



Land Use

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BOULDER COUNTY
BOARD OF COUNTY COMMISSIONERS
Thursday, December 12, 2019, at 12:00 p.m.
Commissioners' Hearing Room, Third Floor
Boulder County Courthouse, 1325 Pearl Street, Boulder, CO

PUBLIC HEARING

Docket DC-19-0001: Proposed Boulder County Land Use Code Amendments to Article 4-514 Telecommunication Facilities.

Staff: Kathy Sandoval, Planner II, Land Use
Jacey R. Cerda, Assistant County Attorney, Boulder County Attorney

AGENDA

1. Staff presentation and Board of County Commissioner (“BOCC”) clarifying questions
2. Public Hearing
3. BOCC deliberation and decision

INTRODUCTION

On February 14, 2019, the BOCC authorized staff to pursue text amendments to the Boulder County Land Use Code (Code). The Code needs amendment to streamline and clarify Code provisions, and provide for appropriate Land Use review of telecommunications facilities, including Small Cell Wireless Facilities (SCWF). The amendment is timely and necessary because the Federal Communications Commission (FCC) recently updated its interpretation of the Telecommunications Act of 1996 with regards to local government regulation of all types of telecommunication facilities, and issued new orders regarding SCWF that restricted the following: (1) the allowed timeline for local government review and approval of SCWF; (2) the amount of fees local governments may require for approval, siting, and permitting processes; and, (3) the type of aesthetic and design requirements local governments may place on SCWF. Furthermore, relevant Colorado statutes were revised in April 2017 in anticipation of the future deployment of SCWF, and those statutes substantially reflect the FCC’s interpretations and orders restricting local government regulation of SCWF.

ACTION REQUESTED

Staff requests that the BOCC approval of the Code text amendments proposed in Attachment A.

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I. OBJECTIVES AND SCOPE OF PROPOSED AMENDMENTS

The purpose of this Code amendment is to ensure compliance with the FCC’s September 26, 2018 Declaratory Ruling and Third Report and Order (“Order”) interpreting the Telecommunications Act of 1996 and providing rules for streamlining state and local review of SCWF siting applications. The Order further limits local authority regarding the placement, construction, and modification of wireless telecommunication facilities, particularly as related to SCWF, thus requiring an update to the county’s Code regarding such facilities. Additionally, Staff identified opportunities to streamline and clarify existing Code provisions related to telecommunication facilities overall and provide for Land Use review processes applicable to the development of SCWF.

In contrast to macro-cell telecommunication facilities (i.e. towers greater than 50 feet tall with large accessory buildings and structures) that provide overall coverage for wireless telecommunications, SCWF enhances the capacity for and speed of data usage. SCWF are therefore typically deployed in areas with heavy demand for data (e.g. public squares, downtown pedestrian areas, campuses, sport stadiums, etc.). SCWF will likely need to be on

new towers or existing vertical infrastructure (e.g. utility poles) every 200 to 600 feet and will primarily be located in the county's ROWs. Federal and state law preempts the county's ability to regulate SCWF, other than regarding aesthetic, fee, and permitting requirements that are reasonable, objective, and published in advance (see Attachment B). Given these regulatory limits, staff proposes to process SCWF through a new Administrative Review process as outlined below.

Scope of Proposed Text Amendments

- Revisions to the structure of the existing Code provisions related to telecommunications.
- Clarification of the Telecommunication Facility definition and addition of a definition for Small Cell Wireless Facility.
- Creation of Land Use process for Small Cell Wireless Facility applications and delineation of required application materials and processes.
- Addition of a new Administrative Review process in the Code.

II. BACKGROUND

Staff from Boulder County Land Use, Transportation, and the County Attorney's office identified key topics and priorities for the Code update and related regulations. The proposed Code language is informed by a literature review of FCC and state requirements, sample code examples from the National League of Cities/National Association of Telecommunications Officers and Advisors, and from other County and City jurisdictions. Staff met with telecommunication industry representatives ("carriers") to better understand SCWF and the carriers' intentions for deployment of SCWF, technological requirements, and carriers' suggested Code language. Staff also hosted a local planner meeting with representatives from the Cities of Boulder, Longmont, and Lafayette, and the Town of Nederland to better understand those jurisdictions' processes and requirements for SCWF.

Staff found that several jurisdictions utilize a master license agreement (MLA) with individual carriers to delineate requirements that will apply to all of that carrier's proposed SCWF, with an additional supplemental site application delineating the requirements specific to each individual proposed tower or other facility. Staff thus reviewed several MLAs from other jurisdictions. Staff also reviewed the code requirements and design guidelines used by other local jurisdictions. The Land Use and Transportation Departments collaboratively reviewed the current ROW permitting process for utility installation. Staff then determined that because the majority of SCWF will be in the county's ROWs, Boulder County will use a similar process to many of the other local jurisdictions and require an MLA between the county and each carrier, with supplemental site applications for each proposed SCWF, and the County Attorney's office is in the process of drafting a template MLA for the county.

Staff further determined that a new Land Use Administrative Review process provided the appropriate regulatory tool necessary to facilitate processing SCWF applications within the shot clocks required by the FCC Order, and developed the Small Cell Wireless Facility Design Requirements and Guidelines that carriers must adhere to for approval of proposed SCWF. The proposed Code language is informed by the above described research and

collaborative meetings, along with additional activities conducted as part of the Code update process, as summarized in Table 1.

Table 1. Summary of Telecommunication Related Land Use Code Update Activities

Activity	Timeframe (2019)
BOCC Authorization	February 14
Literature review of other jurisdictions' codes, sample design guidelines and additional research	March-April
Meeting with Industry representatives	April
Meeting with Boulder County Planners from other jurisdictions	April
Additional research regarding Master License Agreements and Supplemental Site Applications	April-June
Drafting of proposed Code changes and Small Cell Wireless Facility Design Requirements and Guidelines, including public referral comment period	May-July
PC public hearing and recommendation	July 17
Joint PC-BOCC Study Session	October 15
PC discussion of study session outcomes	November 20
BOCC public hearing and decision	December 12

III. EXPLANATION OF PROPOSED AMENDMENTS

This section presents a summary of proposed Code changes, by topic. Additional details regarding the proposed changes, are available in Attachment A.

Addition to Article 3-100. B.1.j & Article 3-202.15 to define the process for application submittal

This section defines the requirements under the Supplemental Site Application for SCWF. The process requires a signed MLA with the County; after which an application can be submitted through the Administrative Review process for specific facilities. The Supplemental Site Application will include the application form, vicinity map, site plan with GIS coordinates for the proposed tower(s), utility report and map, utility construction permit, engineering report, building and electric permits, written consent from Utilities and ROW owners (e.g. Xcel or CDOT), written consent from fiber optics owners if applicable, referral packet, and the Small Cell Wireless Facility Submittal Check List. The application also requires carriers to adhere to the Small Cell Wireless Facility Design Requirements and Guidelines (DRG) and allows carriers to submit up to 20 towers per Supplemental Site Application.

Define Telecommunication Facility and add Small Cell Wireless Facility

The current Code (Article 4-514.O and P) contains the definition for a traditional, macro-cell telecommunication facility only (the current Code does not use the term macro-cell; however, the proposed Code updates now use this term) and outlines the different requisite Land Use processes for those facilities depending on the proposed facility's height, location, and whether it is a new structure. The proposed Code language updates outdated

Code references and clarifies the definition of Telecommunication Facility as it relates to 47 U.S.C. Section 332 (c) (7)(C) of the Telecommunications Act of 1996. The proposed Code language also defines SCWF as described in section 29-27-402(4)(a) of the Colorado Revised Statutes, and thereby distinguishes SCWF from Macro-Cell Facilities. The height and placement requirements for traditional Macro-Cell Facilities remain unchanged from the existing Code provisions.

The addition of Article 4-700: Administrative Review Process

Currently, the Code allows for staff to administratively review a variety of different application types that are deemed unnecessary for the PC or BOCC to review. These administrative review processes are currently described in each applicable section of the Code. However, Staff believes that the Code will be clearer if all application types subject to administrative review were described and listed in a separate section of the Code. Staff thus added the new section Article 4-700: Administrative Review Process. Through this Code update, the only application type that will be listed under Article 4-700 will be for SCWF applications. However, Staff anticipates that as Code updates in other Articles occur, Article 4-700 will also be updated with the other application types subject to the Administrative Review Process.

Staff determined that SCWF applications will be subject to the new Administrative Review process in order to comply with the FCC's approval timelines (shot clocks). The FCC's shot clocks require local governments to completely process and issue all necessary permits for SCWF in 60 days when the proposed SCWF is collocated on existing infrastructure or 90 days for new structures.

