

Seattle Department of Transportation

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Seattle
Department of
Transportation

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Design standards for small wireless facilities on poles in the public place

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A. Introduction

- A1. This document establishes the City’s design standards for small wireless facilities on poles in the public place (also known as right-of-way) for which there is a valid lease or wireless site agreement, including those poles that are owned in whole or in part by the City, and privately-owned poles in the public place.
- A2. Small wireless facilities not installed in the public place are not subject to these requirements, but these standards may inform those installations.
- A3. Applications for small wireless facilities shall comply with these design standards to minimize visual impacts, unless an alternative design is approved pursuant to E.7.d or G.7.e below.

B. Definitions

- B1. “Accessory equipment” means any equipment appurtenant to an antenna’s operation including but not limited to risers, external facing antennas, electrical service disconnect, electrical meter, or remote radio heads on poles in the public place.
- B2. “Antenna” means a system of electrical conductors that emit or receive radio frequency waves. (Seattle Municipal Code (SMC) 25.10.210)
- B3. “Areaway” means a space below the level of the sidewalk or public place, covered or uncovered, affording room, access, or light to a building. An “areaway” is sometimes called a “light well.” (SMC 15.02.042.D)
- B4. “Pedestrian light poles” means a pole that illuminates the sidewalk and is generally less than 18 feet tall, measured from ground level. Poles that include both pedestrian and street lighting are not considered to be “pedestrian light poles” for the purpose of this definition.
- B5. “Pole” means either a City-owned pole or a privately-owned pole.
- B6. “Pole, City-owned” or “City-owned pole” means a pole owned in whole or in part by the City.
- B7. “Pole, privately-owned” or “privately-owned pole” means a pole owned in whole by a non-City entity, including other structures used to support wireline or wireless attachments.
- B8. “Public place” means public right-of-way and the space above or beneath its surface, whether or not opened or improved, including streets, avenues, ways, boulevards, drives, places, alleys, sidewalks, planting strips, squares, triangles, and plazas that are not privately owned. (SMC 15.02.046)

- B9. “Minor communication utility” means a utility use in which the means for transfer of information are provided but which generally do not have significant impacts beyond the immediate area. These facilities are smaller in size than major communication utilities and include phone cable vaults; two (2) way, land, mobile, and cellular communications facilities; cable TV facilities; point-to-point microwave dishes; FM translators; and FM boosters with less than ten (10) watts’ transmitting power. (SMC 25.10.220) Small wireless facilities are considered minor communication utilities where that term is used in the SMC.
- B10. “Wireless facility, small” or “small wireless facility” means a type of wireless attachment where each antenna is no greater than 3 cubic feet in volume and associated accessory equipment is no greater than 28 cubic feet in volume.

C. Standards applicable to small wireless facilities on wood poles

- C1. The small wireless facilities shall comply with the wood pole design standards in Table C.1 below, the general design standards in section E, and the pole owner’s standards.

Table C.1. Wood Pole Design Standards	
i. Height	<p>The maximum height allowed of any replacement pole shall not extend more than 10 feet above the height of the standard replacement pole or the minimum additional height required for adequate clearance from electrical wires, whichever is greater. Any height increase above 10 feet shall be the minimum extension necessary to provide a required clearance up to a maximum of 5 feet of additional height and shall be confirmed in writing by the pole owner.</p> <p>The maximum height allowed shall include the small wireless facility.</p>
ii. Antenna	<p>Subject to the design standards in this Table C.1, either one-top mount or one side-mount canister antenna is allowed on a wood pole. Up to 3 additional side-mounted panel antenna enclosures are allowed lower on the pole for poles with a top-mount canister. Additional panel antennas are not allowed for poles with a side-mount canister antenna.</p>

iii. Side-Mount Antenna

Side-mount antennas are allowed provided they are located at least 15.5 feet above grade. They shall be located as close to the top of the pole as technically feasible.

Side-mount canister antennas shall be placed such that the top of the side-mount canister antenna does not extend above the height of the pole and shall meet the following dimensional standards:

- Maximum 3 feet in height
- Maximum 16 inches in diameter
- Maximum 28 inches from the pole's surface to the outside edge of the antenna

Side-mount panel antennas shall be placed such that the top of the side-mount antenna does not extend above the height of the pole and shall meet the following dimensional standards:

- Maximum 3 feet in height
- Maximum 14 inches in width
- Maximum 16 inches from the pole's surface to the outside edge of the antenna (measured to the furthest extent taking into account antenna tilt)
- All panel antennas are sited at the same approximate elevation on the pole

Panel antennas shall be located at least 12 inches from the streetlight or streetlight arm and antennas shall not interfere with the intended illumination pattern.



Image 1: Typical wood pole design with panel antennas

	<p>One side-mount canister antenna or up to a maximum of three panel antenna enclosures may be allowed, provided that each antenna (and enclosure, if applicable) shall not be greater than 3 cubic feet in volume. The carrier is allowed to have the minimum amount and length of cables outside of the conduit to connect the antenna and the accessory equipment cabinet.</p>	 <p><i>Image 2: Side-mount canister antenna and equipment cabinet on a wood pole</i></p>
<p>iv. Top-Mount Canister Antenna</p>	<p>The top-mount canister antenna shall be placed to look as if it is an extension of the pole. All cables shall be concealed either within the canister antenna or a sleeve between the canister antenna and the pole. The canister antenna's outer diameter shall not be more than 16 inches diameter maximum. The canister antenna and sleeve between the canister antenna and the pole shall be no more than 3 feet tall, including the antenna, radio head, mounting bracket, and other equipment necessary for installation. No attachments shall be placed on the outside of the canister antenna or sleeve, although accessory equipment that is infeasible to place within the canister may be in an accessory equipment location as described below in section C.1.vi. The carrier is allowed to have a minimum amount of cable outside of the conduit to connect the antenna and the accessory equipment cabinet.</p>	
<p>v. Pole Diameter and Placement</p>	<p>The replacement pole's diameter shall not increase more than the minimum extent necessary. All pole diameters shall comply with Streets Illustrated and the pole placement shall meet Streets Illustrated and ADA requirements.</p>	

