

SMALL CELL FACILITES IN THE PUBLIC RIGHT OF WAY

**Mayor and City Council
Work Session
April 11, 2016**

BACKGROUND

- In July of 2015, the City adopted a number of revisions to our telecommunications ordinance to be better prepared for changes in Federal Regulations and the industry.
- Information regarding small cell telecommunications facilities was included in the amendment.
- Small cell facilities (microcellular optical repeater equipment) are used to provide faster data coverage and capacity for mobile phone and device users.
- Requests for small cell antenna installations are expected to rise dramatically. Many cities and counties in the area are seeing requests by companies for installation.

KEY ELEMENTS OF THE FEDERAL REGULATIONS

- No regulation can be enacted which prohibits the provision of personal wireless services.
- No discrimination among all providers – everyone must be treated equally.
- Any requests have to be approved by the City in a “reasonable period of time”. Timeframes range from 60-150 days.
- Decisions for denial shall be in writing and must include substantial supporting evidence.
- Regulations may not be on the basis of the environmental effects of radio frequency emissions if in compliance with FCC regulations.

RIGHT OF WAY AGREEMENT IS REQUIRED FOR A COMPANY TO INSTALL SMALL CELL FACILITIES

- This establishes basic issues of location, placement, and any fees associated with the use of the right-of-way.
- While the City has the right to manage limited aspects of these requests, we are limited by federal statutes. Basically, the City may address the aesthetic issues such as design, color, height, placement of equipment, and location.

TO MEET THE TIMELINES REQUIRED BY FEDERAL STATUTES, STAFF HAS DEVELOPED A PROCESS TO HANDLE THESE REQUESTS

- A standardized ROW agreement between the City and interested parties **(Completed)**
- A pre-application process to work through major issues and prevent applications from being “deemed granted” due to a lack of a timely response by the City **(Completed)**
- Development of several standard (prototypes) designs which would be approved by City Council **(Under discussion tonight)**
- Allowing future applications to be approved at the staff level if they use the standard designs or are colocations in existing facilities **(Subject to Mayor and City Council direction)**

STANDARDIZATION OF DESIGNS ALLOWED IN THE ROW

As part of the pre-approval process, staff has been working with a provider, Crown Castle, to develop prototype designs that they and other providers would use for installations in the ROW. Each of the prototype designs can accommodate three cell providers.

ISSUES CONSIDERED DURING THE DEVELOPMENT OF PROTOTYPES

- Placement on existing facilities owned by other entities
- Retrofitting of existing light poles
- Replacement of existing street lights
- Separate pole installations
- Design, color, and type of pole
- Long-term maintenance issues
- Pole and equipment locations

RESIDENTIAL PROTOTYPE OPTIONS

RETROFITTING OF EXISTING STREET LIGHTS



About 50 percent of the 3,800 city-owned lights could not be retrofitted. In these cases, luminaires are mounted on top of light posts and are not designed to allow for extension of the pole to include an antenna array.

(Not recommended by staff)

RESIDENTIAL PROTOTYPE OPTIONS

REPLACEMENT OF EXISTING STREET LIGHTS



Replacement of existing street lights with new street lights modified to handle the small cell equipment.

REPLACEMENT ISSUES

While possible, this raised a number of concerns including:



- Ownership issues?
- Who would be responsible for maintenance?
- How do outage issues get resolved in a timely manner
- Mixing of different styles lights (post top mounted vs. light poles with small mast arms)

REPLACEMENT OF EXISTING STREET LIGHTS



Not recommended by staff, but if this were to occur staff would recommend that provider owns and maintains the pole and light fixture



RESIDENTIAL PROTOTYPE OPTIONS SEPARATE POLE INSTALLATIONS

(Staff's recommendation and prototypes being proposed)

Residential Locations – at intersections

- Wherever possible, new poles would be located at an intersection in a community.
 - Existing signs would be removed from the existing sign posts and added to this pole to keep the amount of clutter to a minimum.
 - The style and the color of the pole would match those of the light poles in the community.
 - In these cases, the equipment to power the antennas would be either pole or ground mounted (see two options). A third alternative is to install all equipment, except the electrical meter in a larger diameter monopole.

TYPICAL INTERSECTION



OPTION 1: POLE MOUNTED EQUIPMENT



Photo Simulation

NPE-070m2

Proposed DAS Antennas
and Equipment Cabinet on
Steel Pole (with Existing
Street Signs Moved to Pole)

Created by:



Version 2, January 14, 2016

OPTION 2: GROUND MOUNTED EQUIPMENT



Photo Simulation

NPE-070m2

Proposed DAS antennas on steel pole. Existing traffic signs relocated to steel pole. Proposed equipment cabinet on new steel post at grade.