IV. DESIGN REQUIREMENTS AND GUIDELINES

Staff determined that because telecommunication technology often evolves quite rapidly, it was necessary to develop Design Requirements and Guidelines (DRG) for SCWF that carriers are required to adhere to per the Code. However, the DRG are not within the Code itself so that the DRG may be updated at the pace of technology emergence, rather than having to go through a traditional Code update each time a new technology requires different DRG. These DRG will be revised as appropriate to address technological changes in the telecommunication industry, in accordance with state and federal law, and as necessary to provide for the safe and appropriate function of the public ROWs.

The DRG are intended to ensure a thorough and consistent review of these proposals without creating barriers to deployment of wireless communication services, and in accordance with state and federal law. The DRG outline the preferred order of location and deployment; the need for architectural consistency with vertical infrastructure in the surrounding areas, including harmonious integration with existing poles, traffic signals, lighting poles and other architectural features of existing structures; and to ensure public health and safety.

V. SUMMARY OF REFERRAL FEEDBACK AND RESPONSES

Staff circulated a [referral packet](#) in late June to solicit public feedback on draft Code changes. Staff received 12 responses from referral agencies and none from the public. Only two referral agencies responded with comments, while the others had no comment or conflict. County staff also received internal feedback from other county departments. This section summarizes the comments received, as well as changes made in response to those comments. Staff did not receive any additional comments on docket DC-19-0001 for the BOCC hearing.

Verizon's Referral Comments:

- **Height requirements not listed for SCWF that attach to or replace existing poles**
 - Staff reviewed this comment and added additional language reflecting that SCWF must be consistent with the applicable zoning district height limits.
- **Traffic Control Plan should be a Condition of Approval not a part of the application**
 - Staff reviewed this comment and agreed with Verizon that because of timing issues, it is more appropriate to require a Traffic Control Plan as part of the Utility Construction Permit under conditions of approval, rather than as part of the application packet.
- **Proposed additional language to the new Administrative Review section**
 - Staff reviewed this comment and understands that the FCC imposed shot clocks on local governments, and that the county's authority is limited by other provisions in the FCC's Order. However, the county does not find it necessary to add Verizon's proposed language into the Code as staff consistently follows federal and state requirements for all Land Use applications and processes without explicitly incorporating each and every statute into the Code.
- **Distance requirements of poles**
 - Staff reviewed this comment and finds that Verizon's proposed language is consistent with other jurisdictions and has adjusted the proposed Code to include Verizon's suggested language.
- **Undergrounding requirement for ancillary equipment and structures**
 - Staff reviewed this comment and finds that Verizon's proposed language is inappropriate for the DRG regarding ancillary equipment. However, Staff has deemed it appropriate to allow the County Engineer to waive this requirement when he or she determines that it is technologically infeasible to place ancillary equipment and structures underground.

- **No SCWF in Historic Districts or county Open Spaces**
 - Staff reviewed this comment and finds that there may be limited situations in which it is appropriate to place a SCWF on land owned or maintained by county Parks and Open Space (POS) or City of Boulder Open Space and Mountain Parks (OSMP), which paragraph 14 of the proposed DRG language currently prohibits. For example, a SCWF may be appropriate next to disturbed areas on POS or OSMP land, such as bathrooms at trail heads, or sports recreation areas (e.g. baseball diamonds). As a result, staff changed the proposed Code language to allow the Land Use Director to waive this prohibition if he or she determines that it is appropriate to do so based on consideration of technological feasibility, environmental and visual impacts, and other considerations the Land Use Director deems appropriate to review in determining whether this prohibition may be waived.

City of Boulder -Open Space and Mountain Parks (OSMP)

- **SCWF impact on public view shed for open space properties and as perch sites for birds; and request to prohibit SCWF on OSMP as well as county-owned open space.**
 - Staff reviewed these comments. The proposed Design Requirements and Guidelines currently do not allow SCWF to be placed in any county open space without waiver by the Land Use Director. The county is willing to include OSMP property into this language.
 - The county has already indicated in the DRG (i.e. paragraph 15) that visual impacts shall be minimized.
 - Staff agrees with OSMP that it is appropriate to require that if any towers or poles are placed within or near any property owned or maintained by OSMP or POS that those towers or poles shall be designed to minimize the potential for birds to perch upon them.

VI. SUMMARY OF PLANNING COMMISSION MEETING OUTCOMES

The Boulder County pc considered this application at a public hearing on July 17, 2019. Staff presented the proposed Code Amendments to Article 4-514, including the update of the Telecommunications Facilities Code to include a definition and review process for SCWF, relevant content in Articles 3 and 4, and other associated Code revisions necessary to integrate the proposed changes. Staff requested the PC recommend to the BOCC approval of the proposed Land Use Code text amendments in Attachment A of the staff report. Following the staff presentation, the PC heard public comments from Verizon representatives regarding the following issues: Verizon is concerned with the SCWF height limitations in the proposed Code language, because it limits collocation and Verizon’s propagation studies indicate a more dense network of towers will be required if height limits are less than 40 feet. Verizon is also concerned with the limitation of SCWF in open space areas. Verizon thus recommended Boulder County adopt a height limit following the federal definition of 50 ft for SCWF, and noted that SCWF may be in open space subject to specific and certain standards.

After the close of public comment, the PC asked questions related to the proposed

Administrative Review process, appeals, potential conflict with the Boulder County Comprehensive Plan (BCCP), and review of the SCWF Design Review Guidelines. With regards to the Administrative Review process, the PC inquired as to whether it would include any public hearings with the PC or the BOCC. Staff responded that the Administrative Review process would not include public hearings, and that it was chosen as the correct review process given the federal and state regulations and shot clock requirements. SCWF are not subject to any appeal process under the Land Use Code. With regards to the BCCP, staff noted that the BCCP includes support for telecommunications and thus the review process and DRG would balance the different concerns in the BCCP.

After answering the above questions, the PC recommended that staff include additional language allowing the Land Use Director to have discretion to waive the height limitations on SCWF based on considerations of co-location and density. The PC also recommended that staff review the DRG regularly, although not more than annually, and include a public process within that review, to determine if the requirements and guidelines are appropriate given technological developments, additional regulations, and public concern. Finally, the PC recommended that open space requirements apply to all types of open space, regardless of jurisdiction.

Commissioner McMillan then made a motion to approve the docket as presented subject to the recommended additions and conditions of approval. Commissioner Sam Libby seconded the motion, and the motion passed with a unanimous vote.

VII. SUMMARY OF THE STUDY SESSION

On October 15, 2019 the PC and BOCC held a joint study session regarding telecommunication facilities. The study session consisted of presentations by staff and expert panelists, as well as clarifying questions from PC and BOCC. Staff presented background on the existing Telecommunication Infrastructure in Boulder County and summarized the current Land Use application processes for various telecom facilities. Staff then opened the study session to the panelists: Dr. Kevin Gifford PhD from the University of Colorado Technology, Cyber security, and Policy program; Michael Cotton Division Chief of Telecommunications Theory Division, Institute for Telecommunication Sciences, National Telecommunication and Information Administration; and, David Born, Principal RF Engineer with Verizon Wireless.

The objectives of the study session were to:

- Gain a better understanding of the interrelationship between telecommunication-related topics (e.g., tower height, co-location and density of infrastructure) to inform decision making and to determine whether potential additional Land Use Code changes may be warranted.
- Provide PC and BOCC with an opportunity to jointly discuss how to address challenging topics related to telecommunications infrastructure decision making, and the proposed Design Requirements and Guidelines for the small cell wireless-related Code update.
- Determine what, if any, role third-party verification can play in review of telecommunications infrastructure decision making.

Summary of conclusions:

Interrelationship between height, density and emissions

- Additional research is necessary to better understand the potential health and environmental impacts of RF emissions from telecom facilities. Colocation does not affect the maximum limits set for each facility. Local governments may not regulate telecom facilities based on potential environmental or health effects of RF emissions.
- The necessary density, height, and width of telecom facilities will depend on the network requirements for each telecom provider. Small cell towers will need to be more dense and closer together, whereas macro towers will remain less dense and much farther apart. Staff finds this information supports the recommended design requirements and guidelines previously set forth in the DC-19-0001 Code update and the current criteria for Macro-cell Facilities outlined under 4-602 (D) of the Land Use Code.

Co-location: feasibility, analysis guidelines, incentives

- The current telecommunication facility regulations and the proposed Code update continues to support co-location. Staff will explore ways to improve how this policy is implemented during the land use processes for these types of facilities.

Third party verification

- Staff will continue to explore whether third-party verification services are available for Boulder County to use or require as part of its land use processes.

