City Perspective

Presented by Dante Posadas  
ROW and Construction Services  
September 19, 2018

1

//////

## Major Points

```
graph TD; A[Telecommunication Industry Changes (5G)] --- B[Wireless Networks - Small Cell and Macro Sites]; B --- C[Governing Bodies and Legislation]; A --- D[Impacts on Oregon City]; B --- E[Planned Action];
```

- Telecommunication Industry Changes (5G)
- Wireless Networks – Small Cell and Macro Sites
- Governing Bodies and Legislation
- Impacts on Oregon City
- Planned Action

2

## 5G Capabilities and Needs

The Evolution of Mobile Communications, from 1G to 5G

1G 1980's

2G 1993

3G 2001

4G 2009

5G 2020?

**Calls** travel by airwaves to the nearest tower. From there they travel on the network.

**Data** also travels by airwaves to the nearest tower or small cell pole.

**SMALL CELL POLE**

Small cell poles remove large volumes of data from traditional cell towers.

**MACRO**

From the tower or pole, data or calls travel via fiber or copper to the service provider's switching office.

3

## Macro Cells vs. Small Cell



**MACROCELL TOWER**

Towers vary in height, but are often **200' to 400' tall.**

22 to 40 miles: the typical coverage of a macrotower

**SMALL CELL POLE**

Small cell poles are **32' tall.**

1,500 feet: the typical coverage of a small cell pole

Small cell poles remove data traffic to provide better cell phone service in locations with heavy traffic such as, arenas, theaters and other large gathering venues.

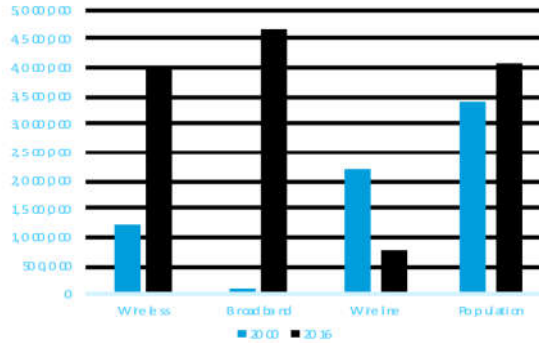
4

## Wireless Network Growth

The Way Oregon Communicates is Changing...

From 2000-2016,  
Oregon has seen:

- 235% increase in wireless phone subscribers<sup>1</sup>
- 5,960% increase in broadband subscribers<sup>2</sup>
- 66% decrease in switched access lines<sup>3</sup>
- 20% increase in population<sup>4</sup>



1. FCC Local Competition Report May 2001 (as of 12/31/00), Table 9; FCC Voice Telephone Services Report April 2017 (as of 06/30/16), Supplemental Table 1.  
2. FCC High-Speed Services for Internet Access Status as of December 2000 (Table 7); FCC Internet Access Service Report April 2017 (as of 06/30/16) \*Connections/lines over 200 Kbps.  
3. FCC Local Competition Report May 2001 (as of 12/31/00), Table 9; FCC Voice Telephone Services Report April 2017 (as of 06/30/16), Supplemental Table 1.  
4. U.S. Census Bureau (2013) by State and County: U.S. Census Bureau Report 2017 (as of 06/30/16), Supplemental Table 1.



5

## Wireless Networks in Oregon City

### Current ROW users

- AT&T
- Verizon
- Comcast
- CenturyLink

### Current Private Property Macro site users

- AT&T
- Verizon
- Sprint
- T-Mobile
- Cricket Wireless



6

## Small Cell Legislation

### United States Congress

- [June 28, 2018--S.3157-Streamline Small Cell Deployment Act](#)

### Federal Communications Commission

- [January 31, 2017- Broadband Deployment Advisory Committee](#)
- [September 5, 2018- Accelerating Wireless Broadband deployment](#)

### National Conference of State Legislatures

- [20 States have enacted legislation](#)

### National Governors Association

- [July 27, 2018--https://www.nga.org/letters-nga/streamline-small-cell-deployment/](https://www.nga.org/letters-nga/streamline-small-cell-deployment/)

### National League of Cities

- [Model code August 2018](#)

### National Association of Telecommunication Officers and Advisors



7

## Oregon City Code

### Oregon City Municipal Code 13.24 - Telecommunication Facilities

- Permit and manage access to City's ROW
- Fair and reasonable compensation
- Public safety, health and welfare
- Encourage competitive and advancing utility services
- Comply with Oregon City Code, State, and Federal Law

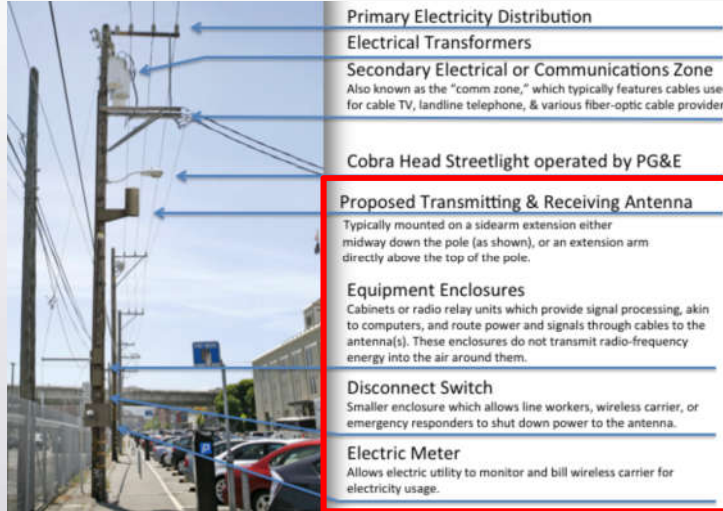
### Oregon City Municipal Code 17.80 - Communication Facilities

- Promote maximum utilization and colocation
- Minimal impacts on community, views, and historical areas
- Existing infrastructure use
- Encourage location in non-residential areas

8



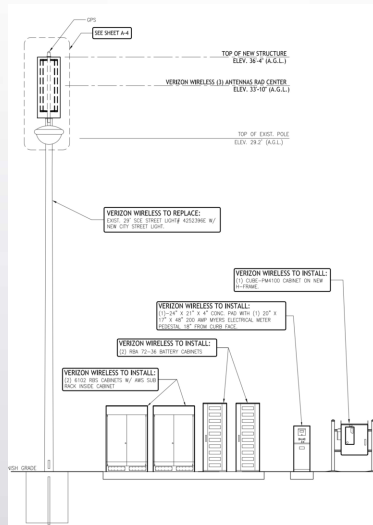
## Small Cell Installations



9

## Standards

- Location
- Zoning
- Street classifications
- Infrastructure
- Permissions
- Permits
- Removal

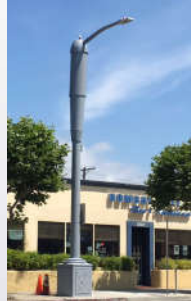


10

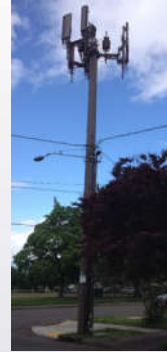
**Typical Installations**



Portland, Oregon



**Monopole Shrouded**



11

**Usage Fees**

**Oregon City Current**

Communications  
5% gross revenue  
Attachment Fee \$5,000

**Other Agency Fees**

San Jose, California  
\$2,600 - \$17,750 annual; 3% annual escalation

Eugene, Oregon  
\$600 quarterly; 5 yr. term; 3% annual escalation

Portland General Electric – Attachment Fee

**Oregon City Considerations for Future Fees**

Communications 5% Gross Revenue

Attachment Fee

- Municipality Comparison
- Antenna & Ground Equipment Size
- Capacity Output
- Radio Frequency Propagation Maps
- Residential Zone Classification
- Review & Processing Permit Fee

12



//////

**Oregon City – Next Steps 6-12 months**

- Implement Reasonable, Fair Management of the ROW
- Establish Small Cell Code
- Establish Small Cell Standards within ROW
- Establish Usage Fee Resolution Consistent with Neighboring Oregon Municipalities

13

//////

Questions?

14

## References

- Slide 1: graphic credit <http://siouxfalls.business/data-service-slow-big-crowds-sdn-fixing/>
- Slide 2: graphic credit: <https://www.quora.com/Where-I-can-start-to-learn-about-2G-3G-4G-and-5G>
- Slide 2: graphic credit: <https://www.rcwireless.com/20171212/network-infrastructure/report-finds-major-increase-in-small-cell-deployments-tag17>
- Slide 2: graphic credit: 2016 AT&T Intellectual Property. All rights reserved. AT&T, Globe logo, Mobilizing Your World and DIRECTV are registered trademarks and service marks of AT&T Intellectual Property and / or AT&T affiliated companies. All other marks are the property of their respective owners.
- Slide 3: graphic credit: All graphics are intellectual property of corresponding trademarked telecommunication provider and their subsidiary
- Slide 4: Graphic Credit: <https://medium.com/@omarmasry/part-2-example-photos-of-the-good-the-bad-and-the-downright-ugly-ea483f83fe7>
- Slide 4: Verizon wireless standards: are the intellectual property of Verizon Wireless and are used here in an informational use.
- Slide 5: Verizon wireless standards: are the intellectual property of Verizon Wireless and are used here in an informational use.
- Slide 5: graphic credit: <https://medium.com/@omarmasry/part-2-example-photos-of-the-good-the-bad-and-the-downright-ugly-ea483f83fe7>
- Slide 6: graphics credits: <https://medium.com/@omarmasry/part-2-example-photos-of-the-good-the-bad-and-the-downright-ugly-ea483f83fe7>

Resolution 19-02 Amending the Rights-of-Way Fee Schedule to include fee provisions for Small Cell Facilities installed in the Public Rights of Way and within the City of Oregon City

**RECOMMENDED ACTION (Motion):**

Amend Resolution 13-26 and Resolution 14-10 governing Rights-of-Way (ROW) usage fees and establish Resolution 19-02 ROW Usage Fees Schedule including fees for Small Cell facility Rights of Way usage.

**Background**

Small Cell management and deployment within Oregon City Public Rights-of-Way (ROW) was introduced during the September 19, 2018, City Commission meeting. At that time, staff provided an update to the establishment of standards and fees for reasonable management of Small Cell facilities within Oregon City ROW.

Under the direction of the City Commission, City staff invested time into understanding industry needs, federal regulations, and Oregon City historical data compiled regarding utility use of City rights-of-way. City staff found the following information.

Industry projects a 50% increase in deployment of Small Cell facilities between 2018-2020. An estimation of 40% of telecommunication providers will have 100-350 small cells per square mile by 2020. The use of data processing and wireless communication devices has skyrocketed. Industry projects a \$275 billion investment in the nation's 5G network capabilities.

The telecommunication industry, a changing/advancing utility, has become a vital part of building prosperous communities. The demand for data processing capacity has led industry to seek solutions in Small Cell deployments along Oregon City's ROW. Pursuant to the changing demands of the telecommunication industry, the Federal Communication Commission published new rulings on January 14, 2019, setting guidelines for municipality public rights-of-way usage fees.

Oregon City staff has reviewed the industry needs and the federal regulations in a reasonable look at the impact of the utility industries within Oregon City ROW. Staff has reviewed the revenue, permitting, expenses, and resources allocated to the rights-of-way management and facility deployment over a five-year period.

Resolution 19-02 includes a new Usage Fee Schedule that retains the various utility service usage fees as previously established and establishes the Small Cell Facility usage fees as proposed in this recommended action. The Small Cell usage fee is \$1,850 per year per attachment. Staff evaluated and determined the usage fee to be a reasonable approximation of impacts on City resources and the needs of the growing, changing industries within Oregon City Public Rights-of-Way.

The attached Rights-of-Way Usage Fee Schedule (Exhibit A) outlines the changes in the usage fees for Small Cell deployments in City Public Rights-of-Way. In addition to the annual Small Cell ROW attachment fee, Resolution 19-05, also being presented for consideration by the City Commission, includes one-time construction permit fees to cover the cost of deployment of Small Cell installations. Oregon City staff recommends the adoption of Resolution 19-02 in compliance with both State and Federal regulations for Small Cell uses within the public rights of way.

**BUDGET IMPACT:**

Amount: Varies annually depending on industry deployment of Small Cell in Oregon City; General Fund and Engineering Fund.

**RESOLUTION NO. 19-02**

---

**AMEND THE RIGHTS-OF-WAY USAGE FEE RATES WITHIN THE CITY OF OREGON CITY**

**WHEREAS**, the City of Oregon City has statutory and constitutional authority to manage its Rights-of-Way (“ROW”) in accordance with Oregon Revised Statutes 221.510 Municipal Regulation of Telecommunication Carriers, and

**WHEREAS**, on November 6, 2013, the City enacted Ordinance No. 13-1014 which established Chapter 13.34 of the Oregon City Municipal Code, Utility Facilities in Public Rights-of-Way, and exercised the City’s authority to secure compensation to the City and its residents for utility use of the ROW (“Ordinance”), and

**WHEREAS**, on November 20, 2013, the City adopted Resolution No. 13-26, which set ROW registration, licensing, and usage fees for various utility use of the City’s ROW including usage rates for electric utilities, natural gas utilities, communication utilities, cable utilities, water utilities, sanitary utilities, storm utilities and attachments; and

**WHEREAS**, on November 19, 2014, the City adopted Resolution No. 14-30, amending Resolution 13-26 Rights of Way usage rates for electric and natural gas utilities; and

**WHEREAS**, on January 14, 2019, the regulatory rulings of the Federal Communication Commission became effective regarding the City’s authority to regulate Small Cell facilities in the ROW. These rulings established state and local government authority to adopt usage fees and aesthetic requirements for Small Cell deployment and management as a reasonable approximation of the cost for processing applications and managing deployments in the right-of-way; and

**WHEREAS**, City staff seeks to clarify the ROW Usage Fee by consolidating Resolution No.13-26 and Resolution No. 14-30; affirming established ROW usage fee rates per utility service sector; and reducing attachment fees reflecting Federal Communication Commission ruling of reasonable approximation of deployment and management of Small Cell attachments.

**NOW, THEREFORE, OREGON CITY RESOLVES AS FOLLOWS:**

**Replace usage fee rates identified in Resolution No. 13-26 and Resolution No. 14-30 as follows:**

**Section 1.** The City Commission of Oregon City authorizes the Rights of Way Usage Fee Schedule as attached pursuant to OCMC 13.34 and OCMC 13.24;

**Section 2.** Rights of Way usage minimum fees shall increase annually at 3% from minimum fees established and increased since January 1, 2015. Rights of Way annual attachment fees proposed in Resolution 19-02 shall increase 3% annually on January 1, 2020.

**Section 3.** This Resolution shall be in full force and effect upon its adoption by the Commission.

Approved and adopted at a regular meeting of the City Commission held on the 20<sup>th</sup> day of February 2019.

---

Dan Holiday, Mayor

Attested to this 20<sup>th</sup> day of February 2019:

Approved as to legal sufficiency:

---

Kattie Riggs, City Recorder

---

City Attorney



# City of Oregon City

## Public Works

### Rights of Way Usage Fee Schedule

February 20, 2019

Registration		
Utility Service	Rate	Fee Description
License	5 year Term	\$50
Registration	Annual	\$50

Annual Usage Fee		
Utility Service	Rate	Fee Description
Electric	Annual	5% of Gross Revenue
Natural Gas	Annual	5% of Gross Revenue
Communications	Annual	5% of Gross Revenue
Cable	Annual	5% of Gross Revenue
Water	Annual	6% of Gross Revenue
Sanitary Sewer	Annual	6% of Gross Revenue
Storm Sewer	Annual	6% of Gross Revenue

Attachment Fee		
Utility Service	Rate	Fee Description
Small Cell Facility Minor Small Cell Facility Major (installations)	Annual/Per facility	\$1,850
Attachment (non-small cell attachments)	Annual/Per facility	\$5,000

Minimum Annual Licensee Fees	
Linear Feet of Utility Facilities in Public	Minimum Annual Fee
Up to 5,000	\$5,796.37
5,001 to 10,000	\$8,694.56
10,001 to 20,000	\$11,592.74
More than 20,000	\$17,389.11

\*For any Utility Operator that does not earn gross revenue within the City: \$2.75 per foot of Utility Facilities in the Right of Way (as these terms are defined in OCMC Chapter 13.34.050).

“Gross revenue” means any and all revenue, of any kind, nature or form, without deduction for expense, less net uncollectible, derived from the operation of utility facilities in the City, subject to all applicable limitations in federal or state law.

Utility Providers shall comply with OCMC Chapter 13.34 Utility Facilities Within Public Rights of Way and Chapter 13.24 Telecommunication Facilities.

**RESOLUTION NO. 13-26**

---

**A RESOLUTION TO ESTABLISH THE RIGHT OF WAY USAGE FEE RATES  
AND APPLICATION FEES FOR PUBLIC UTILITIES OPERATING WITHIN  
THE CITY OF OREGON CITY RIGHTS OF WAY**

**OREGON CITY MAKES THE FOLLOWING FINDINGS:**

**WHEREAS**, the City of Oregon City has statutory and Constitutional authority to manage its Right of Way ("ROW"), and

**WHEREAS**, on November 6, 2013, the City enacted Ordinance No. 13-1014 which establishes Chapter 13.34 of the Oregon City Municipal Code, Utility Facilities in Public Rights Of Way, and exercises the City's authority to secure compensation to the City and its residents for utility use of the ROW ("Ordinance"), and

**WHEREAS**, the Ordinance establishes certain application fees to cover the City's costs related to such applications; and

**WHEREAS**, the City finds that it is in the public interest to establish the rates and fees set forth below.

**NOW, THEREFORE, OREGON CITY RESOLVES AS FOLLOWS:**

**Section 1.** The Registration Fee established in OCMC 13.34.060.D shall be \$50.00:

**Section 2.** The License Application Fee established in OCMC 13.34.070.C shall be \$50.00.

**Section 3.** The rates of the Right of Way Usage Fee established in OCMC 13.34.130.A shall be as follows, to the extent permitted under applicable law:

**Annual Fee Rate:**

<b>UTILITY SERVICE</b>	<b>ROW USAGE FEE RATE</b>
Electric	3.5% of gross revenue
Natural Gas	3.0% of gross revenue
Communications	5% of gross revenue; For any Utility Operator that does not earn gross revenue within the City: \$2.75 per foot of Utility Facilities in the Right of Way (as these terms are defined OCMC 13.34.050)
Cable	5% of gross revenue
Water	6% of gross revenue
Sanitary Sewer	6% of gross revenue
Storm Sewer	6% of gross revenue



"Gross revenue" means any and all revenue, of any kind, nature or form, without deduction for expense, less net uncollectibles, derived from the operation of utility facilities in the City, subject to all applicable limitations in federal or state law.

**Minimum Annual Fee:**

A utility operator shall pay the Minimum Annual Fee set forth below, based on the total linear feet of Utility Facilities in the Right of Way (as these terms are defined OCMC 13.34.050), instead of the Annual Fee Rate set forth above if the Minimum Annual Fee is greater than the fee calculated using the Annual Fee Rate.

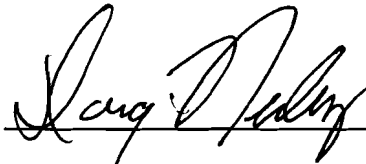
TOTAL LINEAR FEET OF UTILITY FACILITIES IN RIGHT OF WAY	MINIMUM ANNUAL FEE
Up to 5,000	\$5,000.00
5,001 to 10,000	\$7,500.00
10,001 to 20,000	\$10,000.00
More than 20,000	\$15,000.00

The Minimum Annual Fee set forth above shall increase 3% annually on January 1<sup>st</sup> of each year beginning January 1, 2015.

