



# Small Cell Technology in the Right of Way



# Small Cell Technology

- Used by cellular phone carriers to enhance the coverage and capacity of their services
- Antenna that fits in an enclosure not more than 6 cubic feet in volume
- Associated equipment cumulatively not more than 28 cubic feet in volume
- Height may be up to 40 feet tall
  - In some areas, City can limit new poles to 35 feet
  - Attachments to existing poles can be limited to no more than 5 additional feet



# Small Cell Technology





# Small Cell Technology





# State Law

- Recently passed HB 478 set new state law regarding the deployment of small cell technology in municipal right of way
- New law goes into effect at the end of July
- Cities are required to permit small cell facilities installed by one of the four major cell phone companies in the right of way
- Within the constraints of federal and state law, cities can establish design guidelines to influence and manage the small cell facilities



# Draft Design Guidelines

- Developed by considering:
  - New state law
  - Examples from other cities, in and outside Ohio
  - Characteristics of Worthington
  - Advice from legal counsel



# Section I: Purpose

- Guidelines relate to siting, construction, installation, collocation, modification, relocation, operation and removal of small cell technology
- Goals:
  - Uniform standards and criteria
  - Enhance deployment of the technology to benefit residents, businesses and visitors
  - Preserve Worthington's character
  - Ensure compliance with health and safety regulations
  - Comply with applicable state and federal laws



## Section II: Definitions

- Many of the definitions mirror those in state law
- *Collocation*: Install, mount, maintain, modify, operate or replace wireless facilities on a support structure
- *Small Cell Facility*: Antenna and associated wireless equipment that meet sizes specified in state law
- *Toll*: Pause or delay in the required time period
- *Wireless Support Structure*: Pole, including street light pole, traffic signal pole, utility pole and a 15' or taller sign pole



# Section III: Requirement to Comply

- Placement or modification of small cell facility and/or wireless support structure shall comply with these guidelines
- Operators and permittees must comply with the City's Right of Way Regulations (Codified Ordinances Chapter 949)



# Section IV: Application

- Pre-application Conference is required
- Application materials and requirements are spelled out in the guidelines
- Application Fee: \$250 per small cell facility
- Timeline for Review
  - As required by state law:
    - 90 days for collocation, replacement or modification of a small cell facility
    - 120 days to construct, modify or replace a wireless support structure
- Tolling of Timeline
  - City will comply with tolling under state law:
    - Mutually agreed
    - Incomplete application
    - More than 15 requests within 30 days



# Section V: Locations

- Most Preferable Locations
  - Industrial Areas
  - Highway Rights of Way
  - Retail & Commercial Areas
- Strong Preference for Collocation
- Least Preferable Locations
  - Residential Areas
  - Parks
  - Historic District
  - Architectural Review District