Design Requirements and Guidelines

- Staff will move forward with the current Telecommunication Facility Code update and the Design Requirements and Guidelines for Small Cell Wireless Facility. Staff will use the study session information as background for Macro-cell tower facilities as it relates to future projects and applications.
- Staff is aware that the telecommunication field is evolving with new technologies coming on line and will continue to monitor and review information to inform potential future decisions regarding changes to our Telecommunication policies and goals.

Based on the outcomes of the session staff does not propose any near-term Code updates aside from the small cell wireless-related Code update already underway. Staff views the study session outcomes as valuable information to inform how we interpret our existing regulations. For example, staff is now better positioned to develop internal best practices for how planners set expectations with telecommunications providers for preparation of their site alternatives analyses.

A key outcome from the study session was a recognition that the county would benefit from staff gathering more information on the potential role of third-party verification in evaluating alternative locations for proposed telecommunications facilities. Vantage Point Solutions (VPS), a third-party verification firm that has done work for other Colorado communities. Staff met with Lori Sherwood, a representative of that firm on November 7th. Based on that conversation staff believes there may be opportunities for VPS or other

companies with similar capabilities and positioning (e.g., that do not also serve the telecommunications providers) to provide services that will enhance the county's ability to effectively review telecommunications applications, particularly as it relates to evaluating potential alternative tower locations. Third-party verifiers could not entirely replicate the same location analysis a telecom provider could conduct due to the propriety nature of some technical specifications. However, there are steps a third-party verifier could perform that would help ensure the quality and effectiveness of telecommunications providers' analyses. The PC recommended to staff that even though public comment is not part of the Administrative review process for Small Cell Wireless Facilities, staff will post a notice of these applications to maintain a record of public comment.

VIII. RECOMMENDATION

Text Amendment Criteria

Article 16-100.B. contains the criteria for amending the text of the Land Use Code. Staff finds that the proposed amendments in this Docket meet the following criteria:

1. the existing text is in need of the amendment;
2. the amendment is not contrary to the intent and purpose of this Code; and
3. the amendment is in accordance with the Boulder County Comprehensive Plan

Action Requested

Staff requests that the Board of County Commissioners approve to the Land Use Code text amendments proposed in Attachment A.

Small Cell Wireless Code Update

Article 3-100. (B)(1)(j) Development Related Permits [Add Small Cell Wireless to list]

Small Cell Wireless Facility Supplemental Site Application – administrative review for the siting of Small Cell Wireless Facilities.

Article 3-202.15 (renumber section) Addition of Application Submittal Requirements for Small Cell Wireless Facilities

Small Cell Wireless Facility Supplemental Site Application

- a. No small cell facility installation shall be constructed, erected, modified, operated or maintained on County property, including the public right-of way, without a Master License Agreement in effect between applicant and the County.
- b. Application Form(s), Project Description and Fee
- c. Vicinity Map
- d. Site Plan with GIS coordinates (X,Y) for the proposed tower
- e. Utility Report and Map
- f. Utility Construction Permit
- g. Engineering Report
- h. Building and Electric Permits
- i. Written Consent from Utilities and non-county ROW owners (e.g. CDOT, Xcel)
- j. Written Consent from fiber optics owners if applicable
- k. Master License Agreement
- l. Referral Packet
- m. Small Cell Wireless Facility Submittal Checklist
- n. Affidavit Demonstrating Compliance with the Small Cell Wireless Design Requirements and Guidelines
- o. Carriers may submit up to 20 poles per supplemental site application; however, subsections (c)- (k) will be required for each tower location.

Article 4-514 Revised Telecommunication Facility section to incorporate the Small Cell Wireless Facilities with the current Telecommunication Facilities.

~~0. Telecommunications Facility, utilizing an existing structure and meeting the height requirements of the district in which the facility is located.—~~

~~1. Definition: A facility used for the transmission or reception of electromagnetic or electro-optic information, which is placed on an existing structure, may or may not require accessory structures, and meets the height requirements of the district in which it is located. This use does not include any other use listed in this Code, devices not used for communication, or radio frequency machines which have an effective radiated power of 100 watts or less.~~

~~2. Districts Permitted: By right in all districts~~

~~3. Parking Requirements: None~~

~~4. Loading Requirements: None~~

~~5. Additional Provisions:~~

~~a. This use is not required to be located on a building lot, or comply with the minimum lot size requirement for the district in which it is located.~~

~~b. A separate accessory equipment building is allowed as long as it is no more than 10% of the gross floor area of all existing permitted structures on the parcel or 450 square feet, whichever is less.~~

~~c. Site Plan Review is required for this use.~~

~~P. Telecommunications Facility, requiring a new structure or accessory structure exceeding the height limitation of the district in which the facility is located, or exceeding the accessory building size limitations set forth in subsection (O) immediately above.~~

~~1. Definition: A facility used for the transmission or reception of electromagnetic or electro-optic information, which is placed on a new structure, requires accessory structures, or exceeds the height requirements of the district in which it is located. This use does not include any other use listed in this Code, devices not used for communication, or radio frequency machines which have an effective radiated power of 100 watts or less.~~

~~2. Districts Permitted: By Special Review in all districts~~

~~3. Parking Requirements: None~~

~~4. Loading Requirements: None~~

~~5. Additional Provisions:~~

~~—— a. In addition to the general requirements for approval of a special use permit, telecommunication facilities shall also be subject to the requirements outlined in Section 4-600 of this Code.~~

~~—— b. This use is not required to be located on a building lot, or comply with the minimum lot size requirement for the district in which it is located.~~

O. Telecommunications Facility

1. Definition: A facility used to provide personal wireless services as defined at 47 U.S.C. Section 332 (c)(7)(C); or wireless information services provided to the public or to such classes of users as to be effectively available directly to the public via licensed or unlicensed frequencies; or Smart City, Internet of Things, wireless utility monitoring and control services. A Telecommunication Facility does not include a facility entirely enclosed within a permitted building where the installation does not require a modification of the exterior of the building; nor does it include a device attached to a building, used for serving that building only and that is otherwise permitted under other provisions of the Code. A Telecommunication Facility includes an Antenna or Antennas, including without limitation, direction, omni-directional and parabolic antennas, support equipment, Alternative Tower Structures, and Towers. This use does not include any other use listed in this Code, devices not used for communication, or radio frequency machines which have an effective radiated power of 100 watts or less.

a. Small Cell Wireless Facility - is defined as a facility that is mounted on structures 50 feet or less in height including their antennas, and where each antenna is located inside an enclosure no more than three cubic feet in volume or, in the case of an antenna that has exposed elements, the antenna and all of its exposed elements could fit within an imaginary enclosure of no more than three cubic feet; and primary equipment enclosures are no larger than seventeen cubic feet in volume. The following associated equipment may be located outside of the primary equipment enclosure and, if so located, is not included in the calculation of equipment volume: electric meter, concealment, telecommunications demarcation box, ground-based enclosure, back-up power systems, grounding equipment, power transfer switch and cut-off switch and meets the height requirements of the district in which it is located.

b. Macro-Cell Facility is defined as a facility used for the transmission or reception of electromagnetic or electro optic information for the purposes of providing coverage over large areas, greater than 50 feet in height, and primary equipment enclosures are greater than seventeen cubic feet in volume.

c. Eligible Facility Request is defined as any request for modification of an existing tower

or base station that does not substantially change the physical dimensions of such tower or base station, involving: collocation of new transmission equipment; removal of transmission equipment; or replacement of transmission equipment.

2. Districts Permitted:

- a. For Small Cell Wireless and Eligible Facility requests, an Administrative Review as set forth in Article 4-700 and the County Engineer or Land Use Director.
- b. For Macro-cell Facility placed on an existing structure that may require accessory structures and meets the height requirements of the district in which it is located, by Site Plan Review, subject to the requirements outlined in Section 4-800 through 4-806 of this Code.
- c. For Macro-cell facility placed on a new structure or that exceeds the height requirements for the district in which it is located, by Special Review. In addition to the general requirements for Special Review, telecommunication facilities shall also be subject to the requirements outlined in Section 4-600 and Section 4-602.D of this Code.

