
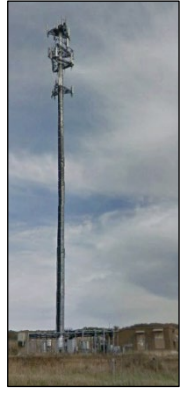





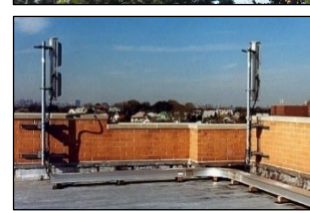





## 1.0 Background

There are many types of cellular installations that wireless providers may build depending upon their network needs. The following cellular facility descriptions are referenced throughout this policy.

**TABLE 1 – CELLULAR FACILITY DESCRIPTIONS**

<p><b>Lattice towers or tall monopoles</b> are traditional cellular installations designed to cover a maximum geographic territory. Typically, a fenced equipment compound is associated with the installation.</p>			<p><b>Macro cells</b> may be installed on rooftops, building facades, monopoles and other steel structures. These cells provide coverage over a broad area (up to several miles). When on monopoles, they are typically over 50 feet in height.</p>		
<p><b>Small wireless facilities (SWFs)</b> are miniature versions of traditional cell sites. They are self-contained, small, lightweight, low-power and an extension of the macro network. SWFs include microcells, picocells, metrocells and femtocells.</p> <p><b>Antenna attachments</b> are SWFs mounted to existing infrastructure. In Wisconsin, a micro wireless facility<sup>1</sup> is defined as a SWF that does not exceed 24” in length, 15” in width, and 12” in height and has no exterior antenna longer than 11”.</p>			 		

## 2.0 Legal Authority

New federal and state laws were enacted in 2019 to enable the deployment of 5G technology using small-wireless facilities (SWFs). These laws affect the installation of SWFs on highway right-of-way (ROW) and other public infrastructure. Cellular installations not defined in statute as SWFs shall be handled using Wisconsin’s existing utility and permitting laws as listed in [HMM 09-15-05](#) and other corresponding federal laws.

### 2.1 Federal Law

On September 27, 2018, the Federal Communications Commission (FCC) released a Declaratory Ruling and Third Report and Order [18-133](#)<sup>2</sup>, on *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*. The Order requires state and local governments to follow specific rules for accommodating small-wireless facility (SWF) installations on highway ROW and other public infrastructure. The order revised 47 CFR, Part 1 by creating a new [subpart U](#) titled, “State and Local Government Regulation of the Placement, Construction, and Modification of Personal Wireless Service Facilities.” The new requirements have been adopted into this policy where applicable.

<sup>1</sup> Wis. Stat. s. [66.0414\(1\)\(p\)](#)

<sup>2</sup> Effective January 14, 2019

## 2.2 Wisconsin Law

On July 10, 2019, the Wisconsin Legislature enacted 2019 Wisconsin [Act 14](#), which corresponds to the FCC ruling on SWFs but includes a few additional requirements. The law created Wis. Stat. s. [66.0404 Mobile Tower Siting Regulations](#) and s. [66.0414 Small Wireless Facilities](#). The new requirements have been adopted into this policy where applicable.

## 3.0 General Policy

Cellular towers, monopoles, macro cells, SWFs and their associated equipment may be allowed on highway ROW. This includes controlled-access highways. WisDOT has the right to deny any cellular installation to protect public safety and welfare, or if it may adversely affect highway operations, maintenance, or a highway improvement project. This is consistent with utility accommodation policy in general. SWFs are also allowed on utility poles<sup>3</sup> and third party utility poles. A utility pole is any pole used for electric distribution, lighting, traffic control, signage, or a similar function.

Under Wis. Stat. s. [66.0414\(1\)\(t\)](#), “Right-of-way” (ROW) means the area on, below, or above a highway, as defined in s. [340.01 \(22\)](#), other than a federal interstate highway; a sidewalk; or other similar property, including property owned or controlled by WisDOT.

A permit is required for each cellular installation. If a wireless provider wants to install multiple cellular facilities in the ROW, WisDOT may develop an Agreement with the provider that details items germane to all permits thereby reducing the amount of documentation needed for each individual permit.

### 3.1 Right-of-Way Use Fees and Shared Resource Projects

Under Wis. Stat. ss. [66.0414](#), [86.07\(2\)\(a\)](#) and [84.01\(31\)](#), WisDOT has the authority to charge fees or receive communication services in exchange for the use of highway ROW. A utility may be charged a fee for locating cellular facilities in the ROW, which also includes rest areas, waysides, park-n-ride lots and other WisDOT-owned or controlled property. WisDOT’s rate schedule is listed in Table 2. Instead of the use fee, WisDOT may enter into a shared resource project with a wireless provider to obtain tower space for State Patrol antennas or communication services for WisDOT traffic management systems.

