



THE VILLAGE OF CROTON-ON-HUDSON

**SMALL WIRELESS FACILITY
DESIGN MANUAL**

SECTION I. DEFINITIONS

The following terms are defined as follows:

1. **ACCESSORY EQUIPMENT:** Any equipment serving or being used in conjunction with a Wireless Facility or Wireless Support Structure, including but not limited to transmission equipment, power supplies, generators, batteries, cables, equipment buildings, cabinets and storage sheds, shelters or similar structures.
2. **ANTENNA:** An apparatus designed for the purpose of emitting radiofrequency (RF) radiation, to be operated or operating from a fixed location pursuant to Federal Communications Commission authorization, for the provision of wireless service and any commingled information services.
3. **COLLOCATE or COLLOCATION:** The mounting of one or more Wireless Facilities, including antennas, on a pre-existing structure, or modifying a structure for the purpose of mounting or installing a WIRELESS FACILITY on that structure.
4. **DECORATIVE POLE:** A pole that is specially designed and placed for aesthetic purpose and on which no appurtenances or attachments, other than a Small Wireless Facility, lighting, banners, or municipal attachments have been placed or are permitted to be placed.
5. **PRIOR APPROVED DESIGN:** A design for a Small Wireless Facility that has been reviewed and deemed to be in accordance with this Design Manual and approved for construction by the Village.
6. **PUBLIC RIGHT-OF-WAY (ROW):** The surface and space above, on, and below any public highway, avenue, street, lane, alley, boulevard, concourse, driveway, bridge, tunnel, park, parkway, waterway, dock, bulkhead, wharf, pier, public easement, right-of-way or any other public ground or water within or in which the Village now or hereafter holds any property interest. This includes area adjacent to paved surfaces which area is part of a Village right-of-way.
7. **SMALL WIRELESS FACILITY:** Shall have the same meaning as set forth in 47 CFR § 1.6002(1), or any successor provision.
8. **STEALTH TECHNOLOGY:** Camouflaging methods applied to Wireless Facilities and accessory equipment which render them more visually appealing or blend the proposed facility into the existing structure or visual backdrop in such a manner as to render it minimally visible to the casual observer. Such methods include, but are not limited to, architecturally screened roof-mounted Antennas, building-mounted Antennas painted to match the existing structure and Wireless Facilities constructed to resemble trees, shrubs, and light poles.

9. **SUPPORT STRUCTURE:** A pre-existing structure, such as a utility pole, streetlight pole, or traffic signal pole, that has been installed for a primary purpose other than the provision of wireless service.
10. **TECHNICALLY FEASIBLE:** By virtue of engineering or spectrum usage, the proposed placement for a small wireless facility or its design or site location can be implemented without a material reduction in the functionality of the Small Wireless Facility.
11. **UNDERGROUND AREA:** An area of the Village of Croton-on-Hudson in which all utility installations are required to be installed underground on a non-discriminatory basis, including one side of a street where there are no common facilities.
12. **VILLAGE:** The Village of Croton-on-Hudson, Westchester County, New York.
13. **VILLAGE CODE:** The Code of the Village of Croton-on-Hudson, as amended.
14. **WIRELESS FACILITY APPLICANT:** Any person that applies for a Wireless Facility building permit, zoning approval and/or permission to use the rights-of-way or other Village-owned or third-party land or property.
15. **WIRELESS SUPPORT STRUCTURE:** A pole, tower, base station, or other building, whether or not it has an existing Antenna facility, that is used or to be used for the provision of wireless service (whether on its own or comingled with other types of services).

SECTION II. GENERAL STANDARDS FOR SMALL WIRELESS FACILITIES

1. All Small Wireless Facilities shall comply with the applicable requirements of this *Small Wireless Facility Design Manual* and the Village Code, including but not limited to Chapter 206, Telecommunications Towers, of the Village Code.
2. Standard of care.
 - a. Small Wireless Facilities shall meet or exceed all applicable standards and provisions of the FAA, the FCC, and any other agency of the state or federal government with the authority to regulate Wireless Facilities, the latest edition of the National Electrical Safety Code (NESC), the American National Standards Institute (ANSI) Code, the structural standards of the American Association of State Highway and Transportation Officials, and any other industry standard applicable to the structure.
 - b. If such standards or regulations are changed, the owner of the Small Wireless Facility shall bring such Small Wireless Facility into compliance with the revised standards within six (6) months of the effective date of such standards or regulations, unless a different compliance schedule is mandated by the controlling state or federal agency.

