



Issues Regarding Siting of Telecommunication Towers

Dear Reader:

The following document was created from the MTAS website ([mtas.tennessee.edu](https://www.mtas.tennessee.edu)). This website is maintained daily by MTAS staff and seeks to represent the most current information regarding issues relative to Tennessee municipal government.

We hope this information will be useful to you; reference to it will assist you with many of the questions that will arise in your tenure with municipal government. However, the *Tennessee Code Annotated* and other relevant laws or regulations should always be consulted before any action is taken based upon the contents of this document.

Please feel free to contact us if you have questions or comments regarding this information or any other MTAS website material.

Sincerely,

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Specifics to be Decided by the City

In modifying any particular model ordinance, your city should make amendments that will answer the following questions, based on your community's needs and preferences:

1. What types of antennas will be affected by the ordinance?

Cities usually exempt certain types of antennas from their zoning regulations. These include television satellite (dish) antennas and "receiveonly" antennas, which can be as simple as a piece of wire stretched between trees to receive shortwave radio broadcasts.

Counties often exempt amateur (or "ham") radio towers from compliance with their antenna facilities ordinance, presumably on the grounds that such facilities are built in sparsely populated areas and will not affect neighboring properties. Cities, however, should carefully consider regulating amateur radio towers that are excessively high.

Some city ordinances require construction permits for amateur radio towers that exceed specific heights (for example, 45 feet for a ground-mounted antenna and 30 feet for one mounted on a building).

2. How shall we encourage colocation?

Out of a concern that their communities may one day be overrun with antenna towers, some cities require tower applicants to conduct studies to determine if other facilities in the area would be suitable for antenna placement. These might include space on an existing tower that could be leased by the applicant to place an antenna or space on buildings, water towers, bridges or other tall structures that might be leased for antenna placement.

If the applicant's tower proposal is otherwise acceptable, some cities require that the tower be built in such a way that it can accommodate other antennas in the future, thus reducing the need for more antennas in the area. In cases where a new tower is proposed, some cities require applicants to thoroughly inventory all colocation opportunities in the community and explain why such opportunities have been rejected by the applicant.

Colocation studies are expensive (the costs should be paid by the applicant) and may be controversial. Still, such investigations can prevent the creation of "antenna farms" in certain areas of town.

3. How do we protect the community if the tower is eventually abandoned?

A city may opt to require tower applicants to post a performance bond guaranteeing the safe demolition of a tower in the event it is ever abandoned. This can be valuable to the city in the aftermath of a tornado or an occurrence where the tower owner may not have the resources to repair or demolish the tower.

4. How can we protect the community against poor maintenance of the tower?

The city might consider a requirement that telecommunications towers are inspected periodically by a qualified professional engineer registered in the state of Tennessee, and that a copy of such inspection report be filed with the municipality's building inspector.

5. How do we recover the cost of evaluating the permit application?

Properly evaluating a permit application requires consulting with a variety of professionals whom the city may not regularly employ (i.e., structural engineers, telecommunications engineers, telecommunications lawyers, etc.). In developing its tower ordinance, the city should take care to see that the cost of hiring such consultants is recovered in the applicant's permit fee. Due to the expertise required, it is doubtful that a city's normal building inspection fees will be sufficient; a separate fee schedule should be considered with all such fees paid by the applicant prior to permit review.

6. Should the city permit the tower owner to add facilities or change the design?

The city should require the tower owner to secure an additional permit for each antenna proposed for placement on the tower. This will assure that (a) wind loading standards are not exceeded, and (b) police, fire and emergency radio communications are not degraded or disrupted. The original construction permit likely will not take these factors into account.

7. For how long should a tower construction permit be valid?

The city should set reasonable deadlines for a permitted tower construction to be completed. The permit

should not be open ended. The ordinance should encourage prompt completion and allow the city to revoke permits that fail to meet deadlines.

8. How can the city minimize the confrontational aspects of the permit process?

The city can encourage the development of modern, state-of-the-art telecommunications by adopting and uniformly enforcing a clearly written tower construction ordinance. Additionally, the city might consider a two-stage application process. In the preliminary stage, the applicant is made aware of the city's construction standards before incurring the costs of developing final construction plans. This may help the applicant avoid expensive, "back-to-the-drawing-board" costs after presenting final plans to the city.

9. How can the community's aesthetics be protected?

To most people, a telecommunications tower will be seen as having a negative impact on the landscape of the community. There are a few ways such an impact can be mitigated. The city should consider adopting an ordinance that:

- Limits the number of towers in the line of sight of historic neighborhoods and other scenic resources;
- Encourages the planting of vegetative screening or construction of screening fences;
- Requires setbacks that minimize interference with scenic resources; and
- Requires the telecommunications facility to be painted colors that blend with the surrounding natural or architectural environment. Muted colors, earth tones and subdued hues should be encouraged.

10. How can we encourage the owner to keep the tower secure?

The city should consider a requirement that all telecommunications towers are fenced to discourage intruders. Additionally, cities can require the owner to include telemetry and alarms to alert when illegal entry occurs or when tower lights are not functioning.

DISCLAIMER: The letters and publications written by the MTAS consultants were written based upon the law at the time and/or a specific sets of facts. The laws referenced in the letters and publications may have changed and/or the technical advice provided may not be applicable to your city or circumstances. Always consult with your city attorney or an MTAS consultant before taking any action based on information contained in this website.

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