

Section 12.03.080 Communication Towers and Facilities

- A. Purpose.
1. To establish standards for the siting and design of communication facilities that promote the availability of adequate public services while ensuring compatibility with adjacent land uses.
 2. To assure compliance with the Federal Communications Commission's (FCC) legislative rules for Communication Facilities including those for Radio Frequency human exposure limits in 47 C.F.R. Part 1, Subpart I standards and those addressing State and Local Government Regulation of the Placement, Construction, and Modification of Personal Wireless Service Facilities, in 47 C.F.R. Part 1, Subpart U.
 3. To establish clear guidelines, standards, and timeframes for the exercise of County authority to regulate communication facilities that comply with FCC rules regarding reasonable timeframes for issuing decisions on communication facility permits.
- B. Definitions.
1. ~~Antenna: Any system of exterior wires, poles, rods, reflecting discs or similar devices used for the transmission or reception of electromagnetic waves.~~ An apparatus designed for the purpose of emitting radiofrequency (RF) radiation, to be operated or operating from a fixed location pursuant to FCC authorization, for the provision of personal wireless service and any commingled information services. This definition does not apply to antennas designed for amateur radio use or satellite dishes for residential or household purposes.
 2. Antenna facility: An antenna and associated antenna equipment.
 3. ~~Antenna, Minor—An antenna mounted or affixed to a structure, sign, light post or similar structure.~~ Antennas which have a face area of six (6 sq. ft.) square feet or less and are completely within twenty-four (24") inches of the supporting structure
 4. Base Station: A structure or equipment at a fixed location that enables FCC-licensed or authorized wireless communications between user equipment and a communications network. The term does not encompass a tower or any equipment associated with a tower.
 5. Cell on Wheels (COW): A portable self-contained wireless facility that can be moved to a location and set up to provide wireless services on a temporary or emergency basis. A COW is typically vehicle-mounted and contains a telescoping boom as the antenna support structure.
 6. CFR: Code of Federal Regulations
 7. ~~Co-Location: Placement on a single tower or structure of one or more antennas or dishes, owned or used by more than one public or private entity.~~
(1) Mounting or installing an antenna facility on a pre-existing structure; and/or
(2) Modifying a structure for the purpose of mounting or installing an antenna facility on that structure.
(3) For Eligible Facilities Requests, mounting or installation of transmission equipment on an eligible support structure for the purpose of transmitting and/or receiving radio frequency signals for communications purposes as provided in 47 C.F.R. §1.6100(b)(2).
 8. Communication Facility: A facility that transmits and/or receives electromagnetic signals by way of towers, antennas and microwave dishes, and which includes equipment buildings or structures, parking areas or other accessory development. It may include facilities staffed with employees in addition to other than occasional maintenance and installation personnel, minor antennas, vehicle or outdoor storage

yards, offices or broadcast studios. A Communication Facility can include a base station and a communication tower.

9. ~~Communication Tower - A support structure designed and constructed primarily for the purpose of supporting one or more antennas, including self-supporting lattice towers, guy towers, or monopole towers. It does not include ground or structure mounted satellite dishes that are less than ten (10') feet in diameter, citizens band radio antennas whose total height is less than twenty (20') feet, nor antennas operated by a federally licensed amateur radio operator as part of the Amateur Radio Service.~~
Any structure built for the sole or primary purpose of supporting any FCC-licensed or authorized antennas and their associated facilities, including structures that are constructed for wireless communications services including, but not limited to, private, broadcast, and public safety services, as well as unlicensed wireless services and fixed wireless services such as microwave backhaul, and the associated site.
10. Eligible Facilities Request: Any request for modification (co-location, removal or replacement of transmission equipment) of an existing tower or base station that does not substantially change the physical dimensions of such tower or base station, involving:
 - a. Co-location of new transmission equipment;
 - b. Removal of transmission equipment; or
 - c. Replacement of transmission equipment.
11. FCC Shot Clock: the presumptively reasonable time frame within which the County must act on a wireless application, as defined by the Federal Communications Commission (FCC), shown below subject to amendment from the FCC. The shot clock begins when the applicant takes the first procedural step that the County requires.
 - a. Aggregate of 60 days:
 - 1) Standby emergency generators at previously permitted macro cell tower sites.
 - 2) Collocation of small wireless facilities using existing structures.
 - 3) Eligible Facilities Requests.
 - b. Aggregate of 90 days:
 - 1) Small wireless facilities using new structures.
 - 2) Collocation of facilities other than a small wireless facility using existing structures.
 - c. Aggregate of 150 days:
 - 1) All other applications, such as the development of a new facility using a new structure.
12. "Public Right of Way" or "Public ROW": the area on, below, or above property that has been designated for use as or is used for a public roadway, highway, street, sidewalk, alley or similar purpose, but not including a federal interstate highway or other area not within the legal jurisdiction, or within the legal ownership or control of the County.
13. Small Cell Wireless Facility (SCWF): The same as defined in 47 C.F.R. §1.6002(l), as may be amended or superseded, which defines the term as follows:
 - a. The facilities—
 - 1) Are mounted on structures 50 feet or less in height including their antennas as defined in 47 C.F.R. §1.1320(d), or
 - 2) Are mounted on structures no more than 10 percent taller than other adjacent structures, or
 - 3) Do not extend existing structures on which they are located to a height of

