Small Cell Wireless Facilities

Old Town Civic Association

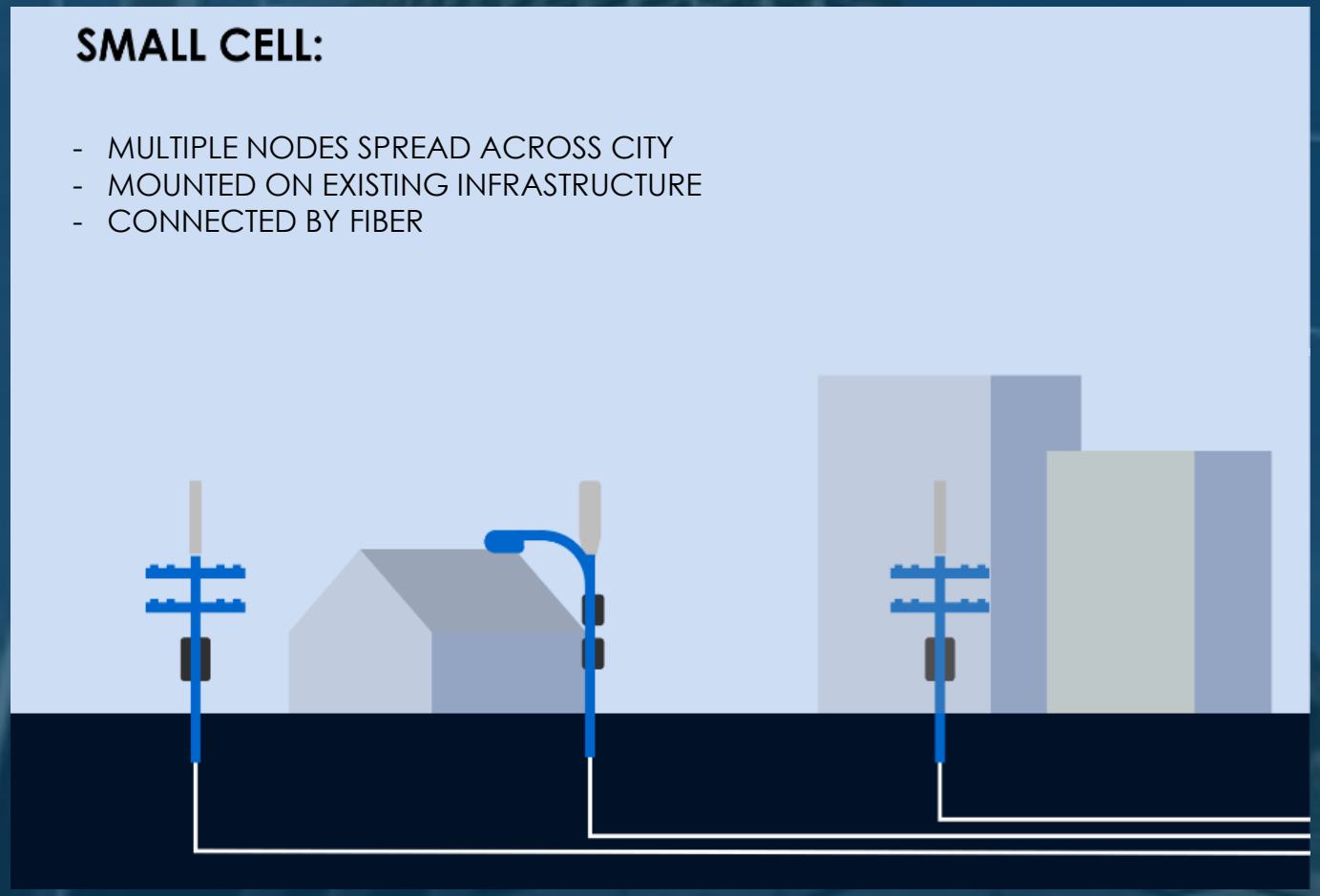
June 11, 2019

AGENDA

- Staff Presentation
  - What are Small Cells?
  - Need & Concerns
  - Framework & Constraints
  - What We Know
- Work in Progress & Next Steps
- Q&A

What are Small Cells?

