

# City of Carroll

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112 E. 5th Street

Carroll, Iowa 51401-2799

(712) 792-1000

FAX: (712) 792-0139

**GOVERNMENTAL BODY:** Carroll City Council  
**DATE OF MEETING:** April 15, 2019  
**TIME OF MEETING:** 5:15 P.M.  
**LOCATION OF MEETING:** Carroll Fire Station – 801 N Bella Vista Drive

[www.cityofcarroll.com](http://www.cityofcarroll.com)

## AGENDA

- I. Pledge of Allegiance
- II. Roll Call
- III. Oral Requests and Communications from the Audience
- IV. Resolutions
  - A. Policy 715 – Small Wireless Facility Antenna/Tower Right-of-Way Siting
  - B. Policy 716 – Small Wireless Facility Design Guidelines
- V. Adjourn

1869 *Carroll* 2019  
**150**  
YEARS

# City of Carroll

112 E. 5th Street

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**MEMO TO:** Honorable Mayor and City Council Members  
**FROM:** Mike Pogge-Weaver, City Manager *MSP-w*  
**DATE:** April 11, 2019  
**SUBJECT:** Policy 0715 – Small Wireless Facility Antenna/Tower Right-of-Way Siting

A recent Federal Communications Commission (FCC) Order suggests that all local jurisdictions comply with various rules and recommendations on the exercise of local aesthetic, zoning, public works, and fee schedules when dealing with small cell (Small Wireless Facility) installations. Communities have until April 15, 2019 to approve and publish Small Wire Facility regulation.

The City recognizes its responsibilities under the federal Telecommunications Act of 1996 and Iowa law (Iowa Code Chapter 8C: Iowa Cell Siting Act) and believes that it is acting consistent with Iowa Code Chapter 8C: Iowa Cell Siting Act of the law in ensuring that development activity does not endanger public health, safety, or welfare. The City intends this Policy will ensure that the installation, augmentation and relocation of Small Wireless Facility installations in the public rights-of-way are conducted in such a manner as to lawfully balance the legal rights of applicants under the federal Telecommunications Act and Iowa Code Chapter 8C: Iowa Cell Siting Act, relating to the Siting of Small Wireless Facilities with the rights, safety, privacy, property and security of residents of the City.

Policy 0715 addresses the siting of Small Wireless Facility antennas and towers in the City of Carroll.

**RECOMMENDATION:** Mayor and City Council consideration and approval of a resolution approving Policy 0715 – Small Wireless Facility Antenna/Tower Right-of-Way Siting.

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RESOLUTION NO. \_\_\_\_\_

A RESOLUTION APPROVING POLICY 715 – SMALL WIRELESS FACILITY  
ANTENNA/TOWER RIGHT-OF-WAY SITING

WHEREAS, Policy 715 – Small Wireless Facility Antenna/Tower Right-of-Way Siting has been deemed necessary due to a recent Federal Communications Commission Order; and

WHEREAS, the Small Wireless Facility Antenna/Tower Right-of-Way Siting is attached hereto as Exhibit “A”; and

WHEREAS, it is determined that the approval of the attached Small Wireless Facility Antenna/Tower Right-of-Way Siting is in the best interest of the City of Carroll, Iowa;

NOW, THEREFORE, BE IT RESOLVED that Policy 715 - Small Wireless Facility Antenna/Tower Right-of-Way Siting, attached as Exhibit “A”, be authorized and approved.

PASSED AND APPROVED by the Carroll City Council of the City of Carroll, Iowa this 15th day of April, 2019.

CITY COUNCIL OF THE  
CITY OF CARROLL, IOWA

BY: \_\_\_\_\_  
Eric P. Jensen, Mayor


ATTEST:

By: \_\_\_\_\_  
Laura A. Schaefer, City Clerk

# CITY OF CARROLL

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## POLICIES AND PROCEDURES MANUAL

<b>Subject</b> Small Wireless Facility Antenna/Tower Right-of-Way Siting	<b>Policy No.</b> 0715
<b>Responsible Division(s), Office(s)</b> Public Works Department Building Department	<b>Related Policies &amp; Procedures</b> Policy 0716 – Small Wireless Facility Design Guidelines
<b>Effective/Revision Date</b> April 15, 2019	<b>Approvals(s)</b>  Michel J. Pogge-Weaver

This policy has been established to define the general requirements for the installation of small wireless facilities within the rights-of-way in the City of Carroll. See attached for the full policy.

# CITY OF CARROLL

## DEPARTMENT OF PUBLIC WORKS

### Small Wireless Facilities

**POLICY TITLE:** Small Wireless Facility

**POLICY NO.:** 0715

Antenna/Tower Right-of-Way Siting

**PURPOSE:**

1. This policy has been established to define the general requirements for the installation of small wireless facilities within the rights-of-way in the City of Carroll. The policy creates requirements for the siting and design of wireless communication structures, facilities, and related utilities. As such the provisions of this policy are intended to regulate and guide the installation of small wireless facility antennas and related accessory structures on infrastructure and to regulate and guide the installation of new communication towers when needed. It is the desire of the City to encourage the development of an aesthetically pleasing local environment. It is also the intent of the City to encourage the expansion of wireless technology, as it provides a valuable service to City residents and businesses. It is not the City's goal to unreasonably discriminate among providers of functionally equivalent services nor to have the effect of prohibiting, either directly or indirectly, the provisions of small wireless services. It is the City's goal to encourage wireless providers to construct new facilities disguised through techniques of camouflage design, as defined in this Policy. It is the intent of this Policy to achieve the following objectives:
  - 1) To minimize the adverse visual effects of communication structures through careful design, siting, locating and screening.
  - 2) To locate and engineer communications support structures in a manner which minimizes potential damage to adjacent properties from structural failure.
  - 3) To allow for the reasonable location and efficient use of communication structures through the co-location of carriers.
2. The City currently regulates all wireless telecommunications facilities in the public rights-of-way through a permit process. The City's existing code is in the process of being updated to reflect current telecommunications trends or necessary legal requirements. Further, the existing code provisions were not specifically designed to address the unique legal and practical issues that arise in connection with multiple small wireless facility installations deployed in the public rights-of-way.

3. A recent FCC Order suggests that all local jurisdictions comply with various rules and recommendations on the exercise of local aesthetic, zoning, public works, and fee schedules when dealing with small cell (**Small Wireless Facility**) installations. The FCC Order also concludes that local governments function as regulators of their rights-of-way. The FCC's Declaratory Rule and Third Order Rights concluded that when local governments regulate, they do so as a regulatory function. This section is supporting The Declaratory Ruling and Third Order Rights view of local governments acting as regulators. Thus, Carroll Iowa is in clear need of policies that support their role as a regulator of their rights-of-way.
4. The City recognizes its responsibilities under the federal Telecommunications Act of 1996 and state law (Senate File 431: Act Relating to the Siting of Small Wireless Facilities) and believes that it is acting consistent with Senate File 431 Act of the law in ensuring that development activity does not endanger public health, safety, or welfare. The City intends this Policy to ensure that the installation, augmentation and relocation of **small wireless facility** installations in the public rights-of-way are conducted in such a manner as to lawfully balance the legal rights of applicants under the federal Telecommunications Act and **Senate File 431: Act Relating to the Siting of Small Wireless Facilities** with the rights, safety, privacy, property and security of residents of the City.
5. This policy is not intended to, nor shall it be interpreted or applied to: (1) prohibit or effectively prohibit any wireless telecommunications service provider's ability to provide wireless services; (2) prohibit or effectively prohibit any entity's ability to provide any interstate or intrastate telecommunications service; (3) unreasonably discriminate among providers of functionally equivalent services; (4) deny any request for authorization to place, construct or modify wireless telecommunications service facilities on the basis of environmental effects of radio frequency emissions so long as such wireless facilities comply with the FCC's regulations concerning such emissions; (5) prohibit any collocation or modification that the City may not deny under federal or state law; or (6) otherwise authorize the City's to preempt any applicable federal or state law.
6. Based on the foregoing, Carroll's **Public Works Department** finds and determines that the preservation of public health, safety and welfare requires that this Policy be enacted and be effective immediately upon adoption.

**POLICY:**

**A. Application for Small Wireless Facility Permit:**

An applicant must submit an application for a permit to install a **Small Wireless Facility**, in, over or under Carroll City rights-of-way. Upon issuance of a permit by the city, the applicant agrees to abide by the terms and conditions of a permit agreement to be approved by the Public Works Department. The application shall consist of the following:

- a) Completed City of Carroll Small Wireless Facility Application

- b) Signed copy of City of Carroll Small Wireless Facility Special Terms & Conditions.
- c) Right-of-Way Permit (available at <http://www.cityofcarroll.com/building>)
- d) Detailed drawing showing location(s) of proposed Small Wireless Facility
- e) Proposed location and routing of underground infrastructure (i.e. fiber, handholes/vaults). Fiber and handholes/vaults require separate license (permit) for installation and will be approved separately. Staff will review and provide comments to applicant at time of application for Small Wireless Facilities
- f) Signed copy of Special Terms and Conditions for any underground work that will be required for the Small Wireless Facility whether construction is included with installation of Small Wireless Facility or under separate project.
- g) Detail drawing of proposed and picture of Small Wireless Facility that will be installed. Detail and picture shall show everything that will be located on the pole/structure.
- h) Copy of agreement with pole/structure owner if not the City (proof of permission to locate on pole/structure).
- i) If installation is proposed on City owned pole/structure, applicant shall provide calculations as required in Section D Subsection H(I) of this Policy.
- j) If new pole is required, application shall include details on proposed pole installation.

#### **B. Permit Fee:**

Before any **Small Wireless Facility** permit is issued, the applicant shall be required to pay a permit fee in accordance with a fee schedule established from time to time and approved by the Public Works Department. The City reserves the right to do a rate study at a future date to establish the Permit fee for a Small Wireless Facility permit.