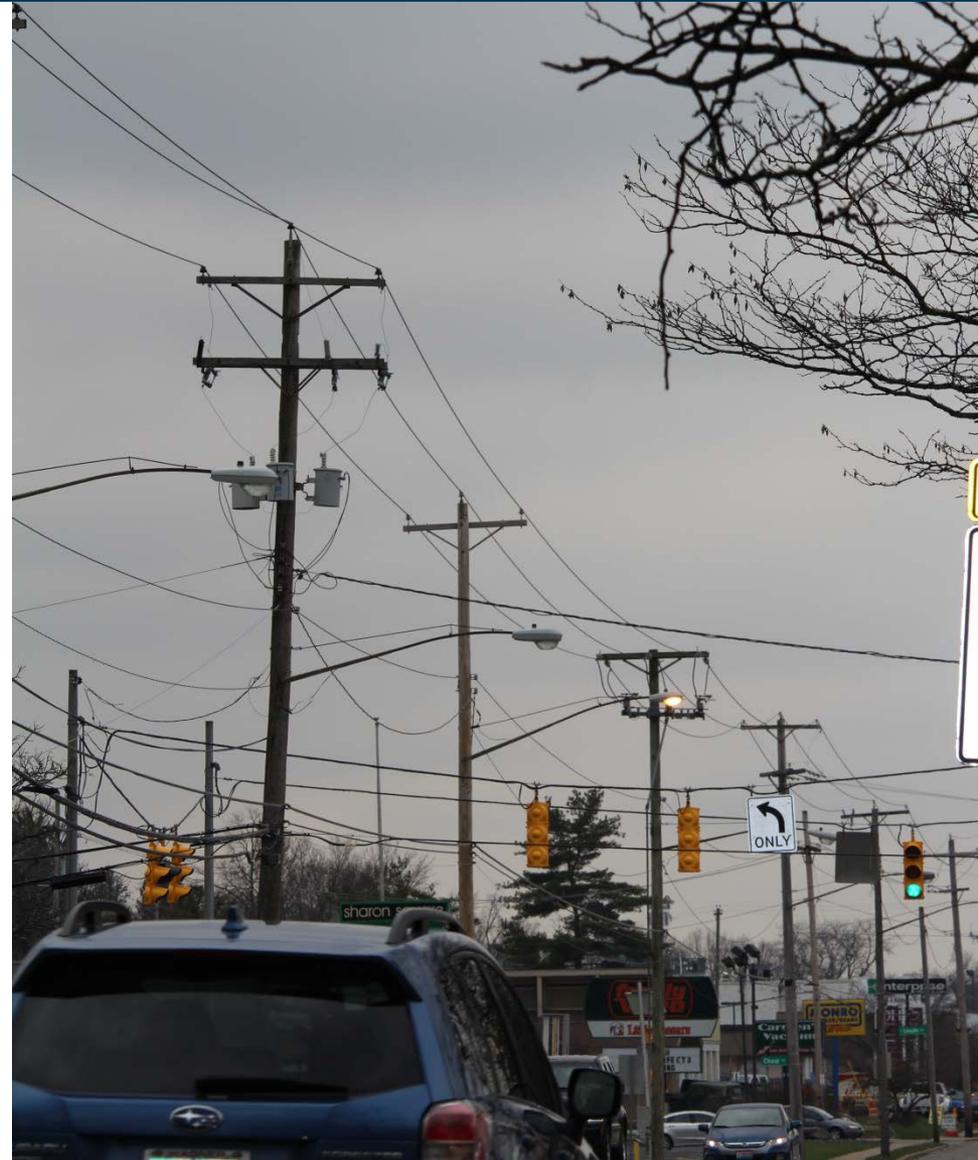
# Section V: Locations

- Order of Preference for Wireless Support Structures
  1. Existing Utility Poles
  2. Non-Ornamental Municipal Service Poles
  3. New Poles
  4. Ornamental Municipal Service Poles
  5. Sign Poles (15 feet or taller)



# Section V: Locations

## 1. Existing Utility Poles





# Section V: Locations

## 2. Non-Ornamental Municipal Service Poles





# Section V: Locations

## 3. New Poles



# Section V: Locations

## 4. Ornamental Municipal Service Poles





# Section V: Locations

## 4. Ornamental Municipal Service Poles





# Section V: Locations

## 5. Sign Poles (15 feet or taller)



# Section VI: Alternate Locations

- City can propose an alternate location for a new wireless support structure within
  - 100 feet of the proposed location, or
  - A distance equivalent to the width of the right of way, whichever is greater
- Operator shall use the alternate location if operator has right to use on reasonable terms and conditions and there are not technical limits or additional costs



# Section VII: Placement

- Should not obstruct, impede or hinder travel or public safety
- Should not obstruct legal use of right of way by other utilities
- Must have concealed cable connections, antenna mounts and other hardware
  - Service lines undergrounded whenever feasible
  - Excess fiber optic or coaxial cables shall not be spooled, coiled or otherwise stored on the pole except within an approved enclosure
  - Above ground conduit on wood poles must be as small a possible and finished in zinc, aluminum or stainless steel or colored to match those finishes
- Placed, as much as possible, in line with other utility features
- Ambient noise suppression may be required if likely to impact adjacent residences or businesses



