

Cellular Antenna Site Application Requirements

Prior to allowing installation or utilization of an antenna site on University of Colorado Boulder property, please ensure the following:

1. Before completing this application, please contact Steven Stasica (steven.stasica@colorado.edu) to schedule a preliminary meeting to discuss the feasibility of the request.
2. The carrier making a request for antenna installation or modification to an existing site must complete all applicable sections of the application form and provide all other required documents.
3. Application fee of \$3,000 (due at time of application submission). Fee is non-refundable and will be applied towards University charges for plan review and project coordination. Applicant is responsible for all University charges that exceed the amount of the initial application fee.
4. Proof of agent authorization (to act on carrier's behalf).
5. Inventory of existing sites, to include a written narrative and map description of the carrier's existing or then currently proposed macro and/or small cell facilities on University premises. In addition, the applicant shall inform the university generally of the areas on campus in which it believes small cell facilities may need to be located within the next three years. The inventory list should identify the site name, site address or general vicinity if no address is known, and a general description of the facility (i.e. rooftop antennas and ground mounted equipment).
6. Technical Plans or Construction Documents signed and sealed by appropriate qualified professionals of the proposed installation(s) with new and existing equipment labeled, as applicable. The plans must be drawn to scale with a north arrow and include the following:
 - a. If multiple facilities are requested (consolidated application), a master siting map, which includes the locations of all small cell facilities proposed with the application and an identification system for each site (site names, numbering, etc.).
 - b. Detailed plan drawings for each facility, including the following:
 - i. Large scale site plan that includes adjacent streets and access pathways, and other existing university infrastructure. Include the locations of all transmission equipment related to the facility, including antennas, radio transceivers, coaxial or fiber-optic cable, and regular and backup power supply. Include all existing and proposed features within 20 feet of facility including adjacent properties and right of ways (landscaping, trees, bike racks, tree grates, parking meters, benches, awnings, signs, doors, lights, hydrants, fencing, manholes, fire hydrants, etc.). Include the setbacks to buildings and sidewalk clearance adjacent to the vertical infrastructure and facility, if applicable. Include any proposed tree removal locations.

- ii. Small scale site plan that shows the proposed separation of the facility from all other wireless communication facilities and small cell facilities within 600 feet of the facility.
 - c. Elevation drawings of proposed facility that call out the height of the vertical infrastructure, antenna(s), and all exposed elements from grade and clearance to sidewalk, if applicable. Include below grade equipment vaults and the locations of all transmission equipment related to the facility, including antennas, radio transceivers, coaxial or fiber-optic cable, and regular and backup power supply. Include the dimensions of each antenna enclosure and of all exposed elements.
 - d. Detailed plans for the screening of antenna and other transmission equipment, including equipment enclosures and vaults. Plans to include sample exterior materials, with material finish, and colors.
 - e. If placed on existing vertical infrastructure, engineering analysis demonstrating that the existing vertical infrastructure can support the additional loads created by the attachment(s).
 - f. If new or replacement vertical infrastructure is proposed, provide specifications and attachment details for the new structure.
 - g. If below grade equipment vaults are proposed, specifications on proposed vault and cover and plans showing the horizontal and vertical distances from all existing utilities, property lines, and easement boundaries. Include details on materials removed and/or replaced in the right of way (concrete, asphalt, masonry, or stonework, etc.). Provide details for drainage of vault including discharge of pumping equipment.
 - h. Attachment details.
7. Photographs of existing conditions and photo simulations of proposed installation(s) demonstrating architectural compatibility and screening method. Include a map depicting where the photographs were taken.
 8. If new or replacement vertical infrastructure is proposed, a report from a qualified and licensed professional engineer and/or statement from the manufacturer that describes the capacity for collocation.
 9. If a facility is proposed on existing structure, a letter from a qualified and licensed professional engineer certifying that the antenna installations will be placed in a manner so that the size, appearance, and function of the structure will not be considerably altered.
 10. Additional materials as requested at the time of staff review.