<p>vi. Accessory Equipment Location</p>	<p>The City encourages designs that minimize the need for additional accessory equipment. If required for technical feasibility, accessory equipment is allowed and shall be in the smallest possible enclosure and sited to minimize visual impact.</p> <p>When required, all accessory equipment, except the disconnect, shall be undergrounded or mounted inside a cabinet lower on the pole. The equipment shall be placed in the smallest enclosure feasible for the intended purpose. Only one cabinet, not including the disconnect, is allowed. The pole-mounted cabinet, minus the disconnect, shall be no greater than 48 inches long by 21 inches wide by 20 inches deep. All pole-mounted accessory equipment shall be located at least 15.5 feet above the ground and shall extend no more than 25 inches off the pole, measured at the outer edge of the associated equipment enclosure.</p> <p>All small wireless facility equipment associated with the site, including wireless equipment associated with the antenna and any pre-existing equipment associated with the site, and conduit, shall be no more than 28 cubic feet in volume.</p> <p>Placement of accessory equipment shall not relocate street signs without City approval. Carriers shall endeavor to accommodate existing pole banners. Accessory equipment shall be placed in a manner that maintains all required clear sight lines to any regulatory signs.</p>	
<p>vii. Cabling and Conduit</p>	<p>A maximum of two telecommunications conduits and one power conduit for the carrier's needs, colored or painted to match the pole, shall be allowed. The conduit shall be the minimum dimension necessary, up to a maximum of 3 inches in diameter for telecommunications and 2 inches in diameter for power. Shrouds, risers, or conduits shall be used to reduce the appearance of cluttered or tangled cabling. Any wires outside the conduit shall be consolidated and pulled as tight as technically feasible. Excessive cable slack, loops, or bends in flex conduit are prohibited.</p>	 <p><i>Image 3: Example of unallowed excessive bends in flex conduit</i></p>

D. Standards applicable to small wireless facilities on metal poles

- D1. The small wireless facility attachment shall comply with the metal pole design standards in Table D.1 below, the general design standards in section E, and the pole owner’s standards.

Table D.1: Metal Pole Design Standards	
i. Height	The height of any replacement pole shall not extend more than 5 feet above the height of the standard replacement pole. The maximum height allowed shall include the small wireless facility.
ii. Antenna	Subject to the design standards in this Table D.1, either top-mount canister antennas or panel antennas are allowed on metal poles.
iii. Panel Antenna	<p>Panel antennas are allowed provided they are no taller than 36 inches, no wider than 14 inches, and no further than 16 inches from the pole’s surface measured at the antenna’s outer edge (measured to the furthest extent taking into account antenna tilt). Panel antennas shall be flush mounted to the pole (and in no case greater than 6 inches off the pole to allow for antenna tilt).</p> <p>Multiple panel antennas, up to a maximum of three antenna enclosures, may be allowed provided that each antenna (and its enclosure, if applicable) shall not be greater than 3 cubic feet in volume.</p> <p>Panel antennas shall be sited at the same approximate elevation on the pole. Panel antennas shall always be at 15.5 feet or more above grade and shall be oriented towards the top of the pole. Panel antennas shall be located as close as technically feasible to the streetlight or streetlight arm. A setback of 12 inches between the panel antenna and the streetlight or streetlight arm is required. Antennas shall not interfere with the intended illumination pattern.</p>



Image 4: Metal pole with side-mount panel antennas and equipment cabinet

iv. Top-Mount
Canister
Antenna

The canister antenna shall be placed to look as if it is an extension of the pole. If the canister antenna is wider than the top of the pole, a tapered transition between the upper pole and canister antenna is required. The canister antenna's outer diameter shall not be more than 1/3 larger than the diameter of the pole measured at the pole top, up to a maximum of 16 inches, whichever is smaller. The canister antenna shall be no taller than 3 feet in height and shall fit within the maximum height allowed for the pole as stated in D.1.i above. To the extent technically feasible, the canister antenna shall include the antenna, radio head, mounting bracket, and other equipment necessary for installation. No attachments shall be placed on the outside of the canister antenna or sleeve, although accessory equipment that is infeasible to place within the canister may be in an accessory equipment cabinet as described in D.1.vi below. All cables shall be concealed either within the canister antenna or a sleeve between the canister antenna and the pole.

Canister antennas cannot be located on any pole with a post-top streetlight, including globe-light luminaires.

Top-mount canister antennas are not allowed on Chief Seattle poles.



Image 5: Chief Seattle pole



Image 6: Light pole with post-top light

<p>v. Pole Diameter and Placement</p>	<p>The replacement pole’s diameter shall not increase more than the minimum extent necessary and no greater than dimensional limits specified in this section. All replacement poles shall meet all Streets Illustrated clearance and placement standards.</p> <p>Existing poles that already have an attached small wireless facility shall not be allowed to increase pole diameter for a replacement of the existing small wireless facility.</p> <p>For existing poles without a small wireless facility and a base diameter of 12 inches or greater, a replacement pole diameter increase shall be no greater than a 25% increase of the existing pole measured at the base of the pole.</p> <p>Existing poles without a small wireless facility that are less than 12 inches in base diameter but greater than or equal to 10 inches in base diameter may be increased to a 12-inch base diameter. Existing poles without a small wireless facility that are less than 10 inches in base diameter may be increased to a maximum 10-inch base diameter.</p> <p>Top diameter of the pole may not be greater than the base diameter less 2 inches. (For example, a pole with a 10-inch base diameter would have a maximum top diameter of 8 inches, while a pole with a 12-inch base diameter would have a maximum top diameter of 10 inches.)</p> <p>All pole diameters shall also comply with Streets Illustrated and the pole placement shall meet Streets Illustrated and ADA requirements.</p> <p>Decorative or ornamental pole bases, including but not limited to the Chief Seattle base, shall not be increased in height or width. Reuse of existing bases shall be prioritized.</p>
<p>vi. Accessory Equipment Location</p>	<p>The City encourages designs that minimize the need for additional accessory equipment enclosures. If required for technical feasibility, an accessory equipment enclosure is allowed and shall be located in the smallest possible enclosure and sited to minimize visual impact. All accessory equipment, except for the disconnect, shall be underground, placed inside the pole base (if applicable), or mounted inside a cabinet lower on the pole. If the accessory equipment is placed inside the pole base, the pole base shall comply with the diameter restrictions listed in D.1.v.</p> <p>The equipment shall be placed in the smallest enclosure feasible for the intended purpose. Only one cabinet, not including the disconnect, is allowed. The cabinet, minus the disconnect, shall be no greater than 48 inches long by 16 inches wide by 16 inches deep. All pole-mounted equipment shall be located at least 15.5 feet above the ground. The equipment enclosure and all other wireless equipment associated with the pole, including wireless equipment associated with the antenna and any pre-existing equipment associated with the site, and conduit, may not exceed 28 cubic feet in volume.</p>