3. Parking Requirements: None

4. Loading Requirements: None

5. Additional Provisions:

- a. This use is not required to be located on a Building Lot or comply with the minimum lot size requirement for the district in which it is located.
- b. All Telecommunication facilities shall comply with federal standards for radio frequency standards.
- c. Applicant must comply with the Boulder County Land Use Department Small Cell Wireless Facility Design Requirements and Guidelines publication available at the Land Use Department. *Staff will monitor issues, public comments and concerns with the Design Requirements and Guideline on a yearly basis and if necessary will amend through an adoption process by the Board of County Commissioners.
- d. Small cell facilities must meet the height requirements of the district in which it is located. Upon petition by the applicant, the Land Use Director may allow up to an additional 8 feet above the height limit of the zoning district based upon consideration of the context of the location, technological feasibility, density of other equipment in the area, and visual impacts.
- e. Any small cell facility in the public right of way that is not used for a period of six months or more shall be deemed to be abandoned. The small cell facility owner or applicant shall remove a small cell wireless facility that is considered abandoned and if they fail to remove the abandoned facility the County may remove the small cell facility and charge the costs to the small cell facility owner.
- f. For Macro-cell facilities a separate accessory equipment building is allowed as long as it is no more than 10% of the gross floor area of all existing permitted structures on the parcel or 450 square feet, whichever is less.
- g. Any approval of a small cell wireless facility is not subject to any appeal process under the Land Use Code.
- h. For small cell wireless facility applications, property owners within 1,500 feet of the subject property shall be notified. Applications for other telecommunications facilities shall be noticed consistent with Article 3-204 or 4-805 as applicable.

Article 4-700 Administrative Reviews New review process in Article 4 for Administrative Reviews.

4-701 Purpose

A. Administrative review is a review procedure for certain types of proposed development that are deemed in advance to not cause significant conflict with the Boulder County Comprehensive Plan and ensure compliance with the development standards of the County.

4-702 Applicability and Scope of the Administrative Review Process for Development

A Administrative Review shall be required for the following:

1. Any Small Cell Wireless Telecommunications Facility
2. Eligible Facilities Request

B Criteria

1. Meets additional provisions of Use definition
2. Administrative Reviews of Small Cell Wireless Telecommunication Facility are subject to the County's Design Requirements and Guidelines for Small Cell Wireless Facility.

Small Cell Wireless Facility Design Requirements and Guidelines – Handout for design guidelines (not within Code)

1. Applicants shall work with the County and relevant third parties to locate small cell wireless facilities based on the following order of preference for location and deployment:
 - a. Small cell facilities shall be collocated and attached to existing and previously approved small cell facilities.
 - b. Small cell facilities shall be attached to or replace available existing structure previously approved in the County Right of Way (ROW).
 - c. New freestanding small cell facility poles shall be built in a manner that allows for collocation.
2. Any new pole with an antenna must be architecturally consistent with the surrounding area by:
 - a. Utilizing one of the following configurations:
 - i. Replacing existing permitted facilities (including without limitation, traffic signs, traffic signals, light poles or light standards) so that the presence of the small cell facility is not readily apparent;
 - ii. Integrating the equipment in an architectural feature of an existing structure; Integrating or attaching equipment to an outdoor fixture such as a traffic signal, light standard, utility pole or flagpole;
 - AND
 - b. Using a design which mimics or is consistent with the nearby natural or architectural features; and
 - c. Using a design that is consistent with the size and shape of the pole-mounted equipment installed by communications companies on utility poles within three hundred feet of the facility.
3. All small cell equipment and required structures, including, but not limited to, antennas and meters, must be housed internally within in the pole or alternative tower structure hosting the small cell facility. This requirement may be waived by the Director of the Land Use Department, in whole or in part, where it is technically infeasible to internally house the requisite components.
4. Ancillary equipment that is not integrated into the pole such as cabinets, or boxes shall be located below grade. This requirement may be waived by the Director of the Land Use Department, in whole or in part, where it is technically infeasible to house such structures below grade.
5. The siting map must clearly delineate the floodplain and floodway boundaries.
6. Small cell wireless facilities shall be separated from all other wireless communication facilities and small cell facilities within the right-of-way by a distance of at least six hundred feet, unless the facility replaces an existing traffic signal, street light pole or similar vertical infrastructure. Freestanding small cell poles shall be staggered on alternating sides of the street where feasible. The Land Use Director may exempt an applicant from this requirement if: the applicant demonstrates through technical network documentation that the minimum separation requirement cannot be satisfied for technical reasons, or the Land Use Director determines, when considering the surrounding topography, the nature of adjacent uses and nearby properties and the height of the existing structures in the vicinity, that the placement of a small cell wireless facility at a distance less than 600 feet from another small cell wireless facility in the public right of way will meet the intent of reducing visibility and visual clutter of the small cell wireless facilities.
7. Any stand-alone small cell wireless facility shall not block windows or building entrances.
8. Small cell wireless facilities and equipment shall not be installed within the dripline of any tree.
9. All poles and related appurtenances shall be located to ensure proper sight-triangles.
10. All poles and related appurtenances shall be located outside the specified clear zone for the facility on which it is located as specified in the Boulder County Multi Modal Transportation Standards.

11. Poles and related appurtenances shall not interfere with traffic operations or with approved Traffic Control Devices.
12. Poles and related facilities shall not encroach into or interfere with pedestrian ways such as sidewalks, trails, or transit stops or facilities.
13. Proposed locations of poles and related appurtenances shall be reviewed relative to future county capital improvements.
14. Small cell wireless facilities shall not be allowed within historic districts or land owned or maintained by the Boulder County Parks & Open Space, City of Boulder Open Space and Mountain Parks properties, or any other open space properties at the request of the jurisdiction who owns the property, including conservation easements. The Land Use Director may waive this prohibition if he or she determines that it is appropriate to do so based on consideration of technological feasibility, environmental and visual impacts, and any other relevant considerations based on the Boulder County Comprehensive Plan.
15. Small cell wireless facilities shall be located to ensure minimal impacts to view protection corridors.
16. Small cell wireless facilities must not conflict with the Boulder County Comprehensive Plan goals, policies, and mapped features.
17. All small cell wireless facilities shall meet the current standards and regulations of the FAA, the FCC and any other agency of the federal governments with the authority to regulate small cell facilities. If the standards and regulations are changed, then the owners of the small cell facilities shall bring such facility into compliance with such revised standards and regulations within the time period mandated by the controlling federal agency.

Small Cell Wireless Facilities Fact Sheet For Informational Purposes Only

Federal Definition

- Facilities mounted on **towers less than 50 feet** high.
- **Antennas** are no bigger than **3 cubic feet**.
- **Base** structure is no bigger than **28 cubic feet** in volume (Colorado state law defines as less than 17 cubic feet in volume).

Purpose

- **Capacity** for data bandwidth.
- Tall towers are still necessary for coverage, small cell towers are necessary to densify the network such that there is enough bandwidth for the exponential growth in data usage.
- They are not solely for 5G. For example, Verizon is putting in small cell towers in City of Boulder now, for enhancing their 4G capacity; however, their poles will allow for 5G antennas to be mounted above the 4G antennas, when they are ready to roll out 5G.

Deployment

- The poles will likely all be in the ROW because they need 360 degrees.
- Some carriers (Verizon & AT&T) working with Xcel to replace light and other poles with their small cell poles.
- Carriers state that they need poles every 200 to 600 feet to provide the necessary density for data capacity.
- Poles must be connected to fiber and power.
- Carriers indicate they are not willing to collocate with each other at the moment due to interference, but they are willing to collocate on Xcel poles and other such infrastructure.
- Will “bundle” multiple poles into a single application – typically 5-20 per app.

Telecommunications Act of 1996

- Sections 253(a) - "No State or local statute or regulation, or other State or local legal requirement, may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service."
- Section 332(c)(7) - "The regulation of the placement, construction, and modification of personal wireless service facilities by any State or local government or instrumentality thereof:
 - (I) shall not unreasonably discriminate among providers of functionally equivalent wireless services; and
 - (II) shall not prohibit or have the effect of prohibiting the provision of personal wireless services."
- Section 332(c)(7)(B)(ii) - "A state or local government or instrumentality thereof shall act on any request for authorization to place, construct, or modify personal wireless service facilities within a reasonable period of time after the request is duly filed with such government or instrumentality, taking into account the nature and scope of such request."

