



II. Zoning Ordinances For Wireless Communications Facilities

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What issues should communities address in zoning codes regulating wireless communications facilities? How can certain local government code provisions facilitate or hinder local goals related to those facilities? Zoning laws differ from state to state, and local policies governing wireless communications facilities are just as varied. While it is impossible to identify “the right way” to address the zoning of wireless facilities in all cases, the information in this chapter provides guidance for addressing these issues in ways that have proven to be effective and leading to positive outcomes for communities and carriers, alike.

Almost every community will need to deal with the siting of wireless facilities, and almost every community that has already will want to minimize visual impacts of new projects. Clearly, certain kinds of sites are less visually intrusive than others. An effective zoning ordinance will encourage the siting of facilities in preferred locations, thereby minimizing visual impacts while facilitating the provision of wireless services. Your goal should be to adopt zoning regulations that are the minimum required to protect the public interest, and which encourage speed to market for the kinds of wireless sites that your community prefers.

A. A Note About Process

Whether adopting new regulations or amending existing code sections, it is important to first educate all interested parties as to the scope of local zoning authority and the limits placed upon that authority by federal law. Those limits are discussed in more detail elsewhere in this publication, and will not be reviewed in depth here. However, this interplay between federal, state and local law needs to be shared with planning and zoning commissioners, local elected officials, planning staff and the public at large, as you navigate through the process.

It is critical that local governments involve the wireless industry in the process. That is not to say that the industry should write your ordinance. After a draft is prepared, it is advisable to share it with the industry, and meet to discuss their feedback, before bringing the ordinance forward for public hearings. The process may be challenging. There may be issues in proposed code sections the industry will insist that the local government should address differently or not at all, and local government staff may disagree. However, oftentimes the industry will suggest modifications that allow you to address the public interest in a different but equally effective way, and at the same time, make it easier for the wireless provider to manage its business. If the reader takes nothing else away from this

chapter, remember that working through the details with the wireless industry will result in better local legislation, and a more effective working relationship with the entities regulated.

B. What Are Your Community Goals?

Before you begin drafting consider the community goals. Is there a need to encourage more sites in order to improve signal coverage or call handling capacity in the community? If so, you should identify those parts of town where improved coverage is necessary, determine the areas you may want to encourage for new sites, and recognize that your code should encourage siting in these areas.

Are there specific geographical challenges to wireless coverage in your community? Are there environmentally or historically sensitive areas or important view corridors where new, freestanding facilities should be avoided? The fact that there are parts of the community where you may not want any visible facilities does not mean that they can necessarily be prohibited under federal law. However, a good zoning ordinance will provide expedited time-to-approval incentives for locating in preferred areas, incentives for camouflaged facilities in more sensitive areas, and can be a very effective tool in minimizing unwanted visually-intrusive facilities in limited areas.

C. Key Issues To Address In The Ordinance

1. Recitals and Findings

Include the goals of accommodating the communications needs of residents and businesses and promoting deployment of wireless services in your ordinance's recitals. Perhaps obvious, the recitals might state that it is the intent to accomplish these goals in a way that protects the public health, safety and general welfare, eliminates unnecessary regulation, and regulates land uses for wireless facilities in a manner that is consistent with federal law (and state law, if your state has adopted wireless legislation). Depending upon the specifics of the community, the ordinance findings will likely contain specific references to the needs of the community, such as a need for better wireless coverage, or a need to protect important view corridors.

2. Definitions

How you define your code's critical terms will impact how easy or difficult it is to administer. In addition to the obvious terms like antennas and towers, it is helpful to define terms like wall-mounted and roof-mounted. You will want a definition to address accessory or ancillary facilities such as the ground equipment required at each site. The code should also include a definition for alternative design or alternative structure, to describe designs that camouflage or conceal the presence of antennas or towers, such as artificial trees, antennas inside flagpoles, church steeples, clock towers and similar structures. The greater the specificity of the definitions, the easier it will be for staff to administer the code, and for a judge to understand what is contemplated by its terms.