	If technically feasible, enclosures should be sited behind any banners or road signs on the pole. Placement of accessory equipment shall not relocate street signs without City approval. Carriers shall endeavor to accommodate existing pole banners. Accessory equipment shall be placed in a manner that maintains all required clear sight lines to any regulatory signs.
vii. Cabling	All cables (including wires and fiber) shall be routed internally in the pole. The carrier is allowed to use a minimum amount and length of external cables to connect the antenna and to connect the accessory equipment enclosure to the cables internally in the pole. Where externally attached, cables shall match the pole color. No external cables or conduit connecting the antenna(s) to the accessory equipment cabinet are allowed.

E. Standards applicable to small wireless facilities on all poles in the public place

E1. Location preferences

E1a. Small wireless facility attachments are discouraged on poles that are:

- i. Within the Waterfront Seattle Project Area (see Exhibit F-1)
- ii. Within Parks' Boulevards
- iii. Within Historic or Landmark Districts
- iv. Adjacent to a designated Landmark

E1b. If a site is proposed in a location listed in E.1.a above, the applicant shall submit documentation that the location preferences have been evaluated. Documentation shall include the applicant's written evaluation of alternate locations a radius of 250 feet from the proposed location either on existing or replacement poles or on a structure on private property that is outside of the areas in E.1.a.

E1c. The City prohibits small wireless facilities attached to the following:

- i. Poles within medians or traffic circles or islands;
- ii. SDOT traffic and pedestrian signal poles;
- iii. Poles 20 feet in height or under, including pedestrian light poles;
- iv. Poles with globe-light luminaires;
- v. Decorative poles, not including Chief Seattle poles, unless the City determines it fits within the streetscape design plan or the City would replace the pole with a standard pole upon replacement;
- vi. Poles within an [Approved Street Concept Plan](#) area identified in Streets Illustrated, unless the City determines it fits within the street concept plan.



Images 7 & 8: Pedestrian light pole



Image 9: Globe light pole with Chief Seattle base



Image 10: Decorative light pole along Lake Washington Blvd

E1d. Small wireless facilities shall comply with SMC 23.60A, Seattle Shoreline Master Program Regulations.

E1e. New privately-owned poles where the primary purpose for the pole is to support small wireless facilities are not allowed unless the City agrees to take ownership upon installation or if authorized under SMC Ch. 15.65. New poles in the public place will only be considered if the applicant can establish that the proposed small wireless facility cannot be located on an existing or replacement pole or structure on private property.

E2. Context and placement

E2a. The small wireless facility installation shall comply with all applicable federal, state, and City codes, laws, standards, and regulations; and the pole owner's requirements.

E2b. The small wireless facility installation and all equipment located in the public place shall be located so it meets Streets Illustrated standards, or successor rule, and ADA requirements, and it shall not obstruct, distract, impede, or hinder usual pedestrian, bicycle, or vehicular travel.

E2c. Replacement poles shall match the approximate design, color, and materials of the existing pole, unless the new pole fits within the streetscape design plan or the City would replace the pole with a standard pole upon replacement. The replacement pole shall be located as close as feasible to the existing pole, provided that it meets the requirements of E.2.b above, and the existing pole shall be removed.

E2d. Antennas and equipment shall not interfere with the intended illumination pattern of poles with streetlights. All luminaires shall be at the same height as adjacent streetlights. If a replacement pole is not located at the site of the existing pole, a light analysis may be required to ensure street lighting levels remain adequate.

E2e. While orientation of antennas and other equipment may be limited by operational requirements, to the maximum extent feasible, equipment shall be oriented away from the greatest number of adjacent windows, doorways, or entrances. Equipment cabinets shall be on the street side of poles where feasible.

E2f. The use of a pole for the siting of a small wireless facility shall be considered secondary to the primary function of the pole. If the primary function of a pole serving as a host site for a small wireless facility becomes unnecessary and the City determines the pole shall be removed, the pole shall not be retained for the sole purpose of accommodating the small wireless facility and the small wireless facility and all associated equipment shall be removed by the small wireless facility owner at no cost to the City.

E3. Concealment

- E3a. Antennas and equipment shall match the aesthetics of the pole and surrounding poles.
- E3b. All small wireless facilities and equipment shall be colored to match the approximate color of the pole surface. All equipment associated with the small wireless facility shall be subdued and non-reflective.
- E3c. To the extent technically feasible, the least visible equipment, colors, finishes, brackets, and configuration shall be used.
- E3d. The City prefers small wireless facility designs that do not require additional accessory equipment or equipment enclosures to minimize the visual and physical impact to the public place. If accessory equipment is needed for technical feasibility, it shall be the smallest necessary for the installation.
- E3e. When required, accessory equipment's visual impact to the public place shall be minimized by undergrounding or pole-mounting equipment to the maximum extent feasible. Areaways are included in Landmark and Historic District regulations and modifications to the areaway to accommodate small wireless facilities and accessory equipment will trigger Landmark or Historic District review. Where pole-mounted accessory equipment is proposed, the applicant shall screen equipment to the maximum extent feasible. Where proposed, pole-mounted equipment shall be in the smallest enclosure needed for the installation and shall be as narrow as possible, up to the maximum dimensions established in Section C and D above. Applicants shall consider narrow vertical enclosures to minimize the visual impacts to the streetscape.
- E3f. At-grade accessory equipment may be considered only where undergrounding or pole-mounted equipment is not technically feasible. At-grade communication cabinets shall also comply with the requirements of SMC Sections 15.32.200 and 15.32.250.