**Section 4.** The rate of the Attachment Fee established in OCMC 13.34.130.B shall be \$5,000 per attachment. The attachment fee shall increase 3% annually on January 1<sup>st</sup> of each year beginning January 1, 2015.

**Section 5.** This Resolution shall be in full force and effect upon its adoption by the Commission.

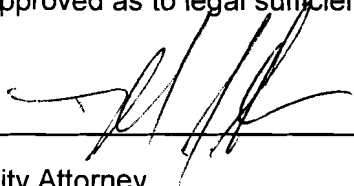
Approved and adopted at a regular meeting of the City Commission held on the 20th day of November 2013.

  
\_\_\_\_\_  
DOUG NEELEY, Mayor

Attested to this 20th day of November 2013.

Approved as to legal sufficiency:

  
\_\_\_\_\_  
Nancy Ide, City Recorder

  
\_\_\_\_\_  
City Attorney

**RESOLUTION NO. 14-30**

---

**A RESOLUTION TO AMEND THE RIGHT OF WAY USAGE FEE RATES  
FOR CERTAIN PUBLIC UTILITIES OPERATING WITHIN  
THE CITY OF OREGON CITY RIGHTS OF WAY**

**OREGON CITY MAKES THE FOLLOWING FINDINGS:**

**WHEREAS**, the City of Oregon City has statutory and constitutional authority to manage its Right of Way ("ROW"), and

**WHEREAS**, on November 6, 2013, the City enacted Ordinance No. 13-1014 which establishes Chapter 13.34 of the Oregon City Municipal Code, Utility Facilities in Public Rights Of Way, and exercises the City's authority to secure compensation to the City and its residents for utility use of the ROW ("Ordinance"), and

**WHEREAS**, on November 20, 2013, the City adopted Resolution No. 13-26, which set ROW usage fees for various utilities use of the City's ROW, including rates for electric utilities and natural gas utilities; and

**WHEREAS**, the City wishes to change the ROW of usage fees for certain utilities, in particular, electric utilities and natural gas utilities.

**NOW, THEREFORE, OREGON CITY RESOLVES AS FOLLOWS:**

**Section 1.** The ROW usage fee rate for electric utilities shall rise from 3.5% of gross revenue to 5.0 percent of gross revenue.

**Section 2.** The ROW usage fee rate for natural gas utilities shall rise from 3.0% of gross revenue to 5.0 percent of gross revenue.

**Section 3.** The ROW usage fee rates for all utilities other than the utilities identified in Sections 1 and 2 of this resolution shall remain the same as previously established in Oregon City Resolution No. 13-26. This resolution makes no other changes to any other portion of Resolution No. 13-26.

**Section 4.** The rates of the Right of Way Usage Fee, as amended by this resolution shall be as follows:

**Annual Fee Rate:**

<b>UTILITY SERVICE</b>	<b>ROW USAGE FEE RATE</b>
Electric	5% of gross revenue
Natural Gas	5% of gross revenue
Communications	5% of gross revenue; For any Utility Operator that does not earn gross revenue within the City: \$2.75 per foot of Utility Facilities in the Right of Way (as these terms are defined OCMC 13.34.050)
Cable	5% of gross revenue
Water	6% of gross revenue
Sanitary Sewer	6% of gross revenue
Storm Sewer	6% of gross revenue

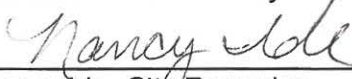
"Gross revenue" means any and all revenue, of any kind, nature or form, without deduction for expense, less net uncollectibles, derived from the operation of utility facilities in the City, subject to all applicable limitations in federal or state law.

**Section 5.** The revised ROW usage fee rate for electric utilities and natural gas utilities shall take effect 90 days from the adoption of this resolution.

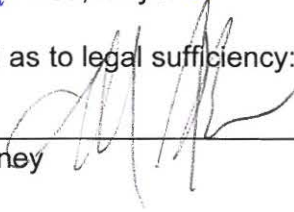
Approved and adopted at a regular meeting of the City Commission held on the 19<sup>th</sup> day of November 2014.

  
\_\_\_\_\_  
DOUG NEELEY, Mayor

Attested to this 19<sup>th</sup> day of November 2014:

  
\_\_\_\_\_  
Nancy Ide, City Recorder

Approved as to legal sufficiency:

  
\_\_\_\_\_  
City Attorney



Resolution No. 19-05 Modifying Public Works Engineering Fees Schedule and Amending  
Resolution No. 18-16

**RECOMMENDED ACTION (Motion):**

Adopt Public Works Engineering Fees Schedule with additional new fees and amending  
Resolution No. 18-16

625 Center Street | Oregon City OR 97045  
Ph (503) 657-0891 | Fax (503) 657-7892

**BACKGROUND:**

The City adopted Resolution No. 18-16 establishing a schedule of permit fees for Public Works Engineering which included all engineering fees previously adopted by resolutions, and established a consistent method to adjust these fees on an annual basis to account for inflation. The previously adopted Resolution No. 18-16 and other resolutions established fees that are necessary to defray the Public Works Engineering Division’s actual operational costs.

Staff recommends to modify the Public Works Engineering Fees schedule, Exhibit A, which includes all engineering fees previously adopted by resolutions; proposes additional fees as described in Exhibit B; and continues to include an adjustment provision to adjust these fees on an annual basis to account for inflation.

Staff recommends adopting this resolution to recover, to the extent practicable, the actual cost of providing Public Works Engineering Services to facilitate the issuing of permits for construction of various public and private infrastructure, including the private Small Cell Facility infrastructure, per the City of Oregon City standards.

With adoption of Exhibit A, the Public Works Engineering Fees schedule shall become effective February 20, 2019.

**BUDGET IMPACT:**

Amount: N/A  
FY(s): N/A  
Funding Source: N/A

RESOLUTION NO. 19-05

**A RESOLUTION MODIFYING THE PUBLIC WORKS ENGINEERING FEES SCHEDULE AND AMENDING RESOLUTION NO. 18-16**

**WHEREAS**, the City of Oregon City adopted Resolution No. 18-16 establishing a schedule of permit fees for Public Works Engineering which included all engineering fees previously adopted by resolutions, and established a consistent method to adjust these fees on an annual basis to account for inflation; and

**WHEREAS**, the City of Oregon City has adopted Resolution No. 18-16 and other resolutions establishing fees that are necessary to defray the Public Works Engineering Division’s actual operational costs; and

**WHEREAS**, the City of Oregon City desires to modify the Public Works Engineering Fees schedule, Exhibit A, which includes all engineering fees previously adopted by resolutions; proposes additional fees as described in Exhibit B, Fee Explanation; and continues to include an annual adjustment to adjust these fees to account for inflation; and

**WHEREAS**, the City of Oregon City, City Commission resolves that the City should recover to the extent practicable, the actual cost of providing Public Works Engineering Services to facilitate the issuing of permits for construction of various public and private infrastructure per the City of Oregon City standards.

**NOW, THEREFORE, THE CITY OF OREGON CITY RESOLVES AS FOLLOWS:**

**Section 1.** The City hereby adopts Exhibit A, Public Works Engineering Fees schedule, to become effective February 20, 2019, with the additional new fees as described in Exhibit B, Fee Explanation.

**Section 2.** The Public Works Engineering Fees Schedule, Exhibit A, shall continue to be adjusted annually to account for inflation on January 1<sup>st</sup>. The adjustment to account for inflation shall be based on changes in the CPI-W for the Pacific Division of the West Region.

Approved and adopted at a regular meeting of the City Commission held on the 20<sup>th</sup> day of February 2019.

\_\_\_\_\_  
DAN HOLLADAY, Mayor

Attested to this 20<sup>th</sup> day of February, 2019:

Approved as to legal sufficiency:

\_\_\_\_\_  
Kattie Riggs, City Recorder

\_\_\_\_\_  
City Attorney

Attachments: Exhibit A - Public Works Engineering Fees Schedule; Exhibit B - Description of Additional Fees



# City of Oregon City

## Public Works

### Engineering Fee Schedule

Proposed  
Effective

January 1, 2019

February 20, 2019

Fee/Engineering Service/Permit Type	Fee Description	Rate	Fee
<b>Erosion &amp; Sediment Control SFR Permit</b> (Application, Plan Review, Inspection)	Regular	Flat	\$262
	Reduced w/ Certification	Flat	\$201
<b>Erosion &amp; Sediment Control Non-SFR Permit</b> (Application, Plan Review, Inspection)	Regular (1 acre or less)	Flat	\$695
	Reduced w/ Certification (1 acre or less)	Flat	\$385
	PLUS, each additional acre or fraction thereof	Per Unit	\$123
<b>Engineering Services for Building Permits</b>	Engineering Site Plan Review for Building Permit	Flat	\$82
	Inspection for Public Sidewalk and Driveway Approach for single family subdivision lot Building Permit	Flat	\$162
<b>Public Utility Service Permit</b>	Application for Public Water Service Line, Sanitary Sewer or Stormwater Service Laterals	Flat	\$52
	Plan Review	Flat	\$111
	Utility Inspection	Flat	\$162
	Pavement Cut & Restoration Inspection	Flat	\$27
	Utility Permit Sidewalk Repair Inspection	Flat	\$27
	Utility Permit Driveway Approach Repair Inspection	Flat	\$27
	Utility Re-Inspection	Flat	\$82
	Sanitary Sewer Service Lateral Launch Video Inspection by City per Customer request	Flat	\$228
	Sanitary Sewer Service Tap Video Inspection at Public Main Line Connection	Flat	\$228
<b>Public Street Driveway Approach Permit</b>	Application	Flat	\$52
	Plan Review	Flat	\$111
	Inspection	Flat	\$162
	Re-Inspection	Flat	\$82
<b>Public Street Sidewalk Permit</b>	Application and Plan Review	Flat	\$52
	Inspection	Flat	\$111
	Re-Inspection	Flat	\$82
<b>Public Street Sidewalk Group Permit</b>	Application (one contractor for multiple sidewalk panel replacements along one block of street frontage, block length shall be a maximum length of 500 feet)	Flat	\$52
	Plan Review	Flat	\$111
	Inspection	Flat	\$162
	Re-Inspection	Flat	\$82



Fee/Engineering Service/Permit Type	Fee Description	Rate	Fee
<b>Grading Permit</b> (Filling, Grading, Excavating, including temporary material stockpile)	Application, Plan Review and Site Monitoring (*Engineer's Final Cost Estimate when applicable)	Flat Fee Plus Percentage	\$284 plus 2.5% of cost estimate*
<b>Public Improvements Development Engineering Services</b> (Street, Water, Sanitary Sewer, Stormwater)	5% of Engineer's Final Cost Estimate (2.5% <b>Technical Plan Review Fee</b> for First through Third <b>Technical Plan Reviews</b> plus 2.5% Inspection Fee)	Percentage	5% of cost estimate
	Additional <b>Technical Plan Review Fee</b> for every plan review beyond the third <b>Technical Plan Review</b> . <b>0.5% added to 2.5% Technical Plan Review Fee for each additional Plan Review after the Third Plan Review</b>	Percentage	0.5% of cost estimate
<b>Geotechnical Review</b>	For Waiver Review Process	Flat	\$642
	City Peer Review of Geotechnical Documents (Reports, Plans, Other)	Actual Cost	Actual Peer Review cost
<b>Stormwater Management Peer Review</b>	City Peer Review of Engineered Method to Calculate Size of Stormwater Management Facilities	Actual Cost	Actual Peer Review cost
<b>Temporary Obstruction in ROW Permit</b>	Application and Plan Review	Flat	\$27
	Inspection	Flat	\$27
<b>Long Term Obstruction in ROW with Revocable ROW Permit</b>	Application	Flat	\$52
	Plan Review	Flat	\$111
	City Resolution and Document Process	Flat	\$217
	Revocable ROW Permit	Flat	\$162
City Resolution and Document Processing	City Resolution and Document Processing	Flat	\$217
Document Processing and Recording Fee	Record one document at one time	Flat	\$296
	record each additional document at same time with first document	Flat	\$168
<b>Plat Review</b>	Partition	Flat	\$560
	Subdivision	Flat	\$784
	Planned Development	Flat	\$2,034
<b>Vacation of Public Rights-of-Way or Public Easements</b>	Public Right-of-Way	Flat	\$1,081
	Public Easement	Flat	\$638
<b>Special Event ROW Permit</b>	Application and Review	Flat	\$162
	<b>ROW Inspection for use of ROW during Special Event</b>	<b>Flat</b>	<b>\$162</b>
<b>Renewable ROW Permit</b> (outdoor seating, monitoring wells, other)	Application, Review and Inspection	Flat	\$162
<b>ROW Permit General - Minor</b> - work outside of travel ways and no vehicular traffic control	<b>Application, Review and Inspection</b>	<b>Flat</b>	<b>\$162</b>
<b>ROW Permit General - Moderate</b> work within travel ways and not requiring Technical Plan Review	<b>Application and Plan Review</b>	<b>Flat</b>	<b>\$162</b>
	<b>Inspection</b>	<b>Flat</b>	<b>\$162</b>

Fee/Engineering Service/Permit Type	Fee Description	Rate	Fee
<b>ROW Permit General - Major -</b> work in ROW requiring Technical Plan Review	Application, Technical Plan Review and ROW Inspection is Flat Fee plus 2.5% of Engineer's Final Cost Estimate	Flat Fee Plus Percentage	\$284 plus 2.5% of cost estimate
<b>Small Cell Facility - Minor Installation</b> (on Existing Third Party Utility Structure)	Application, Review and Inspection	Flat	\$750
<b>Small Cell Facility - Major Installation</b> (on City Utility Structure or Proposed New Structure) (requires Technical Plan Review)	Application, Technical Plan Review and Inspection - Flat Fee plus actual cost over Flat Fee plus 15% Administrative Fee	Flat Fee Plus Actual Cost over Flat Fee Plus Administrative Cost Percentage	\$750 plus actual cost over Flat Fee Plus Administrative Fee
<b>ROW Licensee Major Installation -</b> Fiber, Cable, Natural Gas, Electric, Telecommunications (does not include Small Cell Facility) requires Technical Plan Review	5% of Engineer's Final Cost Estimate (2.5% Technical Plan Review Fee for First through Third Technical Plan Reviews plus 2.5% Inspection Fee)	Percentage	5% of cost estimate
	Additional Technical Plan Review Fee for every plan review beyond the third Technical Plan Review. 0.5% added to 2.5% Technical Plan Review Fee for each additional Plan Review after the Third Plan Review	Percentage	0.5% of cost estimate
<b>Film Permit</b>	ROW Inspection for use of ROW during filming	Flat	\$162
	Usage fee for using City facilities' sanitary sewer during filming	Flat	\$35
	Usage fee for using City facilities' water during filming	Flat	\$35



## Exhibit B: Fee Explanation for Public Works Engineering Fees, Resolution 19-05

The following provides brief explanation of proposed changes to the Public Works Engineering Fees.

Currently, the Public Works Engineering Development Services Group provides plan review services for Building Permits and Engineering Construction Services Group provides inspection services for public sidewalk and driveway approach for single family subdivision Building Permits.

- For Building Permits requiring the following Engineering plan review and/or inspection, then these fees apply:
  - \$82 for Engineering Site Plan Review Fee for Building Permit
  - \$162 for Inspection Fee for Public Sidewalk and Driveway Approach for single family subdivision lot Building Permit

Currently, the Public Works Operations Sanitary Sewer Group provides a sanitary sewer service lateral launch video inspection service to a customer requesting this service to be provided for their sanitary sewer service lateral.

- For Public Utility Service Permits that a customer requests the services from the City for a lateral launch video inspection, then this fee would apply:
  - \$228 video inspection fee for Sanitary Sewer Service Lateral Launch Video Inspection by City per Customer request

Clarifications were made for the Public Improvements Development Engineering Services with adding some clarification language to the existing fee description (shown on Exhibit A in red text).

Currently there are Special Event Permits issued for events that require Public Works Engineering Construction Services to make Right-of-Way (ROW) inspections because the special event is using the ROW.

- For Special Event Permits that include use of the ROW that requires a ROW inspection, then this fee would apply:
  - \$162 for ROW Inspection for use of ROW during Special Event

Currently, the Public Works Engineering Development Services and Construction Services Groups provide plan review and inspection services for ROW encroachments and/or work in the ROW that is not for construction of public infrastructure or permitted private infrastructure, and therefore is permitted as "General ROW" work that is identified as minor, moderate, or major depending on the proposed work in the ROW, the level of impact to the ROW, and the level of plan review and inspection services needed for the "General ROW" permit.

- For proposed projects in the ROW that are categorized as "General," then a determination is made for whether the permit is minor, moderate, or major as follows and will have the following fees applied as follows:

- ROW Permit General – Minor: work outside of travel ways and no vehicular traffic control; Flat Fee of \$162 for Application, Review, and Inspection
- ROW Permit General – Moderate: work within travel ways and not requiring Technical Plan Review; Flat Fee of \$162 for Application and Plan Review and Flat Fee of \$162 for Inspection
- ROW Permit General – Major: work in ROW requiring Technical Plan Review; Application, Technical Plan Review and ROW Inspection is Flat Fee of \$284 plus 2.5% of Engineer's Final Cost Estimate for work in ROW

Currently, the Public Works Engineering Development Services and Construction Services Groups propose to provide plan review and inspection services for construction of private Small Cell Facilities in the ROW. “Small Cell Facility” work is identified as minor or major depending on the proposed “Small Cell Facility” work in the ROW, and the level of plan review and inspection services needed for the “Small Cell Facility” permit.

- For proposed “Small Cell Facility” projects in the ROW, the following determines whether the permit is minor or major and the applicable fees applied:
  - For Small Cell Facility - Minor Installation (on Existing Third Party Utility Structure): Flat Fee of \$750 applies for Application, Plan Review and Inspection
  - For Small Cell Facility - Major Installation (on City Utility Structure or Proposed New Structure) (requires Technical Plan Review): Fee for Application, Technical Plan Review and Inspection includes the Flat Fee of \$750 plus actual cost over Flat Fee of \$750 plus 15% Administrative Fee

Currently, the Public Works Engineering Development Services and Construction Services Groups provide plan review and inspection services for construction of private ROW Licensee infrastructure in the ROW. “Private ROW Licensee infrastructure” work is identified as minor with currently no fee for a “minor” permit, or as major work in the ROW which requires a higher level of Technical Plan Review and inspection services for construction of the “Private ROW Licensee infrastructure.”

- For major “Private ROW Licensee infrastructure” projects for Fiber, Cable, Natural Gas, Electric, Telecommunications (does not include Small Cell Facility) that are in the ROW and require a high level of technical plan review and inspection services the following fees apply:
  - 5% of Engineer's Final Cost Estimate (2.5% Technical Plan Review Fee for First through Third Technical Plan Reviews plus 2.5% Inspection Fee)
  - Additional Technical Plan Review Fee for every plan review beyond the third Technical Plan Review. 0.5% added to 2.5% Technical Plan Review Fee for each additional Plan Review after the Third Plan Review

Currently, the Public Works Engineering Development Services and Construction Services Groups provide plan review and inspection services for Film Permits when the ROW and/or City facilities’ sanitary sewer and/or water are used during filming.