- (a) The fee permissible in the most current FCC regulations but not less than \$500 for non-recurring fees, including a single up-front application for collocation applications that includes up to five Small Wireless Facilities, with an additional \$100 or the fee permissible in the most current FCC regulations, for each Small Wireless Facility beyond five;
- (b) The fee permissible in the most current FCC regulations but not less than \$1,000 for non-recurring fees for a new pole (*i.e.*, not a collocation) intended to support one or more Small Wireless Facilities; and
- (c) The fee permissible in the most current FCC regulations but not less than \$270 per Small Wireless Facility per year for all recurring fees, including any possible ROW access fee or fee for attachment to municipally-owned structures in the ROW.

### **C. Definitions:**

**Authority** Used as a noun, means a state, county, or city governing body, board, agency, office or commission authorized by law to make legislative, quasi-judicial, or administrative decision relative to an application.

“Authority” does not include any of the following:

- a. State courts having jurisdiction over land use, planning, or zoning decisions made by an authority.
- b. The utilities division of the Public Works Department
- c. Any entities, including municipally owned utilities established under or governed by Title IX, subtitle 4 of the Code, that do not have zoning or permitting jurisdiction

**Alternative Antenna Structure** An existing pole or other structure within the public rights-of-way that can be used to support an antenna and is not a utility pole or a City-owned infrastructure.

**Antenna** means communications equipment that transmits and/or receives electromagnetic radio frequency signals used in the provision of Wireless Services. This definition does not apply to broadcast antennas, antennas designed for amateur radio use, or satellite dishes for residential or household purposes.

**Applicant** means the person submitting an application.

**Application** means the process by which a person submits a request to perform construction activity and/or indicates a desire to be granted permission in any way to utilize the rights-of-way of all, or a part, of the City. An application includes all written documentation, in whatever form or forum, made by a person to the City concerning: the installation of any type of public improvements, public utility facilities, the construction of a cable system or any type of information or telecommunications system over, under, on or through the rights-of-way.

**Attached wireless facilities** are those affixed to a structure except optical fiber, wires, coaxial cable and the mounting hardware used to attach optical fiber, wires, and coaxial cable. Examples of attached facilities include but are not limited to antennas, telephone boxes, power boxes, and other equipment boxes and cabinets on structures located on the ground.

**Base Station** a structure other than a tower that supports or houses an antenna, transceiver, or other associated equipment that constitutes part of a “base station” at the time the relevant application is filed with the City, even if the structure was not built for the sole or primary purpose of providing such support, but does not include structures that do not at that time support or house base station components.

**Camouflage Design** Structures and associated equipment taking on the appearance of a piece of art, a natural feature, an architectural structural component or other similar element and which aesthetically blends with the surrounding building environment. Examples of camouflage design include, but are not limited to: architecturally screened roof-mounted antennas; antennas integrated into architectural elements; antennas designed to look other than an antenna; antennas integrated into existing buildings,



sports field lights, highway signs, water towers, etc; and towers designed to blend into the surrounding environment or to look other than a tower, such as flag poles, trees, clock towers, monuments, and church steeples. All such designs are subject to the review and approval of the Public Works Department.

**City-Owned Infrastructure** Infrastructure in public right-of-way within the boundaries of the City, including, but not limited to, streetlights, traffic signals, towers, structures, or buildings owned, operated or maintained by the City. **According to City of Carroll code, the use of traffic signal poles and mast arms by any utility is strictly forbidden.**

**Collocate** means to install or mount a Small Wireless Facility in the Public ROW on an existing Support Structure, an existing Tower, or on an existing Pole to which a Small Wireless Facility is attached at the time of the Application. "Collocation" has a corresponding meaning.

**Collocated Small Wireless Facility Installation** means a single telecommunication tower, pole, mast, cable, wire or other structure supporting multiple antennas, dishes, transmitters, repeaters, or similar devices owned or used by more than one public or private entity.

- A. A single ground or building mounted receive-only radio or television antenna including any mast, for the sole use of the tenant occupying the residential parcel on which the radio or television antenna is located; with an antenna height no higher than the height of the poles and antennas in the surrounding area;
- B. A ground or building mounted citizens band radio antenna, including any mast, if the height (post and antenna) does not exceed the height of the poles and antenna in the surrounding area;
- C. A ground or building mounted receive-only radio or television satellite dish antenna, which does not exceed thirty-six inches in diameter, for the sole use of the resident occupying a residential parcel on which the satellite dish is located; provided the height of said dish does not exceed the height of the ridgeline of the primary structure on said parcel.
- D. Mobile services providing public information coverage of news events of a temporary nature.
- E. Hand-held devices such as cell phones, business-band mobile radios, walkie-talkies, cordless telephones, garage door openers and similar personal-use devices.
- F. Government-owned and operated receive and/or transmit telemetry station antennas for supervisory control and data acquisition (SCADA) systems for water, flood alert, traffic control devices and signals, storm water, pump stations and/or irrigation systems, with heights no higher than the height of the poles and antennas in the surrounding area.
- G. Telecommunication facilities, including multiple antennas, in compliance with the applicable sections of this policy, located on an industrial parcel and utilized for the sole use and purpose of a research and development tenant of said

parcel, where it is found by the planning director to be aesthetically compatible with the existing and surrounding structures

**Communications Facility** means collectively, the equipment at a fixed location or locations within the Public ROW that enables Communications Services, including: (i) radio transceivers, Antennas, coaxial, fiber-optic or other cabling, power supply (including backup battery), and comparable equipment, regardless of technological configuration; and (ii) all other equipment associated with any of the foregoing. A Communications Facility does not include the Pole, Tower or Support Structure to which the equipment is attached.

**Communication Structure** any communications tower, antenna, and related accessory structure used in the transmission or reception of microwave energy, analog data transfer techniques, radio frequency energy, and other digital data transfer techniques.

**Communications Structure Site** a tract or parcel of land that contains the wireless communication structure, accessory building(s), on-site parking, and may include other uses associated with and necessary for wireless communication and transmission.

**Distribute Antenna System (DAS)** A type of **small wireless facility** consisting of a network of spatially separated antenna nodes connected to a common source via a transport medium that provides wireless service within a geographic area. Generally, serves multiple carriers.

**Effectively Screen** aesthetically pleasing construction meant to conceal small wireless facility equipment. Shall be required where needed to improve the aesthetics of the local environment.

**Eligible Facilities Request** any request for modification of any existing wireless tower or base station that involves (a) collocation of new transmission equipment; (b) removal of transmission equipment; or (c) replacement of transmission equipment.

**Eligible Support Structure** any tower or base station, as defined in this section, provided that it is existing at the time the relevant application is filed to the City.

**Equipment Concealed** Whenever technically feasible, antennas, cabling, and equipment shall be fully concealed within a Pole, or otherwise camouflaged to appear to be an integrated part of a Pole.

**Facilities** means any and all equipment, structures, materials or tangible components located in the rights-of-way and used to provide a service, including without limitation: all plants, whether inside or outside, fiber strands or optic lines, electronic equipment, amplification equipment, optic equipment, transmission and distribution structures, antennas of any type, lines, termination equipment, pipes, poles, ducts, mains, conduits, inner ducts, regenerators, repeaters, underground lines, vaults, manholes, pull boxes, splice closures, wires and cables, and all other like equipment, fixtures and appurtenances used in connection with transmitting, receiving, distributing, offering, and/or providing such service. Facilities shall include, as the context dictates, wireless telecommunication facilities, as defined herein.

**Height** means maximum height of the small wireless facility, including antenna, above established grade measured at the base of the structure

**Landscape Screening** The installation at grade of plantings, shrubbery, bushes or other foliage intended to screen the base of a **small wireless facility** from public view.

**Lattice Tower** an antenna support tower that is self-supporting with multiple legs and cross-bracing of structural steel

**Permit Area** Locations in city zones where **small wireless facilities** are permitted to be installed and operated pursuant to the requirements of this policy.

**Major Wireless Telecommunications Facility** means telecommunication towers, poles or similar structures greater than 50 feet in height, including accessory equipment such as transmitters, repeaters, microwave dishes, horns, and other types of equipment for the transmission or receipt of such signals, as well as support structures, equipment buildings and parking areas.

**Micro Wireless Facility** means a **small wireless facility** with dimensions no larger than twenty-four inches in length, fifteen inches in width, and twelve inches in height and that has an exterior antenna, if any, that is no more than eleven inches in length.

**Minimum Height-** the lowest vertical distance at which the structure can still operate at an efficient level of service. An efficient level of service is deemed to be 95% or greater of possible service levels.

**Modification** Includes collocation, removal, or replacement of an antenna or any other transmission equipment associated with the supporting structure.

**Monopole** A structure composed of a single spire, pole or tower designed and used to support antennas or related equipment and that is not a utility pole, an alternative antenna structure, or a City-owned infrastructure.

**Provider** means any person including a franchisee who is providing or is in the process of seeking permission to provide a service to citizens of the City through the placement of facilities or structures either owned or leased in and thereby occupying the rights-of-way, as defined herein.

**Replacement** exchanging of transmission equipment; not to include the structure on which the equipment is located.

**Rights-of-way or ROW** means the surface and space above and below any real property in which the City has a real property interest and/or which have been dedicated to the public or is hereafter dedicated to the public and maintained under public City or by others at the direction of the public City and located within the City including, but not limited to, public: streets, roadways, highways, avenues, lanes, alleys, bridges, sidewalks, easements, public ways and similar public property and areas.

**Signage** Signage is prohibited on all small wireless facilities and wireless support structures, including stickers, logos, and other non-essential graphics and information unless required by the FCC, except for a small placard identifying the service provider and contact information, which shall be placed at 6-feet above grade, facing away from the public rights-of-way.

**Small Wireless Facility(ies)** are low powered antennas that provide cellular and data coverage to small geographic areas supplementing the larger cellular network. It includes all equipment required for the operation and maintenance of radio-frequency

communications systems that transmit and/or receive signals but are not "major wireless telecommunications facilities," including antennas, electronics, and other types of equipment required for the transmission or receipt of such signals.

