

IN THE CITY COUNCIL OF THE CITY OF LIVERMORE, CALIFORNIA

**A RESOLUTION ADOPTING DESIGN GUIDELINES FOR WIRELESS FACILITIES
PURSUANT TO LIVERMORE DEVELOPMENT CODE SECTION 6.02.100**

Livermore Development Code section 6.02.100 establishes the rules and procedures by which the City reviews permit applications for wireless facilities. In particular, Livermore Development Code subsections 6.02.100.E-F contain general provisions for wireless facilities location and design, and authorizes the City to adopt more detailed design guidelines by resolution. The Community Development Department has developed detailed design guidelines, which are attached to this resolution as Exhibit A and incorporated herein by this reference.

On October 8, 2018, the Livermore City Council held a duly noticed public hearing to consider public testimony about the detailed design guidelines. The Livermore City Council finds the detailed design guidelines consistent with the provisions and intent in the General Plan, Livermore Development Code section 6.02.100, and other applicable provisions in the Livermore Development Code.

The Livermore City Council finds the detailed design guidelines will protect and promote public health, safety and welfare, and also balance the benefits that flow from robust, advanced wireless services with the City's local values, which include without limitation the aesthetic character of the City, its neighborhoods and community.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Livermore adopts these design guidelines for wireless facilities pursuant to Livermore Development Code section 6.02.100.J, attached hereto as Exhibit A.

BE IT FURTHER RESOLVED by the City Council of the City that the passage of the design guidelines for wireless facilities in conjunction with the amended wireless communication facilities ordinance is not a project according to the definition in the California Environmental Quality Act and, therefore, is not subject to the provisions requiring environmental review.

On motion of Council Member Carling, seconded by Council Member Spedowfski, the foregoing resolution was passed and adopted on October 8, 2018, by the following vote:


AYES: Council Members Carling, Coomber, Spedowfski, Vice Mayor Woerner,
Mayor Marchand
NOES: None
ABSENT: None
ABSTAIN: None

ATTEST: 

Sarah Bunting
City Clerk

Date: October 9, 2018

APPROVED AS TO FORM:



Catrina Fobian
Assistant City Attorney

Exhibit A – Design Guidelines for Wireless Communication Facilities

EXHIBIT A

CITY OF LIVERMORE DESIGN GUIDELINES FOR WIRELESS FACILITIES

- A. **Authorization.** Pursuant to Livermore Development Code section 6.02.100.F.3, the City Council adopts this resolution to provide design guidelines for wireless facilities consistent with the generally applicable design regulations in Livermore Development Code sections 6.02.100.F. The design guidelines are intended to clarify the aesthetic and public safety goals and standards in Livermore Development Code section 6.02.100 for City staff, applicants and the public.
- B. **Defined Terms.** The abbreviations, phrases, terms and words used in this Resolution will have the meanings assigned to them in Livermore Development Code section 6.02.100.B unless context indicates otherwise.
- C. **Applicability and Exemptions.** Except as provided in Livermore Development Code section 6.02.100.C, this Resolution shall be applicable to all applications and requests for authorization to construct, install, attach, operate, collocate, modify, reconstruct, relocate or otherwise deploy wireless facilities within the City's jurisdictional and territorial boundaries, on private property and within the public rights-of-way.
- D. **Design Guidelines.** In addition to the development standards in Livermore Development Code section 6.02.100.F, all new wireless facilities and collocations or modifications that would substantially change existing wireless facilities must conform to the following design guidelines, as applicable.
1. **Freestanding Wireless Facilities on Private Property.**
 - a. **General Standards.**
 - i. **Tower-Mounted Equipment.** All tower-mounted equipment must be mounted as close to the vertical support structure as possible to reduce its overall visual profile. Applicants must mount non-antenna, tower-mounted equipment (including, but not limited to, remote radio units/heads, surge suppressors and utility demarcation boxes) directly behind the antennas to the maximum extent feasible. All tower-mounted equipment, cables and hardware must be painted with flat colors subject to the approval authority's prior approval.
 - ii. **Ground-Mounted Equipment; Shelters.** All ground-mounted equipment must be concealed underground or within an existing or new structure, opaque fences or other enclosures subject to the approval authority's prior approval. The approval authority may require additional concealment elements as the approval authority finds necessary to blend the ground-mounted equipment and other improvements into the natural and/or built environment.