changes the physical dimensions of an eligible support structure if it meets any of the following criteria. If any of the following is true, the application does not qualify as an Eligible Facilities Request.

Changes in height should be measured from the original support structure in cases where deployments are or will be separated horizontally, such as on buildings' rooftops; in other circumstances, changes in height should be measured from the dimensions of the tower or base station, inclusive of originally approved appurtenances and any modifications that were approved prior to the passage of the Spectrum Act.

- 1) Height:
 - a) For towers other than towers in the public rights-of-way, it increases the height of the tower by more than 10% or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater.
 - b) For other eligible support structures, it increases the height of the structure by more than 10% or more than ten feet, whichever is greater.
- 2) Width:
 - a) For towers other than towers in the public rights-of-way, it involves adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater.
 - b) For other eligible support structures, it involves adding an appurtenance to the body of the structure that would protrude from the edge of the structure by more than six feet.
- 3) Cabinets: For any eligible support structure, it involves installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets; or, for towers in the public rights-of-way and base stations, it involves installation of any new equipment cabinets on the ground if there are no pre-existing ground cabinets associated with the structure, or else involves installation of ground cabinets that are more than 10% larger in height or overall volume than any other ground cabinets associated with the structure.
- 4) Location: It entails any excavation or deployment outside of the current site, except that, for towers other than towers in the public rights-of-way, it entails any excavation or deployment of transmission equipment outside of the current site by more than 30 feet in any direction. The site boundary from which the 30 feet is measured excludes any access or utility easements currently related to the site.
- 5) Concealment It would defeat the concealment elements of the eligible support structure.
- 6) Conditions of Approval: It does not comply with conditions associated with the siting approval of the construction or modification of the eligible support structure or base station equipment.