11. Pending approval by Planning, Design, & Construction (PD&C) and the Office of Information Technology (OIT) the request will be routed to the Director of Real Estate Services for site use agreement preparation. Be advised the party requesting Antenna Site and/or Roof Top space is responsible for Planning, Design, & Construction (PD&C) and the Office of Information Technology (OIT) charges to review the proposed plans, site requirements, and project coordination.
12. Each submission subject to Building Code review and permitting by the Authority Having Jurisdiction (AHJ).
13. Any lease/license agreement will be subject to the terms of the Director of Real Estate Services at rates established by Real Estate Services. Sites rented may be required to be demised and clearly separable from the site and activities of all other research units.
14. All applications must be submitted to Real Estate Services via email to RealEstateServices@colorado.edu or Nick.Feathers@colorado.edu.

Small Cell Requirements

1. Design Standards

Small cell facilities may be permitted if all of the following standards are met:

- (1) Attached to Existing Facilities. Attachment of facilities on an existing or replacement light pole, or other vertical infrastructure is encouraged. These facilities may be permitted provided that:
 - (A) The facility meets the compatibility design techniques to conceal the equipment, and the facility does not exceed the height of the existing infrastructure on which it is mounted by more than ten feet; or
 - (B) Each antenna is located inside an enclosure of 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.
- (2) Freestanding Facilities. Where a new freestanding facility is proposed (that is not an attachment to existing infrastructure or a replacement pole), a freestanding small cell facility may be permitted, provided that:
 - (A) The facility:
 - i. Proposes a new pole with an antenna that is architecturally compatible with the surrounding area through application of the compatibility requirements of this section; and
 - ii. Existing trees shall be preserved to the maximum extent possible.
 - (B) The maximum facility height, including both vertical infrastructure and antenna, is no more than:
 - i. Thirty feet
 - ii. The facility height does not exceed the height limitations of the University
 - (C) Each antenna is located inside an enclosure of 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.

- (3) Compatibility Required. Compatibility techniques shall be used in the design and siting of small cell facilities. The compatibility techniques will minimize or eliminate the visual impact of such facilities to surrounding uses. A small cell facility shall utilize compatibility techniques by:
 - (A) Utilizing or replacing existing permitted facilities (including without limitation, traffic signs, light poles or light standards) so that the presence of the small cell facility is not readily apparent;
 - (B) Integrating the equipment in an architectural feature of an existing structure;
 - (C) Integrating or attaching equipment to an outdoor fixture such as a light standard, utility pole or flagpole;
 - (D) Using a design which mimics or is consistent with the nearby natural or architectural features; and
 - (E) Being consistent with the size and shape of the pole-mounted equipment installed by communications companies on structure within three hundred feet of the facility.
- (4) Non-reflective Materials. The visible exterior surfaces of small cell facilities, such as poles, antennas, vaults and equipment enclosure structures shall be constructed out of or finished with non-reflective materials and shall be painted to match as closely as possible the color and texture of the vertical infrastructure on which it is mounted.
- (5) Equipment Vaults Below Grade. Due to potential impacts to underground irrigation lines, utilities and drainage, reasonable efforts must be made to install all equipment above grade. If above grade equipment space is not an available option, equipment vaults and other transmission equipment associated with the pole and antenna, maybe placed below grade, if compatibility techniques of this section are otherwise met.
- (6) Multiple Users. To the extent practical, all small cell facilities shall be designed and constructed to permit such facility to accommodate at least two wireless service providers on the same facility.
- (7) Separation. The facility shall be separated from all other wireless communication facilities and small cell facilities by a distance of at least six hundred feet, unless the facility replaces an existing street light pole or similar vertical infrastructure.
- (8) Lighting. No exterior lighting may be installed for the benefit of small cell facilities, unless required by the FAA or other applicable governmental authority or the small cell facility is mounted on a light pole or other similar structure primarily used for lighting purposes.

