

# City of Topeka/Shawnee County Small Cell Wireless Facilities General Design & Aesthetic Requirements



Adopted 1/22/18; Amended 8/20/19; Amended 11/20/19

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# Background and Purpose

*These requirements apply to requests to locate small cell facilities in the right-of-way as well as private property and reflect the desire of the City of Topeka (“City” or “Topeka” or “COT”) and Shawnee County (“County” or “SC”) to maintain a compatible visual appeal within the City and County.*

The City of Topeka and Shawnee County will use these requirements to accommodate an increase in the availability and quality of wireless broadband by wireless providers and wireless infrastructure companies to locate small cell facilities in the public right of way (ROW). These low-powered antennas provide cellular and data coverage to supplement the provider’s cellular network. New small cell towers will improve the provider’s ability to meet current and future cellular needs. These Small Cell Wireless Facilities Aesthetic Requirements provide aesthetic requirements and specifications that all small cell facilities installed within the public ROW must meet prior to installation in the City of Topeka or Shawnee County, being mindful that federal law, as interpreted by the Federal Communications Commission (FCC) Order 18-133 (released 9/27/2018), prohibits any local requirement that ‘materially inhibits the deployment of wireless service’ or that is more burdensome on deployments by wireless services providers and wireless infrastructure providers than on other similar infrastructure deployments.

Kansas State Statute 66-2019 addresses the siting of wireless infrastructure and the placement of small cell facilities in public rights-of-way. The law is intended to promote the rapid deployment of small cell facility infrastructure within the right-of-way by ensuring that municipalities grant or deny permits to construct, modify, maintain, and operate wireless facilities in a timely manner and within reasonable parameters. The law recognizes the authority of a municipality to manage access to, and occupancy of, rights-of-ways to the extent necessary with regard to matters of local concern. This includes the protection of the integrity of residential and historic areas and ensures that the use of the rights-of-way in such districts is technologically and aesthetically appropriate.

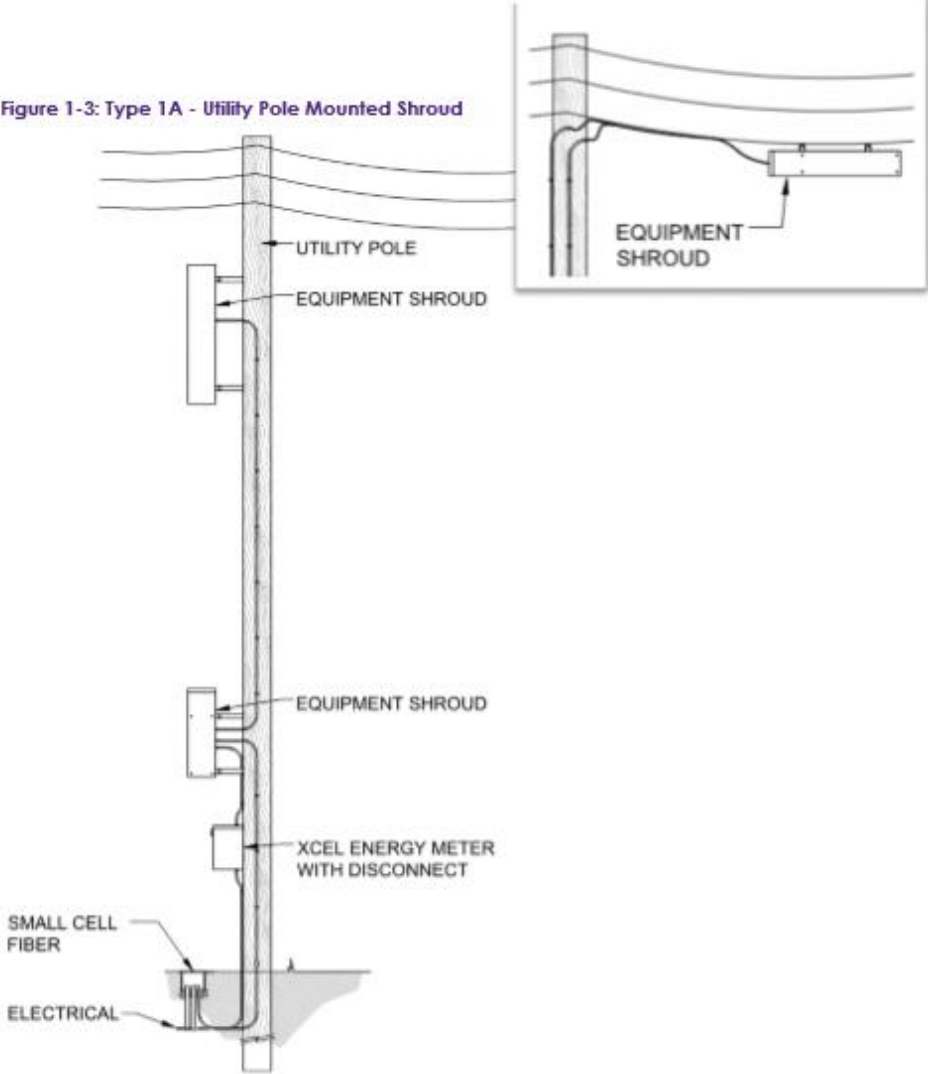
The purpose of the Small Cell Wireless Facilities Aesthetic Requirements is to strike a balance between preserving the character of the City of Topeka and Shawnee County through careful design, siting, landscaping and dimensional standards to blend these facilities into their environment, while enhancing the ability of wireless communications carriers to deploy small cell facilities and wireless support structures in the City and County quickly, effectively, and efficiently so that residents, businesses, and visitors benefit from ubiquitous and robust wireless service availability. They are intended to allow sufficient flexibility to respond to and integrate future advances in small cell facilities technology as well as innovations that improve the ability for these facilities to integrate into the surrounding environment. Due to the rapid advances in wireless technology, the Small Cell Wireless Facilities Aesthetic Requirements will be evaluated periodically to ensure that the provisions respond and adapt accordingly to these evolving technologies.