E4. Noise and lighting

- E4a. Small wireless facilities and accessory equipment, including but not limited to cooling fans, are required to comply with City noise standards (SMC Chapter 25.08).
- E4b. Lighting specific to the small wireless facility is not allowed.

E5. Radio Frequency (RF) equipment disconnect and warning labels on the poles

- E5a. The small wireless facility shall comply with applicable federal laws, rules, regulations, and standards regarding radio frequency exposure.
- E5b. Radio frequency equipment shall have a disconnect that meets or exceeds the pole owner's requirements.

- E5c. If required, radio frequency warning labels shall be mounted to the exterior of the small wireless facility. Labels shall be placed facing toward the street and away from the adjacent buildings and windows, and located on or near the site disconnect. Labels shall contain a site identification number, carrier name, and emergency phone number.
 - E5d. Signage and warning stickers shall be no larger than 5 inches by 7 inches (or as otherwise required by applicable Federal, State, or local laws). Other signs, logos, or advertising devices are prohibited, except for certification and warning signage required by law or allowed by the City.
- E6. Underground Ordinance Areas
- E6a. Certain areas in the City have been designated as underground ordinance areas. There may still be overhead electrical distribution poles or other poles supporting overhead wires in some of these areas.
 - E6b. Proposals in these areas shall conform with the specific underground ordinance for that area and may be considered if in conformance with the ordinance and until the point the area is undergrounded. All carrier equipment shall be removed and relocated by the carrier owner, at no cost to the City, as required by the City as necessary for underground construction, regardless of whether the small wireless facility is on wood or metal poles. The equipment shall be removed within 30 days upon notification or as determined by the pole owner.
- E7. Proposal review
- E7a. In addition to complying with these design standards, small wireless facility attachments shall adhere to all applicable federal, state, and City codes, laws, standards, and regulations, including but not limited to the National Electrical Safety Code; SMC Title 15 (Street and Sidewalk Use Code), SMC Title 23 (Land Use Code); and SMC Title 25 (Environmental Protection and Historic Preservation).
 - E7b. All small wireless facility attachments to poles shall be approved by the pole owner prior to submitting an application to the City for approval. If there is a design standard that creates an operational impediment to the pole owner, the City may make a minor exception upon written confirmation by the pole owner. Minor exceptions do not trigger the process identified in section E.7.d below.
 - i. All equipment on Seattle City Light poles shall meet applicable standards, including: 0095.15 Pole Attachments, Small Cell Antennas and Distributed Antenna System Below Distribution Conductors, 0095.20 Pole Attachments, Pole Top Cellular Antennas, 0095.50 Requirements for Small Cell Antenna on Streetlights, and the Joint Use Handbook or successor standards.
 - ii. Attachments to poles owned in part or fully owned by Qwest Corporation d/b/a CenturyLink QC require approval from Qwest Corporation d/b/a CenturyLink QC.
 - iii. Attachments to poles owned by King County Metro, or to poles under 50 feet in height that are co-owned by King County Metro and the City, require approval from both King County Metro and the City.

- E7c. The applicant shall confirm that their proposed small wireless facility attachments comply with these design standards.
- i. Applications for small wireless facilities in non-preferred locations identified in Section E.1.a above may be approved if:
 1. The applicant provides evidence that due to technical infeasibility or unavailability the applicant cannot locate the proposed small wireless facility on an existing or replacement pole or structure on private property within 250 feet of the proposed site and outside of these areas, and
 2. The applicant has approvals listed in E.7.c.ii below.
 - ii. These design standards serve as minimum requirements and additional requirements may be applied to proposals in the following areas:
 1. Seattle Waterfront Project Area. The applicant shall include the Office of the Waterfront written approval and comply with Sections F and G at the time of application.
 2. Historic or Landmark Districts or adjacent to a designated Landmark. The applicant shall include a copy of the Certificate of Approval as required by SMC Title 23 or Title 25 at time of application.
 3. Parks' Boulevards. The applicant shall include Parks' written approval at time of application.
- E7d. Small wireless facility technologies will improve over time, future designs may not have been contemplated in these standards, or the carriers may seek a design alternative that meets the intent of these standards but not its specific requirements. The City has developed an optional 'preapproved' alternative design process for applicants that seek to deviate from these standards. This option is a mechanism for applicants to receive preapproval of an alternative small wireless facility design that deviates from these standards but achieves an equal or better aesthetic outcome.
- i. An applicant shall submit an alternative design proposal to the City that includes a written justification of requested variations from the design standards, graphics that adequately depict the proposal from multiple views/angles (such as site plans, elevations, photos, and before-and-after to-scale simulations), and information on the scope of the request (will it be used for a single type of pole, in a certain location, the anticipated number of installations, etc.). If Design Commission review is triggered, additional materials may be required.
 - ii. Based on the scope of the proposal, the City shall determine if the request can be processed administratively or if Design Commission review is necessary. Approvals required by E.7.c.ii above are also required.
 - iii. At the City's discretion, a full-scale mock-up may also be required.

- iv. After design preapproval is granted, the applicant may submit for a small wireless facility permit under the standard process. The applicant shall include the design preapproval documentation with the application submittal.
- v. Upon approval of a preapproved design, the City may allow subsequent applicants to use the same design or may recommend approval only for the individual proposal. New preapproved designs may be incorporated into updates of these design standards by rulemaking process (SMC Chapter 3.02).

E7e. These design standards are intended to be used solely for the purpose of concealment and siting. Nothing in these standards shall be interpreted or applied in a manner that dictates the use of a particular technology, nor prohibits or has the effect of prohibiting the deployment of wireless services.