- For Film Permits when there is usage of the ROW, City facilities’ sanitary sewer and/or water, then the following fees shall apply:
  - Flat fee of \$162 for ROW Inspection for use of ROW during filming
  - Flat fee of \$35 for Usage fee for using City facilities' sanitary sewer during filming
  - Flat fee of \$35 for Usage fee for using City facilities' water during filming

**These fees shall be adjusted annually for inflation on January 1 as stated in the resolution and rounded to the nearest dollar.**



# Small Wireless Facilities Model Design Guidelines

JUNE 2020

This model was produced in coordination with:



### **DISCLAIMER**

Any model document provided by the League of Oregon Cities (LOC) is intended to be used as a starting point in an individual city's development of its own documents. Each city is unique, and any adopted document or policy should be individually tailored to meet a city's unique needs. Furthermore, this model is not intended to be a substitute for legal advice. Cities should consult with their city attorney before adopting any small wireless facility policies to ensure that they comply with all aspects of federal, state, and local law.

## Table of Contents

FOREWORD .....	1
SMALL WIRELESS FACILITIES DESIGN STANDARDS .....	3
ACKNOWLEDGEMENTS .....	12
APPENDICES .....	13
<i>APPENDIX A – SHOTCLOCK INFORMATION</i> .....	13
<i>APPENDIX B – CODE OF FEDERAL REGULATIONS (CFR) CITED THROUGHOUT DOCUMENT</i>	15

## Foreword

### Background

On January 31, 2017, Federal Communications Commission (“FCC”) Chairman Ajit Pai established a Broadband Deployment Advisory Committee (“BDAC”), which he tasked with making recommendations to the FCC on ways to accelerate the deployment of broadband by reducing or removing regulatory barriers to infrastructure investment. On September 27, 2018, the FCC released a Declaratory Ruling and Third Report and Order ([FCC 18-133](#), referred throughout the document as “Small Cell Order” or “FCC Order”) that significantly limits local authority over small wireless infrastructure deployment and fees for use of the rights-of-way (ROW). The FCC Order took effect January 14, 2019. However, the requirements regarding aesthetics did not take effect until April 15, 2019. Under the FCC Order aesthetic or design standards must be: (1) reasonable; (2) no more burdensome than those applied to other types of infrastructure deployments; (3) objective; and (4) published in advance. The FCC Order also defines the size limitations for small wireless facilities (allowing antennas of up to 3 cubic feet each, with additional equipment not to exceed 28 cubic feet), and specifies that such facilities may not result in human exposure to radiofrequency radiation in excess of applicable standards in the FCC’s rules (federal law preempts local regulation of RF emissions). “Small wireless facilities” are sometimes also called “small cells.”

### LOC Model Small Wireless Facilities Design Standard

In coordination with many cities,<sup>1</sup> representatives from Verizon, AT&T, T-Mobile, and the LOC met from January 2019 to May 2020 to discuss and craft a model code and model design standards relating to small wireless facilities while there is pending litigation<sup>2</sup> on the FCC Order. The model code and model design standards are intended to be paired together.

There is no single design standard that will work for every jurisdiction. As such, the LOC’s model design standard is intended as a roadmap to assist local governments in adopting their own design standard. While example language is included in some sections, the LOC does not intend to suggest these examples could work for every jurisdiction. In some instances, the local government may need to issue a deviation to the design standards when it would be technically infeasible for the applicant to comply. The deviation process is provided in Section I of these model standards and is intended to occur within the “shot clock”<sup>3</sup> – the time frame in which the state or local government should act on a request for authorization to place, construct, or modify personal wireless service facilities, as defined by the FCC. However, to the extent that the local government cannot reasonably act on the application within the shot clock, the parties are encouraged to seek a tolling agreement to allow the applicant to vet reasonable design alternatives and the local government to complete its review. Local governments cannot require a tolling agreement as a condition of a deviation.

---

<sup>1</sup> See “Acknowledgments” section for full list of participants.

<sup>2</sup> In October 2018, the LOC in coordination with other municipalities and municipal leagues filed suit against the FCC in the United States Court of Appeals for the Ninth Circuit.

<sup>3</sup> See Appendix A

The LOC also recognizes there are many ways to structure a design standard. The appropriate structure will vary by jurisdiction. For purposes of this model, the LOC opted to approach designs by type of pole and deployment. The model is intended to provide a general framework and thus is drafted as an outline of provisions jurisdictions may want to include in their final design standard. In many cases example language is provided to help illustrate the issues to be addressed. However, the intent is to allow each jurisdiction to draft the substantive provisions that best reflect local needs and interests. The LOC recommends that jurisdictions that own poles or other structures in the rights-of-way establish a clear design standard. The circumstances of each municipality may, and likely will, require modifications to the framework and/or example language of this model design standard.

### **Additional Considerations**

The LOC model design standards only applies to small wireless facilities. Municipalities should review their existing ordinances, standards and policies to determine if this framework is appropriate. Municipalities may want to consider whether it would be preferable to adopt a utility-neutral standard covering all utilities and communications providers, which would provide one set of “rules” for the design of the public rights-of-way. Differences in policy choices and existing standards, among other things, may impact the decision in how to proceed. It is recommended that cities consult their attorney, ROW specialists, engineers, master plans, comprehensive plans, goals and/or wireless providers before final adoption of standards. Cities may choose to adopt design standards administratively or in code.

### **Understanding the Organization of the Model Design Standards**

As stated above, the model is best described as an outline or roadmap to assist municipalities in drafting the appropriate standards for their community. The model includes example language to illustrate the intent of the section. The example language, or a variation thereof, may be appropriate for final adoption in some jurisdictions.

Finally, there may be additional notes or issues for consideration within the subsections of the model, which are [bracketed] and in ALL CAPS. Again, these notes are intended as guidance for municipal drafters, not for adoption in a final ordinance.

## Small Wireless Facility Design Standards

[GIVEN THAT THE TECHNICAL NEEDS FOR EACH OPERATOR MAY VARY, JURISDICTIONS ARE ENCOURAGED TO ADOPT DESIGN STANDARDS BY CITY COUNCIL RESOLUTION AND/OR ADMINISTRATIVELY BY THE CITY MANAGER OR OTHER OFFICIAL. THIS WAY, CITIES WOULD BE ABLE TO REACT QUICKLY AND AMEND THE STANDARDS IN RESPONSE TO CHANGES IN LAW AND TECHNOLOGY. CITIES SHOULD NOTE THAT THIS NIMBLER APPROACH IS POSSIBLE ONLY IF THE REGULATIONS FOR SMALL WIRELESS FACILITIES IN THE PUBLIC RIGHTS-OF-WAY ARE LOCATED OUTSIDE OF THE LAND DEVELOPMENT CODE.]

### A. Definitions

“**Antenna**” means the same as defined in 47 C.F.R. § 1.6002(b), as may be amended or superseded. The term includes an apparatus designed for the purpose of emitting radio frequencies (RF) to be operated or operating from a fixed location pursuant to Federal Communications Commission authorization, for the provision of personal wireless service and any commingled information services. For purposes of this definition, the term antenna does not include an unintentional radiator, mobile station, or device authorized under [47 C.F.R. Part 15](#).

“**Antenna Equipment**” means the same as defined 47 C.F.R. § 1.6002(c), as may be amended or superseded, which defines the term to mean equipment, switches, wiring, cabling, power sources, shelters or cabinets associated with an antenna, located at the same fixed location as the antenna, and, when collocated on a structure, is mounted or installed at the same time as such antenna.

“**Antenna Facility**” means the same as defined in 47 C.F.R. § 1.6002(d), as may be amended or superseded, which defines the term to mean an antenna and associated antenna equipment.

“**Applicable codes**” means uniform building, fire, safety, electrical, plumbing, or mechanical codes adopted by a recognized national code organization or state or local amendments to those codes that are of general application and consistent with state and federal law.

“**Applicant**” means any person who submits an application as or on behalf of a wireless provider.

“**Application**” means requests submitted by an applicant (i) for permission to collocate small wireless facilities; or (ii) to approve the installation, modification or replacement of a structure on which to collocate a small wireless facility in the rights-of-way, where required.

“**Collocate**” means the same as defined in 47 C.F.R. § 1.6002(g), as may be amended or superseded, which defines that term to mean (1) mounting or installing an antenna facility on a preexisting structure, and/or (2) modifying a structure for the purpose of mounting or installing an antenna facility on that structure. “Collocation” has a corresponding meaning.



“**Day**” means calendar day. For purposes of the FCC shot clock, a terminal day that falls on a holiday or weekend shall be deemed to be the next immediate business day.

“**Historic District**” means a group of buildings, properties, or sites that are either: (1) listed in the National Register of Historic Places or formally determined eligible for listing by the Keeper of the National Register in accordance with Section VI.D.1a.i-v of the Nationwide Programmatic Agreement codified at [47 C.F.R. Part 1, Appendix C](#); or, (2) a locally designated historic district as of the effective date of this [Chapter/Section] or in a locally designated historic district existing when an application is submitted. [NOTE: THIS IS NOT MEANT TO RETROACTIVELY AFFECT SWFs ALREADY IN PLACE WHEN A NEW DISTRICT IS CREATED].

“**Person**” means an individual, corporation, limited liability company, partnership, association, trust, or other entity or organization, including the City.

“**Pole**” means a type of structure in the rights-of-way that is or may be used in whole or in part by or for wireline communications, electric distribution, lighting, traffic control, signage, or similar function, or for collocation of small wireless facilities; provided, such term does not include a tower, building or electric transmission structures.

“**Rights-of-Way**” or “**ROW**” means [INSERT A CONSISTENT DEFINITION ACROSS OTHER CODES. Example: “Right-of-way,” “rights-of-way,” “public right-of-way,” or “ROW” means and includes, but is not limited to, the space in, upon, above, along, across, over or under the public streets, roads, highways, lanes, courts, ways, alleys, boulevards, bridges, trails, paths, sidewalks, bicycle lanes, public utility easements and all other public ways or areas, including the subsurface under and air space over these areas, but does not include parks, parkland, or other City property not generally open to the public for travel.]

“**Small wireless facility**” means a facility that meets each of the following conditions per 47 C.F.R § 1.6002(l), as may be amended or superseded:

1. The proposed facilities meet one of the following height parameters:
  - a. are mounted on structures 50 feet or less in height including their antennas as defined in 47 C.F.R. Section 1.1320(d), or
  - b. are mounted on structures no more than 10 percent taller than other adjacent structures, or
  - c. do not extend existing structures on which they are located to a height of more than 50 feet or by more than 10 percent, whichever is greater.
2. Each antenna or antenna enclosure shall not exceed three cubic feet in volume.
3. The total volume of installed equipment external to the pole (including, but not limited to cabinets, vaults, boxes) shall not exceed twenty-eight (28) cubic feet. This maximum applies to all equipment installed at the time of original application and includes any equipment to be installed at a future date. Antennas and antenna

enclosures are excluded. If equipment exceeds this maximum, the installation will be redefined as a Macro site installation and all the associated standards and rates for Macro installations will be applied.

4. The facilities do not result in human exposure to radio frequency radiation in excess of the applicable safety standards specified in the FCC's Rules and Regulations [47 C.F.R. section 1.1307(b)].

“**Structure**” means the same as provided in 47 C.F.R. § 1.6002(m), as may be superseded or amended, which defines the term as a pole, tower, base station, or structure, whether or not it has an existing antenna facility, that is used or to be used for the provision of personal wireless service (whether on its own or comingled with other types of service).

[IF THE CITY HAS SPECIFIC CODES OR ORDINANCES WITH DEFINITIONS RELATING TO SWF, CONSIDER INCLUDING DEFINITIONS OR A CROSS REFERENCE HERE.]

## **B. General Requirements.**

1. [NOTE: SECTION (B)(1) IS OPTIONAL. CITIES SHOULD CONSIDER A PREFERENCE THAT IS IN LINE WITH GOALS AND CURRENT STANDARDS ON WHETHER THE CITY PREFERS GROUND-MOUNTED EQUIPMENT OR NOT.]  
Ground-mounted equipment in the right-of-way is discouraged, unless the applicant can demonstrate that pole-mounted equipment is not technically feasible, or the electric utility requires placement of equipment on the ground (such as an electric meter). If ground-mounted equipment is necessary, then the applicant shall conceal the equipment in a cabinet, in street furniture or with landscaping. [THE TERM “TECHNICALLY FEASIBLE” IS USED BY THE FCC TO DESCRIBE WHEN AESTHETIC STANDARDS MAY BE FOUND TO BE REASONABLE AND DO NOT MATERIALLY INHIBIT THE WIRELESS SERVICE PROVIDER’S ABILITY TO PROVIDE SERVICE.]
2. Replacement poles, new poles and all antenna equipment shall comply with the Americans with Disabilities Act (“ADA”), city construction and sidewalk clearance standards and city, state and federal laws and regulations in order to provide a clear and safe passage within, through and across the right-of-way. Further, the location of any replacement pole, new pole, and/or antenna equipment must comply with applicable traffic requirements, not interfere with utility or safety fixtures (e.g., fire hydrants, traffic control devices), and not adversely affect public health, safety or welfare. [NOTE: ADA REQUIREMENTS, WALKING SPACE, BOLT PATTERNS AND OTHER GENERALLY APPLICABLE CONSTRUCTION STANDARDS ALL NEED TO BE CONSIDERED. THESE CAN BE LIMITING DESIGN FACTORS.]
3. Replacement poles shall be located as near as feasible to the existing pole. The abandoned pole must be removed within \_\_\_\_\_ days. [NOTE: KEEP CONSISTENT

WITH OTHER CODES OR REQUIREMENTS ABOUT TIMEFRAMES TO REMOVE EQUIPMENT.]

4. Any replacement pole shall substantially conform to the material and design of the existing pole or adjacent poles located within the contiguous right-of-way unless a different design is requested and approved pursuant to Section I.
5. No advertising, branding or other signage is allowed unless approved by the [City designee] as a concealment technique or as follows:
  - a. Safety signage as required by applicable laws, regulations, and standards; and,
  - b. Identifying information and 24-hour emergency telephone number (such as the telephone number for the operator's network operations center) on wireless equipment in an area that is visible.

[NOTE: IDENTIFYING SIGNAGE IS USUALLY REQUIRED TO BE PLACED ON THE POLE AND READABLE FROM THE GROUND AS A MINIMUM. A CITY MAY ADD ADDITIONAL REQUIREMENTS FOR PLACEMENT. STANDARDS FOR SIGNAGE ARE ADVISORY AND MAY BE SUBJECT TO OVERSIGHT BY MULTIPLE FEDERAL AGENCIES. ALTHOUGH THE FCC'S REGULATIONS ULTIMATELY CONTROL, THE FCC'S REGULATIONS ARE GENERAL AND CAN BE UNCLEAR. AS A BEST PRACTICE, CITIES MAY WISH TO CONSULT THE MORE DETAILED RECOMMENDATIONS BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.]

6. The total volume of multiple antennas on one structure shall not exceed fifteen (15) cubic feet, unless additional antenna volume is requested and approved pursuant to Section I.
7. Antennas and antenna equipment shall not be illuminated except as required by municipal, federal or state authority, provided this shall not preclude deployment on a new or replacement street light.
8. Small wireless facilities may not displace any existing street tree or landscape features unless: (a) such displaced street tree or landscaping is replaced with native and/or drought-resistant trees, plants or other landscape features approved by the City, and (b) the applicant submits and adheres to a landscape maintenance plan or agrees to pay an appropriate in-lieu fee for the maintenance costs.

**C. Small Wireless Facilities Attached to Wooden Poles and Non-Wooden Poles with Overhead Lines.** Small wireless facilities located on wooden utility poles and non-wooden utility poles with overhead lines shall conform to the following design criteria unless a deviation is requested and approved pursuant to Section I:

[IN OREGON, PGE AND PACIFIC CORP ARE THE MOST COMMON UTILITY POLE OWNERS. BOTH HAVE THEIR OWN DESIGN STANDARDS. CITIES SHOULD

WORK WITH POLE OWNERS TO FIND WHAT WORKS BEST FOR THEIR COMMUNITIES AND COMPARE DESIGN STANDARDS.]

1. Proposed antenna and related equipment shall meet:
  - a. The City’s design standards for small wireless facilities;
  - b. The pole owner requirements; and
  - c. National Electric Safety Code (“NESC”) and National Electric Code (“NEC”) standards.
2. The pole at the proposed location may be replaced with a taller pole or extended for the purpose of accommodating a small wireless facility; provided that the replacement or extended pole, together with any small wireless facility, does not exceed 50 feet in height or 10 percent taller than adjacent poles, whichever is greater. The replacement or extended pole height may be increased if required by the pole owner, and such height increase is the minimum necessary to provide sufficient separation and/or clearance from electrical and wireline facilities. Such replacement poles may either match the approximate color and materials of the replaced pole or shall be the standard new pole used by the pole owner in the city.
3. To the extent technically feasible, antennas, equipment enclosures, and all ancillary equipment, boxes, and conduit shall match the approximate material and design of the surface of the pole or existing equipment on which they are attached, or adjacent poles located within the contiguous right-of-way. Near matches may be permitted by the City when options are limited by technical feasibility considerations, such as when high-frequency antennas cannot be placed within an opaque shroud but could be wrapped with a tinted film.
4. Antennas which are mounted on poles shall be mounted as close to the pole as technically feasible and allowed by the pole owner.
5. No antenna shall extend horizontally more than 20 inches past the outermost mounting point (where the mounting hardware connects to the antenna), unless additional antenna space is requested and approved pursuant to Section I. [NOTE: THE 20 INCH STANDARD HERE IS NOT INTENDED TO DICTATE THE SIZE OF THE ANTENNA. RATHER, TO DICTATE THE DISTANCE BETWEEN THE ANTENNA/ANTENNA EQUIPMENT AND THE POLE ITSELF.]
6. Antenna equipment, including but not limited to radios, cables, associated shrouding, disconnect boxes, meters, microwaves and conduit, which is mounted on poles shall be mounted as close to the pole as technically feasible and allowed by the pole owner.
7. Antenna equipment for small wireless facilities must be attached to the pole, unless otherwise required by the pole owner or permitted to be ground-mounted [pursuant to subsection (B)(1) above]. The equipment must be placed in an enclosure reasonably related in size to the intended purpose of the facility. [IF APPLICABLE, THE APPLICANT IS ENCOURAGED TO PLACE THE EQUIPMENT ENCLOSURE(S)]

BEHIND ANY DECORATIONS, BANNERS OR SIGNS THAT MAY BE ON THE POLE. IN APPROPRIATE CIRCUMSTANCES, CITIES MAY ALSO WISH TO CONSIDER ALLOWING ENCLOSURES THAT INCLUDE REASONABLE SPACE FOR FUTURE ADDITIONAL EQUIPMENT.]

8. All cables and wiring shall be covered by conduits and cabinets to the extent that it is technically feasible, if allowed by pole owner. The number of conduits shall be minimized to the extent technically feasible.

**D. Small Wireless Facilities Attached to Non-Wooden Light Poles and Non-Wooden Utility Poles without Overhead Utility Lines.** Small wireless facilities attached to existing or replacement non-wooden light poles and non-wooden utility poles without overhead lines shall conform to the following design criteria unless a deviation is requested and approved pursuant to Section I:

[NOTE: JURISDICTION MAY PREFER A OR B OR BOTH. ALSO, NOTE THAT THE MOST COMMON TYPES OF THESE POLES ARE DUAL USE POLES. DUAL USE POLES USUALLY REQUIRE SEPARATION INSIDE THE POLE TO KEEP THE UTILITY EQUIPMENT SEPARATE FROM NEW OR ADDED EQUIPMENT FROM SMALL WIRELESS FACILITIES. HOWEVER, THERE MAY BE STANDALONE SMALL WIRELESS FACILITIES POLES THAT MAY USE OPTION A OR B OR BOTH.]