# Small Cell Types

Unless technically infeasible, four types of small cell types are permitted within the City of Topeka and Shawnee County.

## Type 1: Attachments to Utility Poles

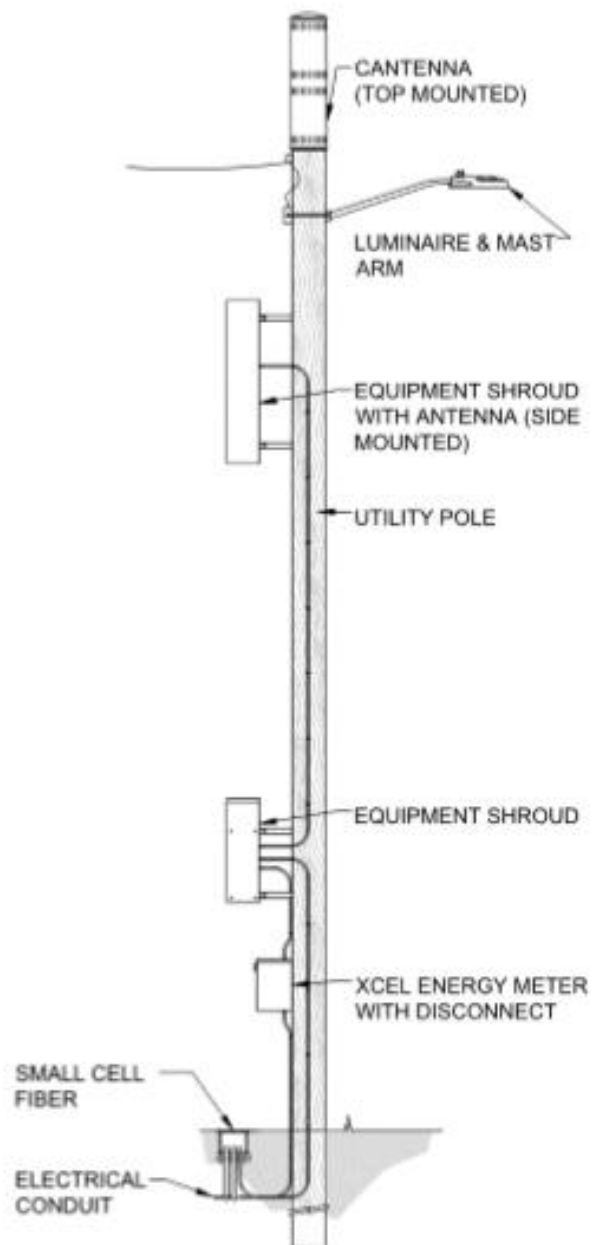
A wireless or small cell facility is categorized as Type 1 when locating small cell attachments on existing utility poles or utility lines.



## Type 2: Small Cell on Existing Wooden Pole with Streetlight

A wireless or small cell facility is categorized as Type 2 when locating small cell equipment on existing wooden streetlights.

**Figure 1-4: Type 2 - Attachment to Wooden Streetlight Pole**



Type 3: Combination Small Cell and Streetlight

A wireless or small cell facility is categorized as Type 3 when replacing an existing streetlight pole with a combination small cell and streetlight pole.