Alternatively, Small Wireless Facility means either of the following:

- (a) Micro wireless facilities that are no larger in dimension than twenty-four (24) inches in length, fifteen (15) inches in width, and twelve (12) inches in height and that have an exterior antenna, if any, of no more than eleven (11) inches in length; or
- (b) A wireless service facility where each antenna is located inside an enclosure of no more than 6 cubic feet in volume and where primary equipment enclosures associated with the small wireless facility is cumulatively no more than twenty-eight cubic feet in volume and shall be placed underground unless it is integrally incorporated inside the customary pole structure or base.

For purposes of this subparagraph volume shall be measured by the external displacement of the primary equipment enclosure, not the internal volume of each enclosure. An associated electric meter, concealment, telecommunications, demarcation box, ground-based enclosures, battery backup power systems, grounding equipment, power transfer switch, cutoff switch, cable, conduit and any equipment that is concealed from public view within or behind an existing structure or concealment may be located outside of the primary equipment enclosure and shall not be included in the calculation of the equipment volume.

For the purposes of this policy, a **small wireless facility** does not include the following:

- A. Wireline backhaul facility, which shall mean a facility used for the transport of communications data by wire from wireless facilities to a network.
- B. Coaxial or fiber optic cables that are not immediately adjacent to or directly associated with a particular antenna or collocation.
- C. Underlying vertical infrastructure, which shall mean poles or similar facilities owned or controlled by the City that are in the public rights-of-way or public utility easements and meant for, or used in whole or in part for, communications service, electric service, lighting, traffic control, or similar functions

**Small Wireless Facility Installation** means all equipment required for the operation and maintenance of so-called "small cell" wireless communications systems that transmit and/or receive signals but are not "Major Telecommunications Facilities," including antennas, microwave dishes, power supplies, transformers, electronics, and other types of equipment required for the transmission or receipt of such signals.

**Stealth Facility** Any commercial wireless communications facility that is designed to blend into the surrounding environment by means of screening, concealment, or camouflage. The antenna and supporting antenna equipment are either not readily visible beyond the property on which they are located, or, if visible, appear to be part of the existing landscape or environment rather than identifiable as a wireless communications facility. Stealth facilities may be installed, but such installation methods are not limited to, undergrounding, partially undergrounding and landscaping.

**Structure** means anything constructed or erected with a fixed location below, on, or above grade, including, without limitation, service cabinets, junction boxes, foundations, fences, retaining walls, awnings, balconies, and canopies.

**Structure Height** the vertical distance measured from the base of the antenna support structure at grade to the highest point of the structure. If the support structure is on a sloped grade, then the average between the highest and lowest grades of the cell site shall be used in calculating the height.

**Tower** Any structure that is designed and constructed primarily for the purpose of supporting one or more antennas, including self-supporting lattice towers, guy towers, or monopole towers, and that is not a utility pole, an alternative antenna structure, or a City-owned infrastructure. Except as otherwise provided for by this Policy, the requirements for a tower and associated antenna facilities shall be those required in this Policy.

**Utility Pole** An upright pole or similar structure owned and utilized in a whole or in part by a public utility, municipality. It is designed and used to support electric cables, telephone cables, telecommunication cables, cable service cables, which are used to provide lighting, traffic control, signage, or a similar function.

**Variance or Variation** A grant of relief by the **Public Works Director** or his/her designee.

**Wi-Fi Antenna** An antenna used to support Wi-Fi broadband Internet access service based on the IEEE 802.11 standard that typically uses unlicensed spectrum to enable communication between devices.

#### **D. Standards and Regulations:**

**Small Wireless Facilities** will be permitted to be placed in right-of-way within the jurisdiction of the City as attachments to existing utility poles, alternative antenna structures, or City-owned infrastructure subject to the following regulations.

- A. Aesthetics.** A small wireless facility shall reasonably match the aesthetics of an existing utility pole or wireless support structure in the area that incorporates decorative elements. Furthermore, a small wireless facility will allow retroactive aesthetic or placement requirements.
- B. Number Limitation and Co-Location.** The **Public Works Director** or his/her designee may regulate the number of **small wireless facilities** allowed on each utility pole or unit of City-owned infrastructure. Up to **two (2) small wireless facilities** will be permitted on utility poles or Alternative Antenna Structure. This Policy does not preclude or prohibit co-location of **small wireless facilities** on towers or monopoles that meet the requirements as set forth elsewhere in this section or as required by federal law.
- C. Separation and Clearance Requirements for Existing Decorative Poles.** **Small wireless facilities** may be attached to a utility pole, alternative antenna structure, monopole, or City-owned infrastructure including decorative only where such pole, structure or infrastructure is located evenly behind the curb. This supports The FCC Order that creates a One-Touch-Make-Ready (“OTMR”) regiment for pole attachments. The City of Carroll, Iowa currently maintains

decorative lighting zone in the downtown core (bounded by and including West Street, 7<sup>th</sup> Street, Court Street, and 4<sup>th</sup> Street) and a corridor (on US Highway 30 between Highway 71 and Grant Road).

- D. Separation and Clearance Requirement New Small Wireless Facilities.** For new **small wireless facilities** between existing decorative street lights no closer than a distance equal to one hundred (100) per cent of the height of such facility to any residential building and no closer than **Three Hundred (300)** feet from any other **small wireless facility** for the same carrier. A new small wireless facility shall be installed on the nearest lot line and not in front of the building or structure on the lot. A separation or lesser clearance may be allowed by the **Public Works Director** or his/her designee as an administrative variance to this Policy when the Applicant establishes that the lesser separation or clearance is necessary to close a significant coverage or capacity gap in the Applicant's services or to otherwise provide adequate services to customers, and the proposed antenna or facility is the least intrusive means to do so within the right-of-way.
- E. City-Owned Infrastructure. The City's preference is that Small Wireless Facilities be installed on non-City-owned infrastructure.** If the facility is attached to City-owned infrastructure then the **Small Wireless Facilities** can only be mounted to City-owned infrastructure including, but not limited to, streetlights, towers or buildings, if authorized by a license or other agreement between the owner and the City.
- F. Construction Requirements. All Small Wireless Facility installations shall comply with the following:**
1. All needed traffic control shall comply with the most recent version of the Manual on Uniform Traffic Control Devices.
  2. Any needed lane closures on arterial roadways shall not start before 9:00 A.M. and end no later than 3:00 P.M.
  3. Small Wireless Facilities shall be installed on non-decorative facilities/poles wherever possible.
  4. Once new pole designs have been approved in an area, all providers shall use the same pole design.
  5. Installations shall foster an aesthetically pleasing environment, prevent visual blight, protect and preserve public safety and general welfare, and maintain the character of residential and nonresidential areas consistent with the adopted plans and compliance of applicable State and Federal legislation.
  6. All disturbed or damaged ROW shall be hydro-seeded, seeded with erosion mat or replaced with sod as soon as completed.
    - a) If seeding or hydro-seeding, prepare the area by hand raking to a depth of 3-4 inches and proper grade. When hydro-seeding, scarify the seedbed to facilitate lodging and germination of the seed.

- b) If sodding, sod shall be rolled immediately after laying to create firm contact with the ground.

Areas shall be maintained by the permittee until satisfactory growth is established. Permittee shall water all seeded or sodded areas once per day for the first 15 days and as needed until established growth and signed off by the city. Any day that there is ¼" or more rainfall in that 24-hr. period, watering does not need to take place.

7. It will be the responsibility of the Permittee to work with property owners to identify location of any existing lawn irrigation system within the public right of way. Any damage to these systems is the responsibility of the Permittee to repair.
8. Installations shall maintain a minimum distance of 15 feet from existing trees in the ROW.
9. Only equipment necessary for the installation of Small Wireless Facilities can sit on the right of way. Large trucks must stay on a hard surface at all times. No equipment can be left on the right of way overnight.
10. Work **cannot** take place during City snow/ice operations.
11. The City reserves the right to deny any future projects with the Permittee if the Permittee has failed to follow the aforementioned Construction Requirements on a previous permit.

**G. New Towers.** When approved by the City, a new monopole shall be installed on the nearest lot line and not in front of the building or structure on the lot. No new monopole or other tower to support **small wireless facilities** shall be installed in rights-of-way, that exceeds the height of surrounding existing poles, within the jurisdiction of the **Carroll, Iowa** unless the **Public Works Department** finds, based on clear and convincing evidence provided by the applicant, that locating the **small wireless facilities** on the rights-of-way is necessary to close a significant coverage or capacity gap in the Applicant's services or to otherwise provide adequate services to customers, and the proposed new monopole or other tower within the rights-of-way is the least intrusive means to do so.

- a. New monopole or tower installations, where approved by the City, shall maintain a minimum horizontal clearance of four (4) feet from all City utilities.
- b. New monopole or tower installations, where approved by the City, shall maintain a minimum horizontal distance of 15 feet from existing trees in the ROW.

**H. Attachment Limitations.** No small wireless telecommunication antenna or facility within the rights-of-way will be attached to a utility pole, alternative antenna structure, tower, or City-owned infrastructure unless all of the following conditions are satisfied:

- a. **Surface Area of Antenna:** The small wireless telecommunication antenna, including antenna panels, whip antennas or dish-shaped

antennas, cannot have a surface area of more than **six (6)** cubic feet in volume.

