

# City of Santa Fe Springs Wireless Design Guidelines

## Design Guidelines for Facilities Outside of the Rights-of-Way

### General Requirements

1. All facilities shall be stealth.
2. All facilities shall be set back from the street as far as possible. In no instance may a site be located within a required setback area.
3. Antennas and shrouds shall not dominate the element they are placed on. This is especially relevant to vertical elements such as light standards, flagpoles, and similar fixtures.
4. Cables and cable trays shall be completely hidden from view. All cables should be routed internally or buried underground. Exterior cable trays designed to replicate an existing vertical element may be considered on a case by case basis. Standard cable trays painted and textured to match an existing building do not qualify as hidden.
5. Equipment and equipment areas shall be completely hidden. The associated equipment should be completely concealed inside an existing structure, inside rooftop screening, inside solid walls or fences, or inside an underground vault to hide or blend them into the surrounding area.
6. Anti-graffiti finishes shall be applied to all solid fences, walls, and gates. Employ design techniques to reduce the opportunities for graffiti.
7. Landscaping used to complement faux vegetation should remain for the life of the permit, even if it is not located within the applicant's lease area. Applicants should coordinate with property owners to ensure that required landscaping is not removed, and that it is properly maintained. Landscaping on premises outside the carrier's control is not considered to provide concealment.

### Architecturally Designed Stand-Alone Towers

1. Architecturally designed stand-alone towers shall be enclosed on all sides and conceal antennas completely within them.
2. Design towers to architecturally blend with the setting. This guideline is not intended to preclude towers from being artistically treated, or from being community focal points as appropriate.
3. Towers should be of a quality design, with architectural variation, including varied planes, textures, colors, and treatments. A simple box is not sufficient.
4. Towers should be built at the lowest height possible.
5. A separate sign permit may be required for any sign designed to conceal antennas.
6. The WTF CUP permit process cannot be used to request signage that does not follow Municipal Code standards for signage.
7. Clock towers should have a functioning clock at all times.

### Athletic Field Lights

1. Athletic field light sites should replicate the design, diameter and proportion of the vertical element they are intending to imitate.
2. Mount antennas as close as possible to the pole, below the light source and within an antenna shroud no more than 38 inches in diameter.
3. Antenna shrouds should conceal antennas and any associated components. No wireless telecommunications facility component except the antenna shroud should be visibly mounted to a pole.
4. Antenna shroud length may be one-third of the overall pole height.
5. Paint antennas and mounting components the same color as the pole.
6. All cables and conduit to and from the light standard are to be routed from the caisson up into the pole. "Doghouse" cable coverings may be permitted to remain in limited circumstances where they are minimally visible.
7. If multiple carriers are present on a site, their facilities should also be complementary in size, shape, and style.

### Buildings and Rooftops

1. Building or rooftop sites shall match the style, colors and textures of the existing building (including features such as reveals, windows, tapers, cornices, tiling, roofing materials, and trim) and should be designed as a feature commonly found on that type/style of building.
2. Facilities should completely contain all wireless telecommunications facility components within the rooftop structure, the building, or the equipment enclosure.
3. Integration into existing rooftop elements is preferred over creating new rooftop elements, unless to do so would defeat concealment or be otherwise undesirable.
4. Rooftop elements should generally be set back from the roof edge at least as far as they are tall; however, this may not be required in certain contexts.
5. Equipment located on the roof of an existing structure shall be set back or located to minimize visibility, especially from the public right-of-way or public places.
6. Unconcealed rooftop installations such as lattice towers, monopoles, rack mounts, "popsicle sticks", and unconcealed façade mounts are prohibited.
7. Fiberglass Reinforced Plastic (FRP) or RF transparent materials can be used to screen and integrate a wireless telecommunications facility with an existing building. FRP is subject to the following guidelines regardless of location:
  - No visible transition lines between the old and new materials, colors, and/or surfaces are permitted. Specifically, FRP should be painted and textured to match adjacent surfaces exactly. If necessary, these surfaces should be repainted to retain consistency. This may necessitate painting an entire façade.
  - Rooftop additions should be concealed on all sides.
  - New architectural features such as columns, pilasters, corbels, or other ornamentation that conceal antennas may be used if it complements the architecture of the existing building.
  - Faux chimneys and similar additions should include architectural details and trim, if such details exist on the building, or if it improves the appearance of the wireless telecommunications facility.

- Architectural details (including, but not limited to flashing, horizontal/vertical trim, reveals, texture changes, and other similar building elements) should match the adjacent building face. Site-specific alternatives may be considered if they can be justified.