**Figure 1-5: Type 3A - Combination Pole with Cantenna**

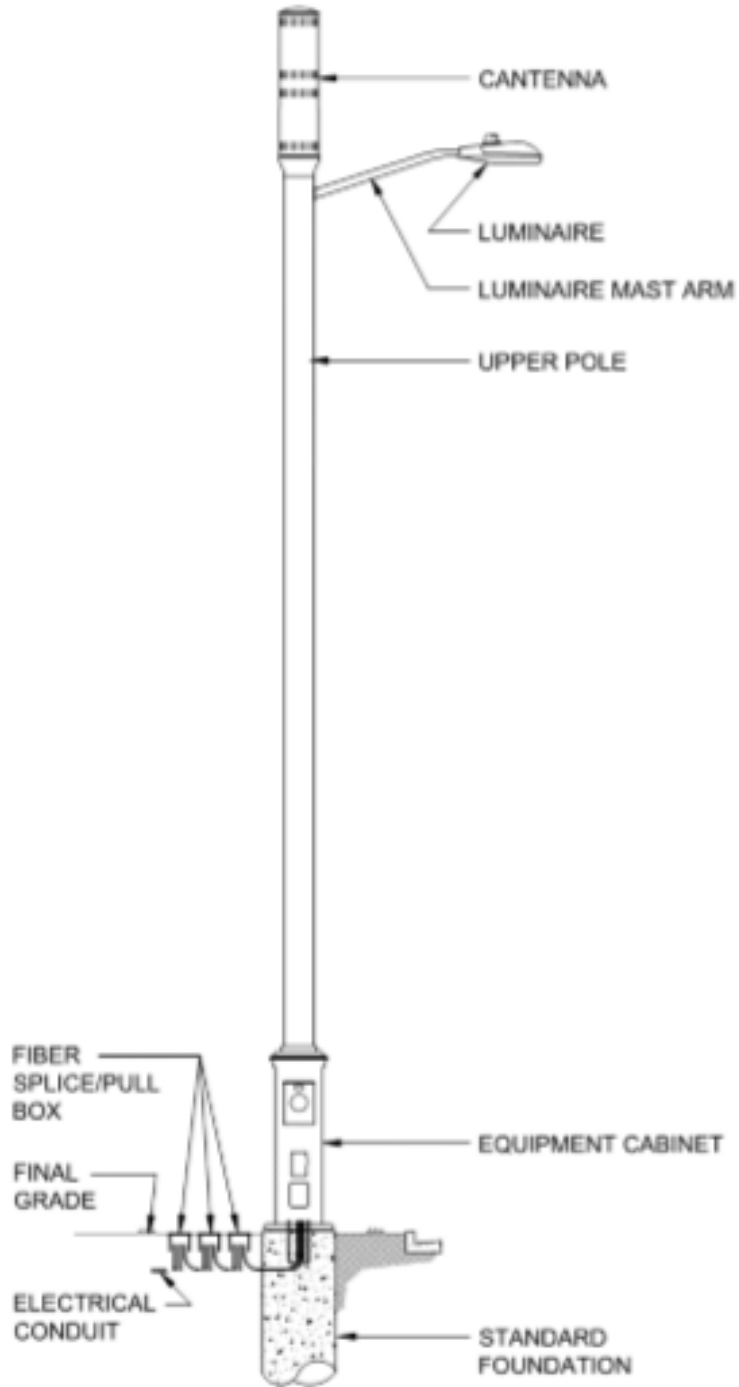


Figure 1-6: Type 3B - Combination Pole with Equipment Shroud

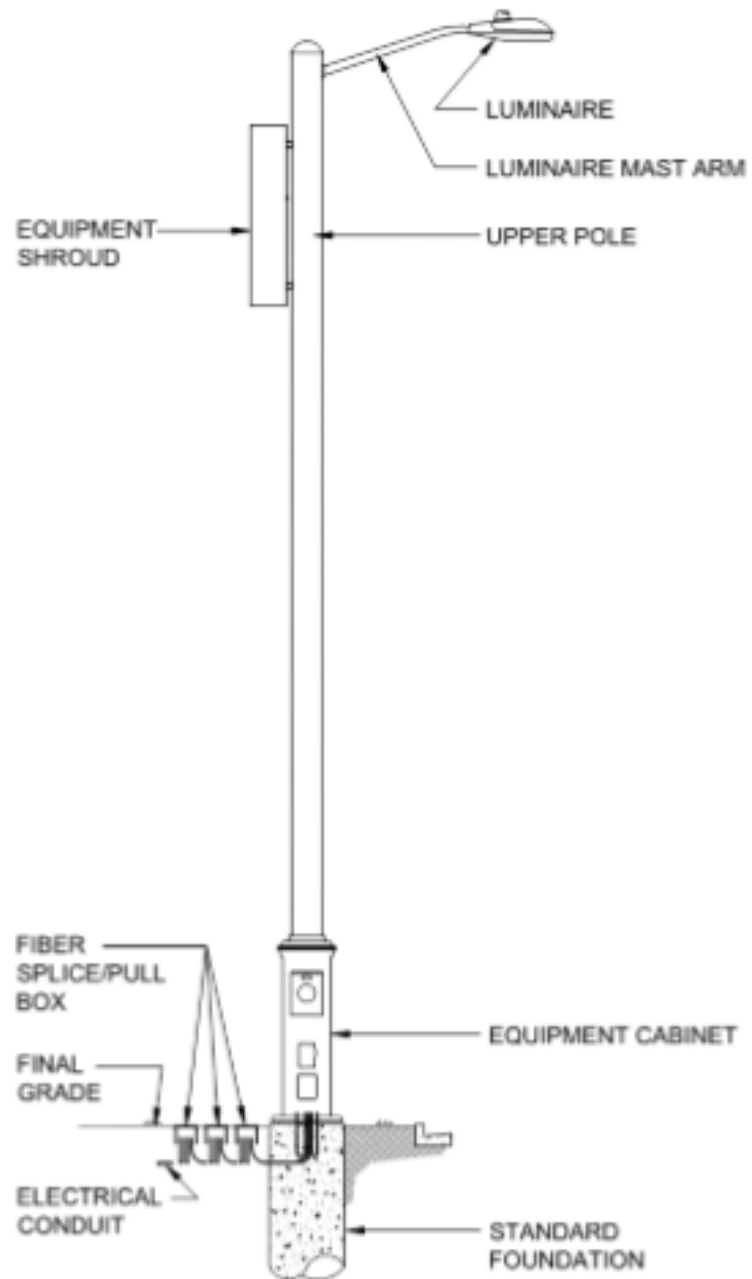
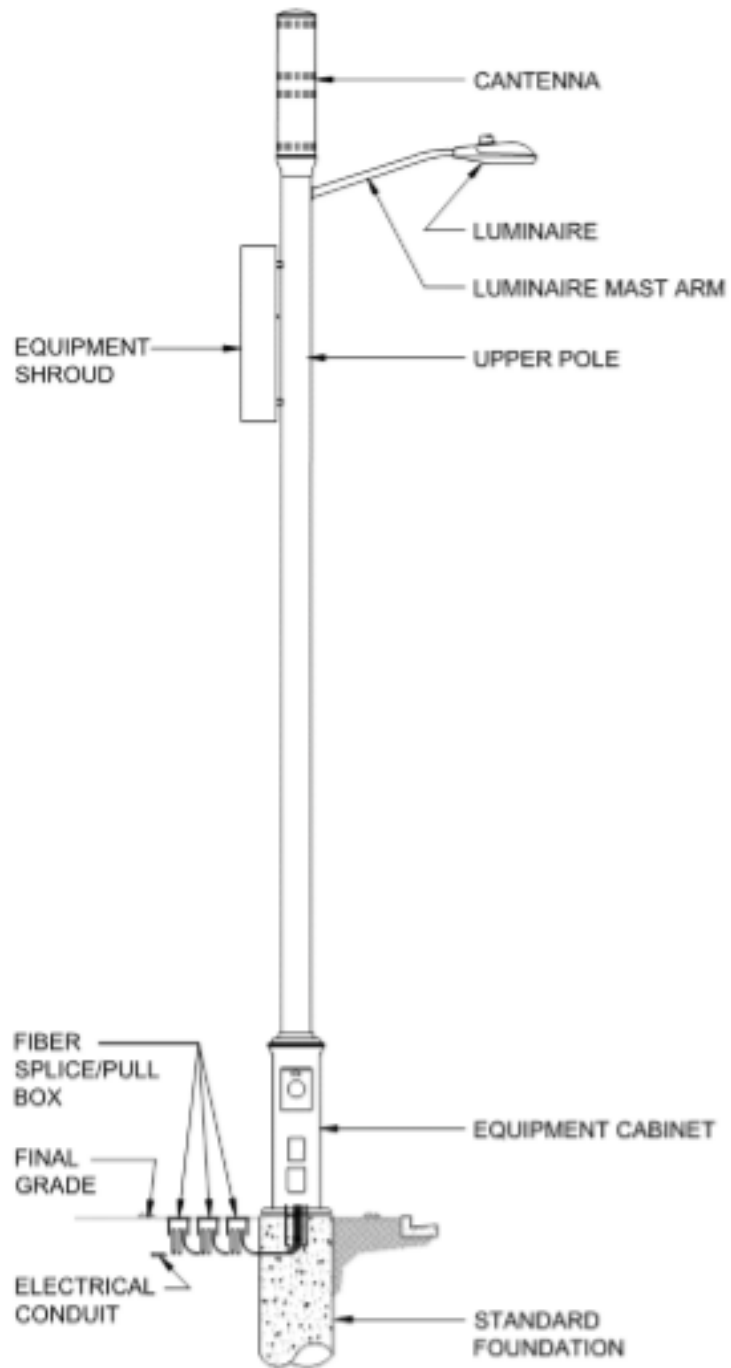