- a. **External Equipment.** The antennas and associated equipment enclosures must be camouflaged to appear as an integral part of the pole or be mounted as close to the pole as feasible and must be reasonably related in size to the intended purpose of the facility and reasonable expansion for future frequencies and/or technologies, not to exceed the volumetric requirements described in Section A. If the equipment enclosure(s) is mounted on the exterior of the pole, the applicant is encouraged to place the equipment enclosure(s) behind any decorations, banners or signs that may be on the pole. Conduit and fiber must be fully concealed within the pole.
- b. **Concealed Equipment.** All equipment (excluding disconnect switches), conduit and fiber must be fully concealed within the pole. The antennas must be camouflaged to appear as an integral part of the pole or be mounted as close to the pole as feasible. [NOTE: AT THIS TIME, MILLIMETER WAVE ANTENNAS CANNOT BE COVERED OR SHROUDED, THEREFORE THEY MUST BE MOUNTED TO THE OUTSIDE OF THE POLE. POLES MAY HAVE TO BE SIGNIFICANTLY BIGGER IN DIAMETER IF EQUIPMENT IS CONCEALED IN OPTION B (ACCORDING TO POLE MANUFACTURES APPROX. 16-20 INCHES). OPTION A MAY REQUIRE A REPLACEMENT POLE. THE DIAMETER OF THE POLE SHOULD BE SIMILAR TO THE ORIGINAL.]

2. Any replacement pole shall substantially conform to the material and design of the existing pole or adjacent poles located within the contiguous right-of-way unless a different design is requested and approved pursuant to Section I.
3. The height of any replacement pole may not extend more than 10 feet above the height of the existing pole, unless such further height increase is required in writing by the pole owner.

**E. New Poles.** Small wireless facilities may be attached to new poles that are not replacement poles under sections C or D, installed by the wireless provider, subject to the following criteria:

[NOTE: CITIES SHOULD CHECK WITH OTHER CODES TO MAKE SURE THIS SECTION DOES NOT CONFLICT WITH PRACTICES OF NO NEW POLES OR POLE NEUTRAL PRACTICES, AND REVISE SUCH CODES AS APPROPRIATE.]

1. Antennas, antenna equipment and associated equipment enclosures (excluding disconnect switches), conduit and fiber shall be fully concealed within the structure. If such concealment is not technically feasible, or is incompatible with the pole design, then the antennas and associated equipment enclosures must be camouflaged to appear as an integral part of the structure or mounted as close to the pole as feasible, and must be reasonably related in size to the intended purpose of the facility, not to exceed the volumetric requirements in Section (A)(3). [IN APPROPRIATE CIRCUMSTANCES, CITIES MAY ALSO WISH TO CONSIDER ALLOWING ENCLOSURES THAT INCLUDE REASONABLE SPACE FOR FUTURE ADDITIONAL EQUIPMENT.]
2. To the extent technically feasible, all new poles and pole-mounted antennas and equipment shall substantially conform to the material and design of adjacent poles located within the contiguous right-of-way unless a different design is requested and approved pursuant to Section I.
3. New poles shall be no more than forty (40) feet in height unless additional height is requested and approved pursuant to Section I. [NOTE: THE FCC DEFINITION CONSIDERS A FACILITY A SMALL WIRELESS FACILITY IF IT IS 50 FT. OR UNDER. SMALL CELL TECHNOLOGY WORKS BEST WHEN DEPLOYED BETWEEN 35-45 FT. AND OTHER THAN DEPLOYMENTS ON UTILITY POLES, MOST WIRELESS PROVIDERS DO NOT NEED 50 FT TO DEPLOY. THEREFORE, IT MAY BE POSSIBLE TO HAVE NEW POLES THAT ARE NOT 50 FT.]
4. The city prefers that wireless providers install small wireless facilities on existing or replacement poles instead of installing new poles, unless the wireless provider can document that installation on an existing or replacement pole is not technically feasible or otherwise not possible (due to a lack of owner authorization, safety considerations, or other reasons acceptable to the [City designee]).



[NOTE: CITIES MAY CONSIDER THE SPACING BETWEEN POLES/DEPLOYMENTS. IT IS RECOMMENDED THAT CITIES CONSIDER DISTANCES BETWEEN NEW POLES BY AN INDIVIDUAL PROVIDER RATHER THAN ALL SWF DEPLOYMENTS. SPACING MAY VARY BECAUSE OF BUILDINGS, TOPOGRAPHY, SIZE OF INSTALLATION, ETC. THEREFORE, IT IS RECOMMENDED THAT CITIES WORK WITH PROVIDERS TO SEE WHAT IS FEASIBLE. THE FCC PROVIDES THAT MINIMUM SPACING REQUIREMENTS CANNOT PREVENT A PROVIDER FROM REPLACING ITS PREEXISTING FACILITIES OR COLLOCATING NEW EQUIPMENT ON A STRUCTURE ALREADY IN USE. ULTIMATELY, MINIMUM SPACING REQUIREMENTS WILL BE EVALUATED UNDER THE FCC'S TEST FOR AESTHETIC REGULATIONS – THAT THE REQUIREMENTS MUST BE (1) REASONABLE; (2) NO MORE BURDENSOME THAN THOSE APPLIED TO OTHER INFRASTRUCTURE DEPLOYMENTS; (3) OBJECTIVE, AND (4) PUBLISHED IN ADVANCE.]

- F. Undergrounding Requirements.** [ACCORDING TO THE FCC ORDER, UNDERGROUNDING REQUIREMENTS ARE SUBJECT TO THE SAME CRITERIA AS OTHER AESTHETIC STANDARDS.]

SOME COMPONENTS OF SMALL WIRELESS FACILITIES WILL OFTEN NOT WORK UNDERGROUND. THEREFORE, CITIES UNDERGROUNDING REQUIREMENTS OR UNDERGROUND DISTRICTS MAY CREATE AN EFFECTIVE PROHIBITION. CITIES ARE ENCOURAGED TO REVIEW CURRENT UNDERGROUNDING REQUIREMENTS AND WORK WITH THEIR ATTORNEYS/ROW SPECIALISTS TO MAKE SURE THOSE REQUIREMENTS ARE NOT IN CONFLICT WITH THE FCC ORDER.]

**G. Historic District Requirements.**

Small wireless facilities or poles to support collocation of small wireless facilities located in Historic Districts shall be designed to have a similar appearance, including material and design elements, if technically feasible, of other poles in the rights-of-way within 500 feet of the proposed installation. Any such design or concealment measures may not be considered part of the small wireless facility for purpose of the size restrictions in the definition of small wireless facility.

- H. Strand Mounted Equipment.** Strand mounted small wireless facilities are permitted, subject to the following criteria:

1. Each strand mounted antenna shall not exceed 3 cubic feet in volume, unless a deviation is requested and approved pursuant to Section I.
2. Only 2 strand mounted antennas are permitted between any two existing poles.

3. Strand mounted devices shall be placed as close as possible to the nearest pole and in no event more than five feet from the pole unless a greater distance is required by the pole owner.
4. No strand mounted device will be located in or above the portion of the roadway open to vehicular traffic.
5. Strand mounted devices must be installed with the minimum excess exterior cabling or wires (other than original strand) to meet the technological needs of the facility.

#### **I. Deviation from Design Standards.**

1. An applicant may obtain a deviation from these design standards if compliance with the standard: (a) is not technically feasible; (b) impedes the effective operation of the small wireless facility; (c) impairs a desired network performance objective; (d) conflicts with pole owner requirements; or (e) otherwise materially inhibits or limits the provision of wireless service. [NOTE: SINCE DEVIATIONS FROM THE DESIGN STANDARDS MAY LEAD TO QUESTIONS FOR WHY ONE PROVIDER WAS ALLOWED AN EXCEPTION AND ANOTHER WAS NOT, IT IS ADVISED THAT CITIES DOCUMENT REASONS FOR DEVIATIONS.]
2. When requests for deviation are sought under subsections (I)(1)(a)-(e), the request must be narrowly tailored to minimize deviation from the requirements of these design standards, and the [City designee] must find the applicant's proposed design provides similar aesthetic value when compared to strict compliance with these standards.
3. [City designee] may also allow for a deviation from these standards when it finds the applicant's proposed design provides equivalent or superior aesthetic value when compared to strict compliance with these standards.
4. The small wireless facility design approved under this Section I must meet the conditions of 47 C.F.R. Sec. 1.6002(I).
5. [City designee] will review and may approve a request for deviation to the minimum extent required to address the applicant's needs or facilitate a superior design. [NOTE: CITIES MAY RECOMMEND A PRE-MEETING WITH PROVIDERS IF A DEVIATION FROM STANDARDS IS BEING CONSIDERED. HOWEVER, PRE-MEETINGS **MUST BE OPTIONAL**. MANDATORY PRE-MEETINGS, WHETHER WITH STAFF, MEMBERS OF THE COMMUNITY OR NEIGHBORHOOD ASSOCIATIONS, WILL TRIGGER THE SHOT CLOCK TO START.]



## Acknowledgements

Alan Bar, Verizon

Alan Galloway, Davis Wright Tremaine

Andrew Bartlett, City of Hillsboro

Cindy Manheim, AT&T

Colleen DeShazer, Verizon

Dave Waffle, City of Beaverton

George Granger, AT&T

Jennifer Backhaus, City of Milwaukie

Jennifer Li, City of Portland

Ken Lyons, Wireless Policy Group (AT&T)

Kim Allen, Wireless Policy Group (Verizon)

Madison Thesing, City of Lake Oswego

Meridee Pabst, Wireless Policy Group (AT&T)

Michael Johnston, Telecom Law Firm

Pam Vaughan, City of Corvallis

Reba Crocker, ROW Consultants LLC (formerly with the cities of Milwaukie and Gladstone)

Rich Roche, Formerly with AT&T

Robert "Tripp" May III, Telecom Law Firm

Ryan Zink, City of Salem

Sambo Kirkman, City of Beaverton

Scott McClure, Formerly with the City of Monmouth

Steve Coon, Verizon

Tegan Enloe, City of Tigard

Tim Halinski, T-Mobile

## Appendix A – Shot Clock Information

*Shot clock provisions that apply to small wireless facilities are codified in 47 C.F.R. Section 1.6003, which is provided below.*

### **§1.6003 Reasonable periods of time to act on siting applications.**

(a) *Timely action required.* A siting authority that fails to act on a siting application on or before the shot clock date for the application, as defined in paragraph (e) of this section, is presumed not to have acted within a reasonable period of time.

(b) *Shot clock period.* The shot clock period for a siting application is the sum of—

(1) The number of days of the presumptively reasonable period of time for the pertinent type of application, pursuant to paragraph (c) of this section; plus

(2) The number of days of the tolling period, if any, pursuant to paragraph (d) of this section.

(c) *Presumptively reasonable periods of time—*(1) *Review periods for individual applications.* The following are the presumptively reasonable periods of time for action on applications seeking authorization for deployments in the categories set forth in paragraphs (c)(1)(i) through (iv) of this section:

(i) Review of an application to collocate a Small Wireless Facility using an existing structure: 60 days.

(ii) Review of an application to collocate a facility other than a Small Wireless Facility using an existing structure: 90 days.

(iii) Review of an application to deploy a Small Wireless Facility using a new structure: 90 days.

(iv) Review of an application to deploy a facility other than a Small Wireless Facility using a new structure: 150 days.

(2) *Batching.* (i) If a single application seeks authorization for multiple deployments, all of which fall within a category set forth in either paragraph (c)(1)(i) or (iii) of this section, then the presumptively reasonable period of time for the application as a whole is equal to that for a single deployment within that category.

(ii) If a single application seeks authorization for multiple deployments, the components of which are a mix of deployments that fall within paragraph (c)(1)(i) of this section and deployments that fall within paragraph (c)(1)(iii) of this section, then the presumptively reasonable period of time for the application as a whole is 90 days.

(iii) Siting authorities may not refuse to accept applications under paragraphs (c)(2)(i) and (ii) of this section.

(d) *Tolling period.* Unless a written agreement between the applicant and the siting authority provides otherwise, the tolling period for an application (if any) is as set forth in paragraphs (d)(1) through (3) of this section.

(1) For an initial application to deploy Small Wireless Facilities, if the siting authority notifies the applicant on or before the 10th day after submission that the application is materially incomplete, and clearly and specifically identifies the missing documents or information and the specific rule or regulation creating the

obligation to submit such documents or information, the shot clock date calculation shall restart at zero on the date on which the applicant submits all the documents and information identified by the siting authority to render the application complete.

(2) For all other initial applications, the tolling period shall be the number of days from—

(i) The day after the date when the siting authority notifies the applicant in writing that the application is materially incomplete and clearly and specifically identifies the missing documents or information that the applicant must submit to render the application complete and the specific rule or regulation creating this obligation; until

(ii) The date when the applicant submits all the documents and information identified by the siting authority to render the application complete;

(iii) But only if the notice pursuant to paragraph (d)(2)(i) of this section is effectuated on or before the 30th day after the date when the application was submitted; or

(3) For resubmitted applications following a notice of deficiency, the tolling period shall be the number of days from—

(i) The day after the date when the siting authority notifies the applicant in writing that the applicant's supplemental submission was not sufficient to render the application complete and clearly and specifically identifies the missing documents or information that need to be submitted based on the siting authority's original request under paragraph (d)(1) or (2) of this section; until

(ii) The date when the applicant submits all the documents and information identified by the siting authority to render the application complete;

(iii) But only if the notice pursuant to paragraph (d)(3)(i) of this section is effectuated on or before the 10th day after the date when the applicant makes a supplemental submission in response to the siting authority's request under paragraph (d)(1) or (2) of this section.

(e) *Shot clock date.* The shot clock date for a siting application is determined by counting forward, beginning on the day after the date when the application was submitted, by the number of calendar days of the shot clock period identified pursuant to paragraph (b) of this section and including any pre-application period asserted by the siting authority; *provided*, that if the date calculated in this manner is a “holiday” as defined in §1.4(e)(1) or a legal holiday within the relevant State or local jurisdiction, the shot clock date is the next business day after such date. The term “business day” means any day as defined in §1.4(e)(2) and any day that is not a legal holiday as defined by the State or local jurisdiction

## Appendix B – Code of Federal Regulations (C.F.R.) Cited Throughout Document

### 47 C.F.R. Section 1.1307

---

**§1.1307 Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.**

[Link to an amendment published at 85 FR 18142, Apr. 1, 2020.](#)

[Link to a correction of the above amendment published at 85 FR 33578, June 2, 2020.](#)

(a) Commission actions with respect to the following types of facilities may significantly affect the environment and thus require the preparation of EAs by the applicant (see §§1.1308 and 1.1311) and may require further Commission environmental processing (*see* §§1.1314, 1.1315 and 1.1317):

(1) Facilities that are to be located in an officially designated wilderness area.

(2) Facilities that are to be located in an officially designated wildlife preserve.

(3) Facilities that: (i) May affect listed threatened or endangered species or designated critical habitats; or (ii) are likely to jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats, as determined by the Secretary of the Interior pursuant to the Endangered Species Act of 1973.

NOTE: The list of endangered and threatened species is contained in 50 CFR 17.11, 17.22, 222.23(a) and 227.4. The list of designated critical habitats is contained in 50 CFR 17.95, 17.96 and part 226. To ascertain the status of proposed species and habitats, inquiries may be directed to the Regional Director of the Fish and Wildlife Service, Department of the Interior.

(4) Facilities that may affect districts, sites, buildings, structures or objects, significant in American history, architecture, archeology, engineering or culture, that are listed, or are eligible for listing, in the National Register of Historic Places (*see* 54 U.S.C. 300308; 36 CFR parts 60 and 800), and that are subject to review pursuant to section 1.1320 and have been determined through that review process to have adverse effects on identified historic properties.

(5) Facilities that may affect Indian religious sites.

(6) Facilities to be located in floodplains, if the facilities will not be placed at least one foot above the base flood elevation of the floodplain.

(7) Facilities whose construction will involve significant change in surface features (e.g., wetland fill, deforestation or water diversion). (In the case of wetlands on Federal property, *see* Executive Order 11990.)

(8) Antenna towers and/or supporting structures that are to be equipped with high intensity white lights which are to be located in residential neighborhoods, as defined by the applicable zoning law.

(b) In addition to the actions listed in paragraph (a) of this section, Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the preparation of an Environmental Assessment (EA) if the particular facility, operation or transmitter would cause human exposure to levels of radiofrequency radiation in excess of the limits in §§1.1310 and 2.1093 of this chapter. Applications to the Commission for construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities must

contain a statement confirming compliance with the limits unless the facility, operation, or transmitter is categorically excluded, as discussed below. Technical information showing the basis for this statement must be submitted to the Commission upon request. Such compliance statements may be omitted from license applications for transceivers subject to the certification requirement in §25.129 of this chapter.

(1) The appropriate exposure limits in §§1.1310 and 2.1093 of this chapter are generally applicable to all facilities, operations and transmitters regulated by the Commission. However, a determination of compliance with the exposure limits in §1.1310 or §2.1093 of this chapter (routine environmental evaluation), and preparation of an EA if the limits are exceeded, is necessary only for facilities, operations and transmitters that fall into the categories listed in table 1, or those specified in paragraph (b)(2) of this section. All other facilities, operations and transmitters are categorically excluded from making such studies or preparing an EA, except as indicated in paragraphs (c) and (d) of this section. For purposes of table 1, *building-mounted antennas* means antennas mounted in or on a building structure that is occupied as a workplace or residence. The term *power* in column 2 of table 1 refers to total operating power of the transmitting operation in question in terms of effective radiated power (ERP), equivalent isotropically radiated power (EIRP), or peak envelope power (PEP), as defined in §2.1 of this chapter. For the case of the Cellular Radiotelephone Service, subpart H of part 22 of this chapter; the Personal Communications Service, part 24 of this chapter and the Specialized Mobile Radio Service, part 90 of this chapter, the phrase *total power of all channels* in column 2 of table 1 means the sum of the ERP or EIRP of all co-located simultaneously operating transmitters owned and operated by a single licensee. When applying the criteria of table 1, radiation in all directions should be considered. For the case of transmitting facilities using sectorized transmitting antennas, applicants and licensees should apply the criteria to all transmitting channels in a given sector, noting that for a highly directional antenna there is relatively little contribution to ERP or EIRP summation for other directions.

**TABLE 1—TRANSMITTERS, FACILITIES AND OPERATIONS SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION**

Service (title 47 CFR rule part)	Evaluation required if:
Experimental Radio Services (part 5)	Power >100 W ERP (164 W EIRP).
Commercial Mobile Radio Services (part 20)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1000 W ERP (1640 W EIRP). Building-mounted antennas: power >1000 W ERP (1640 W EIRP).
	Consumer Signal Booster equipment grantees under the Commercial Mobile Radio Services provisions in part 20 are required to attach a label to Fixed Consumer Booster antennas that:
	(1) Provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transmitting antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310.
Paging and Radiotelephone Service (subpart E of part 22)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1000 W ERP (1640 W EIRP).
	Building-mounted antennas: power >1000 W ERP (1640 W EIRP).
Cellular Radiotelephone Service (subpart H of part 22)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >1000 W ERP (1640 W EIRP).