**TABLE 2 – RATE SCHEDULE for CELLULAR FACILITY USE on WisDOT ROW**

Cellular Facility Description	Annual Site Rates	
	Not a controlled-access highway	<a href="#">Controlled-access highway</a>
1. Lattice tower or tall monopole (with or without equipment compound)	\$6,000	\$12,000
2. Macro cell	\$1,200	\$2,400
3. Small wireless facility on utility pole or third party utility pole	\$20 times the total number of SWF <sup>4</sup> in WisDOT ROW	
4. Small wireless facility on WisDOT utility pole	\$250 per SWF <sup>5</sup>	
All rates are fixed for 5 years, then may be adjusted by: 1-2) the change in the Consumer Price Index (CPI) <sup>6</sup> – capped at double the published rate in Table 2. 3) 10 percent rounded to nearest dollar <sup>7</sup> 4) 10 percent rounded to the nearest multiple of five dollars <sup>8</sup>		

Fees or services agreed to by WisDOT and a utility for cellular installations on highway ROW are not part of the compensable/non-compensable policy regarding utility relocation unless noted in an Agreement. A utility may receive a prorated share of its fee if WisDOT requires the utility to move its facility off highway ROW for an improvement project.

<sup>3</sup> Utility pole defined in Wis. Stat. s. [66.0414\(1\)\(x\)](#)

<sup>4</sup> Wis. Stat. s. [66.0414\(2\)\(c\)5](#). See WisDOT’s [website](#) for the current number of permitted SWFs on these utility poles in WisDOT ROW.

<sup>5</sup> Wis. Stat. s. [66.0414\(4\)\(d\)1](#).

<sup>6</sup> CPI = U.S. City Averages for Urban Wage Earners and Clerical Workers, All Items (1982-84 = 100) published by the United States Department of Labor, Bureau of Labor Statistics

<sup>7</sup> Wis. Stat. s. [66.0414\(2\)\(c\)6](#).

<sup>8</sup> Wis. Stat. s. [66.0414\(4\)\(d\)2](#).

## 4.0 Permit Applications

Submit a separate permit application for each cellular facility via email to the [State ROW Permits Engineer](#). An FTP site link may also be used. Use WisDOT's standard [DT1553](#) permit application form and submit it as a Word document. Submit supporting items as PDF files, which include required drawings and information as detailed in [HMM 09-15-15](#), sections 2.0 – 2.5, along with other statutory requirements.<sup>9</sup> Complete any required environmental and tribal reviews and submit any correspondence or permit approvals from applicable agencies. If required by local ordinances or zoning, submit any correspondence or permit approvals to meet local laws, aesthetic requirements or allow installations in designated historic or underground utility facility districts.

For the items listed in Table 3 #3, utility permits are only required when working in the ROW to replace existing SWFs or install micro wireless facilities, which may include obstructing or closing a lane, shoulder or sidewalk. A permit is not required for routine maintenance unless the work closes/obstructs a lane, shoulder or sidewalk.

### 4.1 Permit Application Processing

Federal and state laws have established specific periods or “shot clocks” in which permit applications for cellular facilities must be reviewed for completeness (initial review) and either approved or denied (final decision). The shot clock starts when WisDOT receives the application.

For SWFs, WisDOT shall notify the applicant within 10 days of receiving the permit application whether it is complete. For other cellular applications, WisDOT shall notify the applicant within 30 days of receiving the application whether it is complete. For an incomplete application, WisDOT shall inform the applicant what is needed to make the application complete. When resubmitted with the required information identified, the final decision shot clock restarts at zero.

**TABLE 3 – WisDOT PERMIT APPLICATION PROCESSING “SHOT CLOCKS” for CELLULAR FACILITIES**

Cellular Facility Description	Processing (Days) ▶	Initial Review	Final Decision
1. Collocation of small wireless facilities on an existing structure		10 <sup>10</sup>	60
2. Small wireless facilities on new or replacement utility pole			90
3. Routine maintenance, replace existing SWF with similar/same size/smaller facility, or install/maintain/replace micro wireless facilities strung on cables between existing poles <sup>11</sup>		N/A	20 <sup>12</sup>
4. Lattice tower, tall monopole or macro-cell – collocation involved on existing structure		30 <sup>13</sup>	90 <sup>14</sup>
5. Lattice tower, tall monopole or macro-cell – new structure			150 <sup>14</sup>
<p>▶ For all categories, the shot clock starts when the permit application is received. If WisDOT notifies an applicant that its application is complete with its initial submittal, the final decision shot clock starts at the initial submittal date – not when WisDOT notifies the applicant.</p> <p>▶ For both 1 and 2, the applicant may consider its permit application approved if WisDOT fails to approve or denies it within the 60- or 90-day period.<sup>15</sup> The applicant and WisDOT may mutually agree to extend the deadline for WisDOT to approve or deny a permit application.</p>			