Figure 1-7: Type 3C - Combination Pole with Cantenna and Equipment Shroud

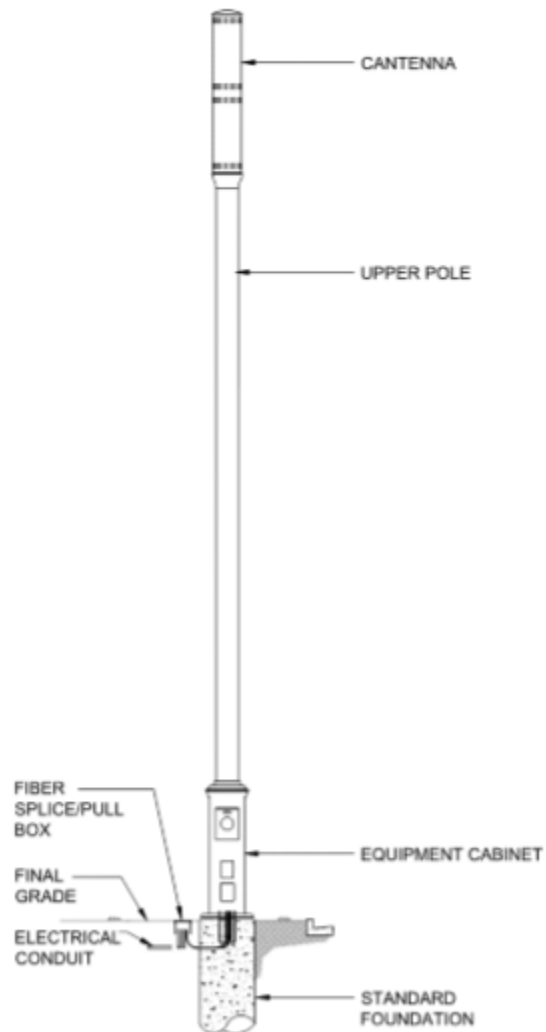




## Type 4: Freestanding Small Cell

A wireless or small cell facility is categorized as Type 4 when installing a freestanding small cell.

Figure 1-8: Type 4 - Freestanding Small Cell



# General Design Requirements

FCC Order 18-133 outlines general requirements that cities must adhere to when processing applications. In addition to the requirements of FCC Order 18-133 and K.S.A. 66-2019, these Design Requirements for Small Cell Facilities and Wireless Support Structures provide guidance to wireless communications carriers on the aesthetic requirements and specifications that all small cell facilities and wireless support structures must meet prior to installation in the City of Topeka and Shawnee County right-of-way.

All applications for small cell wireless infrastructure will be reviewed and decisions regarding applications shall be made in accordance with K.S.A. 66-2019, FCC standards outlined in FCC order 18-133, and municipal and local building/zoning regulatory processes. These applications will be processed in accordance with the FCC standards and the state statute in order to ensure uniformity across the state with respect to consideration of every application.

As part of the application process, every Network Provider shall sign a license agreement that addresses concerns related to the use of the right-of-way. This includes new poles, attachments on City poles, and attachments on third party poles.

Performance Objectives for Requests: Network providers shall consider the aesthetics of the existing streetlights and neighborhoods adjacent to proposed small cell locations prior to submitting an application. New small cells shall match the existing streetlight aesthetics when installed in a district or neighborhood with unique streetlight assemblies. Unique assemblies may include mast arms, decorative pole bases, architectural luminaires, mounting heights, and pole colors.

## Small Cell Facilities (Types 1-3)

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### *Antennas*

- Maximum Size
  - Unless technically infeasible, each antenna that does not have exposed elements shall be located entirely within an enclosure of not more than six (6) cubic feet in volume.
  - The diameter of the antenna or antenna enclosure should not exceed the diameter of the top of the wireless support structure pole, and to the maximum extent practical, should appear as a seamless vertical extension of the pole.
  - In no case shall the maximum diameter of the enclosure be wider than one and one half times the diameter of the top of the pole.
  - Where maximum enclosure diameter exceeds diameter of the top of the pole, the enclosure shall be tapered to meet the top of the pole.
- Mounting Location

- Unless otherwise required by the Context Specific Design Requirements, all antenna shall be mounted to the top of the wireless support structure pole, aligned with the centerline of the structure.
- Design Specifications
  - Shape. Unless technically infeasible, antennas should be generally cylindrical in shape.
  - Enclosure. Unless technically infeasible, antennas should be completely housed within an enclosure whose paint reasonably matches the wireless support structure.
  - Color. Color for all antennas and enclosures shall reasonably match the color of the wireless support structure as prescribed in the Context Specific Design Requirements.