FCC Third Declaratory Order

- Effective prohibition – may occur from restricting entry of a new provider, materially inhibiting new services, or materially inhibiting existing services.
 - Essentially anything that impedes the provision of telecommunication service.
- Fees may be considered an effective prohibition unless:
 - The following are presumptively reasonable:
 - (a) \$500 for non-recurring fees, including a single up-front application that includes up to five Small Wireless Facilities, with an additional \$100 for each Small Wireless Facility beyond five, or \$1,000 for non-recurring fees for a new pole (i.e. not a collocation) intended to support one or more Small Wireless Facilities; and
 - (b) \$270 per Small Wireless Facility per year for all recurring fees, including any possible ROW access fee or fee for attachment to municipally-owned structures in the ROW.
 - Additional fees allowed only if the local government can show:
 - Fees are a reasonable approximation of costs;
 - Those costs themselves are inherently reasonable; and
 - Are non-discriminatory
- Aesthetic requirements may also be considered an effective prohibition if too onerous; however, they are allowed under the following conditions:
 - They are reasonable – technically feasible and reasonably directed to avoiding or remedying the intangible public harm of unsightly or out of character deployments.
 - They are no more burdensome than those applied to other infrastructure deployments; and
 - They are objective – must incorporate clearly-defined and ascertainable standards, applied in a principled manner – and must be published in advance.
- Shot Clocks
 - Full review – including pre-app (if mandatory) all the way through to issuing all necessary permits
 - 60 days for collocation on pre-existing structures (Colorado law states 90 currently, but was enacted before FCC weighed in).
 - 90 days for new structure (Colorado law states 150 currently, but was enacted before FCC weighed in).
 - Shot clocks start when application submitted, local government has 10 days (Colorado law currently says 30 days) to state it is incomplete and restart clock, or the clock continues.

Colorado Law

- Local entity shall allow bundling of poles in application.
- CRS 29-27-404(3) - “The siting, mounting, placement, construction, and operation of a small cell facility or a small cell network is a permitted use by right in any zone.”
- CRS 38-5.5-103
 - (2) A political subdivision shall not discriminate among or grant a preference to competing telecommunications providers or broadband providers in the issuance

of permits or the passage of any ordinance for the use of its rights-of-way, nor create or erect any unreasonable requirements for entry to the rights-of-way for the providers.

- (3) A political subdivision shall not regulate a telecommunications provider or a broadband provider based upon the content or type of signals that are carried or capable of being carried over the provider's facilities; except that nothing in this subsection (3) prevents regulation by a political subdivision when the authority to regulate has been granted to the political subdivision under federal law.
- CRS 38-5.5-104
 - Any domestic or foreign telecommunications provider or broadband provider authorized to do business under the laws of this state has the right to construct, maintain, and operate lines of communication, switches, and related facilities, and communications and broadband facilities, including small cell facilities and small cell networks, and obtain a permanent right-of-way for the facilities over, upon, under, and across all public lands owned by or under the control of the state, upon the payment of just compensation and upon compliance with reasonable conditions as the state board of land commissioners may require.
- CRS 38-5.5-104.5
 - Except as provided in subsection (2) of this section and subject to the requirements and limitations of this article 5.5, [sections 29-27-403](#) and [29-27-404](#), and a local government entity's police powers, a telecommunications provider or a broadband provider has the right to locate or collocate small cell facilities or small cell networks on the light poles, light standards, traffic signals, or utility poles in the rights-of-way owned by the local government entity; except that, a small cell facility or a small cell network shall not be located or mounted on any apparatus, pole, or signal with tolling collection or enforcement equipment attached.

Referral Comments

DC-19-0001

Small Cell Wireless Facilities Code Update



Land Use

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • www.bouldercounty.org

Docket DC-19-0001: Proposed Boulder County Land Use Code Amendments to Article 4- 514 Telecommunication Facilities

Request: Proposed Boulder County Land Use Code Amendments to Article 4-514 to address an update of the Telecommunication Facilities Code (Land Use Staff Planner: Kathy Sandoval)

Date: June 18, 2019

Dear Stakeholder/Interested Party,

On February 14, 2019, the Board of County Commissioners authorized Land Use staff to pursue text amendments to Article 4 of the Boulder County Land Use Code, which regulates telecommunication facilities in Boulder County.

A general update to Article 4-514 Telecommunication Facility is necessary to ensure compliance with the recent Federal Communications Commission (FCC) Declaratory Ruling and Third Report and Order (“Order”). The Order sets forth the FCC’s interpretation of certain sections of the Telecommunications Act of 1996, and provides new rules and orders for Small Cell Wireless Facilities (SCWF). The Order limits local government regulation through the following restrictions: (1) the allowed timeline for local government approval of SCWF; (2) the amount of fees local governments may require for approval, siting, and permitting processes; and, (3) the type of aesthetic, design, and siting requirements local governments may place on SCWF. Furthermore, relevant Colorado statutes were revised in April 2017 in anticipation of the emergence of SCWF, and substantially reflect the FCC’s interpretations and orders.

Federal and state law preempts much of the county’s ability to regulate SCWF, other than aesthetic, fee, and permitting requirements that are reasonable, objective and published in advance. These facilities will likely need to be on towers every 200 to 600 feet within the right of way (ROWs). Additional **information on the limitation of the county’s ability to regulate SCWF is available at the docket webpage:**

<https://www.bouldercounty.org/property-and-land/land-use/planning/land-use-code-update/dc-19-0001/>

The FCC has also placed a very short shot clock of 60 days (collocation on other towers) or 90 days (new structures) for permit approval, which includes the entire review from pre-application (if mandated) through permit issuance. Given these constraints, staff proposes the SCWF be processed through an administrative review process, with the Code update including appropriate definitions, procedural requirements, permit requirements, fees and design guidelines.

Deb Gardner County Commissioner

Elise Jones County Commissioner

Matt Jones County Commissioner

The draft amendments contain changes to the County's telecommunication regulation, while continuing to protect the aesthetic qualities by minimizing visual clutter, protecting scenic views, and preserving Boulder County's rural character. In developing the draft revised version of Article 4-514 staff reviewed proposed amendments for consistency with other sections of the Land Use Code and other amendments related to the Telecommunication Facilities update.

A draft of the proposed text amendments is attached to this letter for your review. The attached draft Code content is a draft document and is still a work in progress. Feedback pertaining to these topics is appreciated. You may also view the proposed draft text amendments and future revisions in our office or online at:

<https://www.bouldercounty.org/property-and-land/land-use/planning/land-use-code-update/dc-19-0001/>

This docket review process will include a public hearing before the Boulder County Planning Commission and a public hearing before the Boulder County Board of County Commissioners. The schedule for these meetings is still to be determined. Confirmation of hearing dates and times will be published online at the link above and in local newspapers.

The Land Use staff and County Commissioners value comments from individuals and referral agencies. Please check the appropriate response below or send a letter or email with your comments. All comments will be made part of the public record. If you have any questions regarding this docket, please contact me at (303) 441-3930 or ksandoval@bouldercounty.org.

Please return responses to the above address by **July 1, 2019**. Late responses will be reviewed as the process permits.

We have reviewed the proposal and have no conflicts.

Letter is enclosed.

Signed  PRINTED Name Melissa K. Reagan

Agency or Address Sherman & Howard L.L.C.
633 17th St., Suite 3000, Denver, CO 80202

Melissa K. Reagan
Sherman & Howard L.L.C.
Direct Dial Number: 303.299.8310
E-mail: mreagan@shermanhoward.com

July 1, 2019

VIA E-MAIL

Boulder County
Attn: Kathy Sandoval
PO Box 471
Boulder, CO 80306

Re: Proposed Boulder County Land Use Code Amendments to Article 4-514 to address an update of the Telecommunication Facilities Code (Land Use Staff Planner: Kathy Sandoval)

Dear Ms. Sandoval:

We serve as counsel to Verizon Wireless. We appreciate the opportunity to participate in Boulder County's ("Boulder" or "County") amendment of its Land Use Code – Article 4-514 – Telecommunications Facilities ("Code"). As the process moves along, we will strive to be transparent in presenting our position and describing the reasoning behind any concerns we raise. Verizon Wireless appreciated the opportunity to meet with Boulder County staff to answer questions prior to the proposed wireless ordinance being drafted. Verizon Wireless wishes to work with the County to enact regulations that which conform to state and federal law, and are reasonable for implementation, and which are fair to all stakeholders. Verizon Wireless believes that such results can be accomplished.

This letter includes Verizon Wireless's comments to the proposed Code for the Planning Staff's consideration and review in advance of the Planning Commission and Board of County Commissioners' meetings. We request the opportunity to discuss these matters with you and the Commissions, in tandem with Verizon Wireless's proposed MLA.

A. Verizon Wireless's Comments to Current Draft of Cheyenne Code

Verizon Wireless respectfully requests the Planning Staff consider the following comments to the current draft of proposed Code. These comments are in addition to Verizon Wireless's comments and track changes in the attached redline of the proposed Code dated June 18, 2019.

1. Article 3-202.15 – Application Submittal Requirements for Small Cell Wireless Facilities.

Verizon Wireless would like the opportunity to further discuss the application submittal requirements for small cell wireless facilities with the Planning Staff. Specifically, with respect to some of the requirements such as traffic control plans, Verizon Wireless will not have the requisite information to provide until a few days prior to construction. Verizon Wireless proposes revising to allow for certain items to be conditions of approval as part of the application process. Verizon Wireless also has requested additional information with respect to certain of the application requirements (e.g. referral packet) as set forth in its comments in the attached draft of the Code.