3. Administrative Approval versus Public Hearings and Public Votes

Because zoning laws differ from state to state, local governments may or may not have flexibility in dictating which types of land use approvals require public hearings and which can be addressed administratively. To the extent that local governments have flexibility, you should consider how to make the approval process more streamlined for the applicant, while still protecting the public interest. In this regard, the application and approval process is of critical importance. If a community goal is to minimize new stand alone structures, encourage camouflaged sites, and utilization of existing structures like buildings, water towers, light poles and traffic signals for wireless facilities, it should create a relatively fast, administrative approval process in as many of its zoning districts as is reasonable. To the extent practical, public hearings, review and approval by Planning and Zoning Commissions and elected bodies should be left to those applications for the more visually obtrusive, freestanding facilities. Given the choice between a six month process with public hearings before Planning Commission and City Council for a 75 foot tower, or a 3 week administrative approval process for an application to place antennas on a water tower or camouflaged on an existing building, we know which way most applicants will proceed.

Some communities require all applications for new freestanding facilities to follow a public hearing and approval process while others will allow for administrative review of freestanding facilities of a certain height in specific zoning districts. Height concerns cannot be addressed the same way in every community or even the same way within each neighborhood in a community. Again, if the community goal is to encourage sites that are less visibly obtrusive, rapid administrative approval for some smaller freestanding facilities in zone districts like industrial is recommended. It is not uncommon for a free standing facility to be allowed as a use by right in a particular zone district, up to the maximum height for any other structure in that zone. Taller structures may be allowable as a conditional or special use, after public hearing, where the application demonstrates special need for the facility and acceptable design criteria.

4. Applications for Administrative Review

The ordinance should describe the requirements and timing for the administrative review process. The application should include proof of ownership or lease rights to the property, and scale drawings of the antennas and accessory facilities that demonstrate how the required design criteria are met. Where existing wireless facilities are present, it should contain a representation that the addition of the proposed facilities to the site will not cause the site to exceed federal standards for radio frequency emissions. Applicants should provide 24/7/365 contact information.

An initial application should be reviewed quickly to determine if it is complete. If an application is not complete, there should be an opportunity for a meeting between the applicant and staff to clarify any outstanding issues. In most cases, administrative action on

a complete application ought to be able to be taken within 15 to 30 days, or as specified by a controlling state law.

5. Applications for Public Hearing Review

A conditional or special use application for a freestanding structure or other facility that may require a public hearing under state or local law should build on that required for the administrative approval application process. The application should indicate the capacity for co-location, and should include a commitment by the applicant to allow co-location upon commercially reasonable terms. The applicant should describe how the proposed site fits into the overall communication network within the community, to demonstrate the necessity for the specific request. The application should demonstrate that there are no commercially viable alternatives to accomplish the network coverage goals the applicant seeks to achieve through the freestanding facility. The applicant should also disclose whether a denial of that particular application will result in the applicant's inability to provide the minimum coverage or capacity it is required to provide pursuant to its FCC license (build-out requirements) and any other applicable law. The ordinance can require application information describing which other sites were considered, and the results of that investigation. Applications should also require realistic and reliable photo simulations of how the facility will look from various locations surrounding the site.

6. Collocation Requirements

Be cautious about mandating collocation. To be sure, collocation of multiple antenna arrays on one tower can minimize the need for additional sites. At the same time, it may actually be less visibly obtrusive to have multiple lower tower sites, compared with one extremely tall and antenna-dense site. For this reason, it is better practice that collocation be encouraged, but that the code allows in proper situations for single use sites, especially when those single use sites are camouflaged.