*Associated Small Cell Facilities and Equipment.*

- Maximum Size
  - Exclusive of the antenna, all primary equipment enclosures associated with the small cell facility shall not exceed seventeen (17) cubic feet in volume. The calculation of equipment volume shall not include electric meters, concealment elements, telecommunications demarcation boxes, grounding equipment, power transfer switches, cut-off switches, and vertical cable runs for the connection of power and other services.
- Encroachments Prohibited
  - No portion of a wireless support structure or small cell facility cabinet or enclosure may encroach at grade or within the airspace beyond the right-of-way or over the travel-way.
- Screening and Installation Location. Unless technically infeasible, all small cell facilities, associated equipment and cabling shall be completely concealed from view within an enclosure, and may be installed in the following locations:
  - Within an equipment enclosure mounted to the wireless support structure;
  - Within an equipment cabinet integrated within the transformer base of a new wireless support structure; or
  - Within a ground-mounted cabinet physically independent from the wireless support structure.
- Color
  - Color for all small cell facilities and enclosures/cabinets attached to wireless support structures or integrated within the transformer base shall reasonably match the color of the associated wireless support structure as prescribed in the Context Specific Design Requirements.
  - Color for all ground-mounted small cell facilities and cabinets shall be as prescribed in the Context Specific Design Requirements.

*Small Cell Facilities Mounted to Wireless Support Structures*

- Minimum Mounting Height
  - All small cell facilities mounted to wireless support structures shall provide a minimum clearance of 10 feet above established grade.

- Maximum Permitted Protrusion of Enclosure from Wireless Support Structure Pole
  - Small cell equipment enclosures shall not protrude more than eighteen (18) inches beyond the face of the pole to the outermost portion of the enclosure.
  - Small cell equipment enclosures should be installed as flush to the wireless support structure pole as practical. In no case shall an enclosure be installed more than four inches from the wireless support structure pole.
- Required Enclosure Mounting Location.
  - All small cell facilities and equipment enclosures shall be mounted on the side of the pole opposite the direction of vehicular traffic of the adjacent roadway. Enclosures shall extend perpendicular from the pole and parallel to the right-of-way.
- Required Arrangement of Multiple Small Cell Facility Cabinets
  - All pole-mounted equipment must be installed as flush to the pole as possible. Where multiple enclosures are proposed on a wireless support structure pole, the enclosures shall be grouped as closely together as possible on the same side of the pole.
- Design Specifications
  - Size. Small cell equipment enclosures should be the smallest size practicable to house the necessary small cell facilities and equipment.
  - Unless technically infeasible, small cell equipment enclosures should be cylindrical or rectangular in shape, and should generally be no wider than the maximum outside diameter of the pole to which it is attached, to the maximum extent possible.
  - Attachment. The enclosure shall be securely strapped to the wireless support structure pole using stainless steel banding straps. Through-bolting or use of lag bolts on publicly-owned wireless support structures is prohibited. New wireless support structures may utilize mounting brackets in accordance with the maximum horizontal offset requirements. Care should be taken to integrate the mounting hardware into the enclosure design.
  - Concealment of Gap. Metal flaps or “wings” shall extend from the enclosure to the pole to conceal any gap between the enclosures and the pole. The design of the flaps shall be integrated with the design of the enclosure.
  - Owner Identification. A four (4) inch by six (6) inch (maximum) plate with the Carrier’s name, location, identifying information, and emergency telephone number shall be permanently fixed to the enclosure on the side of the cabinet opposite the direction of vehicular traffic of the adjacent roadway.

*Small Cell Facilities Cabinets Integrated within a Wireless Support Structure Transformer Base*

- Transformer Base/Cabinet Size.
  - Unless technically infeasible, equipment cabinets integrated into the support structure transformer base shall have a maximum height of five (5) feet with a total volume of seventeen (17) feet or less.
  - The top of the decorative transition or base cover attached to the cabinet (see Transition to Pole, below) shall have no flat horizontal surface greater than two (2) inches wide as measured outward from the pole to the edge of the cabinet to prevent objects from being placed on top the equipment cabinet.

- Siting Requirements
  - Small cell facilities shall comply with City of Topeka and Shawnee County regulations regarding sight distance triangles.
- Design Specifications.
  - Transition to Pole. A decorative transition or base cover shall be installed over the equipment cabinet upper bolts when technically feasible to reasonably match the equipment cabinet size and color.
  - Owner Identification. A four (4) inch by six (6) inch (maximum) plate with the Carrier's name, location, identifying information, and emergency telephone number shall be permanently fixed to the cabinet on the side of the cabinet opposite the direction of vehicular traffic of the adjacent roadway.
  - Attachment to Foundation. Transformer base/cabinet shall feature a breakaway design in the event of collisions.

#### Ground-Mounted Small Cell Facilities (Type 4)

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- Siting Requirements
  - So as not to impede or impair public safety or the legal use of the right-of-way by the traveling public, in urban sections with curb and gutter, in no case shall a ground mounted small cell facility cabinet be located closer than four (4) feet from the travelway, edge line, face of curb OR two (2) feet from a sidewalk, bike lane, or shared-use path as measured to the nearest part of the wireless support structure. In rural sections with open ditches, in no case shall a ground mounted small cell facility cabinet be located closer than one (1) foot inside the right-of-way line.
  - Ground-mounted small cell facility cabinets shall be located a minimum of twelve (12) feet from any permanent object or existing lawful encroachment in the right-of-way to allow for access.
  - Ground-mounted small cell facility cabinets shall not be sited in conflict with required intersection sight distance triangles. Ground-mounted small cell facility cabinet locations shall be located a minimum of twelve (12) feet from driveway aprons as measured parallel to the right-of-way.
  - Facilities shall be consistent with any applicable design standards of the Topeka/Shawnee County Complete Streets Design Guidelines.
- Design Specifications
  - Attachment to Foundation/Slab: Cabinets must be secured to a concrete foundation or slab with a breakaway design in the event of collisions.
  - Owner Identification. A four (4) inch by six (6) inch (maximum) plate with the Carrier's name, location, identifying information, and emergency telephone number shall be permanently fixed to the cabinet.
- Additional Landscape Screening
  - Screening of small cell facility cabinets with a variety of plant material may be required based on the characteristics of the surrounding area.

