



Milwaukee County Parks –Small Wireless Facility Guidelines

1. Background

Milwaukee County has a rich history of providing parks and green space for its residents to enjoy spanning back to 1835. Currently, Milwaukee County Parks manages over 15,000 acres of green space including 157 parks and parkways. Milwaukee County’s public space is a valuable and intentional asset that requires careful stewardship to maintain its integrity and safeguard it as a legacy to future generations.

To address growing customer demand for faster wireless technology, cellular providers have proposed to increase the capacity of their networks by deploying small cell infrastructure, a new low-powered antenna technology, to reduce data traffic load on larger cell towers. Small cell infrastructure consists of antennas, related power equipment, and ancillary fiber and electrical equipment that are installed in closer proximity to users on the ground to improve cellular and data coverage in small geographic areas. Installed small cell facilities will improve the provider’s ability to meet current 4G (LTE) voice and data demands but may be modified with future 5G high speed equipment as technology improves. Like other utilities, State law allows telecommunication providers to place Small Cell infrastructure equipment in the public right-of-way¹.

Milwaukee County Parks has developed guidelines that will allow cellular companies to locate small cell installations in a way that maximizes technological benefits, while attempting to preserve park aesthetics. Small Cell infrastructure will affect the function and aesthetics of public spaces. Moreover, there are numerous providers already operating in Milwaukee County. The result is a significant demand upon a limited resource. Jurisdictions across the nation are beginning to address the issue of balancing the need to accommodate increased cellular demand with their community’s public space, character, and function. These guidelines build off those efforts in a way that is appropriate to the needs of Milwaukee County Parks.

2. General Requirements

All small attachments shall meet the following requirements:

- A. Be reviewed and approved by a licensed professional structural engineer in the State of Wisconsin or equivalent, which shall include review of any structures and foundations. All pertinent calculations shall be stamped by a Professional Structural Engineer and submitted to Milwaukee County Parks as part of the permit review process.
- B. All installations shall meet or exceed all applicable structural standards, clearance standards, and provisions of the latest National Electrical Safety Code (NESC).

¹ Right of Way, or ROW, is hereafter is defined as used in Wis. Stat. 66.0414(1)(t).

- C. All structures with small cell equipment shall have an identification tag attached to the structure with the company information and emergency contact information.
- D. The Small Cell Company is responsible for providing, installing, permitting, and metering all necessary electrical, fiber optic, and telecommunication connections to the small cell equipment. All connections shall comply with all local, state and federal codes. When proposed in a historic district, a Certificate of Appropriateness, or equivalent, shall be the responsibility of the applicant. No applications shall be filed without consent of Milwaukee County Parks as landowner.
- E. All small cell equipment and any support structures on parkland shall be relocated at owner's expense when the County deems necessary for public improvements.
- F. Facilities and support structures, towers, and utility poles must comply with the requirements of the Americans with Disabilities Act.
- G. Tree "topping" or the improper pruning of trees is prohibited. Any proposed pruning of trees, shrubs, or other landscaping already existing in the ROW² must be noted in the application and approved by Milwaukee County Parks and must not occur during trimming moratoriums.
- H. Facilities must be constructed and operated in a manner that minimizes noise that is audible as regulated in local ordinances.
- I. Submittal shall be provided digitally, including a GIS-compatible file that can be used by Milwaukee County for project review.

3. Aesthetics

Any small cell facility proposed on Milwaukee County Parkland shall comply with the following aesthetic considerations and accommodations:

- A. Installation shall not significantly create a new obstruction to sight lines as determined by Milwaukee County Parks.
- B. The facility shall have appropriate clearance from existing utilities as determined by Milwaukee County Parks.
- C. Installations shall match the aesthetics of existing park lights and park amenities/furniture in the vicinity of the proposed small cell locations.
- D. Facilities must not be illuminated, except in accordance with state or federal regulations or if incorporated as part of a street light pole or if requested by Milwaukee County Parks.
- E. Concealment.

Permits for wireless telecommunications facilities shall incorporate specific concealment elements to minimize visual impacts, and design requirements ensuring compliance with all standards for noise emissions. Example of an unacceptable and acceptable small cell installation can be found in Figure 3-1 and 3-2. Unless it is determined that another design is less intrusive, or placement is required under applicable law:

² Right of Way, or ROW, is hereafter is defined as used in Wis. Stat. 66.0414(1)(t).