	Building-mounted antennas: total power of all channels >1000 W ERP (1640 W EIRP).
Personal Communications Services (part 24)	(1) Narrowband PCS (subpart D):
	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >1000 W ERP (1640 W EIRP).
	Building-mounted antennas: total power of all channels >1000 W ERP (1640 W EIRP).
	(2) Broadband PCS (subpart E):
	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >2000 W ERP (3280 W EIRP).
	Building-mounted antennas: total power of all channels >2000 W ERP (3280 W EIRP).
Satellite Communications Services (part 25)	All included.
	In addition, for NGSO subscriber equipment, licensees are required to attach a label to subscriber transceiver antennas that:
	(1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310 of this chapter.
Miscellaneous Wireless Communications Services (part 27 except subpart M)	(1) For the 1390-1392 MHz, 1392-1395 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz bands:
	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >2000 W ERP (3280 W EIRP).
	Building-mounted antennas: total power of all channels >2000 W ERP (3280 W EIRP).
	(2) For the 698-746 MHz, 746-764 MHz, 776-794 MHz, 2305-2320 MHz, and 2345-2360 MHz bands:
	Total power of all channels >1000 W ERP (1640 W EIRP).
Broadband Radio Service and Educational Broadband Service (subpart M of part 27)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1640 W EIRP.
	Building-mounted antennas: power >1640 W EIRP.
	BRS and EBS licensees are required to attach a label to subscriber transceiver or transverter antennas that:

	(1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310.
Upper Microwave Flexible Use Service (part 30)	Non-building-mounted antennas: Height above ground level to lowest point of antenna <10 m and power >1640 W EIRP.
	Antennas are mounted on buildings.
Radio Broadcast Services (part 73)	All included.
Auxiliary and Special Broadcast and Other Program Distributional Services (part 74)	Subparts G and L: Power >100 W ERP.
Stations in the Maritime Services (part 80)	Ship earth stations only.
Private Land Mobile Radio Services Paging Operations (subpart P of part 90)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1000 W ERP (1640 W EIRP).
	Building-mounted antennas: power >1000 W ERP (1640 W EIRP).
Private Land Mobile Radio Services Specialized Mobile Radio (subpart S of part 90)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >1000 W ERP (1640 W EIRP).
	Building-mounted antennas: Total power of all channels >1000 W ERP (1640 W EIRP).
76-81 GHz Radar Service (part 95)	All included.
Amateur Radio Service (part 97)	Transmitter output power >levels specified in §97.13(c)(1) of this chapter.
Local Multipoint Distribution Service (subpart L of part 101) and 24 GHz (subpart G of part 101)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1640 W EIRP.
	Building-mounted antennas: power >1640 W EIRP.
	LMDS and 24 GHz Service licensees are required to attach a label to subscriber transceiver antennas that:
	(1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310.
70/80/90 GHz Bands (subpart Q of part 101)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1640 W EIRP.

	Building-mounted antennas: power >1640 W EIRP.
	Licensees are required to attach a label to transceiver antennas that:
	(1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310.

(2)(i) Mobile and portable transmitting devices that operate in the Commercial Mobile Radio Services pursuant to part 20 of this chapter; the Cellular Radiotelephone Service pursuant to part 22 of this chapter; the Personal Communications Services (PCS) pursuant to part 24 of this chapter; the Satellite Communications Services pursuant to part 25 of this chapter; the Miscellaneous Wireless Communications Services pursuant to part 27 of this chapter; the Upper Microwave Flexible User Service pursuant to part 30 of this chapter; the Maritime Services (ship earth stations only) pursuant to part 80 of this chapter; the Specialized Mobile Radio Service, the 4.9 GHz Band Service, and the 3650 MHz Wireless Broadband Service pursuant to part 90 of this chapter; the Wireless Medical Telemetry Service (WMTS), the Medical Device Radiocommunication Service (MedRadio), and the 76-81 GHz Band Radar Service pursuant to part 95 of this chapter; and the Citizens Broadband Radio Service pursuant to part 96 of this chapter are subject to routine environmental evaluation for RF exposure prior to equipment authorization or use, as specified in §§2.1091 and 2.1093 of this chapter.

(ii) Unlicensed PCS, unlicensed NII, and millimeter-wave devices are also subject to routine environmental evaluation for RF exposure prior to equipment authorization or use, as specified in §§15.255(g), 15.257(g), 15.319(i), and 15.407(f) of this chapter.

(iii) Portable transmitting equipment for use in the Wireless Medical Telemetry Service (WMTS) is subject to routine environmental evaluation as specified in §§2.1093 and 95.2385 of this chapter.

(iv) Equipment authorized for use in the Medical Device Radiocommunication Service (MedRadio) as a medical implant device or body-worn transmitter (as defined in subpart I of part 95 of this chapter) is subject to routine environmental evaluation for RF exposure prior to equipment authorization, as specified in §§2.1093 and 95.2585 of this chapter by finite difference time domain (FDTD) computational modeling or laboratory measurement techniques. Where a showing is based on computational modeling, the Commission retains the discretion to request that supporting documentation and/or specific absorption rate (SAR) measurement data be submitted.

(v) All other mobile, portable, and unlicensed transmitting devices are categorically excluded from routine environmental evaluation for RF exposure under §§2.1091, 2.1093 of this chapter except as specified in paragraphs (c) and (d) of this section.

(3) In general, when the guidelines specified in §1.1310 are exceeded in an accessible area due to the emissions from multiple fixed transmitters, actions necessary to bring the area into compliance are the shared responsibility of all licensees whose transmitters produce, at the area in question, power density levels that exceed 5% of the power density exposure limit applicable to their particular transmitter or field strength levels that, when squared, exceed 5% of the square of the electric or magnetic field strength limit applicable to their particular transmitter. Owners of transmitter sites are expected to allow applicants and licensees to take reasonable steps to comply with the requirements contained in §1.1307(b) and, where feasible, should encourage co-location of transmitters and common solutions for controlling access to areas where the RF exposure limits contained in §1.1310 might be exceeded.



(i) Applicants for proposed (not otherwise excluded) transmitters, facilities or modifications that would cause non-compliance with the limits specified in §1.1310 at an accessible area previously in compliance must submit an EA if emissions from the applicant's transmitter or facility would result, at the area in question, in a power density that exceeds 5% of the power density exposure limit applicable to that transmitter or facility or in a field strength that, when squared, exceeds 5% of the square of the electric or magnetic field strength limit applicable to that transmitter or facility.

(ii) Renewal applicants whose (not otherwise excluded) transmitters or facilities contribute to the field strength or power density at an accessible area not in compliance with the limits specified in §1.1310 must submit an EA if emissions from the applicant's transmitter or facility results, at the area in question, in a power density that exceeds 5% of the power density exposure limit applicable to that transmitter or facility or in a field strength that, when squared, exceeds 5% of the square of the electric or magnetic field strength limit applicable to that transmitter of facility.

(c) If an interested person alleges that a particular action, otherwise categorically excluded, will have a significant environmental effect, the person shall submit to the Bureau responsible for processing that action a written petition setting forth in detail the reasons justifying or circumstances necessitating environmental consideration in the decision-making process. (*See* §1.1313). The Bureau shall review the petition and consider the environmental concerns that have been raised. If the Bureau determines that the action may have a significant environmental impact, the Bureau will require the applicant to prepare an EA (*see* §§1.1308 and 1.1311), which will serve as the basis for the determination to proceed with or terminate environmental processing.

(d) If the Bureau responsible for processing a particular action, otherwise categorically excluded, determines that the proposal may have a significant environmental impact, the Bureau, on its own motion, shall require the applicant to submit an EA. The Bureau will review and consider the EA as in paragraph (c) of this section.

NOTE TO PARAGRAPH (d): Pending a final determination as to what, if any, permanent measures should be adopted specifically for the protection of migratory birds, the Bureau shall require an Environmental Assessment for an otherwise categorically excluded action involving a new or existing antenna structure, for which an antenna structure registration application (FCC Form 854) is required under part 17 of this chapter, if the proposed antenna structure will be over 450 feet in height above ground level (AGL) and involves either:

1. Construction of a new antenna structure;
2. Modification or replacement of an existing antenna structure involving a substantial increase in size as defined in paragraph I(C)(1)(3) of Appendix B to part 1 of this chapter; or
3. Addition of lighting or adoption of a less preferred lighting style as defined in §17.4(c)(1)(iii) of this chapter. The Bureau shall consider whether to require an EA for other antenna structures subject to §17.4(c) of this chapter in accordance with §17.4(c)(8) of this chapter. An Environmental Assessment required pursuant to this note will be subject to the same procedures that apply to any Environmental Assessment required for a proposed tower or modification of an existing tower for which an antenna structure registration application (FCC Form 854) is required, as set forth in §17.4(c) of this chapter.

(e) 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 regulations contained in this chapter concerning the environmental effects of such emissions. For purposes of this paragraph:

(1) The term *personal wireless service* means commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services;

(2) The term *personal wireless service facilities* means facilities for the provision of personal wireless services;

(3) The term *unlicensed wireless services* means the offering of telecommunications services using duly authorized devices which do not require individual licenses, but does not mean the provision of direct-to-home satellite services; and

(4) The term *direct-to-home satellite services* means the distribution or broadcasting of programming or services by satellite directly to the subscriber's premises without the use of ground receiving or distribution equipment, except at the subscriber's premises or in the uplink process to the satellite.

[51 FR 15000, Apr. 22, 1986]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §1.1307, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at [www.govinfo.gov](http://www.govinfo.gov).

EFFECTIVE DATE NOTE: At 85 FR 18142, Apr. 1, 2020, §1.1307 was amended by revising paragraph (b). At 85 FR 33578, June 2, 2020, this revision was delayed indefinitely.

#### **47 C.F.R. Section 1.1320**

---

##### **§1.1320 Review of Commission undertakings that may affect historic properties.**

(a) *Review of Commission undertakings.* Any Commission undertaking that has the potential to cause effects on historic properties, unless excluded from review pursuant to paragraph (b) of this section, shall be subject to review under section 106 of the National Historic Preservation Act, as amended, 54 U.S.C. 306108, by applying—

(1) The procedures set forth in regulations of the Advisory Council on Historic Preservation, 36 CFR 800.3-800.13, or

(2) If applicable, a program alternative established pursuant to 36 CFR 800.14, including but not limited to the following:

(i) The Nationwide Programmatic Agreement for the Collocation of Wireless Antennas, as amended, Appendix B of this part.

(ii) The Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings, Appendix C of this part.

(iii) The Program Comment to Tailor the Federal Communications Commission's Section 106 Review for Undertakings Involving the Construction of Positive Train Control Wayside Poles and Infrastructure, 79 FR 30861 (May 29, 2014).

(b) *Exclusions.* The following categories of undertakings are excluded from review under this section:

(1) *Projects reviewed by other agencies.* Undertakings for which an agency other than the Commission is the lead Federal agency pursuant to 36 CFR 800.2(a)(2).

(2) *Projects subject to program alternatives.* Undertakings excluded from review under a program alternative established pursuant to 36 CFR 800.14, including those listed in paragraph (a)(2) of this section.

(3) *Replacement utility poles.* Construction of a replacement for an existing structure where all the following criteria are satisfied:

(i) The original structure—

(A) Is a pole that can hold utility, communications, or related transmission lines;

(B) Was not originally erected for the sole or primary purpose of supporting antennas that operate pursuant to the Commission's spectrum license or authorization; and

(C) Is not itself a historic property.

(ii) The replacement pole—

(A) Is located no more than 10 feet away from the original pole, based on the distance between the centerpoint of the replacement pole and the centerpoint of the original pole; *provided* that construction of the replacement pole in place of the original pole entails no new ground disturbance (either laterally or in depth) outside previously disturbed areas, including disturbance associated with temporary support of utility, communications, or related transmission lines. For purposes of this paragraph, “ground disturbance” means any activity that moves, compacts, alters, displaces, or penetrates the ground surface of previously undisturbed soils;

(B) Has a height that does not exceed the height of the original pole by more than 5 feet or 10 percent of the height of the original pole, whichever is greater; and

(C) Has an appearance consistent with the quality and appearance of the original pole.

(4) *Collocations on buildings and other non-tower structures.* The mounting of antennas (including associated equipment such as wiring, cabling, cabinets, or backup power) on buildings or other non-tower structures where the deployment meets the following conditions:

(i) There is an existing antenna on the building or structure;

(ii) One of the following criteria is met:

(A) *Non-Visible Antennas.* The new antenna is not visible from any adjacent streets or surrounding public spaces and is added in the same vicinity as a pre-existing antenna;

(B) *Visible Replacement Antennas.* The new antenna is visible from adjacent streets or surrounding public spaces, provided that

(1) It is a replacement for a pre-existing antenna,

(2) The new antenna will be located in the same vicinity as the pre-existing antenna,

(3) The new antenna will be visible only from adjacent streets and surrounding public spaces that also afford views of the pre-existing antenna,

(4) The new antenna is not more than 3 feet larger in height or width (including all protuberances) than the pre-existing antenna, and

(5) No new equipment cabinets are visible from the adjacent streets or surrounding public spaces; or

(C) *Other Visible Antennas.* The new antenna is visible from adjacent streets or surrounding public spaces, provided that

(1) It is located in the same vicinity as a pre-existing antenna,

(2) The new antenna will be visible only from adjacent streets and surrounding public spaces that also afford views of the pre-existing antenna,

(3) The pre-existing antenna was not deployed pursuant to the exclusion in this paragraph,

(4) The new antenna is not more than three feet larger in height or width (including all protuberances) than the pre-existing antenna, and

(5) No new equipment cabinets are visible from the adjacent streets or surrounding public spaces;

(iii) The new antenna complies with all zoning conditions and historic preservation conditions applicable to existing antennas in the same vicinity that directly mitigate or prevent effects, such as camouflage or concealment requirements;

(iv) The deployment of the new antenna involves no new ground disturbance; and

(v) The deployment would otherwise require the preparation of an Environmental Assessment under 1.1304(a)(4) solely because of the age of the structure.

NOTE 1 TO PARAGRAPH (b)(4): A non-visible new antenna is in the “same vicinity” as a pre-existing antenna if it will be collocated on the same rooftop, façade or other surface. A visible new antenna is in the “same vicinity” as a pre-existing antenna if it is on the same rooftop, façade, or other surface and the centerpoint of the new antenna is within ten feet of the centerpoint of the pre-existing antenna. A deployment causes no new ground disturbance when the depth and width of previous disturbance exceeds the proposed construction depth and width by at least two feet.

(c) *Responsibilities of applicants.* Applicants seeking Commission authorization for construction or modification of towers, collocation of antennas, or other undertakings shall take the steps mandated by, and comply with the requirements set forth in, Appendix C of this part, sections III-X, or any other applicable program alternative.

(d) *Definitions.* For purposes of this section, the following definitions apply:

*Antenna* means an apparatus designed for the purpose of emitting radiofrequency (RF) radiation, to be operated or operating from a fixed location pursuant to Commission authorization, for the transmission of writing, signs, signals, data, images, pictures, and sounds of all kinds, including the transmitting device and any on-site equipment, switches, wiring, cabling, power sources, shelters or cabinets associated with that antenna and added to a tower, structure, or building as part of the original installation of the antenna. For most services, an antenna will be mounted on or in, and is distinct from, a supporting structure such as a tower, structure or building. However, in the case of AM broadcast stations, the entire tower or group of towers constitutes the antenna for that station. For purposes of this section, the term antenna does not include unintentional radiators, mobile stations, or devices authorized under part 15 of this title.

*Applicant* means a Commission licensee, permittee, or registration holder, or an applicant or prospective applicant for a wireless or broadcast license, authorization or antenna structure registration, and the duly authorized agents, employees, and contractors of any such person or entity.

*Collocation* means the mounting or installation of an antenna on an existing tower, building or structure for the purpose of transmitting and/or receiving radio frequency signals for communications purposes, whether or not there is an existing antenna on the structure.

*Tower* means any structure built for the sole or primary purpose of supporting Commission-licensed or authorized antennas, including the on-site fencing, equipment, switches, wiring, cabling, power sources, shelters, or cabinets associated with that tower but not installed as part of an antenna as defined herein.

*Undertaking* means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of the Commission, including those requiring a Commission permit, license or approval. Maintenance and servicing of towers, antennas, and associated equipment are not deemed to be undertakings subject to review under this section.

[82 FR 58758, Dec. 14, 2017]

## **47 C.F.R. Section 1.6002**

---

### **§1.6002 Definitions.**

Terms not specifically defined in this section or elsewhere in this subpart have the meanings defined in this part and the Communications Act of 1934, 47 U.S.C. 151 *et seq.* Terms used in this subpart have the following meanings:

(a) *Action or to act* on a siting application means a siting authority's grant of a siting application or issuance of a written decision denying a siting application.

(b) *Antenna*, consistent with §1.1320(d), means an apparatus designed for the purpose of emitting radiofrequency (RF) radiation, to be operated or operating from a fixed location pursuant to Commission authorization, for the provision of personal wireless service and any commingled information services. For purposes of this definition, the term antenna does not include an unintentional radiator, mobile station, or device authorized under part 15 of this chapter.

(c) *Antenna equipment*, consistent with §1.1320(d), means equipment, switches, wiring, cabling, power sources, shelters or cabinets associated with an antenna, located at the same fixed location as the antenna, and, when collocated on a structure, is mounted or installed at the same time as such antenna.

(d) *Antenna facility* means an antenna and associated antennaequipment.

(e) *Applicant* means a person or entity that submits a siting application and the agents, employees, and contractors of such person or entity.

(f) *Authorization* means any approval that a siting authority must issue under applicable law prior to the deployment of personal wireless service facilities, including, but not limited to, zoning approval and building permit.

(g) *Collocation*, consistent with §1.1320(d) and the Nationwide Programmatic Agreement (NPA) for the Collocation of Wireless Antennas, appendix B of this part, section I.B, means—

(1) Mounting or installing an antenna facility on a pre-existing structure; and/or

(2) Modifying a structure for the purpose of mounting or installing an antenna facility on thatstructure.

(3) The definition of “collocation” in §1.6100(b)(2) applies to the term as used in that section.

(h) *Deployment* means placement, construction, or modification of a personal wireless service facility.

(i) *Facility or personal wireless service facility* means an antenna facility or a structure that is used for the provision of personal wireless service, whether such service is provided on a stand-alone basis or commingled with other wireless communications services.

(j) *Siting application or application* means a written submission to a siting authority requesting authorization for the deployment of a personal wireless service facility at a specified location.

(k) *Siting authority* means a State government, local government, or instrumentality of a State government or local government, including any official or organizational unit thereof, whose authorization is necessary prior to the deployment of personal wireless service facilities.

(l) *Small wireless facilities* are facilities that meet each of the following conditions:

(1) The facilities—

(i) Are mounted on structures 50 feet or less in height including their antennas as defined in §1.1320(d);  
or

(ii) Are mounted on structures no more than 10 percent taller than other adjacent structures; or

(iii) Do not extend existing structures on which they are located to a height of more than 50 feet or by more than 10 percent, whichever is greater;

(2) Each antenna associated with the deployment, excluding associated antenna equipment (as defined in the definition of antenna in §1.1320(d)), is no more than three cubic feet in volume;

(3) All other wireless equipment associated with the structure, including the wireless equipment associated with the antenna and any pre-existing associated equipment on the structure, is no more than 28 cubic feet in volume;

(4) The facilities do not require antenna structure registration under part 17 of this chapter;

(5) The facilities are not located on Tribal lands, as defined under 36 CFR 800.16(x); and

(6) The facilities do not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in §1.1307(b).

(m) *Structure* means a pole, tower, base station, or other building, whether or not it has an existing antenna facility, that is used or to be used for the provision of personal wireless service (whether on its own or comingled with other types of services).