iii. **Concealment.** All freestanding wireless facilities must be concealed to the maximum extent feasible with design elements and techniques that mimic or blend with the built and natural surrounding environment and adjacent uses. If a camouflaging opportunity does not exist, the new freestanding facility shall be as slim as structurally possible and painted a medium, flat gray color, unless the review authority determines another color would be more harmonious with the surroundings. When an imitation tree-pole is proposed, it must match the appearance of the natural trees in the immediate vicinity in type, shape, size and color, as much as feasible. The amount of branches and foliage must be of sufficient density to effectively screen the antennas and other pole mounted equipment. Ground mounted equipment, pedestals or equipment cabinets shall have, or be coated with, anti-graffiti films or coatings.

b. **Monopines.**

i. **Shape and Branching.** Monopines shall be gradually tapered from bottom to top to resemble the natural conical pine-tree shape, with shorter branches at the top and wider branches at the bottom. All monopines shall include a “crown” or “topper” installed above the monopole to create a natural point at the top. Branches shall begin at no greater than 15 feet above ground level and maintain at least 3.5 branches per vertical foot when averaged between the bottom-most branch and the highest point on the monopole (excluding any “crown” or “topper” installed above the monopole).

ii. **Bark Cladding.** The entire monopole shall be fitted with faux-pine bark cladding, painted or colored with browns or other appropriate earth tones to mimic natural pine bark.

iii. **Equipment Concealment Techniques.** All antennas, accessory equipment, cross arms, hardware, cables and other attachments to the monopine must be painted or colored with a flat greens, browns or other appropriate earth tones to blend into the faux pine branches. All antennas, remote radio units, tower-mounted amplifiers and other similar equipment larger than one cubic foot shall be fitted with a faux-pine “sock” with faux-pine needles. No tower-mounted equipment shall be permitted to protrude beyond the branch canopy such that it would materially alter the tapered pine shape.

iv. **Concealment Material Selection and Approval.** All materials and finishes used to conceal the monopine shall be subject to prior approval by the Planning Division. Applicants shall use only high-quality materials to conceal the wireless facility. The applicant shall use color-extruded plastics for elements such as the faux-pine needles and faux-bark

cladding to prolong the like-new appearance and reduce fading caused by exposure to the sun and other weather conditions.

2. **Building-Mounted Wireless Facilities on Private Property.**

- a. **Preferred Concealment Techniques.** All applicants should, to the extent feasible, propose new non-tower wireless facilities that are completely concealed and architecturally integrated into the existing facade or rooftop features with no visible impacts from any publicly accessible areas at ground level (examples include, but are not limited to, antennas behind existing parapet walls or facades replaced with RF-transparent material and finished to mimic the replaced materials). Alternatively, when integration with existing building features is not feasible, the applicant should propose completely concealed new structures or appurtenances designed to mimic the support structure's original architecture and proportions (examples include, but are not limited to, cupolas, steeples, chimneys and water tanks). Facilities must be located behind existing parapet walls or other existing screening elements to the maximum extent feasible.





- b. **Facade-Mounted Equipment.** When wireless facilities cannot be placed behind existing parapet walls or other existing screening elements, the approval authority may approve facade-mounted equipment in accordance with this subsection. All facade-mounted equipment must be concealed behind screen walls and mounted as flush to the facade as practicable. The approval authority may not approve “pop-out” screen boxes unless the design is architecturally consistent with the original building or support structure. Except in manufacturing zones, the approval authority may not approve any exposed facade-mounted antennas, including but not limited to exposed antennas painted to match the facade. To the extent feasible, facade-mounted equipment must be installed on the facade(s) along the building frontage that is the least prominent or publicly visible.



- c. **Rooftop-Mounted Equipment.** All rooftop-mounted equipment must be screened from public view with concealment measures that match the underlying structure in proportion, quality, architectural style and finish. The approval authority may approve unscreened rooftop equipment only when it expressly finds that such equipment is effectively concealed due to its low height and/or setback from the roofline.



- d. **Ground-Mounted Equipment; Shelters.** All ground-mounted equipment must be concealed underground or within an existing or new structure, opaque fences, building interior equipment room, or

other enclosures subject to the approval authority's prior approval. The approval authority may require additional concealment elements as the approval authority finds necessary to blend the ground-mounted equipment and other improvements into the natural and/or built environment.