- Small cells are low power wireless installations.
- Small cell antennas and associated equipment can fit on existing utility or streetlight poles.
- Small cell antennas needed to support existing 4G networks, primarily in dense areas



SOURCE: THE CBR GROUP

The Need & Concerns

The Need?

- Increasing usage of wireless devices and data; increased demand requires reliable high-speed wireless service

Concerns

- Visual impact of increase number of equipment mounted on existing poles
- Pole density will likely be substantially more as 5G deploys in future
- Carriers may prefer to own and operate their own poles and not co-locate on existing utility poles, streetlights, etc.

Regulatory Rundown

Apr. 2017
VA General Assembly adopts SB 1282

Oct. 2017
City Council approves zoning text amendment to comply with state regulations

July 2018
VA General Assembly adopts HB 1258 and SB 405

Sep. 2018
FCC issues second Declaratory Ruling and Order

Changes in Federal & State Law

- Virginia General Assembly enacted new statutes governing small cell zoning in 2017 and 2018.
- FCC issued two orders preempting local authority over wireless facilities in 2018.
- Special rules now apply to facilities to be installed at or below 50 feet in height these are deemed “small cell” or “small wireless facilities.”

Changes in Federal & State Law

- Under both federal and Virginia law, City is now subject to new rules governing:
  - Deadlines for evaluating applications for siting small cell facilities, both in and out of the City's rights-of-way
  - Permitting fees
  - Aesthetic standards that may be applied to a facility
  - Undergrounding requirements
- In some cases, these may conflict

Impacts of Changes on City

- City application of “like for like” replacement of existing poles
- Zoning Ordinance regulations for small cell facilities will need to be updated to conform with new Virginia laws & FCC rules.
- Undergrounding policy limits installation of stand-alone poles and prohibits installation of new poles in ROW.
- Wireless carriers still need to obtain franchise agreements authorizing placement within City ROW.

What We Know

Small Cells = Infrastructure

5G = Technology

What We Know

Key points for the City:

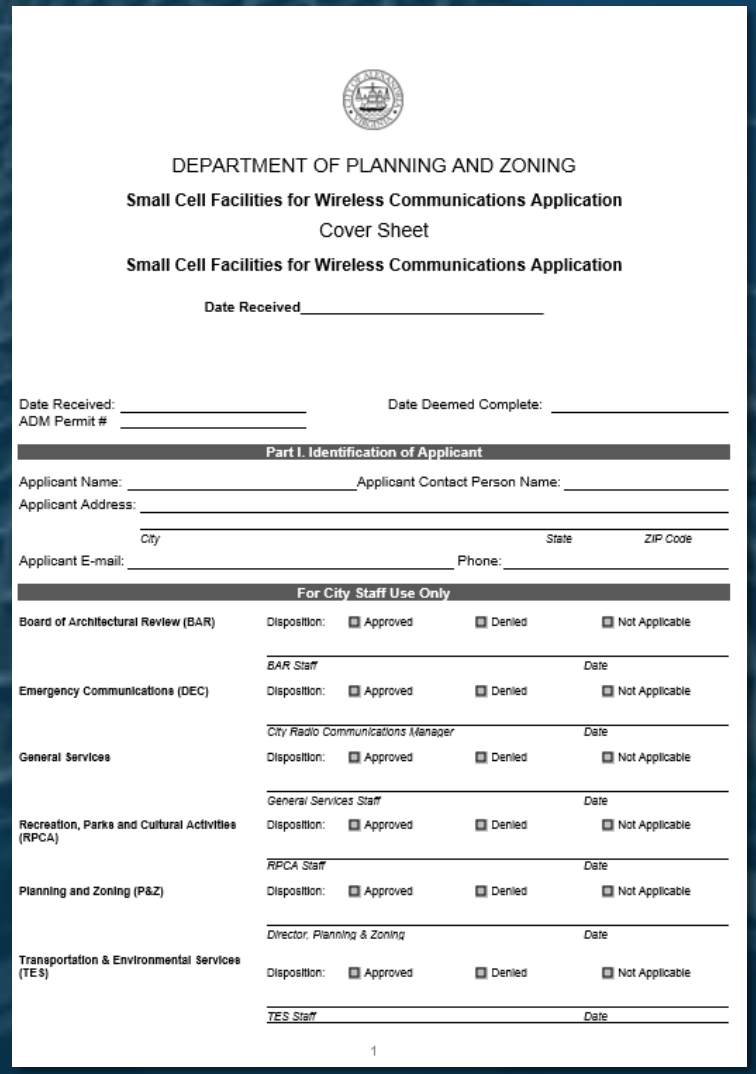
- Current “4G/4G+” deployments are aimed at increasing capacity in high-use areas. 5G will come later, facilities are likely very similar.
- Networks are not truly wireless: Carriers need ROW access for fiber backhaul.
- Antennas are small enough to place on existing utility poles, but ancillary equipment is visible.
- Over long term, carriers may need antennas per block, at or below rooftop level.
- Each carrier and infrastructure provider has independent right to install facilities under Virginia law and FCC rules.
- Overall, both current (still 4G) and future (5G) equipment will supplement rather than replace existing networks.