2. Article 4-700 – Administrative Review.

Verizon Wireless added proposed language regarding the framework for the review process and the shot clock provisions that follows the guidelines issued by the Federal Communications Commission (“FCC”) in its recent September 28, 2018 Order (“FCC Order”) for small cell wireless facilities and eligible facilities requests.

3. Small Cell Wireless Facility Design Requirements and Guidelines

a. Height

The proposed Code does not provide any specific height requirements for small cell wireless facilities that attach to or replace existing poles in the rights-of-way or for freestanding small wireless facilities. Verizon Wireless requires the height of 40 feet for small wireless facilities in all zoning districts to be able to meet its RF objectives and deploy wireless services, specifically in residential areas where customer demand is the greatest. Additionally, Verizon Wireless needs at least eight (8) feet above an existing pole to attach both current and future technologies in its small wireless facilities. Small wireless facilities in the rights-of-way provide an opportunity for wireless providers to deploy wireless services in densely populated areas such as residential zones in a less intrusive manner. Verizon Wireless wants to ensure there is an option for deployment of small cell wireless facilities in all areas, including residential, at the height necessary to provide wireless services.

b. Section 6 - Separation Distance between Freestanding Small Cell Wireless Facilities

Verizon Wireless modified the separation distance provision between small cell facilities to allow for the Land Use Director to waive the requirement in certain circumstances. There may be situations where strict adherence to this separation requirement places an undue burden on the ability of a provider to serve certain areas. Verizon Wireless therefore requests a carve out which would allow for some flexibility under certain circumstances.

Again, Verizon Wireless appreciates the opportunity to comment on the County's proposed wireless facilities section of its Code. Verizon Wireless wishes to work with the County to enact regulations that conform to state and federal law, are reasonable for implementation, and which are fair to all stakeholders. Verizon Wireless believes that such results can be accomplished. We would appreciate the opportunity to further discuss these matters directly with the County in an appropriate forum. Thank you.

Sincerely,

A handwritten signature in blue ink, appearing to read 'M. Reagan', with a long horizontal stroke extending to the right.

Melissa K. Reagan

Encl.

c: Ms. Debbie Essert (via email)
Mr. Mark W. Williams, Esq. (via email)
Mr. Christian H. Hendrickson, Esq. (via email)

Small Cell Wireless Code Update

Article 3-100. (B)(1)(j) Development Related Permits [Add Small Cell Wireless to list]

Small Cell Wireless Facility Supplemental Site Application – administrative review for the siting of Small Cell Wireless Facilities.

Article 3-202.15 (renumber section) Addition of Application Submittal Requirements for Small Cell Wireless Facilities

Small Cell Wireless Facility Supplemental Site Application

- a. No small cell facility installation shall may be constructed, erected, modified, operated or maintained on County property, including the public right-of way, without a Master License Agreement in effect between applicant and the County.
- b. Application Form(s), Project Description and Fee
- c. Vicinity Map
- d. Site Plan with GIS coordinates (X,Y) for the proposed tower
- e. Utility Report and Map
- f. Utility Construction Permit
- g. Engineering Report
- h. Traffic Control Plan
- i. Building and Electric Permits
- j. Written Consent from Utilities and non-county ROW owners (e.g. CDOT, Xcel)
- k. Written Consent from fiber optics owners if applicable
- l. Master License Agreement
- m. Referral Packet
- n. Small Cell Wireless Facility Submittal Checklist
- o. Carriers may submit up to 20 poles per supplemental site application; however, subsections (c)-(k) will be required for each tower location.

Commented [RMK1]: Small wireless facilities are a permitted use by right under federal law and Colorado state statute. Applicants should be allowed to submit applications for small wireless facilities pending negotiations and approval of a master license agreement. Verizon Wireless intends to enter into a MLA with the County. However, the MLA process can take several months, and VZW would like the opportunity to submit applications if it determines a need to do so.

Commented [RMK2]: What is the proposed application fee for small wireless facilities?

Commented [RMK3]: VZW requests that the traffic control plan be required as a condition of use for the building permit to issue. VZW often does not know until a few days prior to construction what the traffic control plan requirements will be.

Commented [RMK4]: See comment above regarding MLA.

Commented [RMK5]: What is a referral packet?

Commented [RMK6]: Is the checklist available for applicants to review?

Commented [RMK7]: Will the Use Tables be updated to include small wireless facilities as use by permitted right?

Article 4-514 Revised Telecommunication Facility section to incorporate the Small Cell Wireless Facilities with the current Telecommunication Facilities.

~~0. Telecommunications Facility, utilizing an existing structure and meeting the height requirements of the district in which the facility is located~~

~~1. Definition: A facility used for the transmission or reception of electromagnetic or electro-optic information, which is placed on an existing structure, may or may not require accessory structures, and meets the height requirements of the district in which it is located. This use does not include any other use listed in this Code, devices not used for communication, or radio frequency machines which have an effective radiated power of 100 watts or less.~~

~~2. Districts Permitted: By right in all districts~~

~~3. Parking Requirements: None~~

~~4. Loading Requirements: None~~

~~5. Additional Provisions:~~

~~a. This use is not required to be located on a building lot, or comply with the minimum lot size requirement for the district in which it is located.~~

~~b. A separate accessory equipment building is allowed as long as it is no more than 10% of the gross floor area of all existing permitted structures on the parcel or 450 square feet, whichever is less.~~

~~c. Site Plan Review is required for this use.~~

~~P. Telecommunications Facility, requiring a new structure or accessory structure exceeding the height limitation of the district in which the facility is located, or exceeding the accessory building size limitations set forth in subsection (O) immediately above.~~

~~1. Definition: A facility used for the transmission or reception of electromagnetic or electro-optic information, which is placed on a new structure, requires accessory structures, or exceeds the height requirements of the district in which it is located. This use does not include any other use listed in this Code, devices not used for communication, or radio frequency machines which have an effective radiated power of 100 watts or less.~~

~~2. Districts Permitted: By Special Review in all districts~~

~~3. Parking Requirements: None~~

~~4. Loading Requirements: None~~

~~5. Additional Provisions:~~

~~a. In addition to the general requirements for approval of a special use permit, telecommunication facilities shall also be subject to the requirements outlined in Section 4-600 of this Code.~~

~~b. This use is not required to be located on a building lot, or comply with the minimum lot size requirement for the district in which it is located.~~

O. **Telecommunications Facility**

1. Definition: A facility used to provide personal wireless services as defined at 47 U.S.C. Section 332 (c)(7)(C); or wireless information services provided to the public or to such classes of users as to be effectively available directly to the public via licensed or unlicensed frequencies; or Smart City, Internet of Things, wireless utility monitoring and control services. A Telecommunication Facility does not include a facility entirely enclosed within a permitted building where the installation does not require a modification of the exterior of the building; nor does it include a device attached to a building, used for serving that building only and that is otherwise permitted under other provisions of the Code. A Telecommunication Facility includes an Antenna or Antennas, including without limitation, direction, omni-directional and parabolic antennas, support equipment, Alternative Tower Structures, and Towers. This use does not include any other use listed in this Code, devices not used for communication, or radio frequency machines which have an effective radiated power of 100 watts or less.
 - a. Small Cell Wireless Facility - is further defined by the Telecommunications Act of 1996, as amended, or where each antenna is located inside an enclosure no more than three cubic feet in volume or, in the case of an antenna that has exposed elements, the antenna and all of its exposed elements could fit within an imaginary enclosure of no more than three cubic feet; and primary equipment enclosures are no larger than seventeen cubic feet in volume. The following associated equipment may be located outside of the primary equipment enclosure and, if so located, is not included in the calculation of equipment volume: electric meter, concealment, telecommunications demarcation box, ground-based enclosure, back-up power systems, grounding equipment, power transfer switch and cut-off switch.
2. Districts Permitted:
 - a. For Small Cell Wireless and Eligible Facility requests, an Administrative Review as set forth in Article 4-700 and the County Engineer or Land Use Director.

Commented [RMK8]: Did the County intend to remove the language that states it shall comply with the height requirements of the zoning district?

