



Wireless Communication Facilities

Design Guidelines & Standards

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Introduction

The wireless communication facilities design guidelines and standards are intended to clarify the aesthetic and public safety goals and standards as provided in [Chapter 18.205](#) ‘Wireless Communication Facilities for New and Substantially Changed Wireless Facilities’ and [Chapter 18.207](#) ‘Wireless Communication Facilities for Eligible Facilities Requests’ in the Concord Municipal Code. In addition to the development standards and requirements in the Municipal Code, all new wireless facilities and collocations, modifications, or other changes to existing wireless communication facilities that require City approval must conform to the design guidelines.

In order to avoid or remedy the public harm caused by unsightly or out-of-character wireless deployments in the City, these guidelines prescribe clear, reasonable, and predictable criteria to assess and process applications in a consistent and expeditious manner. The design guidelines also provide standards for a degree of uniformity and consistency to conceal and minimize the visual impacts of the wireless communication facilities throughout Concord to maintain the aesthetic quality of the site and the surrounding area, to the extent feasible. Applications shall be reviewed based on the best siting, design, equipment, and construction methods and the smallest and least intrusive antennas, components and other necessary equipment available.

Checklists and handouts prepared by staff to facilitate implementation shall be consistent with these requirements.

Freestanding Wireless Communication Facilities on Private Property

- a. **Tower-Mounted Equipment.** All tower-mounted equipment must be mounted as close to the vertical support structure as possible to reduce its overall visual profile. Applicants must mount non-antenna, tower-mounted equipment (including, but not limited to, remote radio units/heads, surge suppressors and utility demarcation boxes) directly behind the antennas to the maximum extent feasible. All tower-mounted equipment, cables and hardware shall have a non-reflective finish and shall be painted or otherwise treated to minimize visual impacts and blend with the existing environment.
- b. **Ground-Mounted Equipment; Shelters.** All ground-mounted equipment must be concealed underground or within an existing or new structure, opaque fences or other enclosures subject to the approval authority's prior approval. The approval authority may require additional concealment elements as the approval authority finds necessary to blend the ground-mounted equipment and other improvements into the natural and/or built environment.

Building-Mounted Wireless Communication Facilities on Private Property

- a. **Preferred Concealment Techniques.** All applicants should, to the extent feasible, propose new non-tower wireless facilities that are completely concealed and architecturally integrated into the existing facade or rooftop features with no visible impacts from any publicly accessible areas at ground level (examples include, but are not limited to, antennas behind existing parapet walls or facades replaced with RF-transparent material and finished to mimic the replaced materials). Alternatively, when integration with existing building features is not feasible, the applicant should propose completely concealed new structures or appurtenances designed to mimic the support structure's original architecture and proportions. Facilities must be located behind existing parapet walls or other existing screening elements to the maximum extent feasible.

Facade-Mounted Equipment. When wireless communication facilities cannot be placed behind existing parapet walls or other existing screening elements, the approval authority may approve facade-mounted equipment in accordance with this guideline. All facade-mounted equipment must be concealed behind screen walls and mounted as flush to the facade as practicable. The approval authority may not approve “pop-out” screen boxes unless the design is architecturally consistent with the original building or support structure.

- b. **Rooftop-Mounted Equipment.** All rooftop-mounted equipment must be screened from public view with concealment measures that match the underlying structure in proportion, quality, architectural style, and finish. The approval authority may approve unscreened rooftop equipment only when it expressly finds that such equipment is effectively concealed due to its low height and/or setback from the roofline.
- c. **Ground-Mounted Equipment; Shelters.** All ground-mounted equipment must be concealed underground or within an existing or new structure, opaque fences, building interior equipment room, or other enclosures subject to the approval authority’s prior approval. The approval authority may require additional concealment elements as the approval authority finds necessary to blend the ground-mounted equipment and other improvements into the natural and/or built environment.