#### Faux trees:

1. Faux trees shall be of a type and size to conceal antennas completely within the faux tree canopy while appearing natural.
2. Faux trees should be used where there are existing trees of a similar height, species, and appearance.
3. Faux trees should replicate the shape, structure, and color of live trees, and should be designed to look like the tree species they are intending to replicate. Branching and equipment placement should not make the tree look top-heavy.
4. Faux trees shall appear healthy, full and vigorous.
5. Faux trees should be designed with a minimum of four branches per foot for full density coverage with limited spacing between the branches, unless 3D models justify lower branch counts.
6. There should be no gaps in branch/frond coverage. All branch/frond ports should be used for branches/fronds. Branches/fronds should blend down the tree with no abrupt transitions.
7. All branches/fronds at the antenna level shall extend a minimum of 24 inches beyond the entire vertical length of the antennas for maximum concealment. Branches/fronds shall extend between each antenna. Antenna socks do not count toward this requirement.
8. Socks are mandatory for all antennas and associated components located on a faux tree.
9. Monopalms and monoecalyptus trees are preferred. If a monopine is selected, the "Nighmist" design by Cell Trees, or equivalent, is preferred.
10. Monopalms shall employ frond tips.
11. Monopines shall be larger at the bottom and progressively taper to create a pyramid of soft-looking foliage.
12. Live trees shall be planted in close proximity to faux trees. Two live palm trees shall be planted for each monopalm, one live tree shall be planted for all other types of faux tree facilities.
13. Faux tree poles shall be covered with faux bark. The faux bark shall be textured and colored to resemble true tree bark.
14. No exposed mounting apparatus may remain without the associated antennas; even if an antenna was approved at that location but not installed.
15. A building permit is required for any re-branching of faux trees.

#### Flagpoles

1. Flagpole sites shall replicate the design, diameter and proportion of the vertical element they are intending to imitate and shall maintain a tapered design.
2. Flagpoles 30 feet or less in height should not exceed nine (9) inches in diameter.
3. Consideration will be given to flagpoles higher than 30 feet that exceed the nine (9) inch diameter limitation if it can be demonstrated that the flag pole is located in

a suitable environment and appropriately tapered to maintain the appearance of an authentic flag pole.

4. Antennas and any pole-mounted equipment shall be enclosed within the flagpole. Flagpoles may not have an antenna shroud.
5. All cables and conduit to and from the light standard are to be routed from the caisson up into the pole. "Doghouse" cable coverings may be permitted to remain in limited circumstances where they are minimally visible.
6. Flagpoles shall fly a flag and comply with the U.S. Flag Code at all times.

#### Parking Lot or Pedestrian Path Light Standards

1. Light standards shall replicate the design, diameter and proportion of the vertical element they are intending to imitate. If there are other non-wireless telecommunications facility light standards on site, they should be replicated as closely as possible.
2. Use only in parking lots or along pedestrian paths. Not to be used to gain height in areas where a light standard is unnecessary.
3. New light standard designs should be consistent and compatible with the surrounding area.
4. Match the design, material and color of nearby light poles.
5. Replicate the height of existing poles.
6. If more than one pole is used, space appropriately throughout the property. Consideration should be given to existing vertical elements before proposing new light pole(s).
7. All cables and conduit to and from the flag pole should be routed from the caisson through the pole to the antennas. "Doghouse" cable coverings are not permitted.
8. All antennas should be concealed inside an antenna shroud of a consistent width and compatible with the diameter of the pole, or concealed within the pole.
9. Light fixtures should be sized and balanced with the design and height of the overall light pole.

### **Design Guidelines for Small Cell Facilities within the Rights-of-Way**

#### General Requirements

1. In no instance can a small cell facility exceed fifty (50) feet in height.
2. Small cell facilities are not permitted on traffic signal poles.
3. No portion of a small cell facility shall interfere with lighting, pedestrian or vehicular clearances, or sight lines for traffic signs, signals, or intersection sight distance.
4. No signage, message or identification other than the manufacturer's identification or identification required by governing law is allowed on any antenna, and any such signage on equipment enclosures shall be of the minimum amount possible to achieve the intended purpose.
5. Antennas and related equipment cannot be illuminated except for security reasons, or if required by a federal or state authority, or unless approved as part of a concealment element.