What We Know about 5G

- 5G is the successor to current “4G” wireless technology; common “5G NR” technical standard was released in December 2018.
- 5G networks can support a larger number of devices than current networks – as reliance on smartphone apps increases, carriers will deploy 5G to support current services in high use areas as well as new services.
- Designed to improve connection speeds and reduce latency (internet response time).
- Lower latency is essential for advanced services, such as driverless cars.
- 5G smartphones available in 2019, new services delivered assuming network in an area has been built.

Current Zoning Process

- Established in 2017
- Guided by state law
- 60-day review period upon submission
  - Routed to multiple city departments and agencies
- Deemed approved if final decision not rendered within 60-day review period (per state law).



DEPARTMENT OF PLANNING AND ZONING

Small Cell Facilities for Wireless Communications Application

Cover Sheet

Small Cell Facilities for Wireless Communications Application

Date Received_____

Date Received: _____ Date Deemed Complete: _____
ADM Permit # _____

Part I. Identification of Applicant

Applicant Name: _____ Applicant Contact Person Name: _____
Applicant Address: _____
City *State* *ZIP Code*
Applicant E-mail: _____ Phone: _____

For City Staff Use Only

Board of Architectural Review (BAR)	Disposition:	☐ Approved	☐ Denied	☐ Not Applicable
	BAR Staff			*Date*
Emergency Communications (DEC)	Disposition:	☐ Approved	☐ Denied	☐ Not Applicable
	City Radio Communications Manager			*Date*
General Services	Disposition:	☐ Approved	☐ Denied	☐ Not Applicable
	General Services Staff			*Date*
Recreation, Parks and Cultural Activities (RPCA)	Disposition:	☐ Approved	☐ Denied	☐ Not Applicable
	RPCA Staff			*Date*
Planning and Zoning (P&Z)	Disposition:	☐ Approved	☐ Denied	☐ Not Applicable
	Director, Planning & Zoning			*Date*
Transportation & Environmental Services (TES)	Disposition:	☐ Approved	☐ Denied	☐ Not Applicable
	TES Staff			*Date*

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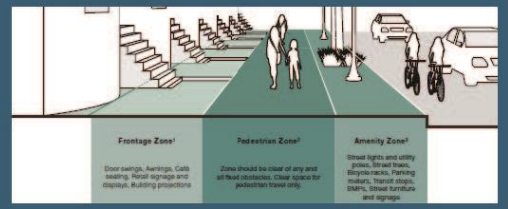
INTERIM WIRELESS FACILITY AESTHETIC GUIDELINES

CONTEXT

Within the City of Alexandria, sidewalks are not a singular space but consist of distinct usage zones. Sidewalks are typically located in the public right of way, which extend from the curb line to a private property line behind it. Sidewalks can be broken up into three primary zones performing unique functions in the overall operation of the street, and interface with adjacent private property uses. These zones are identified as the Frontage Zone, Pedestrian Zone, and Amenity Zone. Although boundaries between zones may blur and blend, the overall function of each zone generally remains consistent. City of Alexandria, Complete Street Guidelines pg. 3-3

Across the City, most of the existing infrastructure that can be used to accommodate wireless facilities (streetlight poles, utility distribution poles, traffic signal poles, etc.) are located within the amenity zone. Deployment of wireless facilities, to the greatest extent possible, should not impede the pedestrian and frontage zones within the sidewalk.