1. Antennas located at the top of support structures shall be incorporated into the structure, or placed within shrouds of a size such that the antenna appears to be part of the support structure;
2. Antennas placed elsewhere on a support structure shall be integrated into the structure or be designed and placed to minimize visual impacts.
3. Radio units or equipment cabinets holding radio units and mounted on a utility pole shall be placed as high as possible on a support structure, located to avoid interfering with, or creating any hazard to, any other use of the public rights of way, and located on one side of the utility pole. Unless the radio units or equipment cabinets can be concealed by appropriate traffic signage, radio units or equipment cabinets mounted below the communications space on utility poles shall be designed so that the largest dimension is vertical, and the width is such that the radio units or equipment cabinets are minimally visible from the opposite side of the support structure on which they are placed.
4. Wiring and cabling shall be neat and concealed within or flush to the support structure, ensuring concealment of these components to the greatest extent possible.
5. Ground-mounted equipment associated with a wireless telecommunications facility shall be permitted only where consistent with the portion of the corridor in which it is to be placed. It is preferred and will be required, if feasible, for equipment to be underground or located on pole, or otherwise shielded or concealed from public view. Where feasible, ground-mounted equipment should be grouped with existing equipment and installed near existing equipment to minimize impervious surfaces and degradation of parkland. In no event may ground-mounted equipment interfere with pedestrian or vehicular traffic

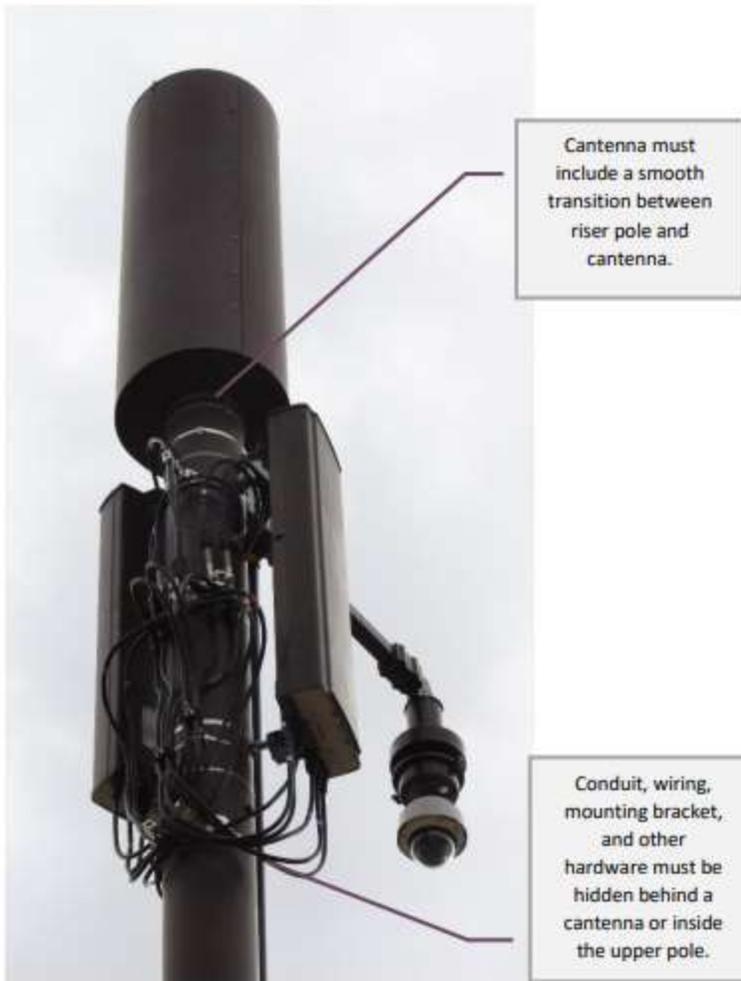


Figure 3-1: Unacceptable Installation



Figure 3-2: Acceptable Installation

4. Location

A. Location Preference Hierarchy.

1. Attachments to existing utility poles including existing small cell monopoles.
2. Attachments to wood, concrete, or metal light poles.
3. Installation of monopoles³.

B. Obstruction.

To the extent possible, a facility, support structure, tower, or utility pole should be located and designed to avoid interference with public ROW maintenance activities, such as:

1. Grass mowing, brush collection, tree trimming, and landscaping maintenance;
2. Trash collection;

³ In no case shall Milwaukee County Parks be responsible to keep backup stock of 3rd Party poles for replacement purposes.

3. Maintenance of parkways, pavement, sidewalks, and bicycle lanes; and
 4. Maintenance of other facilities in the public ROW.
- C. Obstruction of Traffic.
- Facilities and support structures, towers, and utility poles must not obstruct, impede, or hinder vehicular, pedestrian, or bicycle travel or public safety within the ROW, or interfere with the operation and maintenance of signal lights, signage, street lights, street furniture, fire hydrants, or existing programmed park activities, except for authorized temporary lane or sidewalk closures. Facilities and support structures, towers, and utility poles must not be located within vision triangles at street intersections pursuant to local laws.
- D. Facilities and support structures, towers, and utility poles must not be located within the critical root zone of any tree.