- b. Size of Above-Ground Small Wireless Facility:** The total combined volume of all above-ground equipment and appurtenances comprising a **small wireless facility**, exclusive of the antenna itself, cannot exceed **twenty-eight (28)** cubic feet.
- c. Small Wireless Facility Equipment:** The operator of a **Small wireless facility** must, whenever possible, locate the base of the equipment or appurtenances at a height of no lower than **twelve (12)** feet above grade.
- d. Small Wireless Facility Services Equipment Mounted at Grade:** Any equipment or appurtenances that are to be installed outside the exterior of the pole, monopole or structure, must be installed below grade. Pedestals at grade are allowed. In the event that the operator of a **small wireless facility** proposes to install a facility where equipment or appurtenances are to be installed at grade outside of the right-of-way. Where required screening must be installed to minimize the visibility of the facility. Screening must be installed outside the right-of-way, at least **three (3)** feet from the equipment installed at-grade and **eight (8) feet** from a roadway.
- e. Height:** The top of the highest point of the antenna cannot extend more than **ten (10)** feet above the highest point of the utility pole, alternative antenna support structure, tower or City-owned infrastructure or 40' above ground level. If necessary, the replacement or new utility pole, alternative support structure or City-owned infrastructure located within the public rights-of-way may not be higher than existing poles adjacent to the replacement or new pole or structure.
- f. Color:** A **small wireless facility**, including all related equipment and appurtenances, must be a color that blends with the surroundings of the nearest pole, structure tower or infrastructure on which it is mounted and use non-reflective materials which blend with the materials and colors of the surrounding area and structures. Any wiring must be covered with an appropriate cover.
- g. Antenna Panel Covering:** A **small wireless facility** antenna may include a radome, cap or other antenna panel covering or shield, to the extent such covering would not result in a larger or more noticeable facility and, if proposed, such covering must be of a color that blends with the color of the pole, structure, tower or infrastructure on which it is mounted.
- h. Wiring and Cabling:** Wires and cables connecting the antenna to the remainder of the facility must be installed in accordance with the electrical code currently in effect. No wiring and cabling serving the facility will be allowed to interfere with any wiring or cabling installed by a cable television or video service operator, electric utility or telephone utility.



- i. **Grounding:** The **small wireless facility** must be grounded in accordance with the requirements of the electrical code currently in effect in the City.
- j. **Guy Wires:** No guy or other support wires will be used in connection with a **small wireless facility** unless the facility is to be attached to an existing utility pole, alternative antenna support structure, tower or City-owned infrastructure that incorporated guy wires prior to the date that an applicant has applied for a permit.
- k. **Pole Extensions:** No pole extensions to utility poles, alternative support structures, towers and City-owned infrastructure are allowed.
- l. **Structural Integrity:** The **small wireless facility**, including the antenna, and all related equipment must be designed to withstand a wind force and ice loads in accordance with applicable standards established in Chapter 25 of the National Electric Safety Code for utility poles, Rule 250-B and 250-C standards governing wind, ice, and loading forces on utility poles, in the American National Standards Institute (ANSI) in TIA/EIA Section 222-G established by the Telecommunications Industry Association (TIA) and the Electronics Industry Association (EIA) for steel wireless support structures and the applicable industry standard for other existing structures. For any facility attached to City-owned infrastructure or, in the discretion of the City, for a utility pole, tower, or alternative antenna structure, the operator of the facility must provide the City with a structural evaluation of each specific location containing a recommendation that the proposed installation passes the standards described above. The evaluation must be prepared by a professional structural engineer licensed in the State of Iowa.
- m. **Signage.** Other than signs required by federal law or regulations or identification and location markings, installation of signs on a **small wireless facility** is prohibited.
- n. **Screening.** Where screening is required, it must be natural landscaping material or a fence subject to the approval of the City and must comply with all regulations of the City. Appropriate landscaping must be located and maintained and must provide the maximum achievable screening, as determined by the City, from view of adjoining properties and public or private streets. Notwithstanding the foregoing, no such screening is required to extend more than **six (6)** feet in height. Landscape screening when permitted in the rights-of-way must be provided with a clearance of three (3) feet in all directions from the facility. The color of housing for ground-mounted equipment must blend with the surroundings. For a covered structure, the maximum reasonably achievable screening must be provided between such facility and the view from adjoining properties and public or private streets.
- o. **Permission to Use Utility Pole or Alternative Antenna Structure.** The operator of a **small wireless facility** must submit to the City written copies of the approval from the owner of a utility pole, monopole, or an alternative antenna

structure, to mount the **small wireless facility** on that specific pole, tower, or structure, prior to issuance of the City permit.

- J. Licenses and Permits.** The operator of a **small wireless facility** must verify to the City that it has received all concurrent licenses and permits required by other agencies and governments with jurisdiction over the design, construction, location and operation of said facility have been obtained and will be maintained within the corporate limits of the City.
- a. The City currently maintains 1 zone and 1 corridor with decorative street lighting on them. The City maintains that it reserves to determine accessibility to the street lighting.
  - b. The City reserves the right to deny any future projects with the Permittee if the General Terms and Conditions or Special Provisions of this Permit have not been stratified.
- K. Abandonment and Removal.** Any **small wireless facility** located within the corporate limits of the City that is not operated for a continuous period of twelve (12) months, shall be considered abandoned and the owner of the facility must remove same within ninety (90) days of receipt of written notice from the City notifying the owner of such 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. In the case of **small wireless facilities** attached to City owned infrastructure, if such facility is not removed within ninety (90) days of such notice, the City may remove or cause the removal of such facility through the terms of the applicable permit agreement or through whatever actions are provided by law for removal and cost recovery.
- L. NOISE AND EMISSION STANDARDS.**
- a. **Noise.** The incorporation of ambient noise suppression measures is required and/or it is required to place the equipment in locations less likely to impact adjacent residences or businesses to ensure compliance with all applicable noise regulations. The maximum allowable noise emitted by the Small Wireless Facility shall not exceed 30 dB measured at a distance of 3 feet from any portion of the facility.  
  
The only exception is during emergencies or periodic routine maintenance which requires the use of a back-up generator, where the noise standards may be exceeded temporarily.
  - b. **Emissions.** The Federal Telecommunications Act of 1996 gives the FCC sole jurisdiction to regulate radio frequency emissions. Facilities that meet the FCC standards shall not be conditioned or denied on the basis of emissions impacts. Applicants for tower sites shall be required to provide information on the projected power density of the facility and how this meets the FCC standards.
- M. New Technologies** Should, within the term of any lease, developments within the field for which the grant was made to the holder of the lease, present the opportunity to the holder of the lease to be more effective, efficient and

economical through the use of a substance or material other than those for which the lease was originally made, the holder of the lease may petition the Public Works Department which, with such requirements or limitations as it deems necessary to protect public health, safety and welfare, may allow the use of such substances under the terms and conditions of the lease.

#### **N. Safety Requirements**

- a. Prevention of failures and accidents.** Any Person who owns a Small Wireless Facility and/or Wireless Support Structure sited in the ROW shall at all times employ ordinary and reasonable care and install and maintain in use industry standard technology for preventing failures and accidents which are likely to cause damage, injury, or nuisance to the public.
- b. Compliance with fire safety and FCC regulations.** Small Wireless Facilities, wires, cables, fixtures, and other equipment shall be installed and maintained in substantial compliance with the requirements of the National Electric Code, all FCC, state, and local regulations, and in such manner that will not interfere with the use of other property.
- c. Changes in state or federal standards and regulations.** If state or federal standards and regulations are amended, the owners of the Small Wireless Facilities and/or Wireless Support Structures governed by this policy shall bring any facilities and/or structures into compliance with the revised standards and regulations within six months of the effective date of the standards and regulations, unless a different compliance schedule is mandated by the regulating agency. Failure to bring Small Wireless Facilities and/or Wireless Support Structures into compliance with any revised standards and regulations shall constitute grounds for removal at the owner's expense.
- d. Indemnification** Any Person who owns or operates Small Wireless Facilities or Wireless Support Structures in the ROW shall indemnify, protect, defend, and hold the City and its elected officials, officers, employees, agents, and volunteers harmless against any and all claims, lawsuits, judgments, costs, liens, losses, expenses, fees to include reasonable attorney fees and costs of defense, proceedings, actions, demands, causes of action, liability and suits of any kind and nature, including personal or bodily injury or death, property damage or other harm for which recovery of damages is sought, to the extent that it is caused by the negligence of the Operator who owns or operates Small Wireless Facilities and wireless service in the ROW, any agent, officer, director, representative, employee, affiliate, or subcontractor of the Operator, or their respective officers, agents, employees, directors, or representatives while installing, repairing, or maintaining facilities in the Rights-of-Way.
- e. Surety bond or equivalent financial tool for cost of removal.** All owners must procure and provide to the City a bond, or must provide proof of an equivalent financial mechanism, to ensure compliance with all provisions

of this policy. The bond must be maintained for as long as the owner has Small Wireless Facilities and/ or Wireless Support Structures located in the ROW. The bond or equivalent financial method must specifically cover the cost of removal of unused or Abandoned Small Wireless Facilities and/ or Wireless Support Structures or damage to City property caused by an Operator or its agent of each Small Wireless Facility and/ or Wireless Support Structure in case the City has to remove or pay for its removal. Two acceptable alternatives to a bond include a funds set-aside and a letter of credit.

- O. Severability** The various parts, sentences, paragraphs, Sections and clauses of this Policy are hereby declared to be severable. If any part, sentence, paragraph, Section or clause is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this Policy shall not be affected thereby.

#### **Conflict of Laws**

Where the conditions imposed by any provisions of this Policy regarding the siting and installation of **small wireless facilities** are more restrictive than comparable conditions imposed elsewhere in any other local law, policy, resolution, rule or regulation, the regulations of this Policy will govern.

Date of Policy: 4/15/19

Revised:

Approved by Council: 4/15/19

# City of Carroll

112 E. 5th Street

Carroll, Iowa 51401-2799

(712) 792-1000

FAX: (712) 792-0139

**MEMO TO:** Honorable Mayor and City Council Members  
**FROM:** Mike Pogge-Weaver, City Manager *M P W*  
**DATE:** April 11, 2019  
**SUBJECT:** Policy 0716 – Small Wireless Facility Design Guidelines

A recent FCC Order suggests that all local jurisdictions comply with various rules and recommendations on the exercise of local aesthetic, zoning, public works, and fee schedules when dealing with small cell (Small Wireless Facility) installations. Communities have until April 15, 2019 to approve and publish Small Wire Facility regulation. In addition to the Small Wireless Facility Antenna/Tower Siting Policy (Policy 0715), staff is recommending the approval of Small Wireless Facility Guidelines.