[83 FR 51884, Oct. 15, 2018, as amended at 84 FR 59567, Nov. 5, 2019]



# Small Wireless Facilities Model Design Guidelines

JUNE 2020

This model was produced in coordination with:





## **DISCLAIMER**

Any model document provided by the League of Oregon Cities (LOC) is intended to be used as a starting point in an individual city's development of its own documents. Each city is unique, and any adopted document or policy should be individually tailored to meet a city's unique needs. Furthermore, this model is not intended to be a substitute for legal advice. Cities should consult with their city attorney before adopting any small wireless facility policies to ensure that they comply with all aspects of federal, state, and local law.



## Table of Contents

FOREWORD .....	1
SMALL WIRELESS FACILITIES DESIGN STANDARDS .....	3
ACKNOWLEDGEMENTS .....	12
APPENDICES .....	13
<i>APPENDIX A – SHOTCLOCK INFORMATION</i> .....	13
<i>APPENDIX B – CODE OF FEDERAL REGULATIONS (CFR) CITED THROUGHOUT DOCUMENT</i>	15

## Foreword

### Background

On January 31, 2017, Federal Communications Commission (“FCC”) Chairman Ajit Pai established a Broadband Deployment Advisory Committee (“BDAC”), which he tasked with making recommendations to the FCC on ways to accelerate the deployment of broadband by reducing or removing regulatory barriers to infrastructure investment. On September 27, 2018, the FCC released a Declaratory Ruling and Third Report and Order ([FCC 18-133](#), referred throughout the document as “Small Cell Order” or “FCC Order”) that significantly limits local authority over small wireless infrastructure deployment and fees for use of the rights-of-way (ROW). The FCC Order took effect January 14, 2019. However, the requirements regarding aesthetics did not take effect until April 15, 2019. Under the FCC Order aesthetic or design standards must be: (1) reasonable; (2) no more burdensome than those applied to other types of infrastructure deployments; (3) objective; and (4) published in advance. The FCC Order also defines the size limitations for small wireless facilities (allowing antennas of up to 3 cubic feet each, with additional equipment not to exceed 28 cubic feet), and specifies that such facilities may not result in human exposure to radiofrequency radiation in excess of applicable standards in the FCC’s rules (federal law preempts local regulation of RF emissions). “Small wireless facilities” are sometimes also called “small cells.”

### LOC Model Small Wireless Facilities Design Standard

In coordination with many cities,<sup>1</sup> representatives from Verizon, AT&T, T-Mobile, and the LOC met from January 2019 to May 2020 to discuss and craft a model code and model design standards relating to small wireless facilities while there is pending litigation<sup>2</sup> on the FCC Order. The model code and model design standards are intended to be paired together.

There is no single design standard that will work for every jurisdiction. As such, the LOC’s model design standard is intended as a roadmap to assist local governments in adopting their own design standard. While example language is included in some sections, the LOC does not intend to suggest these examples could work for every jurisdiction. In some instances, the local government may need to issue a deviation to the design standards when it would be technically infeasible for the applicant to comply. The deviation process is provided in Section I of these model standards and is intended to occur within the “shot clock”<sup>3</sup> – the time frame in which the state or local government should act on a request for authorization to place, construct, or modify personal wireless service facilities, as defined by the FCC. However, to the extent that the local government cannot reasonably act on the application within the shot clock, the parties are encouraged to seek a tolling agreement to allow the applicant to vet reasonable design alternatives and the local government to complete its review. Local governments cannot require a tolling agreement as a condition of a deviation.

---

<sup>1</sup> See “Acknowledgments” section for full list of participants.

<sup>2</sup> In October 2018, the LOC in coordination with other municipalities and municipal leagues filed suit against the FCC in the United States Court of Appeals for the Ninth Circuit.

<sup>3</sup> See Appendix A

The LOC also recognizes there are many ways to structure a design standard. The appropriate structure will vary by jurisdiction. For purposes of this model, the LOC opted to approach designs by type of pole and deployment. The model is intended to provide a general framework and thus is drafted as an outline of provisions jurisdictions may want to include in their final design standard. In many cases example language is provided to help illustrate the issues to be addressed. However, the intent is to allow each jurisdiction to draft the substantive provisions that best reflect local needs and interests. The LOC recommends that jurisdictions that own poles or other structures in the rights-of-way establish a clear design standard. The circumstances of each municipality may, and likely will, require modifications to the framework and/or example language of this model design standard.

### **Additional Considerations**

The LOC model design standards only applies to small wireless facilities. Municipalities should review their existing ordinances, standards and policies to determine if this framework is appropriate. Municipalities may want to consider whether it would be preferable to adopt a utility-neutral standard covering all utilities and communications providers, which would provide one set of “rules” for the design of the public rights-of-way. Differences in policy choices and existing standards, among other things, may impact the decision in how to proceed. It is recommended that cities consult their attorney, ROW specialists, engineers, master plans, comprehensive plans, goals and/or wireless providers before final adoption of standards. Cities may choose to adopt design standards administratively or in code.

### **Understanding the Organization of the Model Design Standards**

As stated above, the model is best described as an outline or roadmap to assist municipalities in drafting the appropriate standards for their community. The model includes example language to illustrate the intent of the section. The example language, or a variation thereof, may be appropriate for final adoption in some jurisdictions.

Finally, there may be additional notes or issues for consideration within the subsections of the model, which are [bracketed] and in ALL CAPS. Again, these notes are intended as guidance for municipal drafters, not for adoption in a final ordinance.

## Small Wireless Facility Design Standards

[GIVEN THAT THE TECHNICAL NEEDS FOR EACH OPERATOR MAY VARY, JURISDICTIONS ARE ENCOURAGED TO ADOPT DESIGN STANDARDS BY CITY COUNCIL RESOLUTION AND/OR ADMINISTRATIVELY BY THE CITY MANAGER OR OTHER OFFICIAL. THIS WAY, CITIES WOULD BE ABLE TO REACT QUICKLY AND AMEND THE STANDARDS IN RESPONSE TO CHANGES IN LAW AND TECHNOLOGY. CITIES SHOULD NOTE THAT THIS NIMBLER APPROACH IS POSSIBLE ONLY IF THE REGULATIONS FOR SMALL WIRELESS FACILITIES IN THE PUBLIC RIGHTS-OF-WAY ARE LOCATED OUTSIDE OF THE LAND DEVELOPMENT CODE.]

### A. Definitions

“**Antenna**” means the same as defined in 47 C.F.R. § 1.6002(b), as may be amended or superseded. The term includes an apparatus designed for the purpose of emitting radio frequencies (RF) to be operated or operating from a fixed location pursuant to Federal Communications Commission authorization, for the provision of personal wireless service and any commingled information services. For purposes of this definition, the term antenna does not include an unintentional radiator, mobile station, or device authorized under [47 C.F.R. Part 15](#).

“**Antenna Equipment**” means the same as defined 47 C.F.R. § 1.6002(c), as may be amended or superseded, which defines the term to mean equipment, switches, wiring, cabling, power sources, shelters or cabinets associated with an antenna, located at the same fixed location as the antenna, and, when collocated on a structure, is mounted or installed at the same time as such antenna.

“**Antenna Facility**” means the same as defined in 47 C.F.R. § 1.6002(d), as may be amended or superseded, which defines the term to mean an antenna and associated antenna equipment.

“**Applicable codes**” means uniform building, fire, safety, electrical, plumbing, or mechanical codes adopted by a recognized national code organization or state or local amendments to those codes that are of general application and consistent with state and federal law.

“**Applicant**” means any person who submits an application as or on behalf of a wireless provider.

“**Application**” means requests submitted by an applicant (i) for permission to collocate small wireless facilities; or (ii) to approve the installation, modification or replacement of a structure on which to collocate a small wireless facility in the rights-of-way, where required.

“**Collocate**” means the same as defined in 47 C.F.R. § 1.6002(g), as may be amended or superseded, which defines that term to mean (1) mounting or installing an antenna facility on a preexisting structure, and/or (2) modifying a structure for the purpose of mounting or installing an antenna facility on that structure. “Collocation” has a corresponding meaning.

“**Day**” means calendar day. For purposes of the FCC shot clock, a terminal day that falls on a holiday or weekend shall be deemed to be the next immediate business day.

“**Historic District**” means a group of buildings, properties, or sites that are either: (1) listed in the National Register of Historic Places or formally determined eligible for listing by the Keeper of the National Register in accordance with Section VI.D.1a.i-v of the Nationwide Programmatic Agreement codified at [47 C.F.R. Part 1, Appendix C](#); or, (2) a locally designated historic district as of the effective date of this [Chapter/Section] or in a locally designated historic district existing when an application is submitted. [NOTE: THIS IS NOT MEANT TO RETROACTIVELY AFFECT SWFs ALREADY IN PLACE WHEN A NEW DISTRICT IS CREATED].

“**Person**” means an individual, corporation, limited liability company, partnership, association, trust, or other entity or organization, including the City.

“**Pole**” means a type of structure in the rights-of-way that is or may be used in whole or in part by or for wireline communications, electric distribution, lighting, traffic control, signage, or similar function, or for collocation of small wireless facilities; provided, such term does not include a tower, building or electric transmission structures.

“**Rights-of-Way**” or “**ROW**” means [INSERT A CONSISTENT DEFINITION ACROSS OTHER CODES. Example: “Right-of-way,” “rights-of-way,” “public right-of-way,” or “ROW” means and includes, but is not limited to, the space in, upon, above, along, across, over or under the public streets, roads, highways, lanes, courts, ways, alleys, boulevards, bridges, trails, paths, sidewalks, bicycle lanes, public utility easements and all other public ways or areas, including the subsurface under and air space over these areas, but does not include parks, parkland, or other City property not generally open to the public for travel.]

“**Small wireless facility**” means a facility that meets each of the following conditions per 47 C.F.R § 1.6002(l), as may be amended or superseded:

1. The proposed facilities meet one of the following height parameters:
  - a. are mounted on structures 50 feet or less in height including their antennas as defined in 47 C.F.R. Section 1.1320(d), or
  - b. are mounted on structures no more than 10 percent taller than other adjacent structures, or
  - c. do not extend existing structures on which they are located to a height of more than 50 feet or by more than 10 percent, whichever is greater.
2. Each antenna or antenna enclosure shall not exceed three cubic feet in volume.
3. The total volume of installed equipment external to the pole (including, but not limited to cabinets, vaults, boxes) shall not exceed twenty-eight (28) cubic feet. This maximum applies to all equipment installed at the time of original application and includes any equipment to be installed at a future date. Antennas and antenna

enclosures are excluded. If equipment exceeds this maximum, the installation will be redefined as a Macro site installation and all the associated standards and rates for Macro installations will be applied.

4. The facilities do not result in human exposure to radio frequency radiation in excess of the applicable safety standards specified in the FCC's Rules and Regulations [47 C.F.R. section 1.1307(b)].

“**Structure**” means the same as provided in 47 C.F.R. § 1.6002(m), as may be superseded or amended, which defines the term as a pole, tower, base station, or structure, whether or not it has an existing antenna facility, that is used or to be used for the provision of personal wireless service (whether on its own or comingled with other types of service).

[IF THE CITY HAS SPECIFIC CODES OR ORDINANCES WITH DEFINITIONS RELATING TO SWF, CONSIDER INCLUDING DEFINITIONS OR A CROSS REFERENCE HERE.]

## **B. General Requirements.**

1. [NOTE: SECTION (B)(1) IS OPTIONAL. CITIES SHOULD CONSIDER A PREFERENCE THAT IS IN LINE WITH GOALS AND CURRENT STANDARDS ON WHETHER THE CITY PREFERS GROUND-MOUNTED EQUIPMENT OR NOT.]  
Ground-mounted equipment in the right-of-way is discouraged, unless the applicant can demonstrate that pole-mounted equipment is not technically feasible, or the electric utility requires placement of equipment on the ground (such as an electric meter). If ground-mounted equipment is necessary, then the applicant shall conceal the equipment in a cabinet, in street furniture or with landscaping. [THE TERM “TECHNICALLY FEASIBLE” IS USED BY THE FCC TO DESCRIBE WHEN AESTHETIC STANDARDS MAY BE FOUND TO BE REASONABLE AND DO NOT MATERIALLY INHIBIT THE WIRELESS SERVICE PROVIDER’S ABILITY TO PROVIDE SERVICE.]
2. Replacement poles, new poles and all antenna equipment shall comply with the Americans with Disabilities Act (“ADA”), city construction and sidewalk clearance standards and city, state and federal laws and regulations in order to provide a clear and safe passage within, through and across the right-of-way. Further, the location of any replacement pole, new pole, and/or antenna equipment must comply with applicable traffic requirements, not interfere with utility or safety fixtures (e.g., fire hydrants, traffic control devices), and not adversely affect public health, safety or welfare. [NOTE: ADA REQUIREMENTS, WALKING SPACE, BOLT PATTERNS AND OTHER GENERALLY APPLICABLE CONSTRUCTION STANDARDS ALL NEED TO BE CONSIDERED. THESE CAN BE LIMITING DESIGN FACTORS.]
3. Replacement poles shall be located as near as feasible to the existing pole. The abandoned pole must be removed within \_\_\_\_\_ days. [NOTE: KEEP CONSISTENT

WITH OTHER CODES OR REQUIREMENTS ABOUT TIMEFRAMES TO REMOVE EQUIPMENT.]

4. Any replacement pole shall substantially conform to the material and design of the existing pole or adjacent poles located within the contiguous right-of-way unless a different design is requested and approved pursuant to Section I.
5. No advertising, branding or other signage is allowed unless approved by the [City designee] as a concealment technique or as follows:
  - a. Safety signage as required by applicable laws, regulations, and standards; and,
  - b. Identifying information and 24-hour emergency telephone number (such as the telephone number for the operator's network operations center) on wireless equipment in an area that is visible.

[NOTE: IDENTIFYING SIGNAGE IS USUALLY REQUIRED TO BE PLACED ON THE POLE AND READABLE FROM THE GROUND AS A MINIMUM. A CITY MAY ADD ADDITIONAL REQUIREMENTS FOR PLACEMENT. STANDARDS FOR SIGNAGE ARE ADVISORY AND MAY BE SUBJECT TO OVERSIGHT BY MULTIPLE FEDERAL AGENCIES. ALTHOUGH THE FCC'S REGULATIONS ULTIMATELY CONTROL, THE FCC'S REGULATIONS ARE GENERAL AND CAN BE UNCLEAR. AS A BEST PRACTICE, CITIES MAY WISH TO CONSULT THE MORE DETAILED RECOMMENDATIONS BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.]

6. The total volume of multiple antennas on one structure shall not exceed fifteen (15) cubic feet, unless additional antenna volume is requested and approved pursuant to Section I.
7. Antennas and antenna equipment shall not be illuminated except as required by municipal, federal or state authority, provided this shall not preclude deployment on a new or replacement street light.
8. Small wireless facilities may not displace any existing street tree or landscape features unless: (a) such displaced street tree or landscaping is replaced with native and/or drought-resistant trees, plants or other landscape features approved by the City, and (b) the applicant submits and adheres to a landscape maintenance plan or agrees to pay an appropriate in-lieu fee for the maintenance costs.

**C. Small Wireless Facilities Attached to Wooden Poles and Non-Wooden Poles with Overhead Lines.** Small wireless facilities located on wooden utility poles and non-wooden utility poles with overhead lines shall conform to the following design criteria unless a deviation is requested and approved pursuant to Section I:

[IN OREGON, PGE AND PACIFIC CORP ARE THE MOST COMMON UTILITY POLE OWNERS. BOTH HAVE THEIR OWN DESIGN STANDARDS. CITIES SHOULD



WORK WITH POLE OWNERS TO FIND WHAT WORKS BEST FOR THEIR COMMUNITIES AND COMPARE DESIGN STANDARDS.]

1. Proposed antenna and related equipment shall meet:
  - a. The City’s design standards for small wireless facilities;
  - b. The pole owner requirements; and
  - c. National Electric Safety Code (“NESC”) and National Electric Code (“NEC”) standards.
2. The pole at the proposed location may be replaced with a taller pole or extended for the purpose of accommodating a small wireless facility; provided that the replacement or extended pole, together with any small wireless facility, does not exceed 50 feet in height or 10 percent taller than adjacent poles, whichever is greater. The replacement or extended pole height may be increased if required by the pole owner, and such height increase is the minimum necessary to provide sufficient separation and/or clearance from electrical and wireline facilities. Such replacement poles may either match the approximate color and materials of the replaced pole or shall be the standard new pole used by the pole owner in the city.
3. To the extent technically feasible, antennas, equipment enclosures, and all ancillary equipment, boxes, and conduit shall match the approximate material and design of the surface of the pole or existing equipment on which they are attached, or adjacent poles located within the contiguous right-of-way. Near matches may be permitted by the City when options are limited by technical feasibility considerations, such as when high-frequency antennas cannot be placed within an opaque shroud but could be wrapped with a tinted film.
4. Antennas which are mounted on poles shall be mounted as close to the pole as technically feasible and allowed by the pole owner.
5. No antenna shall extend horizontally more than 20 inches past the outermost mounting point (where the mounting hardware connects to the antenna), unless additional antenna space is requested and approved pursuant to Section I. [NOTE: THE 20 INCH STANDARD HERE IS NOT INTENDED TO DICTATE THE SIZE OF THE ANTENNA. RATHER, TO DICTATE THE DISTANCE BETWEEN THE ANTENNA/ANTENNA EQUIPMENT AND THE POLE ITSELF.]
6. Antenna equipment, including but not limited to radios, cables, associated shrouding, disconnect boxes, meters, microwaves and conduit, which is mounted on poles shall be mounted as close to the pole as technically feasible and allowed by the pole owner.
7. Antenna equipment for small wireless facilities must be attached to the pole, unless otherwise required by the pole owner or permitted to be ground-mounted [pursuant to subsection (B)(1) above]. The equipment must be placed in an enclosure reasonably related in size to the intended purpose of the facility. [IF APPLICABLE, THE APPLICANT IS ENCOURAGED TO PLACE THE EQUIPMENT ENCLOSURE(S)]

BEHIND ANY DECORATIONS, BANNERS OR SIGNS THAT MAY BE ON THE POLE. IN APPROPRIATE CIRCUMSTANCES, CITIES MAY ALSO WISH TO CONSIDER ALLOWING ENCLOSURES THAT INCLUDE REASONABLE SPACE FOR FUTURE ADDITIONAL EQUIPMENT.]

8. All cables and wiring shall be covered by conduits and cabinets to the extent that it is technically feasible, if allowed by pole owner. The number of conduits shall be minimized to the extent technically feasible.

**D. Small Wireless Facilities Attached to Non-Wooden Light Poles and Non-Wooden Utility Poles without Overhead Utility Lines.** Small wireless facilities attached to existing or replacement non-wooden light poles and non-wooden utility poles without overhead lines shall conform to the following design criteria unless a deviation is requested and approved pursuant to Section I:

[NOTE: JURISDICTION MAY PREFER A OR B OR BOTH. ALSO, NOTE THAT THE MOST COMMON TYPES OF THESE POLES ARE DUAL USE POLES. DUAL USE POLES USUALLY REQUIRE SEPARATION INSIDE THE POLE TO KEEP THE UTILITY EQUIPMENT SEPARATE FROM NEW OR ADDED EQUIPMENT FROM SMALL WIRELESS FACILITIES. HOWEVER, THERE MAY BE STANDALONE SMALL WIRELESS FACILITIES POLES THAT MAY USE OPTION A OR B OR BOTH.]