3. The following are exempt from the permitting requirements of this Chapter:
 - a. Radio, or television antennae, or communication antennae for non-commercial entertainment and hobby use, accessory to a residence, if located on property within a residential or rural zoning district within the exclusive use or control of the antenna user, and which comply with the maximum height requirements of the zoning district.
 - b. A ground or building-mounted, receive-only, citizens band or two-way radio antenna, including any mast that is operated on a non-commercial basis if located on property within a residential or rural zoning district.
 - c. A ground, building, or tower mounted antenna, operated on a non-commercial basis by a federally licensed amateur radio operator as part of the Amateur or Business Radio Service if located on property within a residential or rural zoning district.
 - d. Minor antennae as defined by this Section, including, ~~but not limited to:~~
 - 1) ~~Wireless internet transceivers that comply with Federal Communications Commission Regulations, 47 C.F.R. Part 15, as may be amended for applicability to wireless internet service providers, provided that:~~
 - a) Each antenna has a face area of six (6 sq. ft.) square feet or less;
 - b) Any point of an antenna is within twenty-four (24") inches of the supporting structure;
 - c) ~~No more than one antenna support structure may be placed on any one support structure building elevation so as to be visible from a roadway; and~~
 - d) ~~Where attached to a building support structure, each antenna and support structure shall be finished in a muted color so as to blend with the building support structure color.~~
 - 2) ~~Antennae added to existing towers which have a face area of six (6 sq. ft.) square feet or less, and where any point of the antenna is within twenty-four (24") inches of the supporting structure, are finished to match the tower and do not result in an increase in overall structure height. [These antennae are subject to the Operational Requirements in Section I.](#)~~
 - 3) ~~Antennae which are affixed to, or located entirely within, a building, sign, light post, or a similar structure, if designed to be an integral part of, and compatible with the design of, the structure to which it is attached, such that the antenna is effectively camouflaged concealed to blend with the surrounding natural and built environment. Such antennae may not be placed on a nonconforming structure nor exceed allowable height limits for the structure. [These antennae are subject to the Operational Requirements in Section I.](#)~~
 - e. [New Small Cell Wireless Facilities as defined by this Section and Small Cell Wireless Facility colocations. These facilities are subject to the Operational Requirements in Section I.](#)
 - f. [Any antenna or wireless communications facility that is exempt from local regulation pursuant to the rules and regulations of the Federal Communications Commission \(FCC\) or a permit issued by the California Public Utilities Commission \(CPUC\). The owner or operator of such facility shall provide the Planning Director with a copy of the current FCC or CPUC permit or a copy of applicable FCC regulations prior to its installation.](#)
 - g. [Facilities for wireless reading of water, gas, or electricity meters.](#)

- h. Over-the-Air-Reception Devices ("OTARD") antennas, as defined by 47 C.F.R. § 1.4000(a).
 - i. Any facility legally entitled to an exemption pursuant to state or federal law or governing franchise agreement.
 - j. The replacement of existing equipment with substantially similar equipment. [These replacements are subject to the Operational Requirements in Section I.](#)
4. Emergency Deployment: In the event of a declared federal, state, or local emergency, or when otherwise warranted by conditions that the Planning Director deems to constitute an emergency, the Planning Director may approve the installation and operation of a temporary wireless communications facility (e.g., a cell on wheels or "COW"), which is subject to such reasonable conditions that the Planning Director deems necessary.
 5. Emergency Standby Generators: The addition or replacement of an emergency standby generator for an existing communication facility shall be permitted through a building permit and shall not require the approval of land use entitlement. In addition to demonstration of compliance with the County site development standards, the building permit application must demonstrate the proposed generator is consistent with the following:
 - a. The screening standards of Nevada County Code Section 12.04.111.
 - b. The noise standards of Nevada County Code Section 12.04.070.
 - c. All conditions of the existing land use entitlements for the communication facility.
 - d. All applicable codes and regulations regarding the storage of hazardous materials and the generation of hazardous wastes set forth in the California Health and Safety Code. The fuel storage on site for a diesel generator requires an annual Environmental Health operating permit. This permit must be applied for prior to the final of the construction permit.
 6. For any work in the public right-of-way, the applicant shall obtain an encroachment permit. Only applicants authorized to enter the public right-of-way pursuant to state or federal law or a franchise or other agreement with the County shall be eligible for a permit to install or modify a communications facility in the public right-of-way.
 7. [Projects submitted but not deemed complete prior to the effective date of an amendment to Nevada County Code Section 12.03.080 shall be subject to the most recently adopted ordinance.](#)

D. Application Requirements.

1. All land use applications for new communication towers, communication facilities, or non-EFR projects, shall include the following information in addition to the requirements of the County applications:
 - a. Detailed information to justify the need for the proposed tower site, i.e., searching the desired service area, technical reasons for the proposed tower height and specific site selection standards. [Improvement to network. Provide a vicinity map of the geographic service area for the proposed communications facility, including the service area of all existing communication facilities in the local service network. Describe the coverage or capacity demand that the communication facility is meant to address, the specific site selection standards, and the technical](#)

reason for the proposed tower height. Each coverage map presented must be signed by a qualified engineer, attesting that they are familiar with the coverage model used, that it is an appropriate coverage model for the purpose, and that the input data used to create the coverage maps was appropriate.