The City recognizes its responsibilities under the federal Telecommunications Act of 1996 and Iowa law (Iowa Code Chapter 8C: Iowa Cell Siting Act) and believes that it is acting consistent with Iowa Code Chapter 8C: Iowa Cell Siting Act of the law in ensuring that development activity does not endanger public health, safety, or welfare. The City intends this Policy will ensure that the installation, augmentation and relocation of Small Wireless Facility installations in the public rights-of-way are conducted in such a manner as to lawfully balance the legal rights of applicants under the federal Telecommunications Act and Iowa Code Chapter 8C: Iowa Cell Siting Act, relating to the Siting of Small Wireless Facilities with the rights, safety, privacy, property and security of residents of the City.

Policy 0716 addresses the Design Guidelines for Small Wireless Facilities in the City of Carroll.

The guidelines are intended to provide technical data to aid in the construction of Small Wireless Facilities and works with Policy 0715 that addresses Small Wireless Facility Antenna/Tower Siting in the City of Carroll. The Policy provides background information, notes applicable law and regulations, provides purpose, includes definitions and include technical information for poles and includes details for poles, cabinets, antennas and foundations. The proposed Design Guidelines specify that all antennas must be located within a utility pole if located within the right-of-way.

**RECOMMENDATION:** Mayor and City Council consideration and approval of a resolution approving Policy 0716 – Small Wireless Facility Design Guidelines.

1869 *Carroll* 2019  
**150**  
YEARS

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION APPROVING POLICY 716 – SMALL WIRELESS FACILITY DESIGN GUIDELINES

WHEREAS, Policy 716 – Small Wireless Facility Design Guidelines has been deemed necessary due to a recent Federal Communications Commission Order; and

WHEREAS, the Small Wireless Facility Design Guidelines is attached hereto as Exhibit “A”; and

WHEREAS, it is determined that the approval of the attached Small Wireless Facility Design Guidelines is in the best interest of the City of Carroll, Iowa;

NOW, THEREFORE, BE IT RESOLVED that Policy 715 - Small Wireless Facility Design Guidelines, attached as Exhibit “A”, be authorized and approved.

PASSED AND APPROVED by the Carroll City Council of the City of Carroll, Iowa this 15th day of April, 2019.

CITY COUNCIL OF THE  
CITY OF CARROLL, IOWA


BY: \_\_\_\_\_  
Eric P. Jensen, Mayor

ATTEST:

By: \_\_\_\_\_  
Laura A. Schaefer, City Clerk

# CITY OF CARROLL

## POLICIES AND PROCEDURES MANUAL

<b>Subject</b> Small Wireless Facility Design Guidelines		<b>Policy No.</b> 0716
<b>Responsible Division(s), Office(s)</b> Public Works Department Building Department	<b>Related Policies &amp; Procedures</b> Policy 0715 – Small Wireless Facility Antenna/Tower Right-of-Way Siting	
<b>Effective/Revision Date</b> April 15, 2019	<b>Approvals(s)</b>  Michel J. Pogge-Weaver	

The City of Carroll Small Wireless Facility Design Guidelines are hereby established with the goal of accommodating the installation of small wireless (4G/LTE/5G) technology within City of Carroll public rights-of-way provided that the installations are completed in the most context sensitive manner through the establishment of minimum standards for:

- Aesthetics
- Location
- Spacing of facilities along streets
- Accommodation of two to three providers at each location
- Safety
- Noise

See attached “Small Wireless Facility Design Guidelines” for the full guidelines.



*SMALL WIRELESS  
FACILITY DESIGN  
GUIDELINES*

*APRIL 15, 2019  
CARROLL CITY POLICY #0716*





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## 1. Executive Summary

### 1.1 Background

The City of Carroll, as with communities across the country and around the world, is facing the next wave of communications technology. While the economic benefits are immense, it has the potential to impact the safety, aesthetic values, and enjoyment of our community in a manner and to a degree that is far more extensive than cellular phones and other types of recent technology.

Small wireless communications, also known as 5G technology, utilizes higher frequencies with the capability to accommodate significantly higher data needs than current 4G/LTE technologies. The physical limits of the higher frequencies require that the transmitters be installed at the spacing of streetlights or fire hydrants rather than 2+/- miles or greater distances that 4G/LTE technologies accommodate. The result of this physical need is that the public rights-of-way are the optimal location to install the required equipment. The Federal Communications Commission (FCC) has adopted the Declaratory Ruling and Third Report and order FCC 18-133 outlining the extent to which local agencies may or may not regulate the installation of these facilities within the public rights-of-way and the use of existing public infrastructure.

Similar to the advent of the telephone which required extensive wires, switch boxes, poles and other structures to provide these services, small wireless communications technology will require a structure to mount a transmitter approximately every 400 to 500 feet with fiber and power connections to each one.

Absent the adoption of guidelines to assure that installations are context sensitive, service providers would be free to install equipment with no concern for the visual impact that they create. This document seeks to accommodate the implementation of the new technology while assuring that the new infrastructure is installed using context sensitive solutions.

In addition, the equipment needs to be located where it will not interfere with visibility for drivers, interference with sidewalks, or other common amenities found in public rights-of-way.

Other issues such as safety, noise and accommodating multiple providers at each location are also addressed within these guidelines.

### 1.2 FCC Order

On September 26, 2018, the Federal Communications Commissions (FCC) adopted a Declaratory Ruling and Third Report and Order, titled “Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment” (the Order). The Order establishes fees, “shot clocks,” and provides mandates on local governments’ control of small wireless infrastructure.

The FCC Order establishes fees as follows:

- \$500 for non-recurring fees, including a single up-front application that includes up to five Small Wireless Facilities, with an additional \$100 for each small wireless facility beyond five
- \$1,000 for non-recurring fees for a new pole (not a collocation) intended to support one or more small wireless facilities.
- \$270 per small wireless facility per year for all recurring fees, including any possible ROW access fee or fee for attachment to municipally-owned structures in the ROW

The following shot clocks are the FCC's permit review times for new small wireless facilities:

- A 60-day review period for collocation of small wireless facilities
- A 90-day review period for construction of new small wireless facilities

Existing shot clocks for non-small wireless facilities deployments remain in place:

- 90 days for collocation on an existing structure
- 150 days for deployment on a new structure

According to the FCC Order, the shot clock rules are as follows:

- Both the new and existing shot clocks apply to “any approval that a siting authority must issue under applicable law prior to deployment.” This includes zoning approvals and building permits, and may also include license or franchise agreements to access the rights-of-way, leases for use of municipal poles or property in the rights-of-way, electric permits and road closure permits, among others.
- For small wireless facilities deployments, shot clocks are reset if the siting authority notifies the applicant within 10 days after submission that the application is incomplete. For subsequent determinations of incompleteness, the shot clock would toll—not reset—if the siting authority provides written notice within 10 days that the supplemental submission did not provide the requested information.
- For non-small wireless facilities, shot clocks begin to run when an application is first submitted, and can be paused—not reset—if the siting authority notifies the applicant within 30 days that the application is incomplete. For subsequent determinations of incompleteness, the process is the same as described above for small wireless facilities.
- Failure to act within the new small wireless facility shot clock constitutes a presumptive violation of the Communications Act and applicants may seek expedited injunctive relief in court within 30 days of a local government missing a shot clock deadline. There is no “deemed granted” remedy.

The FCC Order limits aesthetic reviews and requirements (including undergrounding, spacing, and historic/environmental requirements) to what is:

- (a) reasonable
- (b) no more burdensome than those applied to other types of infrastructure deployments
- (c) objective and published in advance

The effective date of the 2018 Order with respect to the new limitations on rights-of-way fees and deadlines for acting on permit applications was January 14, 2019, and the new limitations on aesthetic standards will go into effect April 15, 2019.

### **1.3 Goal Statement**

The City of Carroll Small Wireless Facility Design Guidelines are hereby established with the goal of accommodating the installation of small wireless (4G/LTE/5G) technology within City of Carroll public rights-of-way provided that the installations are completed in the most context sensitive manner through the establishment of minimum standards for:

- Aesthetics
- Location
- Spacing of facilities along streets
- Accommodation of two to three providers at each location
- Safety
- Noise

## 2. General Information

### 2.1 Introduction and Purpose

These Small wireless Design Guidelines provide objective, technically feasible criteria applied in a non-discriminatory manner that reasonably match the aesthetics and character of the immediate area regarding all of the following, which the City shall consider in reviewing an application.

- (a) The location of any ground-mounted small wireless facilities including their relationship to other existing or planned small wireless sites
- (b) The location of a small wireless facility on a wireless support structure
- (c) The appearance and concealment of small wireless facilities, including those relating to materials used for arranging, screening, and landscaping
- (d) The design and appearance of a wireless support structure including any height requirements adopted in accordance with these guidelines

It is the goal of the City to allow the installation of a small wireless infrastructure with a minimum foot print. This shall be accomplished by small wireless siting and the use of multi-cell poles that can accommodate multiple applicants.

The provisions of these Guidelines shall not limit or prohibit the City's discretion to promulgate and make publicly available other information, materials or requirements in addition to, and separate from these Small Wireless Design Guidelines that do not conflict with state or federal law.

### 2.2 Definitions

The following words, terms and phrases, when used in these guidelines, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

**Administrative Review** means ministerial review of an Application by the City relating to the review and issuance of a Permit, including review by the Public Works Director or designee, if desired, to determine whether the issuance of a Permit is in conformity with the applicable provisions of these Guideline and all City Codes.

**Antenna** means communications equipment that transmits and/or receives electromagnetic radio frequency signals used in the provision of Wireless Services. This definition does not apply to broadcast antennas, antennas designed for amateur radio use, or satellite dishes for residential or household purposes.

**Applicable Codes** means any code drafted and adopted by the City as well as uniform building, fire, safety, electrical, plumbing, Uniform Traffic Control or mechanical codes adopted by a recognized national code organization to the extent such codes have been adopted by the City, including any amendments adopted by the City, or otherwise are applicable in the jurisdiction.