- (9) Historic Preservation. Any small cell facility that is constructed on a historic building shall be required to get an alteration certificate. The University facility manager is the approval authority for alteration certification.
- (10) Public Safety. Any ground mounted equipment shall be located in a manner necessary to address both student safety and aesthetic concerns in the reasonable discretion of the University facility manager. The applicant shall demonstrate that the vertical infrastructure to which any equipment is fastened to can safely support such equipment.
- (12) Sidewalk Clearance. Any encroachment on a sidewalk shall maintain a minimum clearance of twenty feet vertically and horizontally of unobstructed pedestrian way. The requirements of this paragraph may be modified by the University if reasonable passage is provided on the sidewalk and the safety of pedestrians, bicyclists and motorists is not impaired.
- (13) Unreasonable Interference with Traffic and Parking Prohibited. Small cell shall not alter pedestrian or vehicular circulation or parking, or impede vehicular, bicycle or pedestrian access or visibility. All equipment installations shall comply with the Americans With Disabilities Act and every other local, state and federal law and regulation. No small cell may be located or maintained in a manner that causes unreasonable interference. Unreasonable interference means any use that disrupts or interferes with its use by the University, the general public or other persons authorized to use or be present upon on the property, when there exists an alternative that would result in less disruption or interference. Unreasonable interference includes any use of that disrupts vehicular or pedestrian traffic, any interference with public utilities and any other activity that will present a hazard to public health, safety or welfare.

2. Exclusion of Competitors Prohibited

No small cell facility owner or lessee or officer or employee thereof shall act to exclude or to attempt to exclude any other competitor from using the same structure for the location of other antenna.

Cellular Antenna Site Application

SUBMITTED BY:

Name: _____

Title: _____

Company/Organization: _____

Email: _____

Phone: _____

Signature: _____

Date: _____

SITE OWNER CONTACT (Carrier): Check if same as Applicant

Company: _____

Print Name: _____

Title: _____

Email: _____

Phone: _____

Signature: _____

Date: _____

New Site Request

Existing Site Upgrade/Modification

<u>General Information</u>	
If existing site provide site ID and/or location:	
What is the purpose of the antenna site installation or modification (improve coverage, increase capacity, upgrade/add equipment, etc.)?	
Which area/building/property are you requesting installation on or at?	
Provide the start/end dates equipment will be installed and removed:	

Estimated monthly cost to operate equipment? Provide the start/end dates equipment will be installed and removed:	
Project Coordination alone could be costly. What/who is your Guaranteed Funding Source? Estimated monthly cost to operate equipment?	
Provide name & contact information for 24/7/365 notices: Project Coordination alone could be costly. What/who is your Guaranteed Funding Source?	
<u>Site Details</u> (Attach Plans/Drawings)	
Footprint dimensions of site:	
Describe equipment to be installed, location, and type of materials:	
How will equipment be hooked up to building utility lines? If not, how will it be powered?	
<u>STRUCTURAL CALCULATIONS</u> Provide design parameters: (wind speed, exposure factor, etc.)	
Provide Formulas Used:	
Selection of materials: (anchor bolts, etc.)	
Weight of Equipment: (provide itemized breakdown)	

<u>Interference / Federal Communications Commission (FCC)</u>	
Which frequency will be utilized?	
Will signal Interfere with CU signals? Is there potential that the signal will interfere with existing antenna signals?	
FCC Licensing Required?	
Describe the level of RF Exposure in relation to FCC's Maximum Permissible Exposure (MPE) limits	
<u>Additional Details</u>	

Vetting and Approvals

FACILITIES PLANNING

d'Andre Willis, Campus Architect

Date: _____

CAMPUS CIVIL ENGINEER

Jonathan Akins

Date: _____

OFFICE OF INFORMATION TECHNOLOGY

Kyle Ragan, Associate Director, Network Engineering & Operations

Date: _____

REAL ESTATE SERVICES

Steven Stasica, Director of Real Estate Services

Date: _____