- 1) The applicant shall provide the experience and education credentials of the engineers preparing network coverage and/or capacity data in compliance with California law, as well as a description of the software tools used.
- b. Submit a list of existing towers communication facilities within the desired service range, information regarding co-location opportunities for every communication facility on the list, and evidence of negotiation for co- location on existing towers communication facilities where such opportunities exist.
- c. If the proposed tower is part of a system requiring multiple communication facilities, provide a plan showing the location of all proposed towers communication facilities.
- d. ~~A visual study from surrounding areas that includes a computerized photo simulation of the tower on the site.~~ Visual Impact Analysis. Provide a visual impact analysis showing the maximum silhouette, viewshed analysis, color and finish palette, and proposed screening and landscaping. The analysis shall include photo simulations, drone/balloon test, and other information as necessary to determine visual impact of the communication facility. The analysis shall include a map depicting where the photos were taken. Where consistent with the natural or built environment, the analysis shall include a native vegetation landscaping plan with a visual simulation and discussion of how the chosen plants, at maturity, will screen the site.
- e. Structural elevations of the tower shall include any trees or other structures within twenty (20') feet, and their height.
- f. Towers that are located a distance that is less than 100% of their height from a property line, a habitable structure or other tower, shall include a report by a structural engineer licensed by the State of California, certifying that the proposed tower is designed to withstand without failure the maximum forces expected from wind, earthquakes, and ice, when the tower is fully loaded with antennas, transmitters and other equipment and ~~camouflaging~~ concealment elements. The report shall describe the tower structure, specifying the number of and types of antennas it is designed to accommodate, providing the basis for the calculations done and documenting the actual calculations performed.
- g. Applicants shall submit their detailed procedures for reviewing and approving co-location requests from other carriers.
- h. Alternatives Analysis. Provide an itemized list of alternative sites considered, with a comprehensive explanation of reasons alternative sites are not technologically feasible. Explanation shall include specific comparative analysis of how different sites would impact aesthetic values, and other environmental values.
- i. Notice of Application. The applicant shall provide evidence that a county-approved notice was sent to all landowners and residents within 1,000 feet of the proposed communication facility location within a 10-day period prior to application acceptance.
- j. A Radiofrequency Compliance Report that certifies the proposed communication facility, as well as any collocated facilities that contribute to the cumulative exposure, will comply with applicable federal RF exposure standards and exposure limits, including FCC uncontrolled public exposure limits. The Report

shall be prepared, stamped, and signed by a Professional Engineer registered in the State of California, and demonstrate that the facility will not expose members of the general public to radiation levels that exceed the permissible limits the FCC has set for uncontrolled public exposure. The RF report must include the actual frequency and power levels (in watts effective radio power (ERP)) for all existing and proposed antennas at the site and exhibits that show the location and orientation of all transmitting antennas and the boundaries of areas with RF exposures in excess of the uncontrolled/general population limit (as that term is defined by the FCC) and also the boundaries of areas with RF exposures in excess of the controlled/occupational limit (as that term is defined by the FCC). Each such boundary shall be clearly marked and identified for every transmitting antenna at the project site.

- k. Any other studies or information as determined to be necessary by the Planning Director in order to consider an application for a communication facility may be required.
- l. Applicant site plans shall include identification of all defensible space required by Public Resource Code 4291.

- 2. All land use applications for projects requiring an Administrative Development Permit, as described in Section 12.03.080.C.2, shall include the requirements of 12.03.080.D.1.J in addition to the requirements of the County Administrative Development Permit application.

E. Locational Standards for New Towers Communication Facilities.

- 1. Communication towers facilities shall be located to minimize their visibility and the number of distinct facilities present, as follows:
 - a. No new tower communication facility shall be placed on an exposed ridgeline or to silhouette against the sky unless the site is developed with existing communication facilities.
 - b. No new tower communication facility shall be installed in a location that is not developed with communication facilities or industrial or commercial uses ~~other public or quasi-public uses unless it blends with the surrounding, existing, natural and man-made environment so as to be effectively unnoticeable.~~ unless it is effectively concealed to blend with the surrounding natural and built environment.
 - c. No new tower communication facility shall be placed in a location readily visible from a public trail, public park or other developed outdoor recreation area unless it blends with the surrounding existing natural and man-made environment so as to be effectively unnoticeable. it is effectively concealed to blend with the surrounding natural and built environment.
 - d. ~~No tower shall be installed closer than two (2) miles from another readily visible, uncamouflaged or unscreened facility unless it is a co-located facility, is on a multiple-user site, or is designed to blend with the surrounding existing natural and man-made environment so as to be effectively unnoticeable.~~
 - e. Towers shall be located so as to minimize visual impacts from any public trail, park or developed outdoor recreation area. A minimum fifty (50') foot setback from any such area shall be required.
- 2. Communication towers facilities shall be set back from property lines as follows shown