5. Installation Type

A. Installation on Existing Poles

1. Any small cell facility that is collocated on an existing pole must comply with the following, in addition to the previously listed guidelines:
 - a. Minimize impact to the aesthetics of the existing poles.
 - b. New poles should match aesthetics of adjacent poles, unless otherwise requested by Milwaukee County Parks to match planned capital improvements.
 - c. Structural calculations, which show that the existing pole(s) can carry the loading of the new proposed facilities, shall be submitted with the permit application package.
2. Collocation – On County Facilities
 - a. Collocation of facilities is generally preferred over new support structures if it can be accomplished in a way that better complements the character of the surrounding area.
 - b. If a small cell attachment is proposed for an existing utility pole with an existing street light attachment, the small cell equipment shall be installed such that the street light will remain in the same location and height and such that the small cell equipment will not obstruct proper lighting of the area.
3. Collocation - Non-County Facilities
 - a. Where an existing facility or support structure can potentially accommodate collocation of a new wireless facility, collocation will be required unless:
 - i. The applicant submits substantial evidence supporting the unsuitability of the collocation;
 - ii. The owner of the existing facility or support structure is unwilling to accommodate the applicant's equipment and cannot be required to cooperate; or Authorization for collocation on a facility or support structure owned by a party other than Milwaukee County will be voided if the facility or support structure is destroyed, removed, relocated, or replaced, unless:
 - iii. The owner of the collocated facility obtains a permit; or
 - iv. The facility or support structure accommodating the collocation is replaced with a facility or support structure that is comparable in size,

mass, appearance, and placement, as determined by the Milwaukee County Parks.

B. Installation on Freestanding Poles (Monopoles)

1. All freestanding small cell poles shall be privately owned and must be permitted by Milwaukee County Parks and the local unit of government, as applicable. It is the sole responsibility of the applicant to verify needed local permits including but not limited to zoning, historical certificate of appropriateness, building, etc. All freestanding poles must comply with the guidelines previously listed, and be installed in the following manner;
2. The freestanding pole components include the foundation, equipment cabinet, upper pole, antenna, and all hardware and internally integrated electrical equipment necessary for a complete assembly. The small cell components shall also be sized to be visually pleasing. For a combination pole to be considered visually pleasing, the transition between the equipment cabinet and upper pole should be considered. At minimum, a decorative transition shall be installed over the equipment cabinet upper bolts. All hardware connections shall be hidden from view. Each pole component shall be architecturally compatible to create a cohesive aesthetic. Examples of an acceptable freestanding pole can be seen in Figure 5-1.
3. Freestanding poles may not be located within an historic district, deemed historic on a federal, state, or local level, without first receiving a certificate of appropriateness from the jurisdictional authority.
4. Freestanding poles must be equal distance between trees when possible, with enough separation such that no proposed disturbance shall occur within the critical root zone of any tree. Milwaukee County Parks Forestry must be consulted before any trees are trimmed above or below grade for both initial installation as well as ongoing maintenance.
5. Outside of the 20-foot equipment clear zone (for base cabinets less than 18-inches in diameter) or 30-foot clear vision triangle (for base cabinets equal to or greater than 18-inches in diameter) at intersection corners.
6. No closer than 250 feet away, radially, from another privately-owned freestanding small cell wireless facility.
7. The diameter of new support structures is to be minimized such that it is sufficient only for the structural support of the existing and currently proposed attachments.

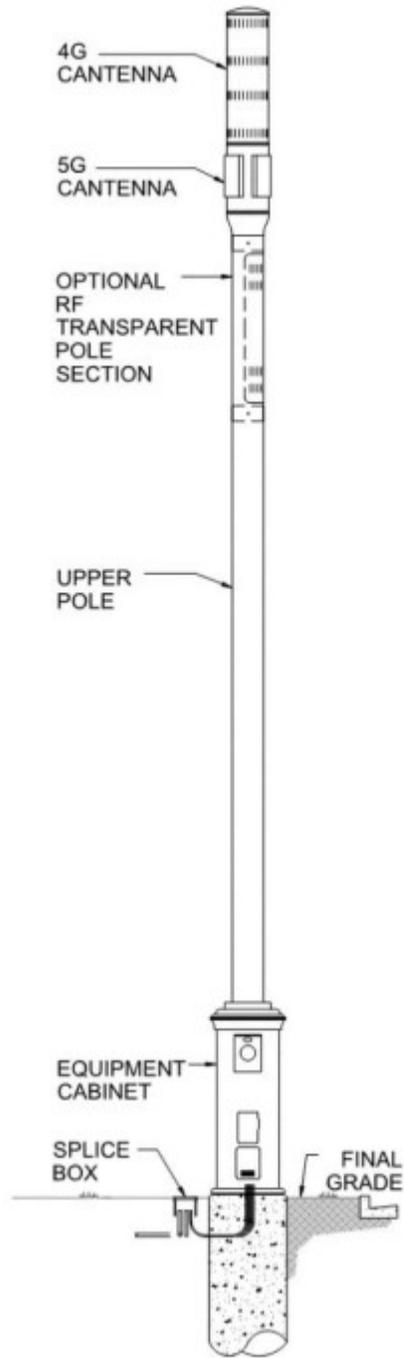


Figure 5-1 Acceptable freestanding pole example