

Wireless Telecommunications Facilities

An Element of Vision 2001-2020

APPLICATION AND DEFINITION

For the purposes of this policy, the term “wireless telecommunications” includes personal wireless services as defined in the Telecommunications Act of 1996. [47 U.S.C._332(c)(7)(C)(i)] Wireless telecommunications facilities include any facility used for the transmission or reception of wireless telecommunications, usually consisting of an antenna or group of antennas, transmission lines, ancillary appurtenances, equipment enclosures, and the antenna-supporting structure.

BACKGROUND

Telecommunications Act of 1996

The Telecommunications Act of 1996 affects the City of Roanoke’s land use decisions in regard to wireless telecommunications facilities. The Act preserves the City’s zoning authority over the placement, construction, and modification of personal wireless service facilities.¹ [47 U.S.C._332(c)(7)(A)] However, City regulations and actions cannot unreasonably discriminate among wireless providers or have the effect of prohibiting the provision of personal wireless services. [47 U.S.C._332(c)(7)(B)(i)] Furthermore, any denial of a wireless service facility must be in writing and supported by substantial evidence contained in a written record. [47 U.S.C._(c)(7)(B)(iii)] The Act is intended to facilitate the growth of wireless telecommunications services while maintaining substantial local control over construction of towers and other wireless infrastructure.

Policy for Wireless Telecommunications Facilities on City Property

In 1997, City Council adopted the *City of Roanoke Policy as to Wireless Telecommunications Facilities Located on City Property*. That document establishes standards for wireless telecommunications facilities located on City-owned properties, including standards for applications, priority of use of City properties, leases, structural integrity, the screening of such facilities, and the blending of such facilities with the natural environment.

¹ As defined by the Act, the term “personal wireless service facilities” means facilities for the provision of commercial mobile services (which includes cellular, personal communication services, specialized mobile radio, enhanced specialized mobile radio, and paging), unlicensed wireless services, and common carrier wireless exchange access services. The term “unlicensed wireless service” means the offering of telecommunications services using duly authorized devices which do not require individual licenses, but does not mean the provision of direct-to-home satellite services.

Vision 2001-2020, the City's Comprehensive Plan

Vision 2001-2020, the City's Comprehensive Plan, establishes the following general policies which guide this specific policy on wireless telecommunications facilities:

- Roanoke will facilitate development of the capacity and coverage of fiber-optic, cable, and wireless communications networks. (*Vision 2001-2020*, page 72, IN P6)
- The visual impact of telecommunication facilities will be minimized by collocation and placement of towers in strategic locations. (*Vision 2001-2020*, page 72, IN P6)
- Adopt zoning regulations that address communication towers to minimize their visual impact. (*Vision 2001-2020*, page 50, EC A11)

Need for and Purpose of a Wireless Telecommunications Facilities Policy

As a result of an increased demand for wireless telecommunications services, providers are seeking continually to increase their service capacity and coverage areas. In order to address the increasing demand for wireless telecommunications facilities, it has become increasingly important for the City of Roanoke to set forth policies, principles, and intended achievements in regard to wireless telecommunications facilities on both publicly and privately owned land. Standards should be implemented to accommodate the growing coverage and capacity needs of carriers, while preserving and minimizing the negative impact wireless telecommunications towers have on the surrounding natural and built environments. Wireless telecommunications facilities should be deployed and constructed in a manner that respects the City's environment and the community's values.

The intent of this wireless telecommunications facilities policy is not to replace the 1997 City policy, but rather to provide applicants for wireless telecommunications facilities, property owners, and all other City residents clear guidance on the policies of the City of Roanoke regarding wireless telecommunications facilities on public and private lands. The policies established, and the standards and approaches recommended, by this document should be used by wireless telecommunications service providers as a guide when selecting alternative tower sites and tower designs within the City. In addition, the City of Roanoke should use these policies as a guide in the review and evaluation of any requests for wireless telecommunications facilities. These policies should set the direction for the establishment of specific standards and development regulations within the City's zoning ordinance for the development of wireless telecommunications facilities. Such standards and regulations should create a uniform approach toward analyzing and processing wireless telecommunications facilities siting requests from a land use perspective.

