

Wireless Communications Facilities Design Standards

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CHAPTER 1 – BACKGROUND AND PURPOSE

Pursuant to Chapter 1 of Title 15 of the Del Norte County Code, wireless service providers and wireless infrastructure providers are permitted to locate wireless communications facilities on public or private property, including within the County's right-of-ways. This network of low-powered micro antennas provide cellular and data coverage to supplement the provider's macro-cellular network. New wireless communications facility installations will improve the providers' ability to meet current and future consumer cellular and data needs.

These design standards provide design and aesthetic requirements and specifications that all wireless communications facilities installed within the public right-of-way must meet prior to installation within the unincorporated County of Del Norte (County).

The Community Development Department Director may choose to apply these standards to installations on private property, County property or public lands. Wireless communications facilities installed within the right-of-way are bound to these design standards unless the Community Development Department Director approves a deviation.

There are several different wireless communications facilities installations that are permitted within the County (listed descending in preference):

- Attachments to utility poles
- Installation of monopoles
- Attachments to street lights
- Attachments to street signs
- Attachments to traffic signal poles

1.1 DEFINITIONS

- County – Unincorporated area of the County of Del Norte.
- Design Standards or Standards – These design standards adopted by the County and applicable County Code.
- FCC – Federal Communications Commission of the United States of America.
- Monopole – A freestanding pole with the primary purpose of supporting a wireless communications facility. May also be used for lighting or signage as required by the County. All equipment excluding cantenna inside pole or pole base.
- Pacific Power – The power company or its successor.
- Provider – A wireless service provider or wireless infrastructure provider.
- Right-of-way – The public way including right-of-way, easements, and fee land acquired for road and utility purposes.
- Utility Pole – A utility pole owned by either the power company (presently Pacific Power) or telephone company (presently Frontier Communications).

- Wireless communications facilities – Antennas and related facilities used to provide or facilitate the provision of commercial wireless communications services under a license from the FCC.

CHAPTER 2 – GENERAL REQUIREMENTS

2.1 WIRELESS COMMUNICATIONS FACILITIES EQUIPMENT AND POLES

- Aesthetics – Equipment must match the aesthetics of the pole and surrounding poles.
- Cables – All cables must be clearly labeled for future identification.
- Cantennas – Cantenna must be mounted directly on top of the pole. A tapered transition between the upper pole and cantenna is required. Cantenna must be maximum of 14 inch diameter. Side arm installations are prohibited. Cantenna height shall be 5 feet or less.
- Color – All equipment must be painted to match pole aesthetics. All metal shall be galvanized. Paint on metal shall be powder coated over zinc paint. Match paint to existing pole color. Monopoles and equipment on monopoles shall be AMS-STD-595-COLOR Federal Standard 14036, 17178, or 20040.
- Conduits – All cables shall be in wireless communications facility specific conduits and shall be flush with the existing utility pole or installed in conduits inside pole. All conduits must be clearly labeled for future identification.
- Equipment Cabinet Access Doors - Lockable access door sized to install, maintain, and remove all wireless communication equipment.
- Existing Utility Pole – *Defined in Chapter 3.*
- External Installs – Equipment, other than a cantenna, may not be installed on the outside of any pole other than an existing utility pole.
- External Shrouding - The antenna shall be contained in a cantenna. Any equipment installed on an existing utility pole shall be contained in an attached equipment cabinet. All other installs shall be concealed inside the pole or pole base.
- Flat Surfaces - Attachments to a pole including pole base must include a smooth transition between the wireless communications facility and the pole and except for the top of a cantenna shall not have any flat surface of more than 1.5 inches to prevent creation of a ledge.
- Hardware Attachment – All hardware attachments must be hidden. Welding onto existing equipment is not permissible.
- Height Maximum – Installation of a wireless communications facility on an existing utility pole shall not result in a total height above 50 feet. Any install not on an existing utility pole or monopole shall be no taller than maximum height limit of the zoning where pole is located, which is 30 feet countywide. The total height of a monopole including cantenna shall be 30 feet. For all, measure from finished grade to top of cantenna.

- Internal Installs – Equipment shall be installed within a cantenna, pole, or pole base. Any equipment installed within a pole may not protrude from the pole except to the extent reasonably necessary to connect to power or a wireline.
- Lights – There shall be no lights on the equipment unless required bylaw.
- Pole Base – Pole base, excluding existing utility poles, shall include a round pole cabinet 20 inches in diameter and 5 feet in height measured from finished grade.
- Pole Style – Round. Pole must match aesthetics of surrounding street lights, if present. Pole extension on traffic signal pole must match the rest of the pole. All pole and pole extensions shall be galvanized in accordance with AASHTO M 111.
- Power Meter – Incorporate meter into pole consistent with internal and external install requirements.
- Shutoff – County workers and contractors shall have the ability to easily shut off radio signals and power while working on or near pole.
- Stickers – Any pole with a wireless communications facility must include: a radio frequency warning sticker (if applicable), sticker background to match pole color, no larger than 4 inches by 6 inches facing to the street near the elevation of the antenna; 4 inch by 6 inch (maximum) plate with the provider's name, location identifying information, and 24-hour emergency telephone number 4 to 5 feet above finished grade; and no advertising, logos or decals.