in Table 12.03.080.E.2.

- a. The setback shall be measured from that part of the communication facility that is closest to the neighboring property (i.e., the setback for a faux tree would be measured from the end of the branch closest to the neighboring property).
- b. If the project parcel is adjacent to a zoning district with a more restrictive setback, the more restrictive setback shall apply to the proposed communication tower.
- c. Communication facilities shall not be located anywhere that results in less than a 150% setback from the communication facility to a residentially zoned parcel, regardless of the zoning of the project parcel or the contiguous parcels.

Table 12.03.080.E.2.

Zoning District	Setback From Property Line
Residential	150% of Towers Height
Rural	150% of Towers Height
Commercial	150% of Towers Height
Industrial	Setback Standards of Table 12.02.050.E
Special Purpose	150% of Towers Height

~~d. Towers shall be located so as to minimize visual impacts from any public trail, park or developed outdoor recreation area. A minimum fifty (50') foot setback from any such active area shall be required.~~

3. Co-location of new antennas on existing towers is strongly encouraged. Where appropriate to minimize visual impacts, new towers will not be approved where co-location on existing towers is technically feasible, will provide the desired service coverage, and do not result in alterations that create a greater visual impact.
4. The use of alternative support structures that conceal or camouflage the presence of antennas are strongly encouraged, including man-made trees, light poles, signs, clock towers, bell steeples or other similar structures.

F. Design Standards. Communication facilities shall be designed to minimize visual impacts on the surrounding community and landscapes in accordance with the design standards in this section.

1. Wall mounted antennas shall not extend more than four feet from the face of the wall nor consume more than fifty (50 sq. ft.) square feet per building face, excluding mountings.
2. Communication towers are not subject to the maximum building height established within each zoning district. No tower shall exceed 150 feet in a residential district **as defined in Nevada County Code Section 12.02.020.**
3. The height of an existing communication tower shall not be increased by an amount that would result in a violation of the Locational Standards contained within subsection E of this Section.
4. ~~Communication towers and supporting equipment shall be finished and maintained in non-glare colors that minimize their visibility to the greatest extent possible. Equipment attached to the tower shall match the color of the tower. Colors that blend with background landscapes or structures will be required.~~

The applicant shall employ screening and concealment design techniques in the design and placement of communication facilities and accessory equipment in order to ensure the communication facility is as visually inconspicuous as possible, to prevent the communication facility from dominating the surrounding area and to hide the communication facility from predominant views from surrounding properties and viewsheds, all in a manner that achieves compatibility with the community and background landscapes and structures. Communication facilities and accessory equipment shall be finished in non-glare colors and non-reflective surfaces and colors that minimize their visibility to the greatest extent possible.