The City finds that there are reasonable and feasible alternatives to highly visible wireless telecommunications facilities. This policy is intended to allow for the provision of wireless telecommunications facilities that have limited visual impact on the community. Such facilities may be appropriate and may be approved in any zoning district if the proposal meets standards for siting and design as it relates to the facility's visibility and its visual impact.

POLICY APPROACH

It is the intent of the City to fully comply with all of the applicable provisions of the Telecommunications Act of 1996 and other applicable federal and state laws as such laws address and preserve the City's zoning authority and provide to the wireless telecommunications industry the right and responsibility to provide wireless telecommunications services within their service areas. The policies set forth in this document will be implemented through specific regulatory provisions in the City of Roanoke Zoning Ordinance.

When new wireless telecommunications facilities are proposed, visibility should be the primary consideration in evaluating such requests. Visibility can be measured in terms of the size, height, bulk, and location of the facility. Visibility can be further mitigated by the strategic placement of the facility on a site and the use of vegetative screening. The visual impact of a wireless telecommunications facility is often the most important standard by which it can be evaluated. It is the applicant's burden to substantiate that the requested location is necessary for service coverage and that the proposed facility is the least intrusive means to close a significant gap in service. The City should require an applicant for a wireless telecommunications facility to submit sufficient information to enable the City to measure the visual impact of a proposed facility.

- The measures of visibility of a proposed wireless telecommunications facility, as related to size, height, bulk, and location, should include the proposed facility's visual obtrusiveness (overwhelming its surroundings), visual intrusiveness (in relation to its surroundings), and visual incompatibility (in context with its surroundings).
- Towers and antennas with limited visibility should be encouraged, but a highly visible wireless telecommunications facility may be acceptable if the visual impacts are mitigated by means of camouflage, concealment, or disguise. Camouflage involves minimal changes to the host structure whereby the facility does not overwhelm the host structure and the host structure remains predominant. Concealment is the placement of the facility completely within an enclosed structure. Disguise is changing the appearance of the facility to appear to be something it is not. Wireless telecommunications towers should provide minimal visible intrusion in areas designated for less intense uses. Although siting and design standards should be considered with any application, such standards should be key in consideration of requests in areas of less intense uses.

- Towers should cause minimal impacts on public safety, the natural environment, and surrounding properties. Regulations should encourage coordination between providers of wireless telecommunications services.
- Regulations should protect the character, scale, viability, and quality of life of residential districts.
- Regulations should provide for the reasonable removal of discontinued wireless telecommunications towers and related facilities.

POLICIES

The City encourages the provision of new service capacity by locating new antennas on pre-existing wireless telecommunications towers or other existing structures, a practice known as collocation. Providers of wireless telecommunications services should consider the following when applying for a new facility in the City:

WTF P1. The placement, construction, or modification of wireless telecommunications facilities on existing buildings and other existing structures is strongly encouraged, and providers should always seek opportunities to locate on existing structures. Many times antennas installed on existing buildings, utility poles, water tanks, electric transmission towers, sign support structures, and park or ballfield lights can satisfy the intended coverage areas and diminish the need to erect new wireless telecommunications towers. Other options for placement include flagpoles, treetops, and church steeples. There should be flexibility in the type of antenna allowed, provided the antenna is mounted in a manner that does not dominate the structure and it does not exceed the height allowed by the zoning regulations.

The City further encourages the use of stealth wireless telecommunications facilities, designed in such a manner that they are installed on existing structures or appurtenances and are camouflaged or partially or totally concealed to blend with surroundings. Such facilities are inconspicuous, and citizens would not be able to differentiate reasonably between the existing structure and the facilities integrated into them. Potential sites include church steeples, bell towers, utility poles, and flagpoles.