- All proposed ground mounted equipment cabinets shall be reviewed for determination of applicability of the landscape screening requirement based on the surrounding context, and where required, for appropriateness of the proposed planting plan and plant specifications.

#### Power Supply and Fiber Optic Connections (All Request Types)

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- Independent Power and Communication Sources Required
  - Small cell facilities located on City and County owned wireless support structures may not use the same power or communication source providing power and/or communication for the existing facility original to the purposes of the support structure. The independent power source must be contained within a separate conduit inside the support structure. The applicant shall coordinate, establish, maintain and pay for all power and communication connections with private utilities.
- Utility Undergrounding Required
  - All service lines from the power source to the small cell facilities and wireless support structure shall be located underground when required by ordinances of general applicability.
- Wiring, Cables and Conduit Requirements
  - All wiring and cables must be housed within the steel support structure or pole and extended vertically within a flexible conduit.
  - Spools and/or coils of excess fiber optic or coaxial cables or any other wires shall not be stored on the pole except completely within the approved enclosures or cabinets.
  - Exposed wires, cables, connections and external conduit are prohibited.

#### Removal of Small Cell Facilities and Wireless Support Structures

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##### *Remediation of City and County Owned Support Structures*

- All City and County owned support structures must be returned to an equal or better state, upon removal of small cell facilities. All mounting hardware and equipment must be removed from the site. All holes left in the pole must be neatly sealed from any moisture intrusion and painted to match the pole.
- Applicant shall restore all areas of the right-of-way impacted by the small cell facilities and/or wireless support structure installation and/or removal to equal or better condition.

#### Other Small Cell Facilities Prohibitions.

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- Lighting
  - Lighting associated with small cell facilities is prohibited. Any internal lights associated with electronic equipment shall be shielded from public view.
- Signage

- Signage is prohibited on all small cell facilities and wireless support structures, including stickers, logos, text, and other non-essential graphics and information other than the owner identification unless required by FCC.
- Prohibited Wireless Facilities
  - Microwave, macro towers, and other wireless backhaul facilities associated with such structures are not permitted within the right-of-way.

<b>Spacing Blockface Length Intervals<sup>1</sup></b>	<b>Number of Small Cell Facilities Permitted per Blockface<sup>2</sup> Outside the Downtown and Historic Districts</b>	<b>Number of Small Cell Facilities Permitted per Blockface within the Downtown and Historic Districts</b>	<b>Minimum Distance between Facilities on the Same Blockface<sup>3</sup></b>	<b>Minimum Distance between Facilities on same Blockface within the Downtown and Historic Districts</b>	<b>Limit per Carrier per Block<sup>4</sup></b>
0'-150'	1	1	N/A	N/A	1
151'-300'	2	1	60'	60'	1
301'-450'	3	2	60'	75'	1
451'-600'	4	3	60'	90'	1
601'-750'	5	4	60'	105'	2
Over 750'	6	5	60'	120'	2

<sup>1</sup> Block lengths should be measured along the edge of curb between the edge lines extended of adjacent intersecting streets.

<sup>2</sup>This is inclusive of all types of installations and regardless of carrier.

<sup>3</sup> In other words, the minimum distance between two facilities sharing the same side of the block. Distance should be measured in a linear fashion along the edge of curb between the two facilities' center points.

<sup>4</sup> A block is defined as two opposing blockfaces.

# Context Specific Design Requirements

The design and character of the right-of-way in the City of Topeka and Shawnee County is defined by a variety of interconnected factors—the most prevalent are the functional classification of the roadway within the right-of-way and the predominant land uses along the right-of-way. These variables influence the amount of space available in the right-of-way outside of the travel lanes for elements such as sidewalks and shared use paths, street trees, street lights and utility infrastructure, as well as the aesthetic qualities of these elements.

The unique environmental aesthetics of each area, as well as the characteristics of the right-of-way itself must be taken into consideration in the deployment of small cell facilities and wireless support structures. These facilities must blend seamlessly into the surrounding context to the maximum extent possible.

For the purposes of outlining context specific small cell facilities and wireless support structures design requirements, three districts have been defined based on the unique existing and desired character of the rights-of-way within these areas. These districts are:

- Historic Topeka Districts
- Residential Districts
- Downtown or Mixed Use Districts
- Parks

Each small cell unit design should align with preexisting design requirements for these districts. In addition to the aforementioned General Design Requirements, the following Context Specific Requirements must be met. Where conflicts exist between the requirements, the Context Specific Guideline shall prevail.

Historic Topeka Districts/Downtown/Mixed Use Districts

## *Installation Type Preferences*

- The most preferred installation type in Historic Districts is a collocation of an antenna and associated small cell facilities on an existing privately owned utility pole within side street or alley rights-of-way.
- The second most preferred installation type in Historic Districts is a collocation of an antenna on an existing privately owned utility pole with small cell facilities enclosed in a ground mounted cabinet within side street and alley rights-of-way.
- Existing decorative light poles in Historic Districts are not permitted for collocations of small cell facilities due to the design aesthetics, height, and structural capacity of these fixtures.
- The least preferred installation type in a Historic District is a new wireless support structure with small cell facilities within the highly visible ‘front door’ rights-of-way of Historic Districts, including but not limited to, Kansas Avenue.

Installation Details and Specifications



- New wireless support structures should be sited in alignment with other existing poles on the same side of the right-of-way, and aligned as close as practicable with adjacent side property lines, or with shared wall locations in adjacent multi-tenant structures
- In no case shall a wireless support structure be sited directly in front of an adjacent building entrance or storefront.
- Special care should be taken to avoid siting wireless support structures in conflict with business signs.
- New wireless support structures and antennas should be no taller than functionally necessary, and coordinate with the height of existing poles in the same right-of-way to the maximum extent practicable.
- Color for the new wireless support structures, antenna shrouds, pole mounted equipment, and equipment cabinets within a transformer base shall reasonably match the color of the decorative light poles in the Historic District—black powder coated finish as approved by the City Engineer.