# Section VII: Placement

- Ground Mounted Equipment
  - Maximize line of sight at street corners and intersections
  - Cabinet or shroud must contain all equipment other than antenna
  - Cables & conduits routed directly through metal pole & undergrounded between pole and ground-mounted cabinet



# Section VII: Placement

- Pole Mounted Equipment
  - Installed as flush to pole as possible, protruding no more than 2'
  - Installed at least 8' above ground (16' if necessary to protect the public and vehicular traffic)
  - On metal poles: strapped with steel banding strips, colored to match the pole
  - On wood poles: bolted or strapped with steel banding strips
  - All equipment other than antenna must be concealed in an equipment cage colored to match the pole, if metal, or brushed aluminum, if wood pole
  - Electric service: When a meter is necessary, shall use smallest, least intrusive meter available



# Section VII: Placement

- Undergrounded Equipment Vaults
  - May be required in some areas
- Existing wireless support structures
  - Antenna may be collocated at the top, but shall not increase height by more than 5'
- New wireless support structures
  - Overall height limited to 40'
  - Or 35' in areas with no utility poles taller than 30' and maximum allowable height for building construction is 35' in height



# Section VII: Placement

- New Wireless Support Structures
  - Discourage more than one per block
  - Won't approve more than one per 250' on each side of street unless prevents wireless service
  - Competing requests: priority given to first request received
  - Align, as much as possible, with centerlines of existing poles
  - May require metal pole rather than wood pole based on location – No new wood poles in Architectural Review District
  - Specify footings & foundations for new poles
  - New metal poles must be hot-dip galvanized steel or other corrosion-resistant material and painted black
  - City may require functional streetlights or brackets for flower planters, flags and/or banners



# Section VII: Placement

- City-Owned Wireless Support Structures
  - Require a load analysis
  - May not use City's power source
  - Must not interfere with the existing uses on the pole
  - Installation on sign poles limited to poles 15' or taller
  - City may reserve space for future public safety or transportation uses documents in an approved plan



# Section VIII: Undergrounding

- City may deny requests for areas where City has required all structures and facilities other than those owned by the City to be placed underground or elsewhere in the right of way or a utility easement.
- Applicant may request a waiver if it is unable to achieve its service objective elsewhere in the right of way, in a utility easement or other location made available by the City at reasonable rates, fees and terms



# Section IX: Aesthetic Requirements

- Concealment
  - Prefer new wireless support structures be camouflaged except in industrial areas
  - Small cell facilities must be concealed as much as possible in an equipment cabinet
  - Equipment enclosures shall be as small as possible
  - May include landscaping and/or strategic placement
  - Underground vaults shall minimize disruption to street trees



# Section IX: Aesthetic Requirements

- Colors
  - Match the background of any wireless support structure the facilities are located upon
  - Conduit on wood poles: zinc, aluminum, or stainless steel or colored to match those metal finishes
  - Ground mounted cabinets: brushed aluminum



# Section IX: Aesthetic Requirements

- Signage: Operator shall post its name, location identification, and emergency telephone number using a sign not more than 4" x 6" on the cabinet or at the base of the pole
- No illumination except in compliance with state or federal regulations or if integral to camouflaging strategy
- No unnecessary equipment manufacturer decals or advertisements
- Passive cooling systems in residential areas. When fan needed, low noise profile fan.