3. Small Wireless Facilities located inside the rights-of-way shall comply with the following standards:

- a. All Small Wireless Facilities in the rights-of-way shall comply with the Americans with Disabilities Act guidelines adopted by the Village and all applicable requirements relating to streets and sidewalks as established by Chapter 197 of the Village Code.
 - b. All Small Wireless Facilities in the rights-of-way shall comply with applicable federal and state standards regarding pedestrian access and movement.
4. All Small Wireless Facilities shall be designed to be the minimum height Technically Feasible. The maximum height of any Small Wireless Facility shall be fifty (50) feet, as measured from ground level to the highest point on the Wireless Facility, including Antennas and Accessory Equipment.
5. All Small Wireless Facilities shall be designed and constructed in an effort to minimize aesthetic impact to the greatest extent Technically Feasible. All applications for a Small Wireless Facility shall identify all design features intended to minimize aesthetic impact.
6. To the extent Technically Feasible, Small Wireless Facilities located in the rights-of-way shall be located in line with existing property lines.
7. If a Small Wireless Facility or any portion thereof is to be located on private property, the Wireless Facility Applicant shall provide to the Village evidence that the owner of such private property has granted the Wireless Facility Applicant an easement or other right to construct the Small Wireless Facility.
8. Minimum Setbacks.
- a. All Small Wireless Facilities located in the rights-of-way shall be set back a distance equal to 100% of the total height of the Small Wireless Facility from any structure.
 - b. All Small Wireless Facilities located outside the rights-of-way shall be set back a distance equal to 100% of the total height of the Small Wireless Facility from any adjacent property line or structure.
9. All Small Wireless Facilities shall be designed to withstand the effects of wind gusts and ice to the standard designed by the American National Standards Institute as prepared by the engineering departments of the Electronics Industry Association and Communications Industry Association (ANSI/TIA-222, as amended), or to the industry standard applicable to the structure.
10. As a first priority, Small Wireless Facilities shall be Collocated on existing Support Structures, either inside or outside the rights-of-way. If Collocation of a Small Wireless

Commented [TR1]: This height is established by the FCC's 2018 Small Cell Order and is included in the definition of Small Wireless Facility therein.

Facility on an existing structure cannot be achieved, a Small Wireless Facility may be installed on a new or replacement Wireless Support Structure. Wireless Facility Applicants proposing the installation of a new or replacement Wireless Support Structure shall submit evidence of all structures upon which Collocation was explored and an explanation of why such Collocation was determined not to be Technically Feasible.

11. If deemed necessary by the Village Building Inspector, a security fence with a maximum height of six (6) feet may be required to surround any Small Wireless Facility located outside the rights-of-way. The design of any such fence shall be subject to the approval of the Village Building Inspector.
12. All Small Wireless Facilities shall post a sign in a readily visible location identifying the name and phone number of a party to contact in the event of an Emergency. The only other signage permitted on the Small Wireless Facility shall be that required by the FCC, or any other federal or state agency.

SECTION III. ANTENNA AND ACCESSORY EQUIPMENT STANDARDS

1. Antenna Standards

- a. Any Antenna associated with a Small Wireless Facility shall be as small as is Technically Feasible. Antennas shall not exceed three (3) cubic feet in volume.
- b. All Antennas shall be fully concealed within a shroud or canister type enclosure.
- c. One (1) pole-top Antenna and/or three (3) panel antennas may be installed on a single Support Structure or Wireless Support Structure.
- d. The Collocation of a Small Wireless Facility on an existing Support Structure shall not extend more than five (5) feet above the existing Support Structure.
- e. All pole-top Antennas shall be flush-mounted as closely to the top of the Support Structure or Wireless Support Structure as Technically Feasible and shall be aligned with the centerline of the Support Structure or Wireless Support Structure so as to appear as an extension of the Support Structure or Wireless Support Structure.
- f. All Antennas shall be of a design, style, and color that matches the Support Structure or Wireless Support Structure upon which they are attached.
- g. Any necessary pole-top extension shall be of the minimum height necessary to achieve separation from the existing pole attachments in accordance with the National Electric Safety Code and any other industry standard applicable to the Wireless Facility.
- h. Any Antenna mounted on a lateral standoff bracket, such as panel Antennas, shall protrude no more than necessary to meet clearances from the pole and existing pole

attachments in accordance with the National Electric Safety Code and any other industry standard applicable to the Wireless Facility.

- i. If mounted on an existing Support Structure, no Antenna shall impair the function of said Support Structure.
- j. Antenna placement shall not materially impair light, air, or views from adjacent windows.