3. **Right-of-Way Wireless Facilities.**

a. **General Design Standards.**

- i. **Concealment.** Wireless facilities in the right-of-way must be concealed to the maximum extent feasible with design elements and techniques that mimic or blend with the underlying support structure, surrounding environment and adjacent uses. In addition, wireless facilities in the rights-of-way may not unreasonably subject the public use, for any purpose including expressive or aesthetic purposes, to inconvenience, discomfort, trouble, annoyance, hindrance, impediment or obstruction.
- ii. **Overall Height.** Wireless facilities in the public rights-of-way may not exceed either (a) the minimum separation from supply lines required by CPUC General Order 95, as may be amended or superseded, plus four feet or (b) four feet above the height of the existing support structure. To the extent that, in the approval authority's discretion, the four-foot height allowance would cause the applicant's wireless facility to be materially incompatible with the overall height or appearance of the surrounding support structures in the public right-of-way, the approval authority may require the applicant to propose an alternative design (such as mounting the antenna(s) on the side of the pole) or location to the extent technically feasible.
- iii. **Encroachments over Private Property.** Wireless facilities within the public rights-of-way may not encroach onto or over any private property without the property owner's express written consent.
- iv. **Public Safety.** All wireless facilities shall not interfere with access to a fire hydrant, fire station, fire escape, water valve, underground vault, valve housing structure or any other public health or safety facility. No person shall install, use or maintain any facilities, which in whole or in part rest upon, in or over any public right-of-way, when such installation, use or maintenance endangers or is reasonably likely to endanger the safety of persons or property, or when such site or location

is used for public utility purposes, public transportation purposes or other governmental use, or when such facilities unreasonably interfere with or unreasonably impede the flow of pedestrian or vehicular traffic including any legally parked or stopped vehicle, the ingress into or egress from any residence or place of business, the use of poles, posts, traffic signs or signals, hydrants, mailboxes, permitted sidewalk dining, permitted street furniture or other objects permitted at or near the location where the wireless facilities are located.

b. **Pole-Mounted Wireless Facilities.**

i. **Support Structures.**

1. **Preferred Support Structures.** New wireless facilities must be installed on existing or replacement support structures whenever feasible. The approval authority may require an existing support structure to be replaced if the proposed wireless facility on a replacement support structure would be more consistent with the provisions and objectives in these guidelines. Replacement support structures must be substantially similar to the original support structure in material, size, diameter, shape, functionality and appearance.
2. **Discouraged Support Structures.** The approval authority shall not approve any new, non-replacement support structures unless: (1) the applicant demonstrates that above-ground support structures within 500 feet from the proposed site location either do not exist or are not technically feasible or potentially available to the applicant; or (2) the approval authority specifically finds that a new, non-replacement support structure would be more aesthetically desirable and more consistent with the provisions and objectives in these design guidelines than installations on existing or replacement structures near the project site. The approval authority shall have the discretion to require that any new support structure must be: (a) concealed as decorative street furniture and/or (b) a streetlight that conforms to the City's streetlight standards and specifications, which the City shall maintain for street illumination and public safety purposes.
3. **Prohibited Support Structures.** New wireless facilities shall not be installed on any street signs or decorative streetlights, except that decorative streetlights may be replaced as provided in these

guidelines. The approval authority shall not approve any wireless facility proposed to be installed on a traffic control pole unless the Director finds, in consultation with other City departments or agencies, that the traffic control pole has sufficient capacity to support the wireless facility.

ii. **Antennas.**

1. **Installation Preferences.** To the extent feasible, antennas must be installed above the pole. Side-mounted antennas installed on stand-off brackets may be approved only when the applicant demonstrates that it would be technically infeasible to install the antennas above the pole. Antennas installed on wooden cross arms are prohibited.
2. **Pole-Top Antennas.** Antenna(s) installed above the pole must be concealed within a single, canister-style shroud (or radome) that tapers to the pole. The cable connections, antenna mount and other hardware must be concealed within the antenna shroud or other cable and mounting bracket shroud. GPS antennas, data transport or backhaul antennas and other similar antennas must be placed within the antenna shroud or otherwise concealed from public view through other techniques. The maximum vertical separation between the antenna and the pole shall be the minimum separation required by applicable health and safety regulations (such as CPUC General Order 95).
3. **Side-Mounted Antennas.** Side-mounted antennas on a stand-off bracket must be concealed within a shroud. All cables, wires and other connectors must be concealed within the side-arm mount or other extension arm(s) to the extent feasible. The maximum horizontal separation between the antenna and the pole shall be the minimum separation required by applicable health and safety regulations (such as CPUC General Order 95).
4. **Antenna Volume.** Each antenna associated with a wireless facility shall not exceed three (3) cubic feet in volume, and the cumulative volume for all antennas associated with a wireless facility shall not exceed six (6) cubic feet in total volume. The volume calculation shall include any shroud, radome or other concealment device used in connection with the antenna.

iii. **Accessory Equipment.**

1. **Installation Preferences.** All applicants should, to the extent feasible, install non-antenna accessory equipment according to the following preferences, ordered from most preferred to least preferred: (a) underground; (b) base-mounted; (c) pole-mounted; (d) ground-mounted.