- b. For Macro-cell Facility placed on an existing structure that may require accessory structures and meets the height requirements of the district in which it is located, by Site plan Review, subject to the requirements outlined in Section under 4-800 and Section 4-806 of this Code.
- c. For Macro-cell facility placed on a new structure or that exceeds the height requirements for the district in which it is located, by Special Review. In addition to the general requirements for Special Review, telecommunication facilities shall also be subject to the requirements outlined in Section 4-600 and Section 4-602 (D) of this Code.
- 3. Parking Requirements: None
- 4. Loading Requirements: None
- 5. Additional Provisions:
 - a. This use is not required to be located on a Building Lot or comply with the minimum lot size requirement for the district in which it is located.
 - b. All Telecommunication facilities shall comply with federal standards for radio frequency standards.
 - c. Applicant must comply with the Boulder County Land Use Department Small Cell Wireless Facility Design Requirements and Guidelines publication available at the Land Use Department.
 - d. For Macro-cell facilities a separate accessory equipment building is allowed as long as it is no more than 10% of the gross floor area of all existing permitted structures on the parcel or 450 square feet, whichever is less. Applicant must comply with the Boulder County Land Use Department Small Cell Wireless Facility Design Requirements and Guidelines.
 - e. Any small cell facility in the public right of way that is not used for a period of six months or more shall be deemed to be abandoned. The small cell facility owner or applicant shall remove a small cell wireless facility that is considered abandoned and if they fail to remove the abandoned facility the County may remove the small cell facility and charge the costs to the small cell facility owner.

Commented [RMK9]: Are these separate and apart from what is included in this packet below?

Article 4-700 Administrative Reviews [New review process in Article 4 for Administrative Reviews.](#)

4-701 Purpose

- A. Administrative review is a review procedure for certain types of proposed development that are deemed in advance to not cause significant conflict with the Boulder County Comprehensive Plan and ensure compliance with the development standards of the County.

4-702 Applicability and Scope of the Administrative Review Process for Development

- A. Administrative Review shall be required for the following:
 - 1. Any Small Cell Wireless Telecommunications Facility; and
 - 2. Eligible Facilities Requests.
- B. Criteria
 - 1. Meets additional provisions of Use definition
 - 2. Administrative Reviews of Small Cell Wireless Telecommunication Facility are subject to the County's Design Requirements and Guidelines for Small Cell Wireless Facility.

C. Review of Small Cell Wireless Facility Applications

1. Within ten days of receiving an initial application, the County will determine and notify the applicant whether the application is materially complete. If an application is materially incomplete, the County will specifically identify the missing documents or information, and the specific rule or regulation creating the obligation to submit such documents or information. The shot clock set forth in subsection (2) shall restart at zero on the date which the applicant submits all the documents and information identified by the County to make the application complete. If the applicant's supplemental submission fails to make the application complete, and the County notifies the applicant within 10 days of the supplemental submission and clearly and specifically identifies the missing documents or information, the applicable shot clock set forth in subsection (2) shall be tolled until the applicant provides the missing documents and information. The shot clock resumes (the date calculation does not restart) to run on the date when the applicant submits all the documents and information identified by the County to render the application complete.
2. All applications shall be processed on a nondiscriminatory basis, and the County shall approve or deny an application for: (i) collocation of Small Cell Wireless Facility on an existing structure within 60 days of receipt of the application, or (ii) within 90 days for applications to deploy a Small Cell Wireless Facility using a new structure.
3. An applicant and the County may enter into a written agreement to toll the time periods set forth in Subsection (2).
4. If the County fails to issue a decision on an application for a Small Wireless Facility within the required time periods set forth in Section 4(A)(2) of this Chapter, it shall constitute a "failure to act" within the meaning of 47 U.S.C. § 332(c)(7)(B).

D. Review of Eligible Facilities Requests

1. Timeframe for Review. Subject to the tolling provisions of subsection (D)(3) below, within sixty (60) days of the date on which an applicant submits a complete application under this Section, the County shall act on the application unless he or she determines the application is not covered by this subsection.
2. Tolling of the Timeframe for Review. The 60-day review period begins to run when the application is filed, and may be tolled only by agreement of the County and applicant, or in cases where the County determines the application is incomplete:
 - a. To toll the timeframe for incompleteness, the County must provide written notice to the applicant within thirty (30) days of receipt of the application, specifically delineating all missing documents or information required in the application;
 - b. The timeframe for review begins running again when the applicant makes a supplemental written submission in response to the County's notice of incompleteness; and
 - c. Following a supplemental submission, the County will notify the applicant within ten (10) days that the supplemental submission did not provide the information identified in the original notice delineating missing information, or the application will be deemed complete as of the date of the supplemental submission. The timeframe is tolled in the case of second or subsequent notices pursuant to the procedures identified in subsection (D)(1). In the case of a

Commented [RMK10]: These are the shot clock provisions for small wireless facilities from the recent FCC Order (September 2018).

There also are shot clock requirements for macro facilities which we can provide as well.

second or subsequent notice of incompleteness, the County is not required to specify missing information or documents that were not delineated in the original notice of incompleteness.

3. Failure to Act. In the event the County fails to act on a request seeking approval for an eligible facilities request within the timeframe for review (accounting for any tolling), the request shall be deemed granted. In such event, the grant becomes effective when the applicant notifies the County in writing after the review period has expired (accounting for any tolling) that the application has been deemed granted.
4. Interaction with Telecommunications Act 47 U.S.C. § 332(c)(7). If the County determines the applicant's request is not an eligible facilities request as defined in this Article, the presumptively reasonable timeframe under 47 U.S.C. § 332(c)(7), as prescribed in FCC Order 14-153, part VI ("Shot Clock" order), will begin to run from the issuance of the County's decision that the application is not a covered request. To the extent such information is necessary, the County may request additional information from the applicant to evaluate the application in accordance with the review process set forth in 47 U.S.C. § 332(c)(7).

Small Cell Wireless Facility Design Requirements and Guidelines – Handout for design guidelines

1. Applicants shall work with the County and relevant third parties to locate small cell wireless facilities based on the following order of preference for location and deployment to the extent reasonably feasible from a technological, engineering or constructive perspective:
 - a. Small cell facilities shall be collocated and attached to existing and previously approved small cell facilities.
 - b. Small cell facilities shall be attached to or replace available existing structure previously approved in the County Right of Way (ROW).
 - c. New freestanding small cell facility poles shall be built in a manner that allows for collocation.
2. Any new pole with an antenna must be architecturally consistent with the surrounding area by:
 - a. Utilizing one of the following configurations:
 - i. Replacing existing permitted facilities (including without limitation, traffic signs, traffic signals, light poles or light standards) so that the presence of the small cell facility is not readily apparent;
 - ii. Integrating the equipment in an architectural feature of an existing structure; Integrating or attaching equipment to an outdoor fixture such as a traffic signal, light standard, utility pole or flagpole;

AND
 - b. Using a design which mimics or is consistent with the nearby natural or architectural features; and
 - c. Using a design that is consistent with the size and shape of the pole-mounted equipment installed by communications companies on utility poles within three hundred feet of the facility.
3. All small cell equipment and required structures, including, but not limited to, antennas and meters, must be housed internally within in the pole or alternative tower structure hosting the small cell facility. This requirement may be waived by the Director of the Land Use Department, in whole or in part, where it is technically infeasible to internally house the requisite components.
4. Ancillary equipment that is not integrated into the pole such as cabinets, or boxes shall be located below grade. This requirement may be waived by the Director of the Land Use Department, in whole or in part, where it is technically infeasible to house such structures below grade.
5. The siting map must clearly delineate the floodplain and floodway boundaries.
6. Small cell wireless facilities shall be separated from all other wireless communication facilities and small cell facilities within the right-of-way by a distance of at least six hundred (600) feet, unless the facility attaches to or replaces an existing traffic signal, street light pole, utility pole or similar vertical infrastructure in the right-of-way. Freestanding small cell poles shall be staggered on alternating sides of the street where feasible. The Land Use Director may exempt an applicant from this requirement if: (i) the applicant demonstrates through technical network documentation that the minimum separation requirement cannot be satisfied for technical reasons, or (ii) the Land Use Director determines, when considering the surrounding topography; the nature of adjacent uses and nearby properties; and the height of existing structures in the vicinity, that placement of a small cell wireless facility at a distance less than 600

Commented [RMK11]: The proposed Code does not provide any specific height requirements for small cell wireless facilities that attach to or replace existing poles in the rights-of-way or for freestanding small wireless facilities. Verizon Wireless requires the height of 40 feet for small wireless facilities in all zoning districts to be able to meet its RF objectives and deploy wireless services, specifically in residential areas where customer demand is the greatest. Additionally, Verizon Wireless needs at least eight (8) feet above an existing pole to attach both current and future technologies in its small wireless facilities. Small wireless facilities in the rights-of-way provide an opportunity for wireless providers to deploy wireless services in densely populated areas such as residential zones in a less intrusive manner. Verizon Wireless wants to ensure there is an option for deployment of small cell wireless facilities in all areas, including residential, at the height necessary to provide wireless services.

feet from another small wireless facility in the public right of way will meet the intent of reducing visibility and visual clutter of small wireless facilities.