F. Standards applicable to small wireless facilities on all poles within the Waterfront Seattle Project Area

- F1. The boundary of the Waterfront Seattle Project Area is identified in Exhibit F-1.
- F2. Use of wood poles for small wireless facilities within the Waterfront Seattle Project Area is prohibited.
- F3. The small wireless facility attachment shall comply with the metal pole design standards in Table F.1 below, the general design standards in section G, and the pole owner’s standards.

i. Height	The height of any replacement pole shall not extend more than 5 feet above the height of the standard replacement pole, however the maximum allowable height including the small wireless facility shall be 38.5 feet. The maximum height allowed shall include the small wireless facility.
ii. Antenna	Only top-mount canister antennas are allowed.
iii. Panel Antenna	Panel antennas and their enclosures are prohibited within the Waterfront Seattle Project Area.
iv. Top-Mount Canister antenna	The canister antenna shall be placed to look as if it is an extension of the pole and shall be cylindrical in shape. The top-mount canister antenna and its attachments shall be colored to match the color of the pole surface and shall be subdued and non-reflective. If the canister antenna is wider than the top of the pole, a tapered transition (3 vertical: 1 horizontal) between the upper pole diameter and canister antenna diameter is required. The canister antenna’s outer diameter shall not be more than 1/3 larger than the diameter of the pole, up to a maximum of 16 inches. The canister antenna must be centered on the top of the pole. The canister antenna shall be no taller than 3 feet in height and must fit within the maximum height allowed for the pole (5 feet above standard replacement pole). All cables shall be concealed within the canister or associated tapering and within the supporting pole.

	<p>Canister antennas cannot be located on any pole with a post-top streetlight. All accessory equipment shall be placed within the top-mount canister antenna, within the supporting pole, or in an underground vault. Attachments shall not be attached to the outside of the top-mount canister antenna, supporting pole, or above ground.</p> <p>Top-mount canister antennas are not allowed on Chief Seattle poles.</p>
v. Pole Diameter	<p>The replacement pole's diameter shall not increase more than the minimum extent necessary.</p> <p>Existing poles that already have an attached small wireless facility shall not be allowed to increase pole diameter for a replacement of the existing small wireless facility.</p> <p>For existing poles without a small wireless facility and a base diameter of 12 inches or greater, a replacement pole diameter increase shall be no greater than a 25% increase of the existing pole measured at the base of the pole.</p> <p>Existing poles without a small wireless facility that are less than 12 inches in base diameter but greater than or equal to 10 inches in base diameter may be increased to a 12-inch base diameter. Existing poles without a small wireless facility that are less than 10 inches in base diameter may be increased to a maximum 10-inch base diameter.</p> <p>Top diameter of the pole may not be greater than the base diameter less 2 inches. (For example, a pole with a 10-inch base diameter would have a maximum top diameter of 8 inches, while a pole with a 12-inch base diameter would have a maximum top diameter of 10 inches.)</p> <p>All pole diameters shall also comply with Streets Illustrated and the pole placement shall meet Streets Illustrated and ADA requirements.</p> <p>Decorative or ornamental pole bases, including but not limited to the Chief Seattle base, shall not be increased in height or width. Reuse of existing bases shall be prioritized.</p>
vi. Accessory Equipment Location	<p>All accessory equipment (including the disconnect) shall be fully concealed within the antenna canister, the supporting pole, or an underground vault. When accessory equipment is incorporated into the canister antenna or within the supporting pole, it shall fit within all dimensional requirements of Section F.</p> <p>Underground vaults may not exceed 64 cubic feet in volume. Equipment shall be placed in the smallest underground vault feasible for the intended purpose.</p> <p>Above-ground cabinets and enclosures, or exterior pole-mounted equipment and enclosures are prohibited.</p>

vii. Cabling	All cables, wire, and fiber shall be routed internally in the pole. Exterior equipment, conduit, cables, wires, and fiber are prohibited. All cabling, wires, and fiber shall be internal to the top-mount canister and pole, and lead to the underground vault through underground conduits. Excessive cable slack or loops are prohibited.
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G. Standards applicable to small wireless facilities on all poles in the Waterfront Project Area

Within the Waterfront Seattle Project Area, small wireless facility proposals shall comply with the standards in Section F and G.

G1. Location and siting standards

G1a. Small wireless facility attachments are discouraged on poles that are:

- i. Within the Waterfront Seattle Project Area
- ii. Within Parks' Boulevards
- iii. Within Historic or Landmark Districts
- iv. Adjacent to a designated Landmark

G1b. If a site is proposed in a location listed in G.1.a above, the applicant shall submit documentation that the location preferences have been evaluated. Documentation shall include the applicant's written evaluation of alternate locations a radius of 250 feet from the proposed location either on existing or replacement poles or on a structure on private property that is outside of the areas in G.1.a.

G1c. Small wireless facilities are prohibited attached to the following:

- i. Poles within medians, traffic circles, or islands;
- ii. SDOT traffic and pedestrian signal poles;
- iii. Poles 20 feet in height or under, including pedestrian light poles;
- iv. Poles with globe-light luminaires;
- v. Wood poles;
- vi. Decorative poles, not including Chief Seattle poles, unless the City determines it fits within the streetscape design plan or the City would replace the pole with a standard pole upon replacement;
- vii. Poles within an [Approved Street Concept Plan](#) area identified in Streets Illustrated, unless the City determines it fits within the street concept plan.

G1d. Small wireless facilities shall comply with SMC Chapter 23.60A, Seattle Shoreline Master Program Regulations.

- G1e. New privately-owned poles where the primary purpose for the pole is to support small wireless facilities are not allowed unless the City agrees to take ownership upon installation, if authorized under SMC Chapter 15.65, or if authorized by ordinance. New poles in the public place may only be considered if the applicant can establish that the proposed small wireless facility cannot be located on an existing or replacement pole or on private property.
- G1f. In addition to the standards above, small wireless facilities within the Waterfront Seattle Project Area shall meet the additional minimum standards:
 - i. No closer than 30 feet to another pole;
 - ii. Not within an intersection, which is the extension of the property boundaries, inclusive of but not limited to the street, curbs, pavement, sidewalks, landscaping, signs, and poles (see Figure F-3);
 - iii. Separated from an intersection as defined above by a tree meeting other standards in G.1;
 - iv. At least 12 feet from a tree (measured to the center of the tree);
 - v. Not within the Waterfront Promenade (defined as west of the bicycle facility)