- a. **External Equipment.** The antennas and associated equipment enclosures must be camouflaged to appear as an integral part of the pole or be mounted as close to the pole as feasible and must be reasonably related in size to the intended purpose of the facility and reasonable expansion for future frequencies and/or technologies, not to exceed the volumetric requirements described in Section A. If the equipment enclosure(s) is mounted on the exterior of the pole, the applicant is encouraged to place the equipment enclosure(s) behind any decorations, banners or signs that may be on the pole. Conduit and fiber must be fully concealed within the pole.
- b. **Concealed Equipment.** All equipment (excluding disconnect switches), conduit and fiber must be fully concealed within the pole. The antennas must be camouflaged to appear as an integral part of the pole or be mounted as close to the pole as feasible. [NOTE: AT THIS TIME, MILLIMETER WAVE ANTENNAS CANNOT BE COVERED OR SHROUDED, THEREFORE THEY MUST BE MOUNTED TO THE OUTSIDE OF THE POLE. POLES MAY HAVE TO BE SIGNIFICANTLY BIGGER IN DIAMETER IF EQUIPMENT IS CONCEALED IN OPTION B (ACCORDING TO POLE MANUFACTURES APPROX. 16-20 INCHES). OPTION A MAY REQUIRE A REPLACEMENT POLE. THE DIAMETER OF THE POLE SHOULD BE SIMILAR TO THE ORIGINAL.]

2. Any replacement pole shall substantially conform to the material and design of the existing pole or adjacent poles located within the contiguous right-of-way unless a different design is requested and approved pursuant to Section I.
3. The height of any replacement pole may not extend more than 10 feet above the height of the existing pole, unless such further height increase is required in writing by the pole owner.

**E. New Poles.** Small wireless facilities may be attached to new poles that are not replacement poles under sections C or D, installed by the wireless provider, subject to the following criteria:

[NOTE: CITIES SHOULD CHECK WITH OTHER CODES TO MAKE SURE THIS SECTION DOES NOT CONFLICT WITH PRACTICES OF NO NEW POLES OR POLE NEUTRAL PRACTICES, AND REVISE SUCH CODES AS APPROPRIATE.]

1. Antennas, antenna equipment and associated equipment enclosures (excluding disconnect switches), conduit and fiber shall be fully concealed within the structure. If such concealment is not technically feasible, or is incompatible with the pole design, then the antennas and associated equipment enclosures must be camouflaged to appear as an integral part of the structure or mounted as close to the pole as feasible, and must be reasonably related in size to the intended purpose of the facility, not to exceed the volumetric requirements in Section (A)(3). [IN APPROPRIATE CIRCUMSTANCES, CITIES MAY ALSO WISH TO CONSIDER ALLOWING ENCLOSURES THAT INCLUDE REASONABLE SPACE FOR FUTURE ADDITIONAL EQUIPMENT.]
2. To the extent technically feasible, all new poles and pole-mounted antennas and equipment shall substantially conform to the material and design of adjacent poles located within the contiguous right-of-way unless a different design is requested and approved pursuant to Section I.
3. New poles shall be no more than forty (40) feet in height unless additional height is requested and approved pursuant to Section I. [NOTE: THE FCC DEFINITION CONSIDERS A FACILITY A SMALL WIRELESS FACILITY IF IT IS 50 FT. OR UNDER. SMALL CELL TECHNOLOGY WORKS BEST WHEN DEPLOYED BETWEEN 35-45 FT. AND OTHER THAN DEPLOYMENTS ON UTILITY POLES, MOST WIRELESS PROVIDERS DO NOT NEED 50 FT TO DEPLOY. THEREFORE, IT MAY BE POSSIBLE TO HAVE NEW POLES THAT ARE NOT 50 FT.]
4. The city prefers that wireless providers install small wireless facilities on existing or replacement poles instead of installing new poles, unless the wireless provider can document that installation on an existing or replacement pole is not technically feasible or otherwise not possible (due to a lack of owner authorization, safety considerations, or other reasons acceptable to the [City designee]).

[NOTE: CITIES MAY CONSIDER THE SPACING BETWEEN POLES/DEPLOYMENTS. IT IS RECOMMENDED THAT CITIES CONSIDER DISTANCES BETWEEN NEW POLES BY AN INDIVIDUAL PROVIDER RATHER THAN ALL SWF DEPLOYMENTS. SPACING MAY VARY BECAUSE OF BUILDINGS, TOPOGRAPHY, SIZE OF INSTALLATION, ETC. THEREFORE, IT IS RECOMMENDED THAT CITIES WORK WITH PROVIDERS TO SEE WHAT IS FEASIBLE. THE FCC PROVIDES THAT MINIMUM SPACING REQUIREMENTS CANNOT PREVENT A PROVIDER FROM REPLACING ITS PREEXISTING FACILITIES OR COLLOCATING NEW EQUIPMENT ON A STRUCTURE ALREADY IN USE. ULTIMATELY, MINIMUM SPACING REQUIREMENTS WILL BE EVALUATED UNDER THE FCC'S TEST FOR AESTHETIC REGULATIONS – THAT THE REQUIREMENTS MUST BE (1) REASONABLE; (2) NO MORE BURDENSOME THAN THOSE APPLIED TO OTHER INFRASTRUCTURE DEPLOYMENTS; (3) OBJECTIVE, AND (4) PUBLISHED IN ADVANCE.]

- F. Undergrounding Requirements.** [ACCORDING TO THE FCC ORDER, UNDERGROUNDING REQUIREMENTS ARE SUBJECT TO THE SAME CRITERIA AS OTHER AESTHETIC STANDARDS.]

SOME COMPONENTS OF SMALL WIRELESS FACILITIES WILL OFTEN NOT WORK UNDERGROUND. THEREFORE, CITIES UNDERGROUNDING REQUIREMENTS OR UNDERGROUND DISTRICTS MAY CREATE AN EFFECTIVE PROHIBITION. CITIES ARE ENCOURAGED TO REVIEW CURRENT UNDERGROUNDING REQUIREMENTS AND WORK WITH THEIR ATTORNEYS/ROW SPECIALISTS TO MAKE SURE THOSE REQUIREMENTS ARE NOT IN CONFLICT WITH THE FCC ORDER.]

**G. Historic District Requirements.**

Small wireless facilities or poles to support collocation of small wireless facilities located in Historic Districts shall be designed to have a similar appearance, including material and design elements, if technically feasible, of other poles in the rights-of-way within 500 feet of the proposed installation. Any such design or concealment measures may not be considered part of the small wireless facility for purpose of the size restrictions in the definition of small wireless facility.

- H. Strand Mounted Equipment.** Strand mounted small wireless facilities are permitted, subject to the following criteria:

1. Each strand mounted antenna shall not exceed 3 cubic feet in volume, unless a deviation is requested and approved pursuant to Section I.
2. Only 2 strand mounted antennas are permitted between any two existing poles.

3. Strand mounted devices shall be placed as close as possible to the nearest pole and in no event more than five feet from the pole unless a greater distance is required by the pole owner.
4. No strand mounted device will be located in or above the portion of the roadway open to vehicular traffic.
5. Strand mounted devices must be installed with the minimum excess exterior cabling or wires (other than original strand) to meet the technological needs of the facility.

#### **I. Deviation from Design Standards.**

1. An applicant may obtain a deviation from these design standards if compliance with the standard: (a) is not technically feasible; (b) impedes the effective operation of the small wireless facility; (c) impairs a desired network performance objective; (d) conflicts with pole owner requirements; or (e) otherwise materially inhibits or limits the provision of wireless service. [NOTE: SINCE DEVIATIONS FROM THE DESIGN STANDARDS MAY LEAD TO QUESTIONS FOR WHY ONE PROVIDER WAS ALLOWED AN EXCEPTION AND ANOTHER WAS NOT, IT IS ADVISED THAT CITIES DOCUMENT REASONS FOR DEVIATIONS.]
2. When requests for deviation are sought under subsections (I)(1)(a)-(e), the request must be narrowly tailored to minimize deviation from the requirements of these design standards, and the [City designee] must find the applicant's proposed design provides similar aesthetic value when compared to strict compliance with these standards.
3. [City designee] may also allow for a deviation from these standards when it finds the applicant's proposed design provides equivalent or superior aesthetic value when compared to strict compliance with these standards.
4. The small wireless facility design approved under this Section I must meet the conditions of 47 C.F.R. Sec. 1.6002(l).
5. [City designee] will review and may approve a request for deviation to the minimum extent required to address the applicant's needs or facilitate a superior design. [NOTE: CITIES MAY RECOMMEND A PRE-MEETING WITH PROVIDERS IF A DEVIATION FROM STANDARDS IS BEING CONSIDERED. HOWEVER, PRE-MEETINGS **MUST BE OPTIONAL**. MANDATORY PRE-MEETINGS, WHETHER WITH STAFF, MEMBERS OF THE COMMUNITY OR NEIGHBORHOOD ASSOCIATIONS, WILL TRIGGER THE SHOT CLOCK TO START.]

## Acknowledgements

Alan Bar, Verizon

Alan Galloway, Davis Wright Tremaine

Andrew Bartlett, City of Hillsboro

Cindy Manheim, AT&T

Colleen DeShazer, Verizon

Dave Waffle, City of Beaverton

George Granger, AT&T

Jennifer Backhaus, City of Milwaukie

Jennifer Li, City of Portland

Ken Lyons, Wireless Policy Group (AT&T)

Kim Allen, Wireless Policy Group (Verizon)

Madison Thesing, City of Lake Oswego

Meridee Pabst, Wireless Policy Group (AT&T)

Michael Johnston, Telecom Law Firm

Pam Vaughan, City of Corvallis

Reba Crocker, ROW Consultants LLC (formerly with the cities of Milwaukie and Gladstone)

Rich Roche, Formerly with AT&T

Robert "Tripp" May III, Telecom Law Firm

Ryan Zink, City of Salem

Sambo Kirkman, City of Beaverton

Scott McClure, Formerly with the City of Monmouth

Steve Coon, Verizon

Tegan Enloe, City of Tigard

Tim Halinski, T-Mobile

## Appendix A – Shot Clock Information

*Shot clock provisions that apply to small wireless facilities are codified in 47 C.F.R. Section 1.6003, which is provided below.*

### **§1.6003 Reasonable periods of time to act on siting applications.**

(a) *Timely action required.* A siting authority that fails to act on a siting application on or before the shot clock date for the application, as defined in paragraph (e) of this section, is presumed not to have acted within a reasonable period of time.

(b) *Shot clock period.* The shot clock period for a siting application is the sum of—

(1) The number of days of the presumptively reasonable period of time for the pertinent type of application, pursuant to paragraph (c) of this section; plus

(2) The number of days of the tolling period, if any, pursuant to paragraph (d) of this section.

(c) *Presumptively reasonable periods of time—*(1) *Review periods for individual applications.* The following are the presumptively reasonable periods of time for action on applications seeking authorization for deployments in the categories set forth in paragraphs (c)(1)(i) through (iv) of this section:

(i) Review of an application to collocate a Small Wireless Facility using an existing structure: 60 days.

(ii) Review of an application to collocate a facility other than a Small Wireless Facility using an existing structure: 90 days.

(iii) Review of an application to deploy a Small Wireless Facility using a new structure: 90 days.

(iv) Review of an application to deploy a facility other than a Small Wireless Facility using a new structure: 150 days.

(2) *Batching.* (i) If a single application seeks authorization for multiple deployments, all of which fall within a category set forth in either paragraph (c)(1)(i) or (iii) of this section, then the presumptively reasonable period of time for the application as a whole is equal to that for a single deployment within that category.

(ii) If a single application seeks authorization for multiple deployments, the components of which are a mix of deployments that fall within paragraph (c)(1)(i) of this section and deployments that fall within paragraph (c)(1)(iii) of this section, then the presumptively reasonable period of time for the application as a whole is 90 days.

(iii) Siting authorities may not refuse to accept applications under paragraphs (c)(2)(i) and (ii) of this section.

(d) *Tolling period.* Unless a written agreement between the applicant and the siting authority provides otherwise, the tolling period for an application (if any) is as set forth in paragraphs (d)(1) through (3) of this section.

(1) For an initial application to deploy Small Wireless Facilities, if the siting authority notifies the applicant on or before the 10th day after submission that the application is materially incomplete, and clearly and specifically identifies the missing documents or information and the specific rule or regulation creating the



obligation to submit such documents or information, the shot clock date calculation shall restart at zero on the date on which the applicant submits all the documents and information identified by the siting authority to render the application complete.

(2) For all other initial applications, the tolling period shall be the number of days from—

(i) The day after the date when the siting authority notifies the applicant in writing that the application is materially incomplete and clearly and specifically identifies the missing documents or information that the applicant must submit to render the application complete and the specific rule or regulation creating this obligation; until

(ii) The date when the applicant submits all the documents and information identified by the siting authority to render the application complete;

(iii) But only if the notice pursuant to paragraph (d)(2)(i) of this section is effectuated on or before the 30th day after the date when the application was submitted; or

(3) For resubmitted applications following a notice of deficiency, the tolling period shall be the number of days from—

(i) The day after the date when the siting authority notifies the applicant in writing that the applicant's supplemental submission was not sufficient to render the application complete and clearly and specifically identifies the missing documents or information that need to be submitted based on the siting authority's original request under paragraph (d)(1) or (2) of this section; until

(ii) The date when the applicant submits all the documents and information identified by the siting authority to render the application complete;

(iii) But only if the notice pursuant to paragraph (d)(3)(i) of this section is effectuated on or before the 10th day after the date when the applicant makes a supplemental submission in response to the siting authority's request under paragraph (d)(1) or (2) of this section.

(e) *Shot clock date.* The shot clock date for a siting application is determined by counting forward, beginning on the day after the date when the application was submitted, by the number of calendar days of the shot clock period identified pursuant to paragraph (b) of this section and including any pre-application period asserted by the siting authority; *provided*, that if the date calculated in this manner is a “holiday” as defined in §1.4(e)(1) or a legal holiday within the relevant State or local jurisdiction, the shot clock date is the next business day after such date. The term “business day” means any day as defined in §1.4(e)(2) and any day that is not a legal holiday as defined by the State or local jurisdiction

## Appendix B – Code of Federal Regulations (C.F.R.) Cited Throughout Document

### 47 C.F.R. Section 1.1307

---

**§1.1307 Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.**

[Link to an amendment published at 85 FR 18142, Apr. 1, 2020.](#)

[Link to a correction of the above amendment published at 85 FR 33578, June 2, 2020.](#)

(a) Commission actions with respect to the following types of facilities may significantly affect the environment and thus require the preparation of EAs by the applicant (see §§1.1308 and 1.1311) and may require further Commission environmental processing (*see* §§1.1314, 1.1315 and 1.1317):

(1) Facilities that are to be located in an officially designated wilderness area.

(2) Facilities that are to be located in an officially designated wildlife preserve.

(3) Facilities that: (i) May affect listed threatened or endangered species or designated critical habitats; or (ii) are likely to jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats, as determined by the Secretary of the Interior pursuant to the Endangered Species Act of 1973.

NOTE: The list of endangered and threatened species is contained in 50 CFR 17.11, 17.22, 222.23(a) and 227.4. The list of designated critical habitats is contained in 50 CFR 17.95, 17.96 and part 226. To ascertain the status of proposed species and habitats, inquiries may be directed to the Regional Director of the Fish and Wildlife Service, Department of the Interior.

(4) Facilities that may affect districts, sites, buildings, structures or objects, significant in American history, architecture, archeology, engineering or culture, that are listed, or are eligible for listing, in the National Register of Historic Places (*see* 54 U.S.C. 300308; 36 CFR parts 60 and 800), and that are subject to review pursuant to section 1.1320 and have been determined through that review process to have adverse effects on identified historic properties.

(5) Facilities that may affect Indian religious sites.

(6) Facilities to be located in floodplains, if the facilities will not be placed at least one foot above the base flood elevation of the floodplain.

(7) Facilities whose construction will involve significant change in surface features (e.g., wetland fill, deforestation or water diversion). (In the case of wetlands on Federal property, *see* Executive Order 11990.)

(8) Antenna towers and/or supporting structures that are to be equipped with high intensity white lights which are to be located in residential neighborhoods, as defined by the applicable zoning law.

(b) In addition to the actions listed in paragraph (a) of this section, Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the preparation of an Environmental Assessment (EA) if the particular facility, operation or transmitter would cause human exposure to levels of radiofrequency radiation in excess of the limits in §§1.1310 and 2.1093 of this chapter. Applications to the Commission for construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities must

contain a statement confirming compliance with the limits unless the facility, operation, or transmitter is categorically excluded, as discussed below. Technical information showing the basis for this statement must be submitted to the Commission upon request. Such compliance statements may be omitted from license applications for transceivers subject to the certification requirement in §25.129 of this chapter.

(1) The appropriate exposure limits in §§1.1310 and 2.1093 of this chapter are generally applicable to all facilities, operations and transmitters regulated by the Commission. However, a determination of compliance with the exposure limits in §1.1310 or §2.1093 of this chapter (routine environmental evaluation), and preparation of an EA if the limits are exceeded, is necessary only for facilities, operations and transmitters that fall into the categories listed in table 1, or those specified in paragraph (b)(2) of this section. All other facilities, operations and transmitters are categorically excluded from making such studies or preparing an EA, except as indicated in paragraphs (c) and (d) of this section. For purposes of table 1, *building-mounted antennas* means antennas mounted in or on a building structure that is occupied as a workplace or residence. The term *power* in column 2 of table 1 refers to total operating power of the transmitting operation in question in terms of effective radiated power (ERP), equivalent isotropically radiated power (EIRP), or peak envelope power (PEP), as defined in §2.1 of this chapter. For the case of the Cellular Radiotelephone Service, subpart H of part 22 of this chapter; the Personal Communications Service, part 24 of this chapter and the Specialized Mobile Radio Service, part 90 of this chapter, the phrase *total power of all channels* in column 2 of table 1 means the sum of the ERP or EIRP of all co-located simultaneously operating transmitters owned and operated by a single licensee. When applying the criteria of table 1, radiation in all directions should be considered. For the case of transmitting facilities using sectorized transmitting antennas, applicants and licensees should apply the criteria to all transmitting channels in a given sector, noting that for a highly directional antenna there is relatively little contribution to ERP or EIRP summation for other directions.

**TABLE 1—TRANSMITTERS, FACILITIES AND OPERATIONS SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION**

Service (title 47 CFR rule part)	Evaluation required if:
Experimental Radio Services (part 5)	Power >100 W ERP (164 W EIRP).
Commercial Mobile Radio Services (part 20)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1000 W ERP (1640 W EIRP). Building-mounted antennas: power >1000 W ERP (1640 W EIRP).
	Consumer Signal Booster equipment grantees under the Commercial Mobile Radio Services provisions in part 20 are required to attach a label to Fixed Consumer Booster antennas that:
	(1) Provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transmitting antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310.
Paging and Radiotelephone Service (subpart E of part 22)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1000 W ERP (1640 W EIRP).
	Building-mounted antennas: power >1000 W ERP (1640 W EIRP).
Cellular Radiotelephone Service (subpart H of part 22)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >1000 W ERP (1640 W EIRP).