Right-of-Way Wireless Communication Facilities

- a. **Existing Support Structures.** All wireless communication facilities in the public right-of-way must be installed on existing above-ground structures (such as light standards or utility poles) whenever possible.
 1. **Traffic Signals.** The approval authority shall not approve any wireless facility proposed to be installed on a traffic control pole unless the Transportation Manager finds, in consultation with other City departments or divisions or outside agencies, that the traffic control pole has sufficient capacity to support the wireless facility.
 2. **Decorative Poles.** Wireless communications facilities shall not be attached to or installed on decorative poles. Decorative poles may be replaced as provided in these guidelines.
- b. **Replacement Support Structures.** Existing above-ground structures may be replaced with structurally hardened, fitted or reinforced support structures so long as the replacement structure is, in the approval authority's discretion, substantially similar to the existing structure to be replaced.
- c. **New Support Structures.** The approval authority shall not approve any new, non-replacement support structures unless: (i) the applicant demonstrates that above-ground support structures within the intended service area either do not exist or are not potentially available to the applicant; or (ii) the approval authority specifically finds that a new, non-replacement support structure would be more aesthetically desirable and consistent with the objectives in this section than installations on existing structures near the project site. The approval authority shall have the discretion to require that any new support structure must be a streetlight that conforms to the City's streetlight standards and specifications, which the City shall maintain for street illumination and public safety purposes.
- d. **Undergrounded Equipment.** To conceal the equipment to the maximum degree feasible, wireless providers must install all equipment (other than the antenna and any electric meter)

underground in any area in which the existing utilities are primarily located underground. In all other areas, applicants shall install all equipment (other than the antenna and any electric meter) underground when the approval authority finds that the above-ground equipment would unreasonably interfere with the public's ability to use the right-of-way for uses that include without limitation travel, social, expressive and/or aesthetic uses. When making a determination on whether to require undergrounded equipment, the approval authority shall take into account the presence of existing above-ground utilities. Mere additional expense to install and maintain an underground equipment enclosure does not exempt an applicant from this requirement. If an applicant proposes to install a facility in an area in which the existing utilities are primarily located underground, the approval authority shall have the discretion to require that the applicant install a new streetlight that conforms to the City's streetlight standards and specifications as the facility support structure.



- e. **Pole-Mounted Equipment.** All pole-mounted equipment must be installed flush to the pole to minimize the overall visual profile. If any applicable health and safety regulations prohibit flush-mounted equipment, the maximum separation between the equipment and the pole shall be the minimum separation required by such regulations. All pole-mounted equipment and required or permitted signage must face toward the street or otherwise placed to minimize visibility from adjacent sidewalks and structures to the extent feasible. All cables, wires and other connectors must be routed through conduits within the pole whenever possible, and all conduit attachments, cables, wires and other connectors must be concealed from public view to the extent feasible. All pole-mounted equipment, cables and hardware shall have a non-reflective finish and shall be painted or otherwise treated to minimize visual impacts and blend with the existing environment.

- f. **Ground-Mounted Equipment.** To the extent that the equipment cannot be placed underground as required, applicants may be permitted to install ground-mounted equipment in a location that does not obstruct pedestrian or vehicular traffic or access to the public rights-of-way. All ground-mounted equipment must be placed in the least conspicuous location available within a reasonable distance from the pole. The approval authority may impose conditions of approval on new or enhanced landscaping to conceal ground-mounted equipment. Any ground-mounted equipment, cables and hardware shall have a non-reflective finish and shall be painted or otherwise treated to minimize visual impacts and blend with the existing environment. The approval authority shall not approve a ground-mounted electric meter pedestal or other ground-mounted electric meter enclosure where the ability to underground is possible to the extent feasible.

- g. **Antenna Volume.** Each antenna associated with a wireless facility in the public rights-of-way shall not exceed three (3) cubic feet in volume, and the cumulative volume for all antennas associated with a wireless facility in the public rights-of-way shall not exceed six (6) cubic feet in total volume. For the purposes in this Section D.3.g, “volume” shall include any shroud, radome, or other concealment device used in connection with the antenna.

- h. **Accessory Equipment Volume.** The cumulative volume for all non-antenna accessory equipment associated with a wireless

communication facility in the public rights-of-way shall not exceed nine and one-half (9.5) cubic feet. For the purposes in this Section D.3.h, “volume” shall include any shroud, cabinet, housing or other concealment device used in connection with the accessory equipment, but shall not include any equipment or other improvements installed below ground level or any cables or connectors placed within the pole or other support structure.

- i. **Illustrative Examples.** The following photographs depict wireless communication facility designs that the City may deem appropriate in preferred locations. These examples are illustrative only, and may not be appropriate in all cases.