Amenity Zone lies between the curb and the Pedestrian Zone. This area is occupied by a number of street fixtures and utilities such as street lights, utility poles, street trees, bicycle racks, parking meters, signposts, signal boxes, benches, trash and recycling receptacles, and other amenities. In commercial areas, it is typical for this zone to be hardscape pavement, pavers, or tree grates. In residential, or lower intensity areas, it is commonly a planted strip.

Frontage Zone is the area of sidewalk that immediately abuts buildings along the street. In residential areas, the Frontage Zone may be occupied by front porches, stoops, lawns, or other landscape elements that extend from the front door to the sidewalk edge. The Frontage Zone of commercial properties may include architectural features or projections, outdoor retailing displays, café seating, awnings, signage, and other intrusions into or use of the public right-of-way. Frontage Zones may vary widely in width from just a few feet to several yards.

Pedestrian Zone, also known as the "walking zone," is the portion of the sidewalk space used for active travel. For it to function, it must be kept clear of any obstacles and be wide enough to comfortably accommodate expected pedestrian volumes including those using mobility assistance devices, pushing strollers, or pulling carts.

- City of Alexandria, Complete Street Guidelines

Interim Aesthetic Guidelines

View online at www.alexandriava.gov/109058

GENERAL AESTHETIC STANDARDS & GUIDELINES

The following standards for wireless facilities apply to all areas in the City unless otherwise specified in areas such as historic districts.

- Wireless facilities and associated infrastructure shall be located within the Amenity Zone of the sidewalks or a comparable location in the public right of way.
- Wireless facilities should avoid areas of environmental sensitivity such as floodplains, wetlands, and resource protection areas (RPAs).

Guidelines for Wireless Facilities Subject to Article X of the City's Zoning Ordinance for Historic Districts

Wireless facilities within Historic Districts are subject to Article X of the City's Zoning Ordinance and shall require approval under those provisions. -

Guidelines for Attachments to Existing Utility and Streetlight Poles

The following are applicable when locating wireless cell facilities on existing utility and streetlight poles within the public right of way:

- All wireless facilities and associated equipment located within the public right of way shall be located such that it meets ADA requirements and does not hinder, obstruct, impede usual pedestrian and vehicular travel.
- Wireless facilities must be shrouded, enclosing wires and equipment. No separate ground mounted equipment, including backup power supply, shall be allowed within the public right of way. Wireless facilities shall not negatively impact the decorative elements of the existing pole.
- Wireless facility attachments and hardware shall be colored to match the existing pole or colored to match similar infrastructure along the block face. If located on a wooden pole, attachments shall be colored to match the color of the pole or a similar earth tone color.
- Any signs on poles must comply with Article IX of the City's Zoning Ordinance.

If an existing utility or streetlight pole upon which wireless facility equipment is proposed to be installed requires replacement, see Guidelines for Replacement of Existing Poles.

DEFINITIONS

Small Cell Wireless Facilities are low-powered antennas that provide wireless service coverage to a limited geographic area (often with ranges of a few hundred feet), and are used to supplement and expand the coverage provided by the traditional, larger-scale network

Streetlight pole means a structure owned, operated, or owned and operated by a public utility, the City, or the Commonwealth of Virginia that is designed specifically to support a street light, that lights the public right of way.

Utility pole means a structure owned, operated, or owned and operated by a public utility, the City, or the Commonwealth of Virginia that is designed specifically for and used to carry lines, cables, or wires for communications, cable television, or electricity.

Interim Aesthetic Guidelines

- Primarily addresses location and placement of small cell wireless facilities within and outside of the public right-of-way (ROW)
- Provides guidance for attachments on existing structures (utility poles and streetlight poles) within the public ROW
- Provides guidance for replacement of existing structures (utility poles and streetlight poles) within the public ROW
- Provides guidance for new standalone structures
- Work with carriers on design options/solutions

Current Staff Work

- Meetings with community and stakeholders
- Staff is drafting proposed amendments to Zoning Ordinance to respond to Virginia law and FCC regulations
- Interim Aesthetic Guidelines for small cell facilities that complies with regulations
- Reviewing current policies governing undergrounding, new poles, and replacement
- Exploring development of Smart Technology Framework
- Developing/revising internal staff guidance documents as appropriate

QUESTIONS?

Visit the Small Cells webpage for additional information,
www.alexandriava.gov/109058

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