City of Commerce
Public Works Department

DESIGN STANDARDS AND GUIDELINES FOR SMALL WIRELESS FACILITIES IN THE PUBLIC RIGHT-OF-WAY

(A) **Facility Installation Types**. All proposals for new Small Wireless Facilities (SWF) and substantial changes to existing SWF within the public right-of-way (PROW) shall be identified as one of the following types, which are ordered by preference:

(1) Installation on existing streetlights; then

(2) Collocations on wooden utility poles developed with existing wireless facilities; then

(3) Installation of new SWF on existing wooden utility poles that currently do not include wireless facilities; then

(4) New standalone purpose-built SWF poles; then

(5) Strand mounted SWF.

(B) **Prohibited Support Structures**. The City prohibits SWF to be installed on the following support structures within the PROW:

(1) Traffic signs, poles, cabinets and other traffic related structures.

(2) Any other support structure (pole or otherwise) that would be considered inappropriate or inadequate for use as a SWF within the City's reasonable discretion and would not result in an effective prohibition of wireless service.

(C) **Location**. All proposed new SWF and changes to existing SWF within the PROW, shall be located as follows:

(1) **Outside Pedestrian Path of Travel**. New SWF and all associated equipment shall not obstruct the public use of the PROW.

(2) **Outside the limited-use Visibility Triangle for Intersections and Driveways**. To enhance pedestrian and vehicle safety, new equipment installed as part of a SWF project shall observe the requirements set forth in the most current editions of the *Caltrans Highway Design Manual* and the *California Manual on Uniform Traffic Control Devices* (CA MUTCD).

(3) **Purpose-Built SWF Pole**. New poles shall be located no closer than 10 feet from the nearest streetlight, utility pole, or purpose-built SWF pole.

(D) **Height.** The height of any SWF must meet the following height limitations, unless otherwise directed in writing by the Public Works Department:

- No greater than 45 feet in one-family or two-family residential zone.

- No greater than 55 feet in any multiple-family residential, office, restricted or limited commercial zone, or mixed-use residential zone.

- No greater than 70 feet in any other commercial, commercial-manufacturing or limited manufacturing zone.

(E) **Accessory Equipment.** Proposed equipment necessary for operation of a SWF shall be identified as either ground mounted, underground or pole-mounted.

(1) **Ground Mounted Accessory Equipment**. All ground mounted accessory equipment shall be installed in accordance with the Design and Aesthetic Standards set forth in Section F, Caltrans specifications, and applicable laws, regulations, ordinances, code sections, conditions, and health and safety standards. Should any conflicts arise between any applicable regulations, the applicant shall request guidance from the Public Works Department.

(2) **Underground Accessory Equipment**. All underground accessory equipment must be installed in an environmentally controlled vault that is load-rated to meet the City's standards and specifications. Underground vaults located beneath a sidewalk must be constructed with a slip-resistant cover. Vents for airflow shall be flush-to-grade when placed within the sidewalk and may not exceed two feet above grade when placed off the sidewalk. Applicants shall not be permitted to install an underground vault in a location that would cause any existing tree to be materially damaged or displaced. Such facilities shall be clearly marked and identified. In accordance with California Government Code Sections 4215 et seq., owners of subsurface installations must join a regional notification center (e.g. Underground Service Alert ["USA"]) or 811, which requires contractors to contact such a regional notification center prior to excavation, facility owners to mark their underground subsurface installations when notified, and sets civil penalties for failure to comply therewith. Prior to construction, Permittee shall contact USA to verify the location of existing subsurface installations.