G2. Context and placement

- G2a. The small wireless facility installation shall comply with all applicable federal, state, and City codes, laws, standards, and regulations; and the pole owner's requirements.
- G2b. In addition to the siting standards of G.1 above, the small wireless facility installation and all equipment located in the public place shall be located so it meets Streets Illustrated standards, or successor rule, and ADA requirements, and it shall not obstruct, distract, impede, or hinder usual pedestrian, bicycle, or vehicular travel.
- G2c. Replacement poles shall match the approximate design, color, and materials of the existing pole, unless the new pole fits within the streetscape design plan or the City would replace the pole with a standard pole upon replacement. The replacement pole shall be located as close as feasible to the existing pole, provided that it meets the requirements of G.2.b above, and the existing pole shall be removed.
- G2d. The pole dimensional standards as identified in Section F, as well as all dimensional and other characteristics of the pole including, but not limited to, the mast arm length and type, luminaire type, and festoon accommodation shall remain the same as the original pole. The pole top canister antenna, pole, mast arms and luminaires shall match the same color and materials of the original pole.
- G2e. While orientation of antennas and other equipment may be limited by operational requirements, to the maximum extent feasible, equipment shall be oriented away from the greatest number of adjacent windows, doorways, or entrances.
- G2f. The use of a pole for the siting of a small wireless facility shall be considered secondary to the primary function of the pole. If the primary function of a pole serving as a host site for a small wireless facility becomes unnecessary and the City determines the pole shall be removed, the pole shall not be retained for the sole purpose of accommodating the small wireless facility and the small wireless facility and all associated equipment shall be removed by the small wireless facility owner at no cost to the City.

G3. Concealment

- G3a. Antennas and equipment shall match the aesthetics of the pole and surrounding poles. In addition to the standards identified in Section F, side-mount antennas, arrays, accessory equipment, and cabling are prohibited on poles. Any accessory equipment necessary to support the small wireless facility (including the disconnect) shall be fully concealed within the canister antenna, supporting pole, or located in an underground vault.
- G3b. In addition to the standards identified in Section F, all small wireless facilities and equipment shall be colored to match the approximate color of the pole surface. All equipment associated with the small wireless facility shall be subdued and non-reflective.
- G3c. To the extent technically feasible, the least visible equipment, colors, finishes, brackets, and configuration shall be used.
- G3d. Areaways are included in Landmark and Historic District regulations and modifications to the areaway to accommodate small wireless facilities and accessory equipment may trigger Landmark or Historic District review.
- G3e. Pole-mounted or at-grade cabinets are prohibited.
- G3f. When assessing proposed location and siting, the applicant shall submit photo simulations of each proposed small cell wireless facility and describe how the proposal addresses the cumulative visual effect of the proposed small wireless facilities mounted on poles within the Waterfront Seattle Project Area.

G4. Noise and lighting

- G4a. Small wireless facilities and accessory equipment, including but not limited to cooling fans, shall comply with City noise standards (SMC Chapter 25.08).
- G4b. Lighting specific to the small wireless facility is not allowed.

G5. Radio Frequency (RF) equipment disconnect and warning labels on the poles

- G5a. The small wireless facility shall comply with applicable federal laws, rules, regulations, and standards regarding radio frequency exposure.
- G5b. Radio frequency equipment shall have a disconnect that meets or exceeds the pole owner's requirements.
- G5c. If required, radio frequency warning label signs shall be mounted to the exterior of the small wireless facility. Signage shall be placed facing toward the street and away from the adjacent buildings and windows, and located on or near the site disconnect. Signage shall contain a site identification number, carrier name, and emergency phone number.

G5d. Signage and warning stickers shall be no larger than 5 inches by 7 inches (or as otherwise required by applicable laws). Other signs, logos, or advertising devices are prohibited, except for certification and warning signage required by law or allowed by the City.

G6. Underground Ordinance Areas

G6a. All areas within the Waterfront Seattle Project Area are designated as underground areas. No overhead wires other than seasonal and City authorized art displays are allowed.

G7. Proposal review

G7a. All equipment supporting the small cell wireless facility shall be compliant with the requirements in Section F and G.

G7b. Small wireless facility attachments shall adhere to all applicable federal, state, and City codes, laws, standards, and regulations, including but not limited to the National Electrical Safety Code; SMC Title 15 (Street and Sidewalk Use Code), SMC Title 23 (Land Use Code); and SMC Title 25 (Environmental Protection and Historic Preservation).

G7c. All small wireless facility attachments to poles shall be approved by the pole owner prior to submitting an application to the City for approval. If there is a design standard that creates an operational impediment to the pole owner, the City may make a minor exception upon written confirmation by the pole owner. Minor exceptions do not trigger the process identified in section G.7.e. below

- i. All equipment on Seattle City Light (SCL) poles shall meet 0095.15 Pole Attachments, Small Cell Antennas and Distributed Antenna System Below Distribution Conductors, 0095.20 Pole Attachments, Pole Top Cellular Antennas, 0095.50 Requirements for Small Cell Antenna on Streetlights, and the Joint Use Handbook or successor standards.
- ii. Attachments to poles owned in part or fully owned by Qwest Corporation d/b/a CenturyLink QC require approval from Qwest Corporation d/b/a CenturyLink QC.
- iii. Attachments to poles owned by King County Metro, or to poles under 50 feet in height that are co-owned by King County Metro and the City, require approval from both King County Metro and the City.

G7d. The applicant shall confirm their proposed small wireless facility attachments comply with these design standards.