7. Any stand-alone small cell wireless facility shall not block windows or building entrances to the extent reasonably feasible from a technical, engineering or constructive perspective.
8. Small cell wireless facilities and equipment shall not be installed within the dripline of any tree.
9. All poles and related appurtenances shall be located to ensure proper sight-triangles.
10. All poles and related appurtenances shall be located outside the specified clear zone for the facility on which it is located as specified in the Boulder County Multi Modal Transportation Standards.

Commented [RMK12]: This is alternative language that has been proposed and adopted by jurisdictions in Colorado. Depending on the height of the facility, small wireless facilities may need to be closer together to provide capacity and coverage for the network, or closer locations may achieve certain aesthetics that the County prefers.

11. Poles and related appurtenances shall not interfere with traffic operations or with approved Traffic Control Devices.
12. Poles and related facilities shall not encroach into or interfere with pedestrian ways such as sidewalks, trails, or transit stops or facilities.
13. Proposed locations of poles and related appurtenances shall be reviewed relative to future county capital improvements.
14. Small cell wireless facilities shall not be allowed within historic districts or land owned or maintained by the Boulder County Parks and Open Space, including conservation easements.
15. Small cell wireless facilities shall be located to ensure minimal impacts to view protection corridors.
16. Small cell wireless facilities must not conflict with the Boulder County Comprehensive Plan goals, policies, and mapped features.
17. All small cell wireless facilities shall meet the current standards and regulations of the FAA, the FCC and any other agency of the federal governments with the authority to regulate small cell facilities. If the standards and regulations are changed, then the owners of the small cell facilities shall bring such facility into compliance with such revised standards and regulations within the time period mandated by the controlling federal agency.

DC-19-0001 DRAFT text amendments - 6/18/2019 - Page 5 of 5



Land Use

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • www.bouldercounty.org

Docket DC-19-0001: Proposed Boulder County Land Use Code Amendments to Article 4- 514 Telecommunication Facilities

Request: Proposed Boulder County Land Use Code Amendments to Article 4-514 to address an update of the Telecommunication Facilities Code (Land Use Staff Planner: Kathy Sandoval)

Date: June 18, 2019

Dear Stakeholder/Interested Party,

On February 14, 2019, the Board of County Commissioners authorized Land Use staff to pursue text amendments to Article 4 of the Boulder County Land Use Code, which regulates telecommunication facilities in Boulder County.

A general update to Article 4-514 Telecommunication Facility is necessary to ensure compliance with the recent Federal Communications Commission (FCC) Declaratory Ruling and Third Report and Order (“Order”). The Order sets forth the FCC’s interpretation of certain sections of the Telecommunications Act of 1996, and provides new rules and orders for Small Cell Wireless Facilities (SCWF). The Order limits local government regulation through the following restrictions: (1) the allowed timeline for local government approval of SCWF; (2) the amount of fees local governments may require for approval, siting, and permitting processes; and, (3) the type of aesthetic, design, and siting requirements local governments may place on SCWF. Furthermore, relevant Colorado statutes were revised in April 2017 in anticipation of the emergence of SCWF, and substantially reflect the FCC’s interpretations and orders.

Federal and state law preempts much of the county’s ability to regulate SCWF, other than aesthetic, fee, and permitting requirements that are reasonable, objective and published in advance. These facilities will likely need to be on towers every 200 to 600 feet within the right of way (ROWs). Additional **information on the limitation of the county’s ability to regulate SCWF is available at the docket webpage:**

<https://www.bouldercounty.org/property-and-land/land-use/planning/land-use-code-update/dc-19-0001/>

The FCC has also placed a very short shot clock of 60 days (collocation on other towers) or 90 days (new structures) for permit approval, which includes the entire review from pre-application (if mandated) through permit issuance. Given these constraints, staff proposes the SCWF be processed through an administrative review process, with the Code update including appropriate definitions, procedural requirements, permit requirements, fees and design guidelines.

Deb Gardner County Commissioner

Elise Jones County Commissioner

Matt Jones County Commissioner

The draft amendments contain changes to the County's telecommunication regulation, while continuing to protect the aesthetic qualities by minimizing visual clutter, protecting scenic views, and preserving Boulder County's rural character. In developing the draft revised version of Article 4-514 staff reviewed proposed amendments for consistency with other sections of the Land Use Code and other amendments related to the Telecommunication Facilities update.

A draft of the proposed text amendments is attached to this letter for your review. The attached draft Code content is a draft document and is still a work in progress. Feedback pertaining to these topics is appreciated. You may also view the proposed draft text amendments and future revisions in our office or online at:

<https://www.bouldercounty.org/property-and-land/land-use/planning/land-use-code-update/dc-19-0001/>

This docket review process will include a public hearing before the Boulder County Planning Commission and a public hearing before the Boulder County Board of County Commissioners. The schedule for these meetings is still to be determined. Confirmation of hearing dates and times will be published online at the link above and in local newspapers.

The Land Use staff and County Commissioners value comments from individuals and referral agencies. Please check the appropriate response below or send a letter or email with your comments. All comments will be made part of the public record. If you have any questions regarding this docket, please contact me at (303) 441-3930 or ksandoval@bouldercounty.org.

Please return responses to the above address by **July 1, 2019**. Late responses will be reviewed as the process permits.

We have reviewed the proposal and have no conflicts.

Letter is enclosed.

Signed *Matt Ashley* PRINTED Name Matt Ashley, Associate Property Agent

Agency or Address City of Boulder Open Space and Mountain Parks



City of Boulder Open Space & Mountain Parks

2520 55th St. | Boulder, CO 80301; 303-441-3440

<http://www.osmp.org>

MEMORANDUM

To: Kathy Sandoval, Lead On-Call Planner II, Boulder County Land Use Department

From: Matt Ashley, Associate Property Agent, City of Boulder Open Space and Mountain Parks

Date: July 1st, 2019

Re: Docket DC-19-0001
Proposed Boulder County Land Use Code Amendments to Article 4-514
Telecommunication Facilities

Thank you for the opportunity to review the proposed amendment to the County Land Use Code referenced above. The City of Boulder Open Space and Mountain Parks (OSMP) department supports the proposed amendment because Small Cell Wireless Facilities (SCWF) could have a significant impact on scenic viewsheds and wildlife, and it is in the shared interest of OSMP and the County to minimize these impacts to the extent possible.

Further, the majority of OSMP land lies in Boulder County outside of the City of Boulder, and OSMP works closely with the County (Parks and Open Space, Transportation/Flood, Land Use) on matters affecting or affected by the proposed amendment. Please consider the following comments regarding this proposed amendment:

Given the size and location of the proposed SCWF in ROWs, there are likely to be impacts to the public's viewshed from OSMP open space properties and public roads. Therefore, OSMP supports the County requiring designs that will minimize impacts to the viewshed. OSMP supports the County requiring trees and vegetation where feasible that could help shield the SCWF and associated equipment from the public viewshed.

OSMP requests that design specifications take in to account the impact SCWF will have on all birds. Raptors, etc., may be attracted to the antennas as perch sites, which may put them at risk of electrocution. Simple design features can be built into the antenna boxes (e.g. top with a cone, limit horizontal distance from pole) that would help deter perching/nesting and reduce the risk of accidental electrocution.

A self-contained and integrated design like that in the photograph below would be preferable to OSMP, because there are fewer flat features that would attract a nesting or perching bird. The applicant is encouraged to contact OSMP for more details if interested.



Source: <https://twitter.com/stealthsite/status/851882939633762304>

In the event that birds do build a nest in a SCWF location adjacent to or near OSMP property, OSMP requests that the County coordinate with OSMP wildlife staff to mitigate the nest. For example, a pair of osprey built a nest on a utility pole near Boulder Creek, and OSMP worked directly with Xcel to build an alternative nest platform on an adjacent open space property.

OSMP requests that the prohibition of SCWF on County Open Space extend to all open space, including City OSMP property and CEs.

Use of native plant materials for revegetation and landscaping should be required. Grading and landscape plans should be required and include a section on weed management.

Lighting should be directed downward to minimize glare and the illumination of adjacent/nearby OSMP lands, conservation easements, or other undeveloped property.

Colors should be muted to blend into the natural surroundings, to reduce the visual impact to adjacent and nearby OSMP lands.

Please feel free to contact me if you have any questions or comments about this response.