6. Antennas and associated equipment enclosure(s) shall be sited and installed in a manner which minimizes the visual impact on the streetscape either by fully concealing the antenna(s) and associated equipment within the pole or through a concealment element which provides an equivalent or greater impact reduction.
7. The use of a pole or strand for the siting of a small cell facility shall be considered secondary to the primary function of the pole or strand. If the primary function of a pole or strand serving as the host site for a small cell facility becomes unnecessary, the pole or strand shall not be retained for the sole purpose of accommodating the small cell facility and the small cell facility and all associated equipment shall be removed.
8. The design criteria as applicable to small cell facilities described herein shall be considered concealment elements and such small cell facilities may only be expanded upon an eligible facilities request described in Chapter 157 of the Municipal Code, when the modification does not defeat the concealment elements of the facility.
9. These design standards are intended to be used solely for the purpose of concealment and siting. Nothing herein shall be interpreted or applied in a manner which dictates the use of a particular technology. When strict application of these requirements would unreasonably impair the function of the technology chosen by the applicant, alternative forms of concealment or deployment may be permitted which provide similar or greater protections from negative visual impacts to the streetscape.

#### Utilities

1. Small cell facilities shall have separate electrical conduit and fiber.
2. Underground electrical meters are required for all small cell facilities in the rights-of-way.

#### Antennas

1. Pole top canister type antennas mounted to the top of a pole are the preferred antenna type. Shrouding shall be used to conceal cable connections and transitions to the pole to create a uniform look, as if it is an extension of the pole. Pole top canisters shall not exceed three (3) cubic feet in volume.
2. Omni directional "whip" antennas mounted to the top of a pole are the next preferred antenna type. Shrouding shall be used to conceal cable connections and transitions to the pole to create a uniform look, as if it is an extension of the pole. Whip antennas shall not exceed three (3) cubic feet in volume.
3. Panel antennas are not preferred but may be approved if pole top canister or whip antennas cannot be used. Panel antennas shall be cylindrical in shape or shrouded in a cylinder or three-sided banner to conceal connections and cabling. Panel antennas shall be mounted as close to the pole as possible to minimize visual impact. Panel antennas shall not exceed three (3) cubic feet in volume.
4. Antennas mounted on top of an existing pole may not extend more than five feet (5) above the height of the existing pole, inclusive of all shrouding or screening. Antennas shall be integrated into the pole design so that they appear as a continuation of the original pole and shall be shrouded or screened to blend with

the pole. Canister type antennas do not require shrouding. Antennas and shrouding shall match the diameter of the pole to the greatest extent feasible. In no instance may the outer diameter exceed sixteen (16) inches. All cabling and mounting hardware/brackets from the bottom of the antenna to the top of the pole shall be fully concealed and integrated with the pole.

5. Antennas and all shrouding or screening shall be colored/painted to match the color of the surface on which they are attached.
6. Crossarm/side-arm/mast arm/stand-off mounts are prohibited on street light poles.
7. A side-arm canister antenna may be considered for a wooden pole, so long as the inside edge of the antenna is no more than twelve (12) inches from the surface of the wooden pole. All cabling and mounting hardware/brackets shall be concealed either within the canister antenna or within a sleeve between the antenna and the wooden pole.

#### Ancillary Equipment

1. Equipment for small cell facilities must be concealed within an underground vault, inside the pole, or within an enclosure mounted on the pole or strand. The equipment must be placed in the smallest enclosure possible for the intended purpose. The applicant may place the equipment enclosure behind any banners or road signs that are on the pole, if such banners or road signs are allowed by the pole owner.
2. Equipment may also be installed within an existing grade level equipment cabinet or enclosure, provided that there is no expansion of the existing cabinet or enclosure and no additional cabinets are added.
3. An exception in accordance with § 157.05 shall be required to place a new equipment cabinet or enclosure mounted at grade.
4. Pole mounted equipment enclosures shall be installed as high on the pole as possible. In no instance may any portion of an enclosure be less than ten (10) feet above ground. An exception may be made in the event an existing sign is used as a concealment element technique, where appropriate.
5. To the greatest extent possible, enclosures shall be placed so as to appear as an integrated part of the pole or behind banners or signs.
6. Pole mounted equipment enclosures shall match the diameter of the pole to the greatest extent feasible. In no instance may the width or depth exceed two (2) times the diameter of the pole, as measured at the point where the equipment enclosure will be mounted. If one dimension is two (2) times the diameter of the pole, the other dimension shall not exceed the diameter of the pole. For example, an equipment enclosure on a 10-inch diameter pole shall not exceed:
  - 20" wide by 10" deep
  - 16.67" wide by 12" deep
  - 15" wide by 13.33" deep
  - 14.14" wide by 14.14" deep
7. The length of pole mounted equipment enclosures shall not exceed one-third of the overall pole height, excluding the height of antennas mounted on top of a pole.
8. Ancillary equipment shall be mounted as close to the pole as possible:

- On wooden poles, all related equipment, excluding cabling, shall be mounted no more than four (4) inches from the surface of the pole, unless a further distance is technically required, and is confirmed in writing by the pole owner.
  - On non-wooden poles, all related equipment shall be mounted flush onto the pole.
9. Equipment enclosures and all ancillary equipment, cables and conduit shall be colored/painted to match the color of the surface on which they are attached.
  10. No equipment shall produce noise in violation of §155.424 of the Municipal Code.
  11. Generators are prohibited within the rights-of-way.