**Applicant** means the person submitting an application.

**Application** means the process by which a person submits a request to perform construction activity and/or indicates a desire to be granted permission in any way to utilize the rights-of-way of all, or a part, of the City. An application includes all written documentation, in whatever form or forum, made by a person to the City concerning: the installation of any type of public improvements, public utility facilities, the construction of a cable system or any type of information or telecommunications system over, under, on or through the rights-of-way.

**Attached wireless facilities** are those affixed to a structure except optical fiber, wires, coaxial cable and the mounting hardware used to attach optical fiber, wires, and coaxial cable. Examples of attached facilities



include but are not limited to antennas, telephone boxes, power boxes, and other equipment boxes and cabinets on structures located on the ground.

**Batched Applications** is the submission of multiple siting applications at one time. Batched applications shall not exceed 10 individual Small Wireless Facilities.

**City** means the City of Carroll.

**City cost** means all costs borne by the City for the administration of these guidelines.

**City Council** means the Carroll City Council.

**City Manager** means the Carroll City Manager or designee.

**Code** means the Carroll City Code.

**Collocate** means to install or mount a Small Wireless Facility in the Public ROW on an existing Support Structure, an existing Tower, or on an existing Pole to which a Small Wireless Facility is attached at the time of the Application. "Collocation" has a corresponding meaning.

**Communications Facility** means collectively, the equipment at a fixed location or locations within the Public ROW that enables Communications Services, including: (i) radio transceivers, Antennas, coaxial, fiber-optic or other cabling, power supply (including backup battery), and comparable equipment, regardless of technological configuration; and (ii) all other equipment associated with any of the foregoing. A Communications Facility does not include the Pole, Tower or Support Structure to which the equipment is attached.

**Construction permit** means the authorization to undertake any type of excavation or work, as defined herein, in the rights-of-way or to construct public improvements, as defined herein, in the City or undertake any construction activity within the City. A construction permit can be issued either as a ROW construction permit or as a site construction permit, as applicable.

**Contractor** means a person, partnership, corporation, or other legal entity who undertakes to construct, install, alter, move, remove, trim, demolish, repair, replace, excavate, or add to any improvements or public improvements covered by these guidelines, that requires work to be undertaken and workers, and/or equipment to be in the ROW in the process of performing the above-named operations. Contractor, as the term is defined herein, should include any and all types of general contractor and subcontractor and successors or assigns of said contractor.

**Development Code** means Carroll Code of Ordinances, as amended.

**Director** means the Public Works Director for the City.

**Equipment Concealed** Whenever technically feasible, antennas, cabling, and equipment shall be fully concealed within a Pole, or otherwise camouflaged to appear to be an integrated part of a Pole.

**Excavate or excavation** means to dig into, including boring into, or in any way remove, distribute or penetrate any part of a ROW.

**Facilities** means any and all equipment, structures, materials or tangible components located in the rights-of-way and used to provide a service, including without limitation: all plants, whether inside or outside, fiber strands or optic lines, electronic equipment, amplification equipment, optic equipment, transmission and distribution structures, antennas of any type, lines, termination equipment, pipes, poles, ducts, mains, conduits, inner ducts, regenerators, repeaters, underground lines, vaults, manholes, pull boxes, splice closures, wires and cables, and all other like equipment, fixtures and appurtenances used in connection with transmitting, receiving, distributing, offering, and/or providing such service. Facilities shall include, as the context dictates, wireless telecommunication facilities, as defined herein.



**Franchise** means a right granted by the City for use of the rights-of-way, or any other City-owned or City-controlled real property designated to be or actually used by public utilities, cable providers, or other operators/entities for which a franchise can be granted pursuant to law, for the construction, operation and/or maintenance of a public utility, or any type of cable system or other operations within all of the City or such portions thereof as may be proposed and authorized for such construction operation and/or maintenance, including the City's growth area. Any such authorization, in whatever form granted, shall not mean and shall not include any license or permit required for the privilege of transacting and carrying on a business within the City as required by Code, other ordinances, resolutions or regulations of the City.

**Height** means maximum height of the small wireless facility, including antenna, above established grade measured at the base of the structure

**Indemnification** means that any provider who owns or operates Small Wireless Facilities or Wireless Support Structures in the ROW shall indemnify, protect, defend, and hold the City and its elected officials, officers, employees, agents, and volunteers harmless against any and all claims, lawsuits, judgments, costs, liens, losses, expenses, fees to include reasonable attorney fees and costs of defense, proceedings, actions, demands, causes of action, liability and suits of any kind and nature, including personal or bodily injury or death, property damage or other harm for which recovery of damages is sought, to the extent that it is caused by the negligence of the Operator who owns or operates Small Wireless Facilities and wireless service in the ROW, any agent, officer, director, representative, employee, affiliate, or subcontractor of the Operator, or their respective officers, agents, employees, directors, or representatives while installing, repairing, or maintaining facilities in the Rights-of-Way.

**Inspector** means the person designated by the City within the Public Works Department or the City Building Department to fulfill the responsibilities that have been empowered with such position.

**Landscape** means any combination of living plant material, such as trees, shrubs, vines, ground covers, flowers, vegetables, turf or grass; natural features, such as land and water forms; and structural features, including but not limited to landscaped pedestrian plazas, fountains, reflecting pools, screening, walls, fences and benches.

**Major Wireless Telecommunications Facility** means telecommunication towers, poles or similar structures greater than 50 feet in height, including accessory equipment such as transmitters, repeaters, microwave dishes, horns, and other types of equipment for the transmission or receipt of such signals, as well as support structures, equipment buildings and parking areas.

**Ordinary Maintenance and Repair** means inspections, testing and/or repair that maintain functional capacity, aesthetic and structural integrity of a Communications Facility and/or the associated Support Structure, Pole or Tower, that does not require blocking, damaging or disturbing any portion of the Public ROW.

**Permittee** means any person making application for or in possession of any type of construction permit to perform any construction activity, excavation, or work within the corporate limits of the City.

**Provider** means any person including a franchisee who is providing or is in the process of seeking permission to provide a service to citizens of the City through the placement of facilities or structures either owned or leased in and thereby occupying the rights-of-way, as defined herein.

**Public improvements** means any item placed or constructed in public rights-of-way intended for public use including, but not limited to: roadways, streets, alleys, sidewalks, curbs, gutters, trails, crosswalk or other traffic markings or traffic structures, utilities (water, sanitary sewer, or storm sewer) either owned by or dedicated to the City, or over which the City has or there is recorded a public easement, any private access either owned or dedicated to the City, parking lots, or landscaping, whether privately or publicly owned or maintained, unless otherwise specifically exempted within these guidelines.



**Responsible party** means any person or entity who owns facilities or structures located or to be located in the City rights-of-way and/or who is liable, whether financially or otherwise, for any installation, repair, or maintenance of facilities, or public improvements, either public or private, placed on or to be placed in the City rights-of-way.

**Rights-of-way or ROW** means the surface and space above and below any real property in which the City has a real property interest and/or which have been dedicated to the public or is hereafter dedicated to the public and maintained under public City or by others at the direction of the public City and located within the City including, but not limited to, public: streets, roadways, highways, avenues, lanes, alleys, bridges, sidewalks, easements, public ways and similar public property and areas.

**ROW construction permit** means a category of the general construction permit under these guidelines.

**Sidewalk** means a paved walkway or pathway for the purpose of pedestrian traffic abutting or running parallel or adjacent to a street.

**Site construction permit** means a category of the general construction permit that is issued under these guidelines.

**Signage** Signage is prohibited on all small wireless facilities and wireless support structures, including stickers, logos, and other non-essential graphics and information unless required by the FCC, except for a small placard identifying the service provider and contact information, which shall be placed at 6-feet above grade, facing away from the public rights-of-way.

**Small Wireless Facility(ies)** are low powered antennas that provide cellular and data coverage to small geographic areas supplementing the larger cellular network. It includes all equipment required for the operation and maintenance of radio-frequency communications systems that transmit and/or receive signals but are not "major wireless telecommunications facilities," including antennas, electronics, and other types of equipment required for the transmission or receipt of such signals.

Alternatively, Small Wireless Facility means either of the following:

- (a) Micro wireless facilities that are no larger in dimension than twenty-four (24) inches in length, fifteen (15) inches in width, and twelve (12) inches in height and that have an exterior antenna, if any, of no more than eleven (11) inches in length; or
- (b) A wireless service facility where each antenna is located inside an enclosure of no more than six (6) cubic feet in volume and where primary equipment enclosures associated with the small wireless facility is cumulatively no more than twenty-eight cubic feet in volume and shall be placed underground unless it is integrally incorporated inside the customary pole structure or base.

**Standards and Specifications** means the City of Carroll Standards and Specifications for the Design and Construction of Public and Private Improvements, latest revision, as adopted by ordinance.

**Street, highway or roadway** means the entire width between the boundary lines of every ROW or easement publicly or privately maintained and open to the use of the public for the purposes of vehicular travel.

**Structure** means anything constructed or erected with a fixed location below, on, or above grade, including, without limitation, service cabinets, junction boxes, foundations, fences, retaining walls, awnings, balconies, and canopies.

**Telecommunications** means the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received.

**Telecommunication service(s)** means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.

**Telecommunication service provider** or **telecommunications applicant** means any provider of telecommunications services, except that such term does not include aggregators of telecommunications services (as defined in 47 U.S.C. Section 226).

**Telecommunication system** means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used. A system that provides both cable and telecommunications or information services may be considered both as a cable system and a telecommunications system pursuant to this Code.

**Utility distribution pole** means a structure that supports aerial electric or communications cables with or without a streetlight attached.

**Utility Pole** the City of Carroll, Iowa currently maintains a decorative lighting zone (bounded by and including West Street, 7th Street, Court Street, and 4th Street) and a decorative lighting corridor (on US Highway 30 between Highway 71 and Grant Road) with decorative lighting. An upright pole or similar structure owned and utilized in a whole or in part by a public utility, municipality. It is designed and used to support electric cables, telephone cables, telecommunication cables, cable service cables, which are used to provide lighting, traffic control, signage, or a similar function.