	Building-mounted antennas: total power of all channels >1000 W ERP (1640 W EIRP).
Personal Communications Services (part 24)	(1) Narrowband PCS (subpart D):
	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >1000 W ERP (1640 W EIRP).
	Building-mounted antennas: total power of all channels >1000 W ERP (1640 W EIRP).
	(2) Broadband PCS (subpart E):
	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >2000 W ERP (3280 W EIRP).
	Building-mounted antennas: total power of all channels >2000 W ERP (3280 W EIRP).
Satellite Communications Services (part 25)	All included.
	In addition, for NGSO subscriber equipment, licensees are required to attach a label to subscriber transceiver antennas that:
	(1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310 of this chapter.
Miscellaneous Wireless Communications Services (part 27 except subpart M)	(1) For the 1390-1392 MHz, 1392-1395 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz bands:
	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >2000 W ERP (3280 W EIRP).
	Building-mounted antennas: total power of all channels >2000 W ERP (3280 W EIRP).
	(2) For the 698-746 MHz, 746-764 MHz, 776-794 MHz, 2305-2320 MHz, and 2345-2360 MHz bands:
	Total power of all channels >1000 W ERP (1640 W EIRP).
Broadband Radio Service and Educational Broadband Service (subpart M of part 27)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1640 W EIRP.
	Building-mounted antennas: power >1640 W EIRP.
	BRS and EBS licensees are required to attach a label to subscriber transceiver or transverter antennas that:

	(1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310.
Upper Microwave Flexible Use Service (part 30)	Non-building-mounted antennas: Height above ground level to lowest point of antenna <10 m and power >1640 W EIRP.
	Antennas are mounted on buildings.
Radio Broadcast Services (part 73)	All included.
Auxiliary and Special Broadcast and Other Program Distributional Services (part 74)	Subparts G and L: Power >100 W ERP.
Stations in the Maritime Services (part 80)	Ship earth stations only.
Private Land Mobile Radio Services Paging Operations (subpart P of part 90)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1000 W ERP (1640 W EIRP).
	Building-mounted antennas: power >1000 W ERP (1640 W EIRP).
Private Land Mobile Radio Services Specialized Mobile Radio (subpart S of part 90)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and total power of all channels >1000 W ERP (1640 W EIRP).
	Building-mounted antennas: Total power of all channels >1000 W ERP (1640 W EIRP).
76-81 GHz Radar Service (part 95)	All included.
Amateur Radio Service (part 97)	Transmitter output power >levels specified in §97.13(c)(1) of this chapter.
Local Multipoint Distribution Service (subpart L of part 101) and 24 GHz (subpart G of part 101)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1640 W EIRP.
	Building-mounted antennas: power >1640 W EIRP.
	LMDS and 24 GHz Service licensees are required to attach a label to subscriber transceiver antennas that:
	(1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310.
70/80/90 GHz Bands (subpart Q of part 101)	Non-building-mounted antennas: height above ground level to lowest point of antenna <10 m and power >1640 W EIRP.

	Building-mounted antennas: power >1640 W EIRP.
	Licensees are required to attach a label to transceiver antennas that:
	(1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and
	(2) references the applicable FCC-adopted limits for radiofrequency exposure specified in §1.1310.

(2)(i) Mobile and portable transmitting devices that operate in the Commercial Mobile Radio Services pursuant to part 20 of this chapter; the Cellular Radiotelephone Service pursuant to part 22 of this chapter; the Personal Communications Services (PCS) pursuant to part 24 of this chapter; the Satellite Communications Services pursuant to part 25 of this chapter; the Miscellaneous Wireless Communications Services pursuant to part 27 of this chapter; the Upper Microwave Flexible User Service pursuant to part 30 of this chapter; the Maritime Services (ship earth stations only) pursuant to part 80 of this chapter; the Specialized Mobile Radio Service, the 4.9 GHz Band Service, and the 3650 MHz Wireless Broadband Service pursuant to part 90 of this chapter; the Wireless Medical Telemetry Service (WMTS), the Medical Device Radiocommunication Service (MedRadio), and the 76-81 GHz Band Radar Service pursuant to part 95 of this chapter; and the Citizens Broadband Radio Service pursuant to part 96 of this chapter are subject to routine environmental evaluation for RF exposure prior to equipment authorization or use, as specified in §§2.1091 and 2.1093 of this chapter.

(ii) Unlicensed PCS, unlicensed NII, and millimeter-wave devices are also subject to routine environmental evaluation for RF exposure prior to equipment authorization or use, as specified in §§15.255(g), 15.257(g), 15.319(i), and 15.407(f) of this chapter.

(iii) Portable transmitting equipment for use in the Wireless Medical Telemetry Service (WMTS) is subject to routine environmental evaluation as specified in §§2.1093 and 95.2385 of this chapter.

(iv) Equipment authorized for use in the Medical Device Radiocommunication Service (MedRadio) as a medical implant device or body-worn transmitter (as defined in subpart I of part 95 of this chapter) is subject to routine environmental evaluation for RF exposure prior to equipment authorization, as specified in §§2.1093 and 95.2585 of this chapter by finite difference time domain (FDTD) computational modeling or laboratory measurement techniques. Where a showing is based on computational modeling, the Commission retains the discretion to request that supporting documentation and/or specific absorption rate (SAR) measurement data be submitted.

(v) All other mobile, portable, and unlicensed transmitting devices are categorically excluded from routine environmental evaluation for RF exposure under §§2.1091, 2.1093 of this chapter except as specified in paragraphs (c) and (d) of this section.

(3) In general, when the guidelines specified in §1.1310 are exceeded in an accessible area due to the emissions from multiple fixed transmitters, actions necessary to bring the area into compliance are the shared responsibility of all licensees whose transmitters produce, at the area in question, power density levels that exceed 5% of the power density exposure limit applicable to their particular transmitter or field strength levels that, when squared, exceed 5% of the square of the electric or magnetic field strength limit applicable to their particular transmitter. Owners of transmitter sites are expected to allow applicants and licensees to take reasonable steps to comply with the requirements contained in §1.1307(b) and, where feasible, should encourage co-location of transmitters and common solutions for controlling access to areas where the RF exposure limits contained in §1.1310 might be exceeded.

(i) Applicants for proposed (not otherwise excluded) transmitters, facilities or modifications that would cause non-compliance with the limits specified in §1.1310 at an accessible area previously in compliance must submit an EA if emissions from the applicant's transmitter or facility would result, at the area in question, in a power density that exceeds 5% of the power density exposure limit applicable to that transmitter or facility or in a field strength that, when squared, exceeds 5% of the square of the electric or magnetic field strength limit applicable to that transmitter or facility.

(ii) Renewal applicants whose (not otherwise excluded) transmitters or facilities contribute to the field strength or power density at an accessible area not in compliance with the limits specified in §1.1310 must submit an EA if emissions from the applicant's transmitter or facility results, at the area in question, in a power density that exceeds 5% of the power density exposure limit applicable to that transmitter or facility or in a field strength that, when squared, exceeds 5% of the square of the electric or magnetic field strength limit applicable to that transmitter of facility.

(c) If an interested person alleges that a particular action, otherwise categorically excluded, will have a significant environmental effect, the person shall submit to the Bureau responsible for processing that action a written petition setting forth in detail the reasons justifying or circumstances necessitating environmental consideration in the decision-making process. (See §1.1313). The Bureau shall review the petition and consider the environmental concerns that have been raised. If the Bureau determines that the action may have a significant environmental impact, the Bureau will require the applicant to prepare an EA (see §§1.1308 and 1.1311), which will serve as the basis for the determination to proceed with or terminate environmental processing.

(d) If the Bureau responsible for processing a particular action, otherwise categorically excluded, determines that the proposal may have a significant environmental impact, the Bureau, on its own motion, shall require the applicant to submit an EA. The Bureau will review and consider the EA as in paragraph (c) of this section.

NOTE TO PARAGRAPH (d): Pending a final determination as to what, if any, permanent measures should be adopted specifically for the protection of migratory birds, the Bureau shall require an Environmental Assessment for an otherwise categorically excluded action involving a new or existing antenna structure, for which an antenna structure registration application (FCC Form 854) is required under part 17 of this chapter, if the proposed antenna structure will be over 450 feet in height above ground level (AGL) and involves either:

1. Construction of a new antenna structure;
2. Modification or replacement of an existing antenna structure involving a substantial increase in size as defined in paragraph I(C)(1)(3) of Appendix B to part 1 of this chapter; or
3. Addition of lighting or adoption of a less preferred lighting style as defined in §17.4(c)(1)(iii) of this chapter. The Bureau shall consider whether to require an EA for other antenna structures subject to §17.4(c) of this chapter in accordance with §17.4(c)(8) of this chapter. An Environmental Assessment required pursuant to this note will be subject to the same procedures that apply to any Environmental Assessment required for a proposed tower or modification of an existing tower for which an antenna structure registration application (FCC Form 854) is required, as set forth in §17.4(c) of this chapter.

(e) 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 regulations contained in this chapter concerning the environmental effects of such emissions. For purposes of this paragraph:

(1) The term *personal wireless service* means commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services;



(2) The term *personal wireless service facilities* means facilities for the provision of personal wireless services;

(3) The term *unlicensed wireless services* means the offering of telecommunications services using duly authorized devices which do not require individual licenses, but does not mean the provision of direct-to-home satellite services; and

(4) The term *direct-to-home satellite services* means the distribution or broadcasting of programming or services by satellite directly to the subscriber's premises without the use of ground receiving or distribution equipment, except at the subscriber's premises or in the uplink process to the satellite.

[51 FR 15000, Apr. 22, 1986]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §1.1307, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at [www.govinfo.gov](http://www.govinfo.gov).

EFFECTIVE DATE NOTE: At 85 FR 18142, Apr. 1, 2020, §1.1307 was amended by revising paragraph (b). At 85 FR 33578, June 2, 2020, this revision was delayed indefinitely.

#### **47 C.F.R. Section 1.1320**

---

##### **§1.1320 Review of Commission undertakings that may affect historic properties.**

(a) *Review of Commission undertakings.* Any Commission undertaking that has the potential to cause effects on historic properties, unless excluded from review pursuant to paragraph (b) of this section, shall be subject to review under section 106 of the National Historic Preservation Act, as amended, 54 U.S.C. 306108, by applying—

(1) The procedures set forth in regulations of the Advisory Council on Historic Preservation, 36 CFR 800.3-800.13, or

(2) If applicable, a program alternative established pursuant to 36 CFR 800.14, including but not limited to the following:

(i) The Nationwide Programmatic Agreement for the Collocation of Wireless Antennas, as amended, Appendix B of this part.

(ii) The Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings, Appendix C of this part.

(iii) The Program Comment to Tailor the Federal Communications Commission's Section 106 Review for Undertakings Involving the Construction of Positive Train Control Wayside Poles and Infrastructure, 79 FR 30861 (May 29, 2014).

(b) *Exclusions.* The following categories of undertakings are excluded from review under this section:

(1) *Projects reviewed by other agencies.* Undertakings for which an agency other than the Commission is the lead Federal agency pursuant to 36 CFR 800.2(a)(2).

(2) *Projects subject to program alternatives.* Undertakings excluded from review under a program alternative established pursuant to 36 CFR 800.14, including those listed in paragraph (a)(2) of this section.

(3) *Replacement utility poles.* Construction of a replacement for an existing structure where all the following criteria are satisfied:

(i) The original structure—

(A) Is a pole that can hold utility, communications, or related transmission lines;

(B) Was not originally erected for the sole or primary purpose of supporting antennas that operate pursuant to the Commission's spectrum license or authorization; and

(C) Is not itself a historic property.

(ii) The replacement pole—

(A) Is located no more than 10 feet away from the original pole, based on the distance between the centerpoint of the replacement pole and the centerpoint of the original pole; *provided* that construction of the replacement pole in place of the original pole entails no new ground disturbance (either laterally or in depth) outside previously disturbed areas, including disturbance associated with temporary support of utility, communications, or related transmission lines. For purposes of this paragraph, “ground disturbance” means any activity that moves, compacts, alters, displaces, or penetrates the ground surface of previously undisturbed soils;

(B) Has a height that does not exceed the height of the original pole by more than 5 feet or 10 percent of the height of the original pole, whichever is greater; and

(C) Has an appearance consistent with the quality and appearance of the original pole.

(4) *Collocations on buildings and other non-tower structures.* The mounting of antennas (including associated equipment such as wiring, cabling, cabinets, or backup power) on buildings or other non-tower structures where the deployment meets the following conditions:

(i) There is an existing antenna on the building or structure;

(ii) One of the following criteria is met:

(A) *Non-Visible Antennas.* The new antenna is not visible from any adjacent streets or surrounding public spaces and is added in the same vicinity as a pre-existing antenna;

(B) *Visible Replacement Antennas.* The new antenna is visible from adjacent streets or surrounding public spaces, provided that

(1) It is a replacement for a pre-existing antenna,

(2) The new antenna will be located in the same vicinity as the pre-existing antenna,

(3) The new antenna will be visible only from adjacent streets and surrounding public spaces that also afford views of the pre-existing antenna,

(4) The new antenna is not more than 3 feet larger in height or width (including all protuberances) than the pre-existing antenna, and

(5) No new equipment cabinets are visible from the adjacent streets or surrounding public spaces; or

(C) *Other Visible Antennas.* The new antenna is visible from adjacent streets or surrounding public spaces, provided that

(1) It is located in the same vicinity as a pre-existing antenna,

(2) The new antenna will be visible only from adjacent streets and surrounding public spaces that also afford views of the pre-existing antenna,

(3) The pre-existing antenna was not deployed pursuant to the exclusion in this paragraph,

(4) The new antenna is not more than three feet larger in height or width (including all protuberances) than the pre-existing antenna, and

(5) No new equipment cabinets are visible from the adjacent streets or surrounding public spaces;

(iii) The new antenna complies with all zoning conditions and historic preservation conditions applicable to existing antennas in the same vicinity that directly mitigate or prevent effects, such as camouflage or concealment requirements;

(iv) The deployment of the new antenna involves no new ground disturbance; and

(v) The deployment would otherwise require the preparation of an Environmental Assessment under 1.1304(a)(4) solely because of the age of the structure.

NOTE 1 TO PARAGRAPH (b)(4): A non-visible new antenna is in the “same vicinity” as a pre-existing antenna if it will be collocated on the same rooftop, façade or other surface. A visible new antenna is in the “same vicinity” as a pre-existing antenna if it is on the same rooftop, façade, or other surface and the centerpoint of the new antenna is within ten feet of the centerpoint of the pre-existing antenna. A deployment causes no new ground disturbance when the depth and width of previous disturbance exceeds the proposed construction depth and width by at least two feet.

(c) *Responsibilities of applicants.* Applicants seeking Commission authorization for construction or modification of towers, collocation of antennas, or other undertakings shall take the steps mandated by, and comply with the requirements set forth in, Appendix C of this part, sections III-X, or any other applicable program alternative.

(d) *Definitions.* For purposes of this section, the following definitions apply:

*Antenna* means an apparatus designed for the purpose of emitting radiofrequency (RF) radiation, to be operated or operating from a fixed location pursuant to Commission authorization, for the transmission of writing, signs, signals, data, images, pictures, and sounds of all kinds, including the transmitting device and any on-site equipment, switches, wiring, cabling, power sources, shelters or cabinets associated with that antenna and added to a tower, structure, or building as part of the original installation of the antenna. For most services, an antenna will be mounted on or in, and is distinct from, a supporting structure such as a tower, structure or building. However, in the case of AM broadcast stations, the entire tower or group of towers constitutes the antenna for that station. For purposes of this section, the term antenna does not include unintentional radiators, mobile stations, or devices authorized under part 15 of this title.

*Applicant* means a Commission licensee, permittee, or registration holder, or an applicant or prospective applicant for a wireless or broadcast license, authorization or antenna structure registration, and the duly authorized agents, employees, and contractors of any such person or entity.

*Collocation* means the mounting or installation of an antenna on an existing tower, building or structure for the purpose of transmitting and/or receiving radio frequency signals for communications purposes, whether or not there is an existing antenna on the structure.

*Tower* means any structure built for the sole or primary purpose of supporting Commission-licensed or authorized antennas, including the on-site fencing, equipment, switches, wiring, cabling, power sources, shelters, or cabinets associated with that tower but not installed as part of an antenna as defined herein.

*Undertaking* means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of the Commission, including those requiring a Commission permit, license or approval. Maintenance and servicing of towers, antennas, and associated equipment are not deemed to be undertakings subject to review under this section.

[82 FR 58758, Dec. 14, 2017]

## **47 C.F.R. Section 1.6002**

---

### **§1.6002 Definitions.**

Terms not specifically defined in this section or elsewhere in this subpart have the meanings defined in this part and the Communications Act of 1934, 47 U.S.C. 151 *et seq.* Terms used in this subpart have the following meanings:

(a) *Action or to act* on a siting application means a siting authority's grant of a siting application or issuance of a written decision denying a siting application.

(b) *Antenna*, consistent with §1.1320(d), means an apparatus designed for the purpose of emitting radiofrequency (RF) radiation, to be operated or operating from a fixed location pursuant to Commission authorization, for the provision of personal wireless service and any commingled information services. For purposes of this definition, the term antenna does not include an unintentional radiator, mobile station, or device authorized under part 15 of this chapter.

(c) *Antenna equipment*, consistent with §1.1320(d), means equipment, switches, wiring, cabling, power sources, shelters or cabinets associated with an antenna, located at the same fixed location as the antenna, and, when collocated on a structure, is mounted or installed at the same time as such antenna.

(d) *Antenna facility* means an antenna and associated antennaequipment.

(e) *Applicant* means a person or entity that submits a siting application and the agents, employees, and contractors of such person or entity.

(f) *Authorization* means any approval that a siting authority must issue under applicable law prior to the deployment of personal wireless service facilities, including, but not limited to, zoning approval and building permit.

(g) *Collocation*, consistent with §1.1320(d) and the Nationwide Programmatic Agreement (NPA) for the Collocation of Wireless Antennas, appendix B of this part, section I.B, means—

(1) Mounting or installing an antenna facility on a pre-existing structure; and/or

(2) Modifying a structure for the purpose of mounting or installing an antenna facility on thatstructure.

(3) The definition of “collocation” in §1.6100(b)(2) applies to the term as used in that section.

(h) *Deployment* means placement, construction, or modification of a personal wireless service facility.

(i) *Facility or personal wireless service facility* means an antenna facility or a structure that is used for the provision of personal wireless service, whether such service is provided on a stand-alone basis or commingled with other wireless communications services.

(j) *Siting application or application* means a written submission to a siting authority requesting authorization for the deployment of a personal wireless service facility at a specified location.

(k) *Siting authority* means a State government, local government, or instrumentality of a State government or local government, including any official or organizational unit thereof, whose authorization is necessary prior to the deployment of personal wireless service facilities.

(l) *Small wireless facilities* are facilities that meet each of the following conditions:

(1) The facilities—

(i) Are mounted on structures 50 feet or less in height including their antennas as defined in §1.1320(d); or

(ii) Are mounted on structures no more than 10 percent taller than other adjacent structures; or

(iii) Do not extend existing structures on which they are located to a height of more than 50 feet or by more than 10 percent, whichever is greater;

(2) Each antenna associated with the deployment, excluding associated antenna equipment (as defined in the definition of antenna in §1.1320(d)), is no more than three cubic feet in volume;

(3) All other wireless equipment associated with the structure, including the wireless equipment associated with the antenna and any pre-existing associated equipment on the structure, is no more than 28 cubic feet in volume;

(4) The facilities do not require antenna structure registration under part 17 of this chapter;

(5) The facilities are not located on Tribal lands, as defined under 36 CFR 800.16(x); and

(6) The facilities do not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in §1.1307(b).

(m) *Structure* means a pole, tower, base station, or other building, whether or not it has an existing antenna facility, that is used or to be used for the provision of personal wireless service (whether on its own or comingled with other types of services).

[83 FR 51884, Oct. 15, 2018, as amended at 84 FR 59567, Nov. 5, 2019]