### Cabling

1. The number of conduit, cables, wires and fiber shall be minimized to the number technically necessary to accommodate the small cell.
2. For non-wooden poles, all conduit, cables, wires and fiber must be routed internally in the pole. Separate conduit is required to isolate the small cell facility cables from the light pole cables.
3. For wooden poles, cables, wires and fiber shall be neatly installed and concealed within conduit, ducting, or shrouds. The conduit shall be colored or painted to match the pole. Conduit shall be mounted flush to the wooden pole.
4. Connections at the antenna and ancillary equipment shall be concealed within the pole structure and/or shrouds, canisters or sleeves.

### Replacement Poles

1. Any replacement pole shall substantially conform to the design of the pole it is replacing or the neighboring pole design standards utilized within the contiguous right-of-way.
2. Replacement poles shall be located as near as possible to the existing pole with the requirement to remove the abandoned pole.
3. Replacement poles shall comply with the American with Disabilities Act (ADA), city construction and sidewalk clearance standards, and state and federal regulations in order to provide a clear and safe passage within the rights-of-way.
4. Replacement light poles shall comply with the City's lighting requirements and match the existing streetlight aesthetics.
5. Replacement light poles shall have a base of no greater than twenty (20) inches in diameter. The base shall taper off to match the diameter of neighboring poles.
6. It is recommended that ancillary equipment be contained within the base of a replacement light pole.
7. Antennas and shrouding shall match the diameter of the pole to the greatest extent feasible. In no instance may the outer diameter exceed sixteen (16) inches.
8. Replacement wooden poles shall match the approximate color and diameter of the replaced pole or shall be the standard new wooden pole used by the pole owner.
9. A wooden pole may be replaced with a taller pole, provided that the replacement pole may not extend more than five (5) feet above the height of the existing pole, or the minimum additional height necessary for adequate clearance from electrical wires. The pole owner shall confirm in writing that such height extension is the

minimum extension possible to provide sufficient separation and/or clearance from electrical and wireline facilities.

#### New Poles in the Rights-of-Way

1. New pole installations require an exception in accordance with § 157.05.
2. A new pole will only be considered if there is no other vertical infrastructure within 300 feet.
3. New poles shall not impede, obstruct, or hinder pedestrian or vehicular travel.
4. New poles shall be in alignment with existing trees, utility poles, and streetlights.
5. New poles shall be equal distance between trees when possible, with a minimum of 15 feet separation such that no proposed disturbance shall occur within the critical root zone of any tree.
6. New poles shall have appropriate clearance from existing utilities.
7. New poles shall not significantly create a new obstruction to property sight lines.
8. New poles shall have similar designs to existing neighboring poles in the rights-of-way, including similar height.
9. All conduit and wirelines on new poles shall be installed internally in the structure or otherwise integrated into the design of the structure.
10. If the Director has already approved a concealment element design either for the applicant or another wireless telecommunications facility along the same public right-of-way or for the same pole type, then the applicant shall utilize a substantially similar concealment element design, unless it can show that such concealment element design is not physically or technologically feasible, or that such deployment would undermine the generally applicable design standards.

#### Strand Mounted Small Cell Facilities

1. Strand mounted devices must be installed to cause the least visual impact and without excess exterior cabling or wires.
2. Only one strand mounted facility is allowed per cable between any two existing poles.
3. No strand mounted device shall be located in or above the portion of the roadway open to vehicular traffic.
4. Strand mounted devices shall be placed as close as possible to the nearest utility pole, in no event more than six feet from the pole unless a greater distance is required by the pole owner for safety clearance.
5. All ancillary equipment (radios, etc.) shall be installed on the strand or in an underground vault. Equipment may also be installed within an existing grade level equipment cabinet or enclosure, provided that there is no expansion of the existing cabinet or enclosure and no additional cabinets are added. An exception in accordance with § 157.05 shall be required to place a new equipment cabinet or enclosure mounted at grade.
6. All strand mounted equipment shall be painted black to match the strand they are mounted on. If the equipment cannot be painted, it shall be enclosed within a black equipment shroud to match the strand.