If a permit for a SWF is denied, WisDOT shall provide the applicant with written documentation explaining the basis for the denial no later than the date that the permit application is denied. An applicant may cure the deficiencies identified in the documentation and resubmit the permit application no later than 30 days after receipt of the documentation without being required to pay an additional application fee. WisDOT shall approve or deny the revised permit application no later than 30 days after its receipt.

If a permit for a non-SWF is denied, the process identified in s. [86.16\(5\)](#) shall be used.

<sup>9</sup> Wis. Stat. s. [66.0414\(3\)\(c\)2](#).

<sup>10</sup> Wis. Stat. s. [66.0414\(3\)\(c\)1.c](#).

<sup>11</sup> WisDOT may require a permit under Wis. Stat. s. [66.0414\(3\)\(e\)2](#), or s. [66.0414\(3\)\(f\)](#)

<sup>12</sup> If a permit is issued, WisDOT would follow s. [86.16\(5\)](#) since they are standard utility permits

<sup>13</sup> 47 CFR, Part 1, [Subpart U](#), s. 1.6003(d)(2)(iii)

<sup>14</sup> 47 CFR, Part 1, [Subpart U](#), ss. 1.6003(c)(1)(ii) and (iv)

<sup>15</sup> Wis. Stat. s. [66.0414\(3\)\(d\)2](#).

## 4.2 Permit Application Fees

Submit a non-refundable permit application fee for cellular facilities shown in Table 4. No permit application fee is charged for the items listed in #4 unless WisDOT charges a general fee to review all utility permit applications.

**TABLE 4 – PERMIT APPLICATION FEE SCHEDULE for CELLULAR FACILITY on WisDOT HIGHWAY ROW**

Cellular Facility Description	Application Fee
1. Lattice tower, tall monopole or macro-cell	\$1,000
2. Installation or replacement of a utility pole together with collocation of an associated SWF	\$1,000* <sup>16</sup>
3. Small wireless facility on existing utility pole	\$100* <sup>17</sup>
4. Routine maintenance, replace existing SWF with similar/same size/smaller facility, or install/maintain/replace micro wireless facilities strung on cables between existing poles <sup>18</sup>	\$0
* WisDOT may adjust these fees by 10 percent every five years, rounded to the nearest multiple of five dollars. During each 5-year period, the adjustment may be applied incrementally or as a single adjustment. <sup>19</sup>	

Make all checks for cellular permit applications payable to the “Wisconsin Department of Transportation” and mail them to the State ROW Permits Engineer at the address listed on the right:

Wisconsin DOT  
Bureau of Highway Maintenance  
4822 Madison Yards Way, 5th Floor South  
Madison, WI 53705

## 5.0 Specific Small Wireless Facility Requirements

The following requirements for small wireless facilities (SWFs)<sup>20</sup> are a part of state and/or federal law:

1. “Small wireless facility” means a wireless facility to which all of the following apply:
  - a. The SWF (satisfies any of the following):
    - i. Is mounted on a structure 50 feet or less in height including any antenna, or
    - ii. Is mounted on a structure no more than 10 percent taller than other adjacent structures, or
    - iii. Does not extend existing structures on which they are located to a height of more than 50 feet or by more than 10 percent, whichever is greater.
  - b. Each antenna associated with the deployment of the SWF, excluding associated antenna equipment, is no more than three cubic feet in volume.
  - c. All other wireless equipment associated with the structure, including the wireless equipment associated with the antenna and any pre-existing associated equipment on the structure, is no more than 28 cubic feet in volume.
  - d. The SWF does not require registration as an antenna structure under [47 CFR Part 17](#).
  - e. The SWF is not located on Tribal lands, as defined in [36 CFR 800.16](#) (x).
  - f. The SWF does not result in human exposure to radio frequency in excess of the applicable safety standards specified in [47 CFR 1.1307](#).
2. The height of a SWF installed or modified in the ROW may not exceed the greater of:<sup>21</sup>
  - a. A height that is 10 percent taller than the existing utility pole or wireless support structure on which the SWF is located.
  - b. Fifty feet above ground level.
3. SWFs may be erected on a utility pole in the ROW. The height of an installed or modified utility pole in the ROW may not exceed the greater of:<sup>22</sup>
  - a. A height that is 10 percent taller than the tallest existing utility pole as of July 12, 2019, that is located within 500 feet of the new or modified pole in the same ROW.
  - b. Fifty feet above ground level.
4. These height limits may be exceeded if the wireless provider complies with the height limits under zoning ordinances enacted by a municipality or county.<sup>23</sup>