(3) **Pole-Mounted Accessory Equipment**. All pole-mounted accessory equipment must be installed in a single equipment shroud. All pole-mounted accessory equipment must be installed flush to the pole to minimize the overall visual profile. If any applicable health and safety and/or other regulations prohibit flush-mounted equipment, the maximum separation permitted between the accessory equipment and the pole shall be the minimum separation required by such regulations. All pole-mounted equipment and required or permitted signage must be placed and oriented away from public view. Pole-mounted equipment may be installed behind street, traffic or other signs to the extent that the installation complies with applicable public health and safety regulations. All cables, wires and other connectors must be routed through conduits within the pole, and all conduit attachments, cables, wires and other connectors must be concealed from public view. To the extent that cables, wires and other connectors cannot be routed through the pole, applicants

shall route them through the minimum number and size of external conduits necessary, not to exceed three (3) in quantity or one and a half (1.5) inches in diameter each. All conduits, shrouds, and visible equipment shall be finished or painted to match the underlying support structure.

(F) **Design and Aesthetic Standards.** All facilities must conform to the standards as follows:

(1) **Existing Streetlights**. Applicants who propose to install small cell facilities on an existing City streetlight shall, if necessary, replace the existing streetlight with a new streetlight substantially similar. The new streetlight must meet the City's standards and specifications and must be designed to accommodate wireless antennas and accessory equipment. To mitigate any material changes in the street lighting pattern, the replacement pole shall: (A) be located in the same location as the removed pole, except where prohibited by any applicable laws, or health or safety regulations, or technical limitations, in such cases, the new pole shall be located as close to the existing location as possible; (B) be aligned with the other existing streetlights and/or as determined by the Public Works Department; and (C) include a luminaire at substantially the same height from grade level, and distance from the pole as the luminaire on the removed pole. Unless approved in writing by the City, new Street lighting fixture type and level of lighting shall match existing fixture and lighting level.

(a) **Concealment**. Small Wireless Antennas (SWAs) shall be top-mounted, centered to the pole, and housed within a stealthed radome with a decorative cap and base plate in order to blend in with the underlying streetlight to the extent possible.

(b) **Size**. Maximum size for a single SWA and radome is 24 inches with a 10-inch diameter unless Applicant can demonstrate that there is no technologically feasible design that would fit within these dimensions. Minimizing the size of any concealment elements is fundamental to mitigating any visual impacts. Any radome or concealment element larger than these dimensions will not be considered stealthed.

(c) **Other Equipment**. Remote Relay Units (RRUs) and other equipment required for the operation of the facility shall be the minimum number and size required, and located in the following order of descending preference: (i) within an underground vault; (ii) pole-mounted beneath the radome. Ground mounted equipment may be permitted within the reasonable discretion of the Public Works Department if Applicant can demonstrate that undergrounding or pole mounting such equipment is technically infeasible.

(d) **Color**. The radome and associated equipment shall be painted to match the base color of the pole material it immediately touches.

(e) **Number**. One radome per streetlight maximum. Any number of SWA may be mounted to the interior of the pole or radome, as long as the antennas and concealment elements do not increase the dimensions of the pole or radome or

extend the height beyond the applicable height limitations.

(f) **City Streetlight Style & Location** – For any proposed installation of new City streetlights, Applicant shall contact the Public Works Department for guidance.

(2) **Purpose-Built Small Cell Facility Poles**. New poles shall be located no closer than ten (10) feet from the nearest streetlight, utility pole, or purpose-built SWF pole. Unless otherwise directed by the Public Works Department, in its sole discretion, the new pole must function as a streetlight and appear substantially similar to the City's standards and specifications but designed to accommodate wireless antennas and accessory equipment located immediately adjacent to the proposed location.

(a) **Pole**. Purpose built SWF poles shall match the designated streetlight for that street in material, color, height, and dimensions.

(b) **Concealment**. SWAs shall be centered to the pole and housed within a stealthed radome with a decorative cap and base plate in order to blend in with the underlying streetlight to the extent possible.

(c) **Radar Dome Size**. Maximum size for a radome is 24 inches with a 10-inch diameter unless Applicant can demonstrate that there is no technologically feasible design that would fit within these dimensions. Minimizing the size of any concealment elements is fundamental to mitigating any visual impacts. Any radome or concealment element larger than these dimensions will not be considered stealthed.