2. **Undergrounded Accessory Equipment.** To conceal the equipment to the maximum degree feasible, applicants must install all accessory underground in any area in which the existing utilities are primarily located underground. In all other areas, applicants must install all equipment (other than the antenna) underground when the approval authority finds substantial evidence in the written record that the above-ground equipment would incommode the public's use of the rights-of-way. When determining whether to require undergrounded equipment, the approval authority shall take into account whether and to what extent there are existing above-ground utilities in proximity to the proposed site location. 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. Unless the applicant can demonstrate a severe economic hardship, mere additional expense to install and maintain an underground equipment enclosure does not exempt an applicant from the requirements in this subsection.



3. **Base-Mounted Accessory Equipment.** Base-mounted equipment shrouds or enclosures shall be integrated into the support structure, reasonably proportional in size and consistent with the underlying support structure's design and finishes. All cables, wires and other connectors routed between the antenna and base-mounted equipment must be concealed from public view.



4. **Pole-Mounted Accessory Equipment.** All pole-mounted equipment must be installed flush to the pole

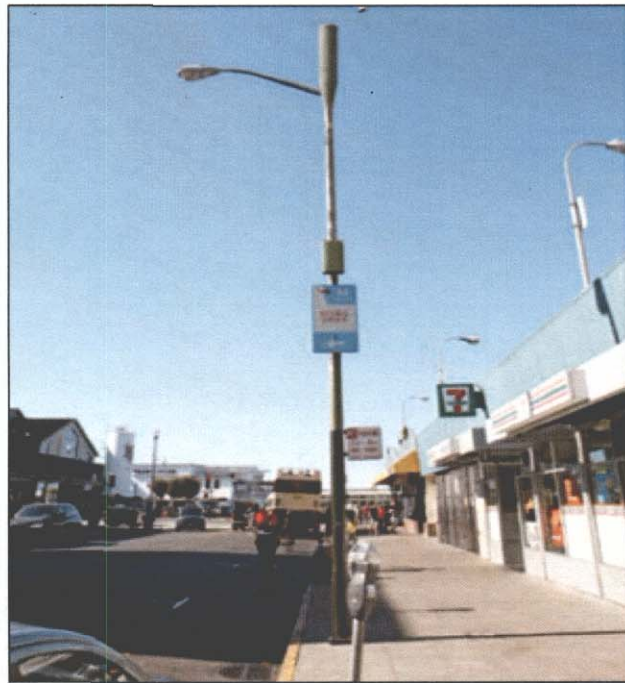
to minimize the overall visual profile. If any applicable health and safety regulations prohibit flush-mounted equipment, the maximum separation between the equipment and the pole shall be the minimum separation required by such regulations. All pole-mounted equipment and required or permitted signage must be placed and oriented in a manner that minimizes visibility from adjacent sidewalks and structures to the extent feasible. Pole-mounted equipment may be installed behind existing or new street, traffic or other signs subject to the approval authority's discretion. All cables, wires and other connectors must be routed through conduits within the pole whenever possible, and all conduit attachments, cables, wires and other connectors must be concealed from public view to the extent feasible. To the extent that cables, wires and other connectors cannot be routed through the pole, applicants shall route them through a single external conduit or shroud that has been finished to match the underlying support structure. Publicly visible spools, service loops, excess cable or fiber on aerial strand and "snow shoes" on the support structure are prohibited.

5. **Ground-Mounted Accessory Equipment.** To the extent that the equipment cannot be placed in the City's more-preferred locations, applicants may be permitted to install the accessory equipment within a single, low-profile shroud or cabinet in a location that does not obstruct pedestrian or vehicular traffic. All ground-mounted equipment must be placed in the least conspicuous location available within a reasonable distance from the pole. The approval authority may condition approval on new or enhanced landscape features to conceal ground-mounted equipment. The equipment shroud or cabinet must contain all the equipment associated with the facility other than the antenna. All cables and conduits associated with the equipment must be concealed from view, routed directly through any concrete, metal or composite pole and undergrounded between the pole and the ground-mounted cabinet. The approval authority may require the applicant to incorporate concealment elements into the proposed design. Concealment may include, but shall not be limited to, public art displayed on the cabinet, installing a replacement pole with a decorative base for equipment concealment, strategic placement in less obtrusive locations and placement within existing or replacement street furniture such as a bus

stop bench or trash bin specifically designed to conceal transmission equipment.



- c. **Illustrative Examples.** The following photographs depict wireless facility designs that the City may deem appropriate in preferred locations. These examples are illustrative only, and may not be appropriate in all cases.







PROPOSED
WIRELESS ANTENNA

PROPOSED SUPPORT EQUIPMENT