2.2 GENERALLY APPLICABLE REQUIREMENTS

Any wireless communications facility must comply with the following:

- Locate at the intersection of property lines, or along secondary property street frontage.
- Maintain required clearance from utilities.
- Preferably locate equidistant from adjacent poles.
- In a residential neighborhood, limit noise to be 5 dBA above ambient sound at midnight, not to exceed 30 dBA as measured at a property line. Where possible, a facility shall not generate noise. If the facility does not generate noise, include this information in the submittal.
- Any aesthetic considerations and accommodations are to be included in the application submittal.
- All equipment located within the public right-of-way shall be located such that it meets Americans with Disabilities Act (ADA) requirements and does not obstruct, impede, or hinder usual pedestrian, cyclist, or vehicular travel or interferes with the operation and maintenance of improvements in the right-of-way.
- Minimize impact to the aesthetics of the existing poles.
- New poles must match aesthetics of adjacent poles.
- County may require a new street light in lieu of a monopole.

CHAPTER 3 – ATTACHMENTS TO EXISTING UTILITY POLES

3.1 PURPOSE

This chapter of the standards governs the attachment of a wireless communications facility to utility poles owned by the power and telephone company, presently Pacific Power and Frontier Communications. A wireless communications facility attachment must conform to pole owner's attachment standards.

3.2 STANDARDS

Any attachment to a utility pole or utility line must first be approved in writing by the owner of the utility pole. This includes attachment of overhead fiber and on-strand attachments proposed to attach to a utility pole. These standards apply utility poles. A new utility pole installed for the purpose of attaching a wireless communications facility is not permitted and would be treated as a monopole.

The wireless communications facility shall be concealed to the maximum extent practicable. No provider equipment shall be detached from the pole, or installed below finished grade; this includes but is not limited to utility boxes, equipment cabinets, and power meters. Side arm installations are prohibited.

An existing utility pole includes a utility pole owned by the power or telephone company that was placed into service on or before January 1, 2020 and includes in-kind replacement of utility poles with continuous use.

- If use by the existing utility pole owner ceases, use by the wireless communications facility shall also cease. The permittee shall apply for permits and relocate the wireless communications facility so that it meets design standards at the time of relocation.
- Equipment mounted on an existing utility pole shall be vertically clustered as close as technically feasible and at least 8 feet above finished grade.
- Equipment mounted on an existing utility pole shall not exceed in width the diameter of the pole by more than 3 inches on either side excluding cantenna.
- Attachments to the side of an existing utility pole must be placed perpendicular to the street away from the vehicular traffic (e.g. back of pole). No equipment shall extend beyond the face of a pole on the street side. Mounting on the side of the pole opposite the direction of travel is preferred if mounting on the back of pole is unavailable. All wiring in conduits shall be flush with pole.

Attachment to any utility pole installed after January 1, 2020, and not an in-kind replacement of an existing utility pole, shall meet monopole standards for concealment of the wireless communications facility.

CHAPTER 4 – ATTACHMENTS TO TRAFFIC SIGNAL POLES

4.1 PURPOSE

This chapter of the standards governs attachment of a wireless communications facility to the top of an unused traffic signal upright pole. A wireless communications facility may not be placed on a traffic signal upright pole where there is a luminaire attached. Attachments to traffic signal poles are least desirable.

4.2 STANDARDS

The wireless communications facility shall be concealed in the cantenna, pole, or pole base. No provider equipment shall be placed on the outside of a pole, detached from the pole, or installed below finished grade; this includes but is not limited to utility boxes, equipment cabinets, and power meters. Side arm installations are prohibited.

No physical, electrical, or radio interference by the wireless communications facility with the traffic signal:

The provider needs to provide analysis that the proposed wireless communications facility shall not cause any interference with County public safety radio system, traffic signal, emergency signal control devices, future “smart” technology applications, other County communications components, or any other unforeseen interferences.

CHAPTER 5 – ATTACHMENTS TO STREET LIGHTS

5.1 PURPOSE

This chapter governs wireless communications facility attachments to a street light. Two different types of installations are permitted on street lights, including:

- Collocating wireless communications equipment on existing metal street light poles.
- Replacing an existing or adding a new metal street light pole so that wireless communications equipment can be attached.

5.2 STANDARDS

The wireless communications facility shall be concealed in the cantenna, pole, or pole base. No provider equipment shall be placed on the outside of a pole, detached from the pole, or installed below finished grade; this includes utility boxes, equipment cabinets, and power meters. Side arm installations are prohibited.