(d) **Other Equipment**. RRUs and other equipment required for the operation of the facility shall be the minimum number and size required, and located in the following order of descending preference: (i) within an underground vault; (ii) within the interior of the replacement pole; (iii) pole-mounted beneath the radome. Ground mounted equipment may be permitted within the reasonable discretion of the Public Works Department if Applicant can demonstrate that undergrounding, enclosing the equipment within the pole, or pole mounting such equipment is technically infeasible.

(e) **Color**. The radar dome and associated equipment shall be painted to match the base color of the pole material it immediately touches.

(f) **Number**. One top mounted radome per purpose-built pole. Any number of SWA may be mounted to the interior of the pole or radome, as long as the antennas and concealment elements do not increase the dimensions of the pole or radome or extend the height beyond the applicable height limitations.

(3) **Wooden Utility Poles**. Applicants who propose to install SWF on an existing wood utility pole must install all antennas in a Top-mounted orientation. Side-mounted orientations will only be approved if the applicant demonstrates that a top-mounted configuration would be technically infeasible and must be installed on a stand-off bracket or extension arm and must be concealed within a shroud. Applicants who

propose to install SWF on a replacement wood utility pole must remove and replace the existing wood utility pole with one that is substantially similar in height and diameter, unless the applicant demonstrates that a substantially similar replacement pole would be technically infeasible.

(a) **Orientation**. If top-mounted, SWAs shall be centered to the pole. If side-mounted, the antenna shall be the minimum clearance from the pole required for the operation and maintenance of the facility or required by any applicable Laws or health or safety regulations.

(b) **Concealment**. The antenna shall be housed within a basic radar dome to blend in with other equipment to the extent possible. All cables, wires, and other connectors must be concealed within the side-arm mount or extension arm.

(c) **Size**. Maximum size for a radome is 24 inches with a 10-inch diameter unless Applicant can demonstrate that there is no technologically feasible design that would fit within these dimensions. Minimizing the size of any concealment elements is fundamental to mitigating any visual impacts. Any radome or concealment element larger than these dimensions will not be considered stealthed.

(d) **Other Equipment**. RRUs and other equipment required for the operation of the facility shall be the minimum number and size required and located in the following order of descending preference: i. within an underground vault; ii. pole-mounted beneath the radome. Ground mounted equipment may be permitted within the reasonable discretion of the Public Works Department if Applicant can demonstrate that undergrounding or pole mounting such equipment is technically infeasible.

(e) **Color**. The radar dome and associated equipment shall be painted to match the base color of the pole.

(f) **Number**. There is maximum number of two radomes on a single wooden utility pole.

(4) **Strand Mounted Facilities**. No more than one strand-mounted wireless facility may be installed on any single span between two poles. The Public Works Department shall not approve any ground-mounted equipment in connection with any strand-mounted wireless facility, unless the Public Works Department finds that it is the least intrusive or obstructive alternative. All equipment and other improvements associated with a strand-mounted wireless facility must comply with all applicable health and safety regulations. Strand-mounted wireless facilities shall not exceed one (1) cubic foot in total volume. All strand-mounted equipment shall be finished in a non-reflective grey color. Any accessory equipment mounted on the pole shall be painted and textured to match the underlying pole.

(5) **Landscaping**. New landscaping to replace any existing landscaping displaced during the construction or installation of the facility is required. The use of native,

drought tolerant plant is highly encouraged, however, the type of landscaping shall meet the satisfaction of the City and any requirements specific to the proposed location shall be included in the SWF Permit Conditions of Approval.

(6) **Signage**: Every facility shall, at all times, display signage that accurately identifies the facility owner and provides the facility owner's unique site number, and also provides a local or toll-free telephone number to contact the facility owner's operations center. No facility may display any other signage or advertisements unless: 1) expressly allowed by the City in a written approval, 2) recommended under Federal Communications Commission (FCC) regulations, or 3) required by law or permit condition.