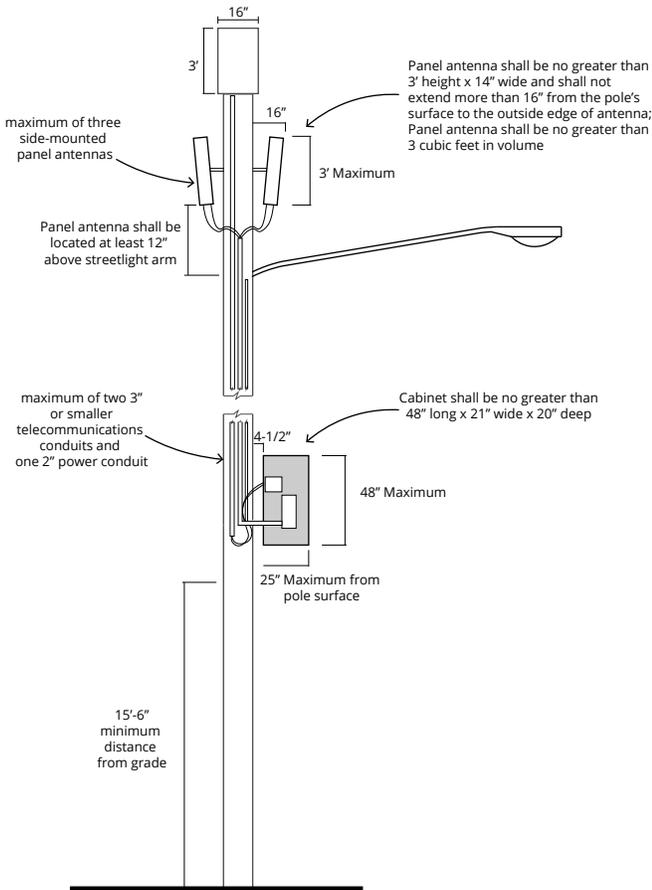
- i. Applications for small wireless facilities in non-preferred locations identified in Section G.1 above may be approved if:
 1. The applicant provides evidence that due to technical infeasibility or unavailability the applicant cannot locate the proposed small wireless facility on an existing or replacement pole or structure on private, property within 250 feet of the proposed site and outside of these areas and
 2. The applicant has approvals listed in G.7.d.ii below.

- ii. These design standards serve as minimum requirements and additional requirements may be applied to proposals in the following areas:
 1. Waterfront Seattle Project Area. The applicant shall include the Office of the Waterfront (or subsequent approval authority) written approval and comply with Sections F and G at time of application.
 2. Historic or Landmark Districts or SWF adjacent to a designated Landmark. The applicant shall include a copy of the Certificate of Approval as required by SMC Title 23 or Title 25 at time of application.
 3. Parks' Boulevards. The applicant shall include Parks' written approval at time of application.
- G7e. Recognizing that technologies will improve over time, future designs may not have been contemplated in these standards, or the carriers may seek a design alternative that meets the intent of these standards but not its specific requirements, the City has developed an optional 'preapproved' alternative design process for applicants that seek to deviate from these standards. This option is a mechanism for applicants to receive preapproval of an alternative small wireless facility design that deviates from these standards but achieves an equal or better aesthetic outcome.
- i. An applicant shall submit a proposal to the City. This shall include a written justification of requested variations from the design standards, graphics that adequately depict the proposal from multiple views/angles (such as site plans, elevations, photos, and before-and-after to-scale simulations), and information on the scope of the request (will it be used for a single type of pole, in a certain location, the anticipated number of installations, etc.). If Design Commission review is triggered, additional materials may be required.
 - ii. Based on the scope of the proposal, the City shall determine if the request can be processed administratively or if Design Commission review is necessary. Approvals required by G.7.d.ii above are also required.
 - iii. At the City's discretion, a full-scale mock-up may also be required.
 - iv. After design preapproval is granted, the applicant may submit for a small wireless facility permit under the standard process. The applicant shall include the design preapproval documentation with the application submittal.
 - v. Upon approval of a preapproved design, the City may allow subsequent applicants to use the same design or may recommend approval only for the individual proposal. New preapproved designs may be incorporated into updates of these design standards by rulemaking process (SMC Chapter 3.02).
- G7f. These design standards are intended to be used solely for the purpose of concealment and siting. Nothing in these standards shall be interpreted or applied in a manner that dictates the use of a particular technology, nor prohibits or has the effect of prohibiting the deployment of wireless services.

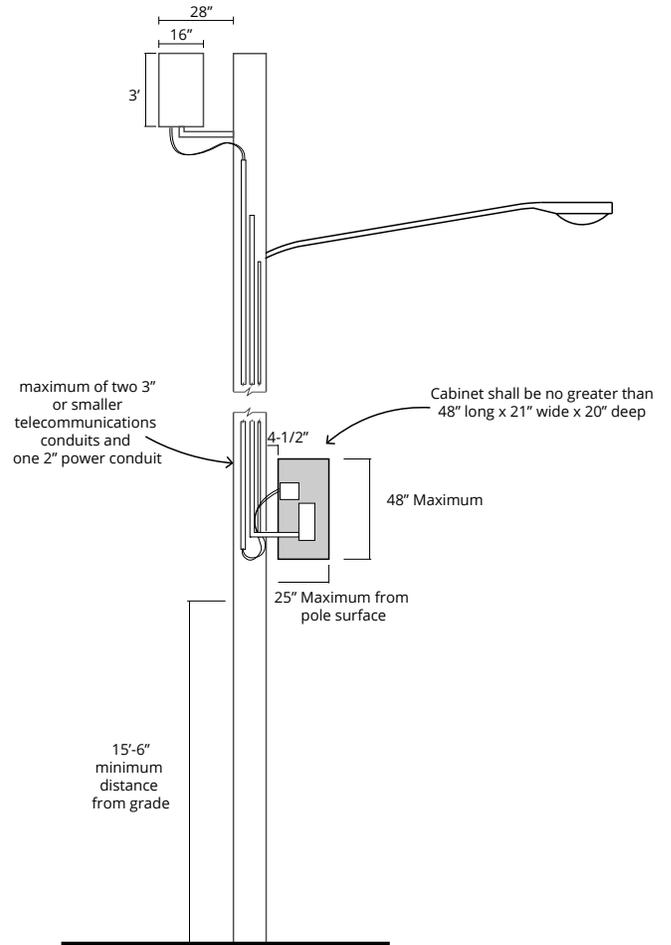
Design Standards for small wireless facilities on poles in the public place