# Section X: Aesthetic Requirements

- Old Worthington
  - When collocating on ornamental black traffic signals, preferred spot is on pole without street signs, at top of vertical pole, immediately below the finial
  - Strongly discourage use of ornamental green streetlights
    - Use only if no other options exist
    - Light fixture must be located at the top of the pole
    - May not interfere with attachment of flags, hanging planters and/or banners





# Section X: Aesthetic Requirements

- Old Worthington

- New wireless support structures more than 20' in height, shall match the design of the ornamental black traffic signals
- New wireless support structures less than 20' in height shall match the ornamental green streetlights
- Along High Street between Village Green Drive South and South Street, operators should look to the rear of properties
  - City will consider requests to locate on other municipal property such as parking lots in this area





# Section X: Aesthetic Requirements

- New Support Structures Outside of Old Worthington
  - High Street, Granville Road, Wilson Bridge Road, Old Wilson Bridge Road
    - Match ornamental black poles at High Street and Wilson Bridge Road
  - Olentangy River Road, Linworth Road, Huntley Road, Proprietors Road, Schrock Road
    - May be wood or metal





# Section X: Aesthetic Requirements

- New Support Structures Outside of Old Worthington
  - Residential Areas
    - Should be located at a corner, intersection or along a lot line
    - Should be located in the yard location where other overhead utilities are located unless not technically feasible
  - Village Green
    - Small cell facilities and/or new support structures should not be located here
    - City will consider requests for location on other municipal property in this area



# Section XI: Installation and Inspection

- After permit granted, shall complete within 180 days
  - May be extended, but not beyond 360 days after permit issuance



# Section XI: Installation and Inspection

- Applicant must obtain a Right of Way Work Permit
- Streets, alleys and other public places where work is done must be left in as good condition or repair as before such work commences and to reasonable satisfaction of City



# Section XII: Interference with Operations

- Small cell facility shall not interfere with the public safety radio system or traffic signals
  - Operator must eliminate any interference that occurs



# Section XIII: Removal, Replacement, Maintenance, Repair

- Replacement of Municipal-Owned Support Structure
  - City may require replacement or modification at operator's cost if necessary for collocation
  - Replacement must accommodate space reserved for future public safety or transportation uses
- Removal or Relocation for City Project
  - Operator shall remove and relocate at operator's sole expense to accommodate construction of a City public improvement project
  - If not done within 120 days of City's notice, City may remove at operator's expense



# Section XIII: Removal, Replacement, Maintenance, Repair

- Removal Required for Safety & Imminent Danger
  - City can require operator to disconnect, remove or relocate if City reasonably determines necessary to protect public health, safety, welfare or City property or operator failed to obtain applicable licenses, permits and certifications
  - City may immediately disconnect, remove or relocate if City Manager reasonably determines an imminent danger to the public



# Section XIII: Removal, Replacement, Maintenance, Repair

- Removal/Abandonment of Facilities
  - Operator must removed abandoned facilities within earlier of 60 days of abandonment or within 60 days of written notice by City
    - Work permit required for removal
  - City may allow the wireless support structure to remain in the right of way and coordinate transfer of ownership to the City
- Restoration
  - Operator shall repair any damage to right of way, facilities and/or property of any third party within 10 calendar days of removal or relocation



# General Provisions

- **As-Build Maps and Records**
  - Operator must maintain accurate maps and records
  - Operator must provide a cumulative inventory within 30 days of City's request
- **Generally Applicable Health & Safety Regulations**
  - All small cell facilities and wireless support structures must maintain compliance
- **Tree Maintenance**
  - Operator must obtain written permission from City before trimming trees
  - On private property, Operator must obtain written permission from property owner
  - City may supervise the trimming



# General Provisions

- Graffiti
  - Must be removed not later than 14 calendar days from notice
- Minor Technical Exceptions
  - City may grant deviations when need arises from circumstances outside applicant's control
- Waivers
  - If applicant asserts strict compliance with these guidelines effectively prohibits the provision of personal wireless service, City may grant exemption



# Next Steps

- Staff has shared these draft guidelines with industry representatives and is considering their comments
- Staff will prepare legislation to be brought back to City Council for consideration