WTF P2. Collocation on existing towers is strongly encouraged, provided visibility is not unnecessarily exacerbated. An arrangement where multiple carriers share space on the same wireless telecommunications tower allows for the “highest and best” use of an existing structure and could eliminate the need for construction of a new tower in an inappropriate area. Providers

should always seek out every opportunity to locate on existing wireless telecommunications towers. If an applicant does not propose a collocation site, the provider should demonstrate why collocation sites would not work and substantiate the need for a new tower. Any new facility should be designed to accommodate additional collocation opportunities. Collocation which results in adverse visual impact, such as vertical collocations that increase the height of a structure or the size or projection of antenna arrays from the support structure, should be discouraged. Visibility should be considered in determining the number, location, and design of platforms and antennas to be located on a tower.

WTF P3. **Requests for new wireless telecommunications towers in the City should be approved when no other reasonable alternative exists for locating antennas needed for service coverage. Approved towers should be low impact in terms of location, siting, height, and design.** To effectively accomplish low-impact towers, proposed towers should address the following principles:

- **Proper location:** New wireless telecommunications towers and antennas should be constructed in locations (the property or general area where such facility is to be placed) that will provide the least negative impact on the community and that will avoid or minimize environmental impacts to the greatest extent practicable, consistent with Federal rules and regulations. The location should be compatible with surrounding land uses and not detrimental to the City's attractiveness, health, safety, and welfare. To help alleviate the negative impact associated with towers, the following list provides a hierarchy of categories of lands on which to construct wireless telecommunications towers, from the most to least preferable:

- (1) Industrially zoned lands
- (2) Commercially zoned lands
- (3) Downtown District zoned lands
- (4) High density residential zoned lands
- (5) Institutionally zoned lands
- (6) Medium density residential zoned lands
- (7) Agricultural or Recreation and Open Space zoned lands
- (8) Low density residential zoned lands

A wireless telecommunications facility does not have to be located in the most preferable locations if careful siting and low-impact design considerations mitigate its impact. The less preferable the location, the more critical siting, height, and design become in consideration of a proposed facility.

- **Careful siting:** Siting refers to a specific point on a property where a wireless telecommunications facility is to be constructed, such as in the trees or on the roof. Strategic placement within trees or below a ridgeline can significantly reduce visibility of the facility. Wireless telecommunications facility locations at elevations lower than surrounding ridge lines, with adequate amounts of trees as a backdrop to eliminate skylining and reduce visibility of the facility, are preferred. If there is no other reasonable alternative and a proposed wireless telecommunications facility must be located on a ridgeline, it should be placed on an available transmission line where such power line has already cut the ridgeline or on existing buildings or other structures located on ridgelines. Siting of facilities should not create a hazard to adjacent property or cause the over-development of property that results in an undue intrusion onto adjacent property.
- **Minimizing height:** Given that Virginia law specifically authorizes the consideration of height in land use regulation and decisions, consideration of the proposed height of a new tower is appropriate. Many times the intended coverage can be accomplished with a lower height. Reducing height can be an effective means of reducing the visual intrusiveness of a tower. Providers should document justification of any requested height and conduct tests to demonstrate the visibility of the proposed facility from surrounding areas. Height considerations should include consideration of any lighting that may be required by other regulatory authority as a result of the proposed height and its effect on the visual impact of the tower.
- **Design:** A well-designed wireless telecommunications facility can make a difference, particularly in areas of high visibility. Design considerations should include the size, height, area, and bulk of the tower or other support structure, associated equipment enclosures, and the types of antennas and mounting techniques as they relate to the overall height, size, and bulk of the tower. Design issues related to public safety and welfare should also be considered.