2. Accessory Equipment Standards

- a. All Accessory Equipment associated with a Small Wireless Facility shall be of the minimum dimensions Technically Feasible. The total cumulative volume of all Accessory Equipment associated with a Small Wireless Facility shall not exceed a maximum twenty-eight (28) cubic feet in volume. Equipment utilized solely for mitigation of the aesthetic impact of the Small Wireless Facility or required for utility service shall not be included in the Accessory Equipment volume calculation.
- b. Accessory Equipment shall be mounted as flush to the side of a Support Structure or Wireless Support Structure as is Technically Feasible.
- c. Pole-mounted Accessory Equipment shall be mounted so as to provide a minimum of fourteen (14) feet vertical clearance from ground level, unless lower placement is necessary for utility or emergency access.
- d. Accessory Equipment shall be of a color that matches the Support Structure or Wireless Support Structure upon which such Accessory Equipment is mounted.
- e. All Accessory Equipment shall be contained within a single equipment shroud or cabinet. Such equipment shroud or cabinet shall be of the smallest dimensions Technically Feasible.
- f. If required by the Building Inspector, Small Wireless Facilities shall post a sign in a readily visible location identifying the name and phone number of a party to contact in the event of an emergency. The only other signage permitted shall be that required by the FCC or any other federal or state agency. All signage associated with a Small Wireless Facility shall be clearly shown in the application and shall be subject to approval by the Village Building Inspector.
- g. The placement of Accessory Equipment shall not materially impair light, air, or views from adjacent windows.
- h. No Accessory Equipment shall feature any visible lighting, including flashing indicator lights, unless required by state or federal law.

- i. Accessory Equipment shall be designed to have the minimum noise profile Technically Feasible. All Small Wireless Facilities shall be operated and maintained so as not to produce noise in excess of applicable noise standards under state law and Chapter 160 of the Village Code

3. Wiring Standards

- a. Exposed wiring is prohibited on any Small Wireless Facility, Accessory Equipment, or Accessory Equipment enclosure.
- b. Wiring associated with a Small Wireless Facility shall be installed underground in any Underground Area to the extent that such wiring is deployed inside the Underground Area.
- c. Transmission, fiber, power cables and any other wiring shall be contained within any Support Structure or Wireless Support Structure for which such concealment is Technically Feasible. If such wiring cannot be contained within the Support Structure or Wireless Support Structure, all wiring shall be contained within conduit or U-guard that is flush-mounted to the Support Structure or Wireless Support Structure.
- d. All wiring shall be installed tautly and without excessive slack or extra cable storage on the Support Structure or Wireless Support Structure.
- e. Any conduit or U-guard shall be of a color that matches the Support Structure or Wireless Support Structure to which the Small Wireless Facility is attached.
- f. Loops of extra wiring shall not be attached to any Support Structure, Wireless Support Structure, or any other part of a Small Wireless Facility.

SECTION IV. WIRELESS SUPPORT STRUCTURE STANDARDS

1. Replacement Wireless Support Structures

- a. Replacement of an existing Support Structure with a replacement Wireless Support Structure shall be preferred over the installation of a new Wireless Support Structure.
- b. Small Wireless Facilities requiring the installation of a replacement Wireless Support Structure shall be permitted only upon a showing by the Wireless Facility Applicant that the proposed Small Wireless Facility cannot be Collocated on an existing Support Structure, either inside or outside the rights-of-way.
- c. Any replacement Wireless Support Structure shall be of comparable materials and design to the existing Support Structure being replaced except as otherwise required by the pole owner.

- d. Any replacement Wireless Support Structure shall be placed within a five (5) foot radius of the existing Support Structure being replaced.
- e. Any replacement Wireless Support Structure shall be designed to accommodate all uses that existed on the Support Structure being replaced.
- f. As part of an application for a Small Wireless Facility, the Wireless Facility Applicant shall provide documentation from a structural engineer licensed in the State of New York confirming that the replacement Wireless Support Structure, Small Wireless Facility, and prior existing uses shall be structurally sound.

2. New Wireless Support Structures

- a. New Wireless Support Structures shall be permitted only upon a showing by the Wireless Facility Applicant that the proposed Small Wireless Facility cannot be Collocated on an existing Support Structure, either inside or outside the rights-of-way.
- b. Any new Wireless Support Structure shall be of comparable materials and design to adjacent Support Structures or other infrastructure in the rights-of-way, such as streetlights, traffic signal poles, or utility poles. If adjacent Support Structures in the rights-of-way are of multiple designs, then the design of the proposed Small Wireless Facility shall be of comparable materials and design to such adjacent Support Structures in the following order of priority, from highest to lowest:
 - i. Utility poles
 - ii. Streetlight poles
 - iii. Traffic signal poles
 - iv. Other infrastructure
- c. To the extent Technically Feasible, no new Wireless Support Structure shall be installed:
 - i. In front of any one- or two-family residential building. Instead, it shall be in line with the dividing line between residential properties and as close thereto or as reasonably approved by the Building Inspector.
 - ii. Within ten (10) feet of the edge of any driveway;
 - iii. In any Underground Area; or
 - iv. In the public rights-of-way directly opposite any driveway.