Wireless communications facilities on street lights shall:

- Be oriented away from the street.
- The size of wireless communications facility must be minimized as possible to minimize visual impact without interfering with the wireless communications facility operation.
- Equipment may not block visibility of existing or potential street light banners.
- Cantenna must include a smooth transition between upper pole and cantenna attachment.
- Attachments to a service area light pole cannot change overall character of light or proportion of the luminaires with the placement of a cantenna. The lighting level of service cannot be decreased.
- All new luminaires shall be the same height as adjacent streetlights.

CHAPTER 6 – INSTALLATION OF MONOPOLES

6.1 PURPOSE

This chapter of the standards is to be used when installing a freestanding wireless communications facility , referred to as a monopole.

6.2 STANDARDS

The wireless communications facility shall be concealed in the cantenna, pole, or pole base. No provider equipment shall be placed on the outside of a pole, detached from the pole, or installed below finished grade; this includes utility boxes, equipment cabinets, and power meters. Side arm installations are prohibited.

- All monopoles shall be metal.
- All poles shall be painted AMS-STD-595-COLOR Federal Standard 14036, 17178, or 20040.
- Paint shall be maintained regularly by owner including when fading, rusting through, or flaking.
- Ownership of monopoles remains with the provider. County reserves the right to attach on the monopole, including but not limited to signage.
- At least 15% of the pole design structural capacity shall be reserved for future County installations.
- All new poles must have appropriate clearance from existing utilities.

The definition of a monopole is a freestanding wireless communications facility pole with components including the foundation, equipment cabinet, upper pole, cantenna, and all hardware and electrical equipment necessary for a complete assembly.

6.3 PLACEMENT REQUIREMENTS

All monopoles shall be privately owned.

The preferred location:

- Is generally on a property line to avoid interference with building face, views, business signage, pedestrian flow, vehicular access, etc.
- Is at the intersection of property lines or along secondary property street facing (less desirable).
- Is in alignment with existing trees, utility poles, and street lights.
- Is equal distance between trees and other poles when possible, with a minimum of 15 feet separation such that no proposed disturbance shall occur within the critical root zone of any tree.
- Is within appropriate clearances from existing utilities.
- Is at least 250 feet radially from other monopoles.
- Does not impede, obstruct, or hinder pedestrian or vehicular travel.
- Does not significantly create a new obstruction to property sightlines.
- Does not have sufficient wireless service to meet the demand in the immediate vicinity.
- Is not located along the frontage of a historic building, deemed historic on a federal, state, or local level.
- Is not within 10 feet of an alley.
- Is not within 5 feet of a driveway.
- Is not located within 50 feet of the apron of a fire station or other emergency service facility.
- Is not within an existing sidewalk or potential future sidewalk area as determined using Del Norte County Code §12.04 – Urban and Rural Public Road Standards.
- Is not within the “sight-distance area” as defined by Del Norte County Code §12.08.010 – Location and Height Restrictions.
- Is not impeding corner sight distance at controlled intersections as defined by Del Norte County Code §12.09.010 – Controlled Intersections.

The Community Development Department Director may approve monopoles that do not meet all of the preferred location criteria. Supporting documentation must be submitted to demonstrate that the location of a monopole that meets all of the preferred location criteria is unavailable and wireless communications facility needs cannot be met without a deviation.

CHAPTER 7 – OTHER ATTACHMENTS

7.1 PURPOSE

This chapter of the standards is to be used for wireless communications facility installations on other County owned assets located in the public way such as signs.

7.2 STANDARDS

Other Attachments is a generalization, the wireless communications facility shall be concealed consistent with the intent of other Chapters of these Standards which includes no provider equipment placed on the outside of a pole, detached from the pole, or installed below finished grade; this includes but is not limited to utility boxes, equipment cabinets, and power meters. Side arm installations are prohibited.

All wireless communications facilities proposed to be installed on signs within the public way shall be approved by the County prior to installation. The County will consider the placement of wireless communications facilities on pole signs located within the public way only when it can be demonstrated that the wireless communications facility will not create any hazard for pedestrians, cyclists, or motor vehicles, visibility of adjacent buildings is not unduly impaired, and that the existing structure can adequately handle the structural requirements for such a facility.

7.3 BASIS OF DESIGN

The wireless communications facility design and installation shall be compatible with the aesthetics of existing signs. The provider shall provide a visual of existing and proposed conditions with the permitting application to demonstrate compatibility with the aesthetics of existing signs. The wireless communications facility components shall be sized to be proportional to the sign.

DESIGN STANDARDS FOR SIGNS

- Wireless communications facility attached to freestanding County owned pole signs in the public way shall only be allowed on existing signpoles.
- Wireless communications facility antenna shall only be installed on top of the sign pole.
- The wireless communications facility antenna shall extend a maximum of 5 feet above the height of the existing sign pole and shall be installed above the sign mounted on the pole.