**Wireless facility(ies)** means capital equipment and property, including but not limited to the optical fiber, wires, pipes, mains, conduits, ducts, pedestals, antennas, cabinets and electronic equipment located in the streets used for transmitting, receiving, distributing, providing or offering wireless telecommunication services over the spectrum of radio frequencies licensed by the Federal Communications Commission.

**Work** means any and all types of construction activity or excavation performed within the City, in the ROW, and/or related to installation of public or private improvements in or on any property that is within the City limits or will be dedicated to the City as ROW.

### **2.3 Application Guidelines**

Complete application requirements can be found in the Carroll City Code of Ordinances Rights-of-Way Code, Chapter 113. As a minimum the application must include the following documentation. Unless the wireless regulations provide otherwise, the applicant must submit both a paper copy and an electronic copy (in a searchable format) of any application, as well as any amendments or supplements to the application or responses to requests for information regarding an application, to the Public Works Director. An application is not complete until both the paper and electronic copies are received by the Public Works Director.

No Small Wireless Facility application will be considered complete until all requirements of the City's Small Wireless Facility Antenna/Tower Right-of-Way Siting Policy (Policy No. 0715) have been met.

- a. Detailed site and engineering plans.
- b. An area map showing the location of all existing above ground poles and facilities within 1,000 feet and the location or locations of all proposed Small Wireless Facilities proposed in that application. Identify what existing facility will be used or replaced including any identifying numbers for the specific pole or a general description of the location such as nearest address or distance and direction from nearest intersection.
- c. Photographs or drawings of proposed equipment including make, model and color with dimensions.
- d. Visual impact analysis with photo simulations to scale showing before and after conditions.



- e. A load analysis completed, sealed and signed by a Professional Engineer licensed and registered by the State of Iowa which indicates that the pole to which the small cell facility will be attached will safely support the loads. If requested, by the City, a copy of the detailed before and after PLA results shall be made available.
- f. Certification by a certified RF engineer demonstrating compliance with the FCC standards for radio frequency emissions as they relate to the general public, including aggregate emissions for all co-located equipment.
- g. Written documentation demonstrating a good faith effort to locate the facility in the least intrusive location and screened to the greatest extent feasible.
- h. The applicant must submit proof that a notice has been mailed to all owners of property within 600 feet of the proposed installation site that the applicant is seeking to place or modify wireless facilities in the ROW. The notice must include: (i) the proposed location of the facility, (ii) a description and scaled image of the proposed facility, and (iii) an email address and phone number for a representative of the applicant who will be available to answer questions from members of the public about the proposed project.
- i. Indemnification agreement that indicates the applicant's agreement with the Indemnification definition included in this chapter.
- j. A written description identifying the geographic service area for the subject installation, accompanied by a plan and maps showing anticipated future installations and modifications for the following two years, in addition to the master plan described by this section.
- k. One entity may submit up to 10 individual applications at one time in a batch. If that entity submits more applications within 30 days of the first batch, the City has the right to retain outside expertise to review those additional applications. All costs for the outside expertise shall be the responsibility of the submitting entity and must be paid before permits are issued
- l. License fees for small wireless facilities shall be submitted with the application. The City reserves the right to do a rate study at a future date to establish the license fees for small wireless facilities.
  - (a) The fee permissible in the most current FCC regulations but not less than \$500 for non-recurring fees, including a single up-front application for collocation applications that includes up to five Small Wireless Facilities, with an additional \$100 or the fee permissible in the most current FCC regulations, for each Small Wireless Facility beyond five;
  - (b) The fee permissible in the most current FCC regulations but not less than \$1,000 for non-recurring fees for a new pole (*i.e.*, not a collocation) intended to support one or more Small Wireless Facilities; and
  - (c) The fee permissible in the most current FCC regulations but not less than \$270 per Small Wireless Facility per year for all recurring fees, including any possible ROW access fee or fee for attachment to municipally-owned structures in the ROW.

### 3. Pole Design Guidelines

#### 3.1 Utility Distribution Poles

All attachments to utility distribution poles shall be approved by MidAmerican Energy prior to installation. All equipment shall meet MidAmerican Energy requirements and Carroll's Rights-of-Way permit requirements.

All small wireless facility equipment shall be shrouded. Only two enclosures including the disconnect and antenna shall be installed on any individual utility pole location. Micro wireless facilities that are no larger in dimension than twenty-four (24) inches in length, fifteen (15) inches in width, and twelve (12) inches in height and that have an exterior antenna, if any, of no more than eleven (11) inches in length; **or**

A wireless service facility where each antenna is located inside an enclosure of no more than three (3) cubic feet or, in the case of an antenna that has exposed elements, the antenna and all of its exposed elements shall fit within an enclosure of no more than three (3) cubic feet.

Ground mounted enclosures, including backup power supply, and electric meters must be concealed within the pole, in existing above-ground cabinets, or placed in a flush-to-grade underground equipment vault or within approved design standard treatments adopted by the City. For additional requirements refer to section 4.4 *Related Ground Equipment* in this chapter

#### 3.2 Utility Streetlight Poles

No existing utility pole whose sole purpose is for street lighting can be used to attach small wireless facilities. With the City and Utility approval, the pole shall be replaced with a metal monopole specifically designed to house two applicant's small wireless facility equipment.

The City reserves the right to require a second applicant for the same general space to install a new pole capable of collocating both applicants internally in the pole. The first applicant is required to allow the subsequent applicant to replace the pole with a multi-cell pole. The original pole shall be made available to the installing applicant to salvage. If not retrieved in 30 days the pole shall be declared abandoned and disposed. As an alternative, an applicant may install a new pole that has multiple cells for additional applicants. The City shall have exclusive rights to the extra cells. If the City requires a second applicant to use the extra cell, half of the initial material costs will be refunded to the applicant who installed the pole.

#### **ALTERNATIVE**

No small wireless facility shall be located on any Utility street light pole. The applicant will replace the small wireless facility pole within 5 feet of an existing Utility pole location. The applicant shall remove the existing Utility streetlight. The applicant will furnish and install a LED streetlight on the small wireless pole. The applicant will wire the streetlight into the small wireless power source. The City shall reduce the one-time application fee to reimburse for the streetlight. The City will also reduce the annual reoccurring fee to cover the cost of power. The small wireless pole shall have space for at least two (2) internal bays, one of which will be available to another applicant with City approval. Designs will be in accordance with the designs shown in **Appendix A**.

#### 3.3 Municipal Poles

Applicants may submit applications to install small wireless facilities on municipally owned poles. The City will consider such applications assuming the pole is not expected to be used for emergency communications or tolling equipment. If allowed, an applicant may be limited to one municipally owned pole within 300 feet of the nearest Small Wireless Facility owned by the same provider. Applicants shall provide their own power and fiber (or other communications medium) to their small wireless facility. All wiring will be inside poles. The City may require upgrades or replacement of poles if attaching small wireless facilities



is determined to be functionally or aesthetically, problematic. In cases of wood poles, the applicant(s) shall replace the wood pole with an acceptable monopole.

### **3.4 New Poles**

New poles shall be consistent with the pole designs detailed in **Appendix A**. New poles shall match the shape and color of existing poles in the area. Replacement could result in establishing a new citywide standard, however, they will be replaced incrementally as various telecommunication service providers expand their 5G service through neighborhoods and through the City. Support facilities shall be concealed within the pole, in existing above-ground cabinets, or placed in a flush-to-grade underground equipment vault or within approved design standard treatments adopted by the City.

For all new pole installations, the City reserves the right to require a second applicant for the same general space to install a new pole capable of collocating both applicants internally in the pole. The first applicant is required to allow the subsequent applicant to replace the pole with a multi-cell pole. The original pole shall be made available to the installing applicant to salvage. If not retrieved in 30 days the pole shall be declared abandoned and disposed.

## 4. Pole Siting Requirements

### 4.1 Location

The City reserves the right to approve all proposed pole locations and to modify those locations as necessary for future City needs, functional and/or aesthetic reasons. The City will work with the applicant to find a suitable location for both the City and the applicant.

Wireless communication facilities shall not be located on historically or architecturally significant structures unless visually and architecturally integrated with the structure and shall not interfere with prominent vistas or significant public view corridors. New small wireless poles shall be located no closer than 300 feet to other poles containing a small wireless facility from the same provider without City approval.

At the sole discretion of the City, multiple poles may be placed at intersections, however, each applicant may apply for only one additional pole at an intersection. Poles shall be located where ever possible on property lines and not in sidewalks or within 10 feet of a driveway. Where ever possible the poles shall be sited to take advantage of existing screening.

All equipment located within the public ROW shall be located such that it meets ADA requirements and does not obstruct, impede, or hinder usual pedestrian or vehicular travel.

Poles shall not be located:

1. Within 30 feet of a fire hydrant unless replacing an existing pole in the same location, reduced distances can be approved by the City;
2. In any manner which would obstruct a public sidewalk or roadway including reducing vertical clearances required by the City;
3. Closer than two (2) feet from curb or sidewalk.
4. Closer than four (4) feet horizontally from City utilities
5. Closer than fifteen (15) feet horizontally from existing trees in the ROW.

In general, Small Wireless Facilities shall be located in areas defined in the City's zoning as follows (Most Preferred to Least Preferred):

1. Industrial areas if not adjacent to a municipal park, residential area, historic district or design district.
2. Highway Rights-of-Way areas if not adjacent to a municipal park, residential area, historic district or design district.
3. Retail and Commercial areas if not adjacent to a municipal park, residential area, historic district or design district.
4. Residential Areas and Parks. A Telecommunication service provider is prohibited from installing a Small wireless pole in a ROW without written consent from the City Council if the ROW is located in or adjacent to a street or thoroughfare that is adjacent to a Municipal park or single-family residential lots or other multifamily residences or undeveloped land that is designated for residential use by zoning or deed restrictions. A Telecommunication service provider installing a Small Wireless Facility or a Small wireless pole in a ROW shall comply with private deed restrictions and other private restrictions in the area that apply to those facilities.
5. Historic districts and design districts. A Telecommunication service provider is prohibited from installing a Small Wireless Facility or a Small wireless pole in the ROW in any area designated

by the City as a design districts or in an area of the City zoned or otherwise designated as a Historic district unless such Small Wireless Facility or a new small wireless pole is camouflaged and other locations listed above are not available as suitable alternatives.