#### *Ground Mounted Small Cell Equipment Details and Specifications*

- The maximum permitted height for ground mounted equipment cabinets shall not exceed three (3) feet as measured from established grade at the foundation/pad without approved concealment measures.
- Color for all ground mounted equipment cabinets shall reasonably match pole color or as approved by the City Engineer.

#### *Additional Requirements*

- As a condition for approval of Small Cell Facilities on Decorative Poles or in a Historic District, the City and County shall require reasonable design or Concealment measures such as camouflage to minimize the impact on aesthetics in a Historic District.
- Network provider shall comply with and observe all applicable City, County, State, and Federal historic preservation laws and requirements.
- Small Cell Wireless facilities are discouraged from being within 50 feet of a historic site or structure or Historic Landmark recognized by the City, County, State, or Federal government.

#### Residential Districts and Parks

##### *Thoroughfare Preferences for Installation of Small Cell Facilities and Wireless Support Structures*

##### *Siting Preferences*

- Arterial and Collector Streets are the most preferred location for small cell facilities and wireless support structures. To the maximum extent possible, proposed small cell facilities and wireless support structures should only be sited in areas of these rights-of-way where parks do not front the right-of-way.

- Streets lights and other potential support structures are typically not present within the rights-of-way of local residential streets or parks. The addition of small cell facilities and wireless support structures in front of residences and parks would be detrimental to the aesthetic character of the neighborhood, particularly in areas where no other similar infrastructure exists within the rights-of-way.

#### Installation Type Preferences

- The most preferred installation type in residential districts and parks are collocations of an antenna and associated small cell facilities on existing street light poles or privately owned utility poles within the right-of-way.
- The second most preferred installation type in residential districts and parks is a collocation of an antenna on existing street light poles or existing privately owned utility pole with small cell facilities enclosed in a ground mounted cabinet within the right-of-way.
- The least preferred installation type in residential districts and parks are new wireless support structures with small cell facilities not camouflaged.

#### Installation Details and Specifications

- New wireless support structures should be sited as close as practicable in alignment with adjacent side or rear property lines perpendicular to the right-of-way, or with shared wall locations in adjacent multi-tenant structures such as townhomes or condominiums.
- Color for new wireless support structures, antenna shrouds, pole mounted equipment, and equipment cabinets within a transformer base shall reasonably match the color of the existing street light poles in the area as approved by the City Engineer.

#### Ground Mounted Small Cell Equipment Details and Specifications

- Unless technically infeasible, the maximum permitted height for ground mounted equipment cabinets shall not exceed three (3) feet as measured from established grade at the foundation/pad to the top of the cabinet without approved concealment measures. Equipment cabinets exceeding three (3) feet may be allowed up to 4.5 feet if there is no interference with the sight distance triangle.
- Ground mounted equipment cabinets may only be sited within amenity zones where required setbacks from the travelway and sidewalks and multi-use paths can be met.
- Color for all ground mounted equipment cabinets shall reasonably match the existing or proposed wireless support structures as approved by the City Engineer.
- A network provider shall not install a type 4 small cell facility in a public right-of-way within a park unless camouflaged or consented to by the park land owner.
- A network provider installing a network node in a public right-of-way described above shall comply with private deed restrictions and other private restrictions in the area that apply to those facilities.

# EXCEPTIONS

The City Engineer, in the City Engineer's sole discretion, may grant exceptions to these Aesthetic Requirements if the City Engineer's finds the following conditions exist:

1. The Aesthetic Requirements as applied to a specific set of circumstances are: (a) technically infeasible and (b) unreasonable when balanced against the interest of avoiding or remedying the intangible public harm of unsightly or out-of-character facility deployments; and
2. The applicant's proposed design and aesthetic appearance for the proposed facilities satisfies the intent of the requirements.

# Glossary of Terms

Term	Definition
5G	The term for emerging 5th generation wireless telecommunications standards usually associated with network speeds of 1 Gpbs or more
Accessory equipment	Means any equipment serving or being used in conjunction with a wireless facility or wireless support structure including, but not limited to, utility or transmission equipment, power supplies, generators, batteries, cables, equipment buildings, cabinets and storage sheds, shelters or similar structures.
Antenna	Means communications equipment that transmits or receives electromagnetic radio signals used in the provision of wireless services.
applicant	Means any person or entity that is engaged in the business of providing wireless services or the wireless infrastructure required for wireless services and that submits an application.
application	Means a request submitted by an applicant to an authority for: (A) The construction of a new wireless support structure or new wireless facility;  (B) the substantial modification of a wireless support structure or wireless facility; or  (C) collocation of a wireless facility or replacement of a wireless facility.
Authority	Means the governing body or the county commission.
Base Station	Means a station that includes a structure that currently supports or houses an antenna, transceiver, coaxial cables, power cables or other associated equipment at a specific site that is authorized to communicate with mobile stations, generally consisting of radio transceivers, antennas, coaxial cables, power supplies and other associated electronics. "Base station" does not mean a tower or equipment associated with a tower and does not include any structure that, at the time the relevant application is filed with the authority, does not support or house equipment described in this paragraph.
Collocation	Means the mounting or installation of wireless facilities on a building, structure, wireless support structure, tower, utility pole, base station or existing structure for the purposes of transmitting or receiving radio frequency signals for communication purposes.
Distributed antenna system	Means a network that distributes radio frequency signals and consisting of: (A) Remote communications or antenna nodes deployed throughout a desired coverage area, each including at least one antenna for transmission and reception; (B) a high capacity signal transport medium that is connected to a central communications hub site; and (C) radio transceivers located at the hub's site to process or control the communications signals transmitted and received through the antennas to provide wireless or mobile service within a geographic area or structure.
Downtown	Any land/right-of-way designated or adjacent to D-1/D-2/D-3 zoning district OR the future land use classification in the City's Land Use and Growth Management Plan.