- The use of monopole stealth towers is preferred in lieu of the more intrusive lattice design structures, which affect the size and bulk of a proposed tower. (Monopole stealth towers consist of hollow metal tubes and are designed to blend into the surroundings.)
- Lattice towers, which are capable of great height, may be acceptable if appropriately sited.
- Guyed towers may be appropriate in remote locations.
- Ground-mounted monopoles and masts are acceptable for wireless telecommunications facilities. Masts are preferable because they are shorter and more slender than monopoles and the antennas can be kept close to the pole, but monopoles are acceptable provided the antennas do not protrude far from the pole.
- An antenna-supporting structure should be no wider than the minimum necessary to support the proposed equipment.
- Roof-mounted facilities are acceptable but should be of a scale and color that are in keeping with the roof. It is preferable that roof-mounted facilities be flush-mounted on the parapet or a penthouse rather than projecting upwardly. Panel antennas should be located so that they do not peak above the roofline and should be positioned below the parapet.
- Dual-polarized or cross-polarized antennas are preferred over antenna arrays that provide for spatial diversity.
- Antennas should be mounted close to the supporting structure and should be designed to minimize visibility. For siting on utility poles, antennas should be mounted close to, or flush-mounted against, the pole. If located on top of the pole, overhang should be limited.
- Ground-based equipment should be limited in size and screened from view.
- The type and color of paint can reduce visibility of towers. Towers, regardless of location, should be painted with a neutral, flat paint, and should be a color which blends with its surrounding environment.

- Lighting and reflective signs should be allowed only when required by other regulating bodies such as the Federal Aviation Administration.
- Any advertising on towers should be prohibited.
- Security fencing should be provided.
- A wireless communications facility should not cause interference to any television, radio, telephone, electronic, or other communications device on or off the site of the facility.

WTF P4. **Consideration of any request for a new wireless telecommunications facility within the City should be reviewed for its potential effects on surrounding jurisdictions as well as the City.** Newly constructed towers should be located to provide the least negative impact to the citizens of all jurisdictions.

ACTIONS

WTF A1. Facilities located within existing structures and having no exterior visibility or collocating without exceeding previously approved heights should be handled administratively with subsequent approval if standards are met. Applications proposing visually intrusive facilities should require application to the Board of Zoning Appeals for a special exception. The justification of why and where a wireless telecommunications facility is proposed to be located should be the applicant's responsibility. Procedural requirements should be drafted to ensure proposed facilities are consistent with the character of the community; are reviewed within a reasonable period of time; and are reviewed according to clear and understandable design and location criteria.

WTF A2. Establish a process and fee for utilizing a consultant to assist the City in evaluating the possible alternatives and potential impacts of a special exception request for a wireless telecommunications facility.

WTF A3. Amend zoning regulations to include minimum submittal requirements for applications for wireless telecommunications facilities. Such standards should include:

- Documentation of service area needs for proposed location;

- Existing structures and collocation sites considered and rejected by the provider and the reasons why;
- Computer simulations and balloon tests to illustrate visibility of the proposed facility;
- Scaled plans depicting location of facility on the site, including setback dimensions;
- Design and photos of the specific type of support structure;
- Design and location of all associated equipment structures, cabinet, shelters, or buildings;
- Design, type, location, height, and configuration of all proposed antennas;
- Design, type, location, height, and configuration of all potential future antennas;
- Landscaping, screening, and security fencing plans;
- Proposed support structure's design and its capability to support other providers;
- Certification of the structural integrity of the support structure as affected by the attachment or location of proposed wireless telecommunications facilities; and
- Justification of the requested height.

WTF A4. Develop and incorporate uniform standards of visibility and impact within the zoning regulations by which applications for wireless telecommunications facilities will be reviewed, evaluated, and considered, with such standards to be used as findings for approval or denial of such applications. A regional approach to the regulation of wireless communications facilities should be taken; therefore, such regulations should be consistent with those of surrounding jurisdictions.

WTF A5. Compile information and develop a map and list showing all tower/antenna sites and providers using those sites within the City and surrounding jurisdictions in an effort to encourage and promote the collocation of antennas on existing public and private structures within the City. This map and list will allow the City access to

current information on tower locations to better assess the possibilities for alternative sites.