<sup>16</sup> Wis. Stat. s. [66.0414\(3\)\(d\)1.c.](#) } Up to 30 permit applications may be submitted as a consolidated application using the one fee under Wis. Stat. s. [66.0414\(3\)\(c\)1.i.](#)

<sup>17</sup> Wis. Stat. s. [66.0414\(3\)\(d\)1.](#)

<sup>18</sup> Wis. Stat. s. [66.0414\(3\)\(e\)](#)

<sup>19</sup> Wis. Stat. s. [66.0414\(3\)\(d\)2.](#)

<sup>20</sup> Wis. Stat. s. [66.0414\(1\)\(u\)](#)

<sup>21</sup> Wis. Stat. s. [66.0414\(2\)\(e\)2.](#)

<sup>22</sup> Wis. Stat. s. [66.0414\(2\)\(e\)3.](#)

<sup>23</sup> Wis. Stat. s. [66.0414\(2\)\(e\)4.](#)



## 5.1 Specific Requirements for Small Wireless Facilities with Permit Submittals

In addition to the information required on form [DT1553](#) and detailed in section [4.0](#), submit the following items with permit applications involving SWFs:<sup>24</sup>

1. A general description of the proposed SWF and associated utility pole, if applicable. The details of such description shall be appropriate to the type of work to be performed with special emphasis on matters likely to be affected or impacted by the proposed work (e.g., accommodating vehicles, pedestrians, erosion, etc.). Include site plans and detailed construction drawings to scale that identify the proposed SWF and ROW use.
2. To the extent the proposed SWF involves collocation on a new utility pole, existing utility pole, or existing wireless support structure, a structural report performed by a licensed professional engineer documenting that the utility pole or wireless support structure will structurally support the collocation, or that the utility pole or wireless support structure will be modified to meet structural requirements, in accordance with applicable codes.
3. If the SWF will be collocated on a utility pole or wireless support structure owned by a third party, other than a governmental pole or a utility pole for designated services, certification that the wireless provider has permission from the owner to collocate on the utility pole or wireless support structure.
4. Certification by the wireless provider that the SWF will comply with relevant FCC regulations concerning radio frequency emissions from radio transmitters and unacceptable interference with public safety spectrum, including compliance with the abatement and resolution procedures for interference with public safety spectrum established by the FCC in [47 CFR 22.970 - 22.973](#) and [47 CFR 90.672 - 90.675](#).
5. Certification by the wireless provider that the SWF will not materially interfere with any of the following:
  - a. The safe operation of traffic control equipment
  - b. Sight lines or clear zones for transportation or pedestrians
  - c. The Federal Americans with Disabilities Act or similar federal or state standards regarding pedestrian access or movement
6. A statement that the SWF shall comply with all applicable codes.
7. If SWF collocation is on a WisDOT utility pole for street lights, traffic signals, signage, or ITS facilities, the wireless provider shall include plans and specifications using WisDOT as-built plans, which will be provided by WisDOT as part of the make-ready work process.<sup>25</sup>

## 5.2 Specific Requirements for non-SWFs

Submit the following items with permit applications involving lattice towers, monopoles and macro cells:

1. A general description of the proposed facilities. The details of such description shall be appropriate to the type of work to be performed with special emphasis on matters likely to be affected or impacted by the proposed work (e.g., accommodating vehicles, pedestrians, erosion, etc.). Include site plans and detailed construction drawings to scale that identify the proposed facilities and ROW use.
2. A structural report performed by a licensed professional engineer documenting that the facility will structurally support itself or will be supported by a wireless support structure (e.g., a macro cell attached to a building), including any collocation of other wireless facilities, in accordance with applicable codes.
3. For collocation installations, submit a copy of the attachment agreement or other certification from the tower, monopole or macro cell owner that the wireless provider has permission to collocate.
4. Items 4 - 6 in section 5.1 above (replacing non-SWFs for SWFs in the language).
5. Include zoning statements or other approvals as needed to certify that the facilities comply with local ordinances.
6. Include copies of purchased private easements for equipment compounds or other facilities adjacent to WisDOT ROW when a portion of those facilities overhangs WisDOT ROW.
7. A STH Connection application/permit for a driveway when an equipment compound or similar facilities are a part of the installation. Note: a driveway permit is not automatically granted especially if there is existing access to a parcel.