D. Design Criteria – all Facilities

The ordinance should set forth the design criteria that will govern consideration of the applications. Some criteria will apply to all sites. For example:

1. Facilities should be designed and located to avoid dominant silhouettes and to preserve view corridors of surrounding areas to the maximum extent possible.
2. No portion of an antenna array should be permitted to extend into a setback or beyond a property line.
3. The visual impact of the facilities should be mitigated through the use of compatible architectural elements such as: colors, textures, surfaces, scale and character.
4. Accessory (ground) facilities should be integrated to the maximum extent possible into the natural setting and the structural environment of the area. It should be screened with vegetation, structures or topographical features. In areas of high visibility, and the extent feasible, accessory facilities should be sited below the ridgeline or designed

(e.g., placed underground, depressed, or located behind earth berms or structures) to minimize the profile.

5. Security fencing should be of a design which blends into the character of the existing environment.

6. Signs for promotional or advertising purposes should be prohibited, although signage with safety information should be allowed (i.e., site identification signs; FCC antenna registration number signs; and RF safety signs).

7. All facilities should be designed, maintained and operated, as required by applicable FCC licenses and regulations.

E. Design Criteria – Freestanding Facilities

1. If collocation is important in your community, you should consider a requirement that towers accommodate at least three carriers if requested by the jurisdiction, and under commercially reasonable terms.

2. Sufficient ground space to accommodate accessory equipment for multiple users if collocation is required.

3. The location and development of freestanding sites should to the maximum extent possible, preserve the existing character of the topography and vegetation.

4. Setbacks for towers have caused debate between local communities and providers. While it is rare, towers do occasionally fail. However, requiring a setback equal to the height of the tower may unnecessarily limit the potential sites available. Some communities have found a balance by requiring setbacks equal to the height of the tower in residential and retail/commercial zones, but have allowed lesser setbacks in industrially zoned areas.

5. Freestanding facilities should not include aircraft warning lights unless required by the FAA or other applicable authority (typically for sites of 200' or taller). If lighting is required, you may wish to include provisions that allow the local zoning authority to review available warning lighting alternatives and approve the design that would cause the least light disturbance to the surrounding areas.

6. While it is impossible to completely screen a freestanding facility from view, you may consider a criterion that facilities should be screened to mitigate visual impacts to the maximum extent practicable.

7. To ensure the structural integrity of towers and other freestanding facilities, the applicant should demonstrate that the facility is of sufficient structural strength to accommodate reasonable collocation, if required, and will be maintained in compliance with building codes, the applicable standards for towers that are published by the Electronic Industries Alliance, as revised from time to time (presently TIA/EIA-222-G as of January 1, 2006), and other applicable codes of the jurisdiction. The ordinance should also require: (a) sufficient anti-climbing measures must be incorporated into each facility to reduce potential for trespass; (b) no guy wires may be anchored within the area in front of any principal structure on a parcel; (c) all wireless facilities shall comply with the power line clearance standards set forth by the state's Public Utilities Commission or similar body; (d) any

freestanding facility shall be designed and maintained to withstand without failure maximum forces expected from wind, tornadoes, hurricanes, and other natural occurrences, when the facility is fully loaded with wireless facilities and camouflaging. The initial demonstration of compliance with this requirement should be provided in a report prepared and stamped by a registered professional structural engineer describing the structure, specifying the number and type of antennas the facility is designed to accommodate, providing the basis for the calculations done, and documenting the actual calculations performed. An applicant should acknowledge that it may be required to provide proof of ongoing compliance upon request.

F. Design Criteria – Attachments and Camouflaged Facilities

Antennas can be attached to the walls or roofs of buildings and other structures like water towers. They can be completely or partially hidden in structures. Issues to consider are how high facilities may extend from the top of an existing structure, and how far out can they extend from the side of a structure.

1. Some ordinances allow facilities to extend from 5 – 15 feet above a structure, even if the structure itself is at the height limit for that zoning district. Likewise, antennas may need to extend some distance out from existing structures, which creates a visual impact depending upon the length. In most cases, 10 feet should suffice, but again, feedback from carriers will help shape your ordinance requirements.

2. Where possible, facilities should be concealed in accessory structures consistent with the architectural scale and character of the area.