EXHIBITS

Exhibit C-1. Wood Pole SWF Diagrams

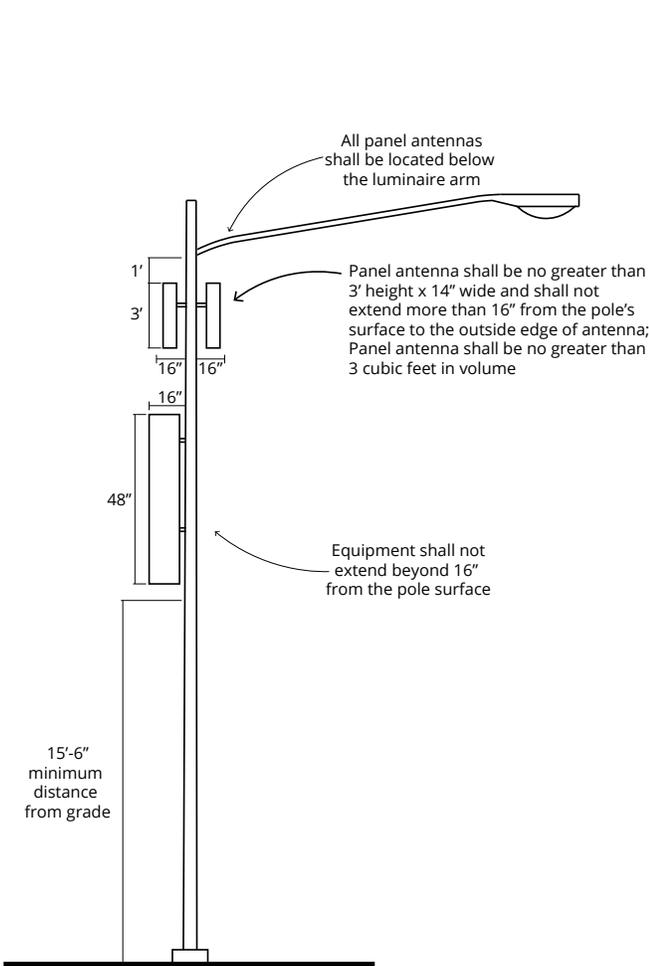


Wood Pole: Top-Mount Canister & Panel Antenna

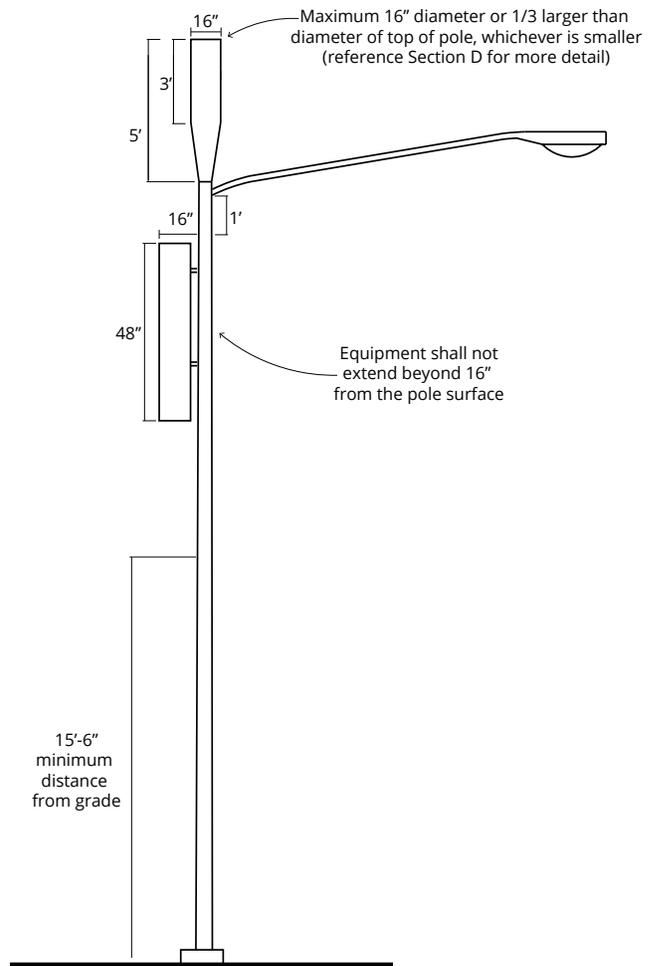


Wood Pole: Side-Mount Canister Antenna

Exhibit D-1. Metal Pole SWF Diagrams



Metal Pole: Panel Antenna



Metal Pole: Top-Mount Canister Antenna

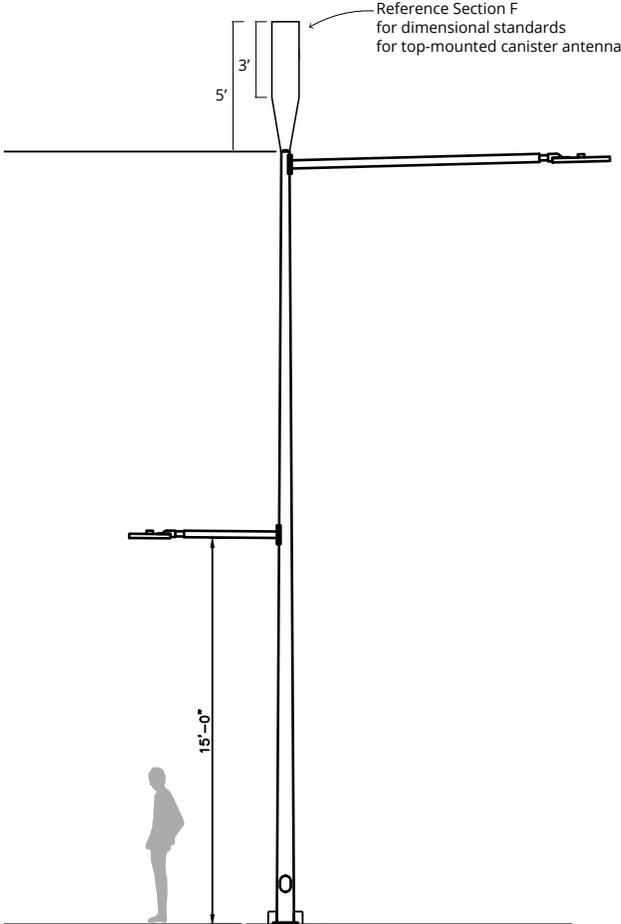
Exhibit F-1. Waterfront Seattle Project Area Map

The area shaded is identified as the Waterfront Seattle Project Area and has supplementary design criteria and standards which apply to Small Wireless Facilities





Exhibit F-2. Waterfront Pole SWF Diagrams



Waterfront Metal Pole: Top-Mount Canister Antenna

Exhibit F-3. Intersection Diagram for Waterfront Seattle Project Area