<sup>24</sup> Items 1-6: Wis. Stat. s. [66.0414\(3\)\(c\)2](#).

<sup>25</sup> Item 7: Wis. Stat. s. [66.0414\(4\)\(g\)](#)

## **6.0 Cellular Facility Location on WisDOT ROW**

Locate cellular facilities as near as practical to the ROW line. Facilities located on private easements may be allowed to overhang the ROW with a WisDOT permit. Cellular installations should not be within the clear zone. If they must be in the clear zone, they must be either breakaway or behind guardrail or other impact attenuator. Due to the nature of SWFs, many of these locations may be on utility poles closer to the roadway. However, SWFs shall still follow clear zone rules. Do not install cellular facilities within the median area since these areas are typically used for WisDOT lighting, traffic signals and ITS operations. Do not install cellular facilities at intersections if they obstruct sight distance or vision corners.

Due to WisDOT's concerns regarding the proliferation of cellular antennas, collocation on cellular towers, utility poles or utility service structures is encouraged. WisDOT may schedule meetings with wireless providers to resolve collocation issues before permits are reviewed.

## **7.0 Controlled-Access Highway Right-of-Way Access**

When permitted by WisDOT, access for constructing or maintaining cellular facilities on or adjacent to a controlled-access highway shall be limited to:

1. Frontage roads where provided
2. Gates where permitted (see [7.3](#))
3. Nearby or adjacent public roads and streets
4. Trails along or near the ROW line that connect only to an intersecting road

Submit in the permit application the anticipated maintenance procedures for the proposed cellular installation.

### **7.1 Special Cases: Direct Access from Highway/Ramp**

In special cases when cellular facilities are permitted within interchange areas or otherwise inaccessible portions of a controlled-access highway, access to them from traffic lanes or ramps may also be permitted. An approved WisDOT traffic control plan for a lane, shoulder or ramp closure is required and will likely include day and time restrictions for access.

### **7.2 Security Fence**

Do not open WisDOT's security fence unless otherwise authorized in a permit. A wireless provider shall repair or replace damaged fence before concluding its work operations at the end of the day, or temporarily secure the fence in some manner to deter access by pedestrians and animals.

When the existing security fence is opened to facilitate construction, it shall be disassembled and, upon work completion, reinstalled in its original location to a uniform profile. All fencing material, except for the posts, may be reused. The provider shall supply new posts. Replace any fencing material damaged during removal or reinstallation with new material.

During construction, install a temporary fence to maintain controlled-access highway security at all times. Place the temporary fence between the highway and work area and attach it to the existing, upright security fence.

All work performed, and the fencing and gate materials supplied, shall conform to WisDOT's specifications.

### **7.3 Security Fence Gates**

A wireless provider may request to disassemble a portion of WisDOT's security fence and install a temporary or permanent gate in its location. A permanent gate in the security fence may be allowed, but only in rare cases. This type of access request must be approved by the Federal Highway Administration (FHWA). When a gate is allowed, provisions to guard against unauthorized use are required.

Any gate should match the profile of the adjacent security fence. Wood posts may be substituted for the metal posts supporting the gate. Any fencing material damaged with the installation of the gate shall be replaced with new material. The provider shall supply the gate and any other fencing material at its own expense.

Keep the gate locked whenever the work site is unattended. The provider shall keep all keys for the gate.

### **8.0 Existing Cellular Facilities on a Proposed Controlled-Access Highway**

Existing cellular facilities in the ROW of a proposed controlled-access highway may remain if they can be maintained and operated without access from the traffic lanes or ramps, and they do not adversely affect the design, safety, construction, maintenance, or operation of the highway. Otherwise, they shall be relocated.

### **9.0 Vehicular Tunnels**

SWFs may be allowed in vehicular tunnels if needed to provide emergency communications for motorists.

### **10.0 Locating SWFs on WisDOT Facilities**

Wisconsin law allows SWF collocation on WisDOT utility poles for streetlights, traffic signals, signage, or ITS facilities. It is *recommended* that SWF installations be placed on streetlights since there are more problems associated with locating on other WisDOT facilities. This includes wires and other infrastructure attached to the outside of these facilities, resolving power supply issues, and access and potential interference with signals, cameras, etc.