3. Roof and wall mounted facilities should be architecturally compatible with and colored and textured to match the building or structure to which they are attached.

4. The code should encourage camouflaged facilities (limited only by an applicant's and the community's creativity – see <http://CellularPCS.com/gallery/> for interesting examples) on a case by case basis.

G. Radio Frequency Emissions

The Telecommunications Act preempts local authority to deny a project based upon the perceived health effects of radio frequency emissions, so long as the facilities comply with the FCC's emissions standards. See, 47 U.S.C. 332(c)(7)(B)(iv). Therefore, local zoning authorities should require an applicant to demonstrate how it will comply with federal standards. Consider a requirement for an applicant to submit the two page form addressing compliance with FCC regulations described in this publication's chapter by Jonathan Kramer on RF Emissions Safety. If a proposed site is not "categorically excluded" per the FCC rules, the code may require a more detailed RF safety report that provides the expected (in the case of a new application) or cumulative (in the case of an operational site) field strength measurements of radio frequency emissions of all antennas installed at the subject site, and that compares the results with established federal standards. The reasonable costs incurred

by the jurisdiction, including reasonable consulting costs to verify compliance with these requirements, should be paid by the applicant.

Another issue that arises from time to time is interference caused by wireless facilities. The instances of wireless facilities interfering with public safety communications are not as widespread as in the past. However, local governments may still want assurances that any interference will be resolved in a timely manner. Here again, federal regulations have affectively preempted most authority where the local government is the permitting agency (although when the local government is the landlord, the site lease terms can require non-interference).

H. Wireless Facilities in the Rights-of-Way

Subject to the local permitting process (and in some states, such as California, by statute), wireless facilities located solely within public rights-of-way should be permitted by administrative action, based upon criteria such as:

1. The facilities should be located on existing poles, upon replacement poles of the same dimensions, or upon replacement poles of a dimension that would otherwise be permitted under existing regulations for any utility.
2. Any necessary wiring or cabling should be located within the pole.
3. There should be a maximum amount of area that wireless facilities add to a pole. Consider a not to exceed amount of 15 square feet. In addition, the facilities should be permitted to add a reasonable amount of additional height to the pole (consider something in the 10 foot range), and may project outward in any direction a reasonable distance (consider 2 feet).
4. Ground equipment for facilities in the rights-of-way should be buried or screened by approved landscaping to be maintained by the facilities' owner.

While administrative approval is generally appropriate or facilities in the rights-of-way meeting the above criteria, if an applicant proposes to add to the total number of poles located in the area, or if the request does not otherwise meet the jurisdiction's criteria for facilities in the rights-of-way, the request should require a special or conditional use permit.

I. Enforcement

If, upon inspection, the jurisdiction concludes that a wireless facility fails to comply with applicable codes and regulations, and/or constitutes a danger, there should be a provision for notice and an opportunity for the permittee to bring the facility into compliance (consider 30 days unless there is an immediate threat to public health or safety). It is reasonable to allow a local official to extend the compliance period for good cause. If the owner fails to bring the facility into compliance, the jurisdiction may terminate the permit, remove the facility at the owner's expense, and/or impose other appropriate penalties.

J. Abandonment and Removal

The ordinance should require the removal of all structures and equipment if a permitted site is not used for more than a specified period of time. We generally suggest 180 days, and again, allow for extensions upon a showing of good cause. Upon removal, the property should be restored, including the landscaping of exposed soils. The jurisdiction should have the sole discretion to require any abandoned facility to be removed after written notice to the owner. If the removal is not completed within a required time period, the jurisdiction may remove and dispose of the facility at the owner's expense. For sites with multiple users, a jurisdiction should not consider a site abandoned or require removal of all facilities until all users cease using the structure.

K. Conclusion

Siting of wireless communications facilities involves an understanding of the interplay between federal, state and local law, the needs of the market, and the goals of the local community. A comprehensive wireless zoning code that recognizes each of these factors will help communities navigate through what can otherwise be complex and at times, contentious land use proceedings.

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