Existing Structure	Means a structure that exists at the time an application to collocate wireless facilities on a structure is filed with an authority. The term includes any structure that is currently supporting or designed to support the attachment of wireless facilities, including, but not limited to, towers, buildings and water towers.
Ground Mounted Equipment	This type of equipment sits at ground level, such as along sidewalks. It is distinct from equipment mounted on existing infrastructure such as telephone poles or buildings. This equipment is similar to traffic control or telephone equipment cabinets.
Infrastructure Developer	Company or entity that invests in or builds out the basic physical and virtual systems of a community, including roads, utilities, internet and wireless networks, water, sewage, etc. These systems are considered essential for enabling productivity in the economy and require significant fiscal investments. Developers and investors can be from the public or the private sector.
Internet Service Providers	An internet service provider (ISP) is a company that provides customers with Internet access. Data may be transmitted using several technologies, including dial-up, DSL, cable modem, wireless or dedicated high-speed interconnects. Typically, ISPs also provide their customers with the ability to communicate with one another by providing Internet email accounts, usually with numerous email addresses at the customer's discretion. Other services, such as telephone and television services, may be provided as well. The services and service combinations may be unique to each ISP
Public lands, buildings, and facilities	Does not include any real property, structures or facilities under the ownership, control or jurisdiction of the secretary of transportation.
Public right-of-way	Means only the area of real property in which the authority has a dedicated or acquired right-of-way interest in the real property. It shall include the area on, below or above the present and future streets, alleys, avenues, roads, highways, parkways or boulevards dedicated or acquired as right-of-way. "Public right-of-way" does not include any state, federal or interstate highway right-of-way, which generally includes the area that runs contiguous to, parallel with, and is generally equidistant from the center of that portion of the highway improved, designed or ordinarily used for public travel.
Replacement	Includes constructing a new wireless support structure of comparable proportions and of comparable height or such other height that would not constitute a substantial modification to an existing structure in order to support wireless facilities or to accommodate collocation and includes the associated removal of the pre-existing wireless facilities, if any, or wireless support structure.
Search Ring	Means a shape drawn on a map to indicate the general area within which a wireless services support structure should be located to meet radio frequency engineering requirements, taking into account other factors, including topography and the demographics of the service area.
Small Cell Facilities	Means a wireless facility that meets the following qualifications: (A) Each antenna is located inside an enclosure of no more than six cubic feet in volume, or in the case of an antenna that has exposed elements, the antenna and

	<p>all of the antenna's exposed elements could fit within an imaginary enclosure of no more than six cubic feet; and</p> <p>(B) primary equipment enclosures that are no larger than 17 cubic feet in volume, or facilities comprised of such higher limits as the federal communications commission has excluded from review pursuant to 54 U.S.C. § 306108. Associated equipment may be located outside the primary equipment, and if so located, is not to be included in the calculation of equipment volume. Associated equipment includes, but is not limited to, any electric meter, concealment, telecommunications demarcation box, ground-based enclosures, back-up power systems, grounding equipment, power transfer switch, cut-off switch and vertical cable runs for the connection of power and other services.</p> <p>(C) Height. (1) 50 feet in height or less; or (2) the structure is no more than 10% higher than that of adjacent structures; or (3) as prescribed in federal law.</p>
Small Cell Network	Means a collection of interrelated small cell facilities designed to deliver wireless service.
Substantial Modification	Means a proposed modification to an existing wireless support structure or base station that will substantially change the physical dimensions of the wireless support structure or base station under the objective standard for substantial change, established by the federal communications commission pursuant to 47 C.F.R. 1.40001.
Transmission Equipment	Means equipment that facilitates transmission for a wireless service licensed or authorized by the federal communications commission including, but not limited to, radio transceivers, antennas, coaxial or fiber optic cable and regular and backup power supply. "Transmission equipment" includes equipment associated with wireless services including, but not limited to, private, broadcast and public safety services such as wireless local area network services, and services utilizing a set of specifications developed by the institute of electrical and electronics engineers for interface between a wireless client and a base station or between two wireless clients, as well as unlicensed wireless services and fixed wireless services, such as microwave backhaul.
Utility Pole	Means a structure owned or operated by a public utility as defined in K.S.A. 66-104, and amendments thereto, a municipality as defined in K.S.A. 75-6102, and amendments thereto, or an electric cooperative as defined in K.S.A. 2018 Supp. 17-4652, and amendments thereto, that is designed specifically for and used to carry lines, cables or wires for telecommunications, cable, electricity or to provide lighting
Water Tower	Means a water storage tank or a standpipe, or an elevated tank situated on a support structure that was originally constructed for use as a reservoir or facility to store or deliver water.
Wireless facility	Means equipment at a fixed location that enables wireless communications between user equipment and a communications network, including, but not limited to: (A) Equipment associated with wireless services such as private, broadcast and public safety services, as well as unlicensed wireless services and fixed wireless services such as microwave backhaul; and (B) radio transceivers, antennas, coaxial or fiber-optic cable, regular and backup power supplies and comparable equipment, regardless of technological

	configuration. Does not mean any wired connections from a wireless support structure or base station to a hub or switching location.
Wireless infrastructure provider	Means any person that builds or installs transmission equipment, wireless facilities or wireless support structures, but that is not a wireless services provider.
Wireless services	Means "personal wireless services" and "personal wireless service facilities" as defined in 47 U.S.C. § 332(c)(7)(C), including commercial mobile services as defined in 47 U.S.C. § 332(d), provided to personal mobile communication devices through wireless facilities or any fixed or mobile wireless services provided using wireless facilities.
Wireless services provider	Means a provider of wireless services.
Wireless support structure	Means a freestanding structure, such as a monopole, guyed or self-supporting tower or other suitable existing or alternative structure designed to support or capable of supporting wireless facilities. "Wireless support structure" shall not include any telephone or electrical utility pole or any tower used for the distribution or transmission of electrical service