#### **4.2 Height Requirements**

The height of a pole used for a small wireless facility within the jurisdiction of Carroll, Iowa shall not exceed the height of surrounding existing poles, unless the **Public Works Department** finds, based on clear and convincing evidence provided by the applicant, that locating the **small wireless facilities** on the rights-of-way is necessary to close a significant coverage or capacity gap in the Applicant's services or to otherwise provide adequate services to customers, and the proposed new monopole or other tower within the rights-of-way is the least intrusive means to do so.

Antennas must be located at a minimum of 12 feet above established grade measured at the base of the wireless support structure

#### **4.3 Noise**

The applicant is required to incorporate ambient noise suppression measures and/or required to place the equipment in locations less likely to impact adjacent residences or businesses to ensure compliance with all applicable noise regulations. The maximum allowable noise emitted by the Small Wireless Facility shall not exceed 30 dB measured at a distance of 3 feet from any portion of the facility.

#### **4.4 Related Ground Equipment**

The applicant is required to ensure that ground equipment meets the following design criteria to minimize the aesthetic and safety impacts of supporting equipment on the public.

1. Ground Equipment near street corners and intersections: ground equipment should be minimal and the least intrusive. To minimize any obstruction, impediment, or hindrance to the usual travel or public safety on a ROW the maximum line of sight required to add to safe travel of vehicular and pedestrian traffic and in order to maximize that line of sight at Street corners and intersections and to minimize hazards at those locations, ground equipment may not be installed within the visibility triangle or as prohibited by sight distance calculations set out in other applicable law.
2. Ground Equipment near Municipal parks. For the safety of Municipal park patrons, particularly small children, and to allow full line of sights near Municipal park property, the Telecommunication service provider shall not install ground equipment in a ROW that is within a Municipal park or within 250 feet of the boundary line of a Municipal park, unless approved by the City Manager or designee in writing.
3. Minimize Ground equipment density: To enhance the public safety requirements of line of sight of pedestrians, particularly small children, the City's designee may deny a request for a proposed Location if the Telecommunication service provider installs Small Wireless Facility ground equipment where existing ground equipment within 100 feet radius already occupies a footprint of a total of 25 sq. ft. or more.

## 5. Safety Requirements

**Prevention of failures and accidents.** Any Person who owns a Small Wireless Facility and/or Wireless Support Structure sited in the ROW shall at all times employ ordinary and reasonable care and install and maintain in use industry standard technology for preventing failures and accidents which are likely to cause damage, injury, or nuisance to the public.

**Compliance with fire safety and FCC regulations.** Small Wireless Facilities, wires, cables, fixtures, and other equipment shall be installed and maintained in substantial compliance with the requirements of the National Electric Code, all FCC, state, and local regulations, and in such manner that will not interfere with the use of other property.

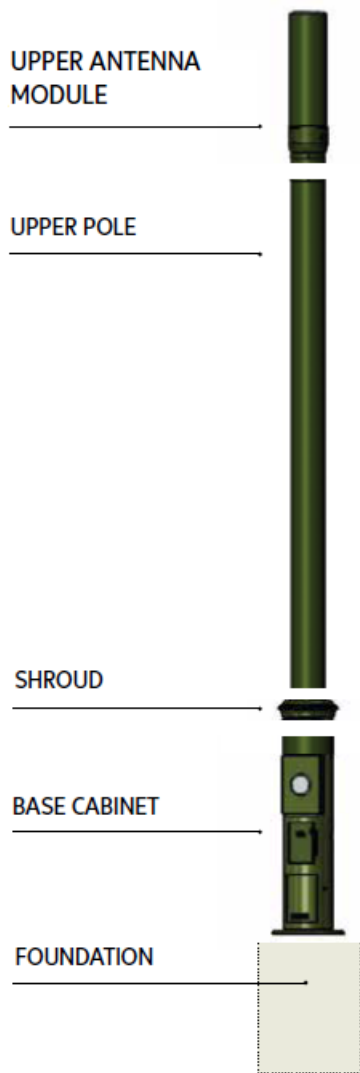
**Changes in state or federal standards and regulations.** If state or federal standards and regulations are amended, the owners of the Small Wireless Facilities and/or Wireless Support Structures governed by this chapter shall bring any facilities and/or structures into compliance with the revised standards and regulations within six months of the effective date of the standards and regulations, unless a different compliance schedule is mandated by the regulating agency. Failure to bring Small Wireless Facilities and/or Wireless Support Structures into compliance with any revised standards and regulations shall constitute grounds for removal at the owner's expense.

**Surety bond or equivalent financial tool for cost of removal.** All owners must procure and provide to the City a bond, or must provide proof of an equivalent financial mechanism, to ensure compliance with all provisions of this chapter. The bond must be maintained for as long as the owner has Small Wireless Facilities and/ or Wireless Support Structures located in the ROW. The bond or equivalent financial method must specifically cover the cost of removal of unused or Abandoned Small Wireless Facilities and/ or Wireless Support Structures or damage to City property caused by an Operator or its agent of each Small Wireless Facility and/ or Wireless Support Structure in case the City has to remove or pay for its removal. Two acceptable alternatives to a bond include a funds set-aside and a letter of credit.

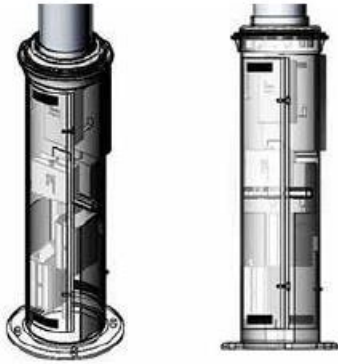
## Appendix A: Designs

The following diagrams and information were provided by, and used with the permission of CityPole. The inclusion of this information in no way indicates that the City endorses CityPole or its products.

### A.1 Small Wireless Facility Pole



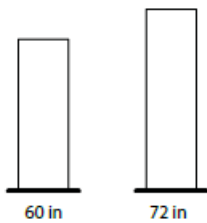
### A.2 Base Cabinet



Integrated wireless equipment in base cabinet.



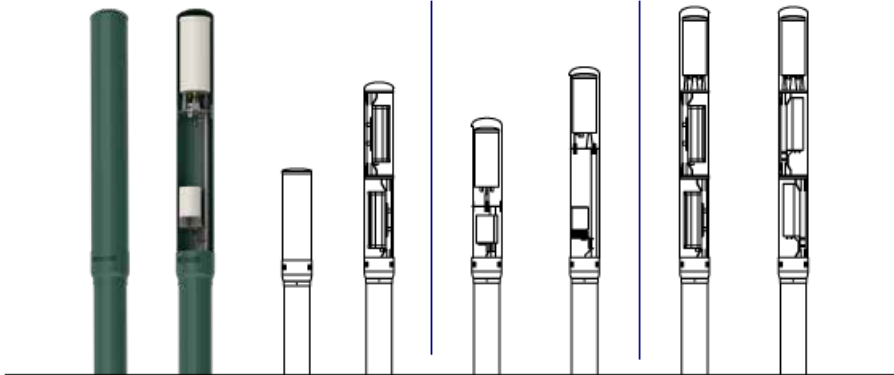
The base cabinet can be configured with a wide range of electrical disconnects to meet local building codes and preferences.



The base cabinet height can be chosen to house future equipment and complement local cityscapes.



### A.3 Upper Antenna Module



The upper antenna module can be easily reconfigured for a number of technology generations. These includes multiple configurations of cellular technology, various backhaul and low power options such as WiFi, Bluetooth, or Zigbee, and as many as three different technology generations.

### A.4 Foundation Selection



CityPole® pre-cast foundation speeds work in the Right of Way.



Caisson and custom designs are available.



### A.5 Product Selection Matrix

		Standard CityPole® System Offering	Custom Options
Overall Pole Height		25', 30', 35', and 40' Above Ground Level (AGL)	Available ↓
Color Choices		9 Color Choices are Standard (Custom colors are available.)	
Base Cabinet	Technology Types	1, 2, or 3 Different Technologies can be Accommodated	
	Dimension	Ground Diameter: 18", 20", 24"   Height: 60", Optional 72"	
	Flexible Mount System	FlexMount™ system to reconfigure internals for future equipment sizes.	
	Electrical Options	No Disconnect, Disconnect Only, or Meter and Disconnect.	
	Universal Meter Bay	Accommodates power meter and meter screen requirements as determined by local utility provider; fits meter boxes of all sizes.	
Upper Pole Antenna Module	Rad Center Location	Variable and Based on Pole Height and Other Options	
	Technology Types	1, 2, or 3 Different Technologies can be Accommodated	
	Auxiliary Bay Options	Low Power RF, Backhaul, and Wifi Options can be Accommodated. Multiple and reconfigurable 12¾ inch modules with RlexRail™ universal equipment track system optional.	
Accessory Selection	Antenna Mount and Shroud Options	Separate and Secure Bays with RF Transparent Materials to accommodate 4G/5G Equipment. Omni and Panel Types available.	
	Lighting	Pole can be ordered without lighting or with 1, 2, 3, or 4 lights.	
	Light Mounts	Standard Plate or Offset Arms depending on light selection	
	Lighting	Shoebox, Cobrahead, Cylindrical, Dome and Acorn	
	Other Technology	Gun Shot Sensors, Video, Weather, Traffic Mgmt	
	Lower Shroud Details	Multiple Options are Available	
	Base Plate Details	Multiple Options are Available	
Environmental Control	Foundation Options	Pre-cast, or Cast-in-Place	
	Thermal Management	All Equipment and Antenna Bays Monitored for Temperature. Passive and Forced Air Standard; Heat Pipe and Thermoelectrical Optional	
	Security	External and Internal Locking Features. CityPole® FlexSmart™ Control and Connectivity Optional.	
	Monitoring and Control	Industrial Controller with 24 Digital and 12 Analog Inputs with FlexSmart™	