(G) **Additional Requirements.**

(1) **Backup or Standby Power Sources and Generators**. The City may not approve any fossil-fuel powered backup power sources or generators unless the applicant demonstrates that the facility cannot feasibly achieve its power needs with batteries, fuel cells or other similarly non-polluting, low noise-level means. However, temporary generators may be allowable in times of emergency and above-ground ports to plug in such generators are permitted.

(2) **Noise**. All transmission equipment and other equipment (including those without limitation air conditioners and sump pumps) associated with the facility must not emit sound that exceeds the applicable limit established in Chapter 19.19.160 of the Commerce Municipal Code.

(3) **Lights**. Small wireless facilities shall not include any lights, not including streetlights, that would be visible from publicly accessible areas, except as may be required under Federal Aviation Administration ("FAA"), FCC, or other applicable regulations for health and safety. All equipment with lights (such as indicator or status lights) must be installed in locations and within enclosures that mitigate illumination impacts visible from publicly accessible areas. The provisions in this subsection shall not be interpreted or applied to prohibit installations on streetlights or luminaires installed on new or replacement poles as may be required under this Policy.

(4) **Obstructions: Public Safety**. SWF and any associated equipment or improvements shall not physically interfere with or impede: (A) worker access to any above-ground or underground infrastructure for traffic control, streetlight or public transportation, including without limitation any curb control sign, parking meter, vehicular traffic sign or signal, pedestrian traffic sign or signal, or barricade reflectors; (B) access to any public transportation vehicles, shelters, street furnishings, or other improvements at any public transportation stop; (C) worker access to above-ground or underground infrastructure owned or operated by any public or private utility agency; (D) access to any fire hydrant or water valve; (E) access to any doors, gates, sidewalk doors, passage doors, stoops or other ingress and egress points to any building appurtenant to the rights-of-way; or (F) access to any

fire escape.

(5) **Underground Utility Connections**. All cables and connectors for telephone, data backhaul, primary electric and other similar utilities must be routed underground where undergrounding of utilities is currently required. Conduits must be large enough to accommodate future collocated wireless facilities. Undergrounded cables and wires must transition directly into the pole base without any external doghouse. All cables, wires and connectors between the underground conduits and the antennas and other accessory equipment shall be routed through and concealed from view within: (A) internal risers or conduits if on a concrete, composite, or similar pole; or (B) a cable shroud or conduit mounted as flush to the pole as possible if on a wood pole or other pole without internal cable space.

(6) **Spools and Coils**. To reduce clutter and deter vandalism, excess fiber optic or coaxial cables shall not be spooled, coiled or otherwise stored on the pole outside equipment cabinets or shrouds.

(7) **Electric Meters**. Small wireless facilities shall use flat-rate electric service or other method that obviates the need for a separate above-grade electric meter. If flat-rate service is not available, applicants may install a ground-mounted electric meter pedestal. The Public Works Director/City Engineer shall not approve a separate ground-mounted electric meter pedestal unless all other options are technically infeasible, including locating equipment underground, and the proposed pedestal will not be located in any sidewalk areas and within a suitable parkway.

(8) **Code Compliance**. Applicant shall design and maintain all facilities in compliance with all applicable Federal, State and local laws, codes, regulations, ordinances, conditions, or other rules.

(9) **Notices and Change of Ownership.** All notices herein must be in writing and, unless otherwise provided herein, shall be delivered by certified mail, return receipt requested or by commercial courier, provided the courier's regular business is delivery service and provided further that it guarantees delivery to the addressee by the end of the next business day following the courier's receipt from the sender. Should the City or Permittee have a change of address, or change of ownership, the other Party shall immediately be notified in writing of such change, provided, however, that each address for notice must include a street address and not merely a post office box. All notices, demands or requests between the Parties shall be given to the other Party addressed as follows:

City:
City of Commerce
ATTN: Public Works Department
2535 Commerce Way
Commerce, CA 90040
Phone: (323) 722-4805

Permittee:

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Notice shall be effective upon actual receipt or refusal as shown on the receipt obtained pursuant to the foregoing.