Commented [TR2]: This hierarchy is at the discretion of the Village

Commented [TR3]: The utility poles are not Village-owned. Can we require collocation to a structure that we don't own?

Commented [MR4R3]: Yes, to the extent that the requirement is that the applicant attempt to collocate. If they are unable to reach agreement on collocation, then a lower-priority collocation or new support structure would be the alternative.

Commented [TR5]: Also at the discretion of the Village

3. Decorative Poles:

- a. No Small Wireless Facility shall be permitted on an existing Decorative Pole unless the Applicant provides documentation showing that such Decorative Pole is the only Technically Feasible location for placement and that no suitable alternative sites exist.
- b. Decorative Poles shall be required:
 - i. For the replacement of any existing Decorative Pole;
 - ii. In any historic district, as established by the Village Code; and
 - iii. In any residential district.
- c. For any replacement Decorative Pole, the replacement Decorative Pole shall match the existing Decorative Pole in shape, design, color, and material.

SECTION V. APPROVAL

- 1. The Village Building Inspector shall reasonably determine whether a proposed Small Wireless Facility design complies with the requirements of this Design Manual.
- 2. Any requests for relief from the requirements of this Design Manual shall be considered on a case-by-case basis by the Village Building Inspector and shall be approved upon a determination by the Village Building Inspector that such relief is necessary to prevent the effective prohibition of wireless service pursuant to the rules of the Federal Communications Commission.
- 3. Upon approval of a design for a Small Wireless Facility requiring relief from the requirements of this Design Manual, such design shall be incorporated by reference into this Design Manual as a Prior Approved Design.
- 4. All requirements herein shall apply to any Small Wireless Facility constructed after the date on which the Village adopts this Design Manual. The requirements of this Design Manual shall not apply to any Small Wireless Facility constructed prior to the date of adoption, except that any modification, repair or replacement shall be performed in compliance with these requirements.

SECTION VI. PRIOR APPROVED DESIGNS

- 1. A record of Prior Approved Designs shall be kept on file at the Village Building Department.

Small Wireless Facility Design Checklist

The information detailed in the following checklist shall be included with any application for a Small Wireless Facility:

Item	Description	Included in Application?	
		Yes	No
Cover Letter	The application shall include a cover letter detailing the location of the proposed site, all equipment being proposed, and a certification that the Applicant has included all information required by the Village Code. The cover letter shall include the name and contact information for the Wireless Facility Applicant and, if different, the owner of the proposed Small Wireless Facility.		
Site Plan	- Site plan shall show all proposed equipment associated with the Small Wireless Facility. - The manufacturer and model, proposed location, and physical dimensions of each piece of equipment should be clearly shown. - Before and after diagrams of the proposed site showing the dimensional changes shall be included. - If the proposed Utility Pole supports existing attachments, the site plan shall show the location and dimensions of all such attachments. - If installation of a new or replacement Utility Pole is being proposed, the site plan shall include the color, dimensions, material and type of Utility Pole proposed. - The site plan shall include an aerial photo showing the location of any existing structures within five hundred (500) feet of the proposed location, including but not limited to residential structures, commercial structures, light poles, traffic signals, traffic signage, and existing Utility Poles.		

Photo Simulations	• Before-and-after photo simulations shall depict the Small Wireless Facility from at least three locations near the proposed site. • The photo simulations should reflect the proposed design and location of all Accessory Equipment associated with the Small Wireless Facility.		
Engineer Certifications	• A written certification by a structural engineer licensed in the State of New York confirming that the proposed Small Wireless Facility and Wireless Support Structure are structurally sound and shall not endanger public health and safety. • A report by a qualified engineering expert which shows that the Small Wireless Facility will comply with applicable FCC regulations, including applicable standards for radiofrequency emissions.		
Paint	• Accessory Equipment shall be painted a color that matches the Utility Pole upon which such Accessory Equipment is mounted. • Application shall detail the proposed painting of any Accessory Equipment necessary to achieve aesthetic uniformity of the site.		
Wiring	• All proposed wires associated with the Small Wireless Facility shall be clearly shown. • A depiction and description of the concealment methods to be utilized for the wiring shall be included. • No exposed wiring is permitted.		
Signage	• Signage shall be posted in a readily visible location and identify the owner's permit number and the name and phone number of a party to contact in the event of an emergency. • If required, FCC-mandated signage is permitted. Applicant shall identify such signage in its application.		

Certificate of Insurance	• A certificate of insurance as required by Chapter 206 of the Village Code.		
Certification of Compliance	• A signed statement affirming the proposed Wireless Facility and Wireless Facility application's compliance with the applicable requirements of Chapter 206 of the Village Code and this <i>Small Wireless Facility Design Manual</i>.		