5. The visible exterior surface of apparatuses to support communication support facilities, i.e. such as vaults, equipment rooms and equipment enclosures, shall be designed to be visually compatible with structures typically found in the vicinity of the project site.
 6. Fencing and screening of ~~towers~~ communication facilities.
 - a. Base stations shall be screened from adjacent public rights of way, public trails, public recreation areas, places of public gathering and adjacent properties by landscaping with native species or other means, in alignment with Section 12.04.111 of the Nevada County Code.
 - b. All areas disturbed during project construction shall be replanted with vegetation compatible with vegetation in the surrounding area unless the County Fire Marshal requires fuel modification. Native trees are the preferred vegetation.
 - c. Existing trees and other screening vegetation in the vicinity of the communication facility and along the access or utility easements, shall be protected from damage during construction.
 - d. No razor wire or barbed wire shall be permitted on any chain link fencing.
 7. Lighting for communication facilities shall be limited as follows:
 - a. All approved lighting shall be shielded or directed on site to minimize off-site light spill except for lighting required by the Federal Aviation Administration.
 - b. In residential zones, lighting shall be limited to Security lighting that is manually operated or motion-detector controlled. Manually operated lighting use is limited to times when personnel are on site.
 8. Signage shall be limited to required address and communication facility identification signs, emergency and safety hazard signage.
 9. All co-located and multiple-user communication facilities shall be designed to promote communication facility and site sharing where feasible, including parking areas, access roads, utilities and equipment.
 10. Towers designed as an integral part of the structure are strongly encouraged within all commercial and industrial districts.
- G. Permit Requirements.
1. Owners of all approved towers shall be required to agree to allow future co- location by other carriers, and to provide an efficient process for handling co- location requests.
 2. Prior to the issuance of any entitlement permit, the applicant shall provide a Facility Maintenance/Removal Agreement to the Planning Director, binding the developer and successors in interest, to an agreement to:
 - a. Maintain the communication facility as approved; and
 - b. Notify the County of intent to vacate the site, agreeing that the applicant will remove all communication facilities within twelve (12) months unless the site is

- occupied by a successor; or
 - c. Provide a cash bond equal in cost to removing the tower and associated facilities.
3. A permanent, weatherproof, facility identification sign, no more than twelve (12") inches by twenty-four (24") inches in size, identifying the facility operator and a twenty-four (24) hour phone number, shall be placed on the fence, the equipment building, or tower base. If larger signage is required by the FCC, the applicant shall provide proof of the requirement, and signage shall not exceed the required size.
 4. Within 15 days after any project approval, the applicant shall sign and file with the Planning Department a Defense and Indemnity Agreement, in the form approved by County Counsel.
- H. **Safety Standards:** All communication facilities shall be designed by qualified, licensed persons to meet minimum standards for public safety, and shall comply with all applicable legal requirements, including the County Building and Fire Codes. All communication facilities should be proactively monitored and maintained to ensure compliance with the safety design.
- I. **Operational Requirements:**
1. **Radio Frequency Monitoring Requirements:**
 - a. Post-installation certification. Within 60 days of commencing operation of a communications facility, the permittee shall provide the director with a post-installation certification that the facility operates in compliance with the FCC's radio frequency exposure limits.
 - b. Post-modification certification. Within 60 days of modifying a permitted communications facility, the permittee shall provide the director with a post-installation certification that the facility operates in compliance with the FCC's radio frequency exposure limits.
 - c. FCC emission exposure compliance. Records shall be maintained which demonstrate ongoing compliance with FCC exposure regulations and guidelines. Records shall be made available to County staff within 3 business days of the request.
 - 1) Compliance testing. If no testing to demonstrate ongoing compliance with FCC radio frequency exposure limitations has occurred within 12 months from the preparation of the previous testing report, the County may require the service provider to retain an engineer or other qualified electromagnetic radiation specialist to conduct RF exposure testing of any facility to ensure the facility's compliance with Federal limits. The results of the test shall be provided to the County within 60 days of the County's request.
 2. **Maintenance:** All communications facilities must be maintained in good condition by the lessee or owner, including ensuring the facilities are reasonably free of:
 - a. Dirt or grease;
 - b. Chipped, faded, peeling, or cracked paint;
 - c. Rust or corrosion;
 - d. Cracks, dents, or discoloration;
 - e. Missing, discolored, or damaged synthetic foliage or other concealment elements;
 - f. Graffiti, stickers, or advertisements;

- g. Litter or debris including but not limited to synthetic foliage that has fallen off a monopine;
- h. Broken or misshapen structural parts; and
- i. Damage from any cause.

J. **Public Notice:** When a Public Hearing is required by Title 12 Chapter 5 of the Nevada County Code for a project regulated by this Section, public notice shall be given consistent with Cal. Gov't Code §§ 65090–65096 and shall be given to owners within one thousand (1,000') feet of the real property that is the subject of the hearing pursuant to Cal. Gov't Code § 65091(a)(3). This notice shall also be given to the owners of at least ten (10) parcels, in addition to the parcel which is the subject of the hearing.