Created by:



Version 3, February 15, 2016



RESIDENTIAL PROTOTYPE OPTIONS

Residential Locations - non-intersection

- In locations where the poles could not be located at an intersection, the use of larger diameter poles (16 inches) would be used.
- The larger diameter poles would contain most, but not all of the accessory equipment (electrical meter would be mounted on the exterior).

In essence these are considered “monopoles”.

SMALL CELL AT A NON-INTERSECTION LOCATION IN A RESIDENTIAL AREA



Photo Simulation

NPE-025

Proposed DAS Antennas
and Associated Equipment
Inside New Concealment
Pole

Created by:



Version 2, February 15, 2016





COMMERICAL PROTOTYPE OPTIONS

Commercial Locations

- For commercial locations, it would not be as critical for the poles to be located at intersections. The style and color of these pole would match those of the light poles in the surrounding area.
 - Example of Standalone steel pole
 - Example of Standalone steel pole at intersection
 - Example of Decorative pole

SMALL CELL STANDALONE STEEL POLE IN A COMMERCIAL AREA



SMALL CELL STAND ALONE STEEL POLE AT AN INTERSECTION IN A COMMERCIAL AREA



Photo Simulation

WSH-008P

Proposed DAS antennas and equipment cabinet on steel pole. Existing traffic signs relocated to steel pole.

Created by:



Version 3, January 14, 2016

SMALL CELL STAND ALONE DECORATIVE POLE IN A COMMERCIAL AREA



Photo Simulation

WSH-010Pm1

Proposed DAS Antennas
and Associated Equipment
Inside Concealment Pole
(with Street Sign Relocated
to Pole)

Created by:



an **intercloud systems** company
MindsTogether.

Version 5, February 15, 2016



REAL LIFE EXAMPLES

CROWN CASTLE PROPOSAL

Crown Castle has submitted pre-approval applications for:

- A group of four new facilities in the Rio commercial area
 - three (3) utilitarian and
 - one (1) decorative pole installation
- Five (5) facilities in the residential communities of
 - Washingtonian Woods (two at intersection) and
 - Westleigh (1 intersection and two non-intersection)

RESIDENTIAL SITES



NPE Revised 1-14-16 Locations

City of Gaithersburg Public Works | 800 Rabbitt Road Gaithersburg, MD 20878 | (301)-259-6370 | www.gaithersburgmd.gov



NEW LOCATION-STOP SIGN



ORIGINAL LOCATION



SAME LOCATION-SAME POLE w/ LIGHT



SAME LOCATION-SAME POLE no light



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0 60 120 240 Feet 1" = 100'

COMMERCIAL SITES



WSH Revised 1-14-16 Locations

City of Gaithersburg Public Works | 800 Rabbitt Road Gaithersburg, MD 20878 | (301)-259-6370 | www.gaithersburgmd.gov



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DECISION POINTS - Residential

- Pole Location
 - First Priority: Existing utility pole (if area has above ground utilities)
 - Second Priority: Intersection locations
 - Third Priority: Non-intersections on the joint property line
- Color and Style
 - Style and the color of the pole would match those of the light poles in the residential community



DECISION POINTS - Residential

- Type of Pole and Equipment location
 - Intersection with pole-mounted equipment
 - Intersection with ground mounted equipment
 - Monopole with internal equipment (except electrical meter). This is a larger diameter pole.
- Height
 - Council could establish a maximum height
- Ownership
 - Provider would own any poles installed even if they have a light

DECISION POINTS - Commercial

- Pole Location
 - First Priority: Existing utility pole (if area has above ground utilities)
 - Second Priority: Intersection locations
 - Third Priority: Non-intersections
- Color and Style
 - Style and the color of the pole would match those of the light poles in the commercial area



DECISION POINTS - Commercial

- Type of Pole and Equipment location
 - Intersection with pole-mounted equipment
 - Non-Intersection pole-mounted equipment
 - Monopole with internal equipment (except electrical meter). This is a larger diameter pole.
- Height
 - Council could establish a maximum height
- Ownership
 - Provider would own any poles installed even if they have a light

DECISION POINTS-STAFF APPROVAL AND NOTIFICATION PROCESS

- Staff would approve installations that meet the prototype design requirements.
- Adjacent property owner(s) would be notified by the provider prior to the installation of the facility. There would be a staff contact person to explain limits placement.