

Section 29 - Antennas

Subdivision

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29.01 PURPOSE AND INTENT

The purpose of this section is to establish predictable, balanced regulations for the siting and screening of wireless communications equipment to accommodate the growth of wireless communicating systems within St. Augusta while protecting the public against any adverse impacts on the City's aesthetic resources and the public welfare. The provisions of this Ordinance are intended to maximize the use of existing towers, structures, and buildings to accommodate new wireless telecommunication antennas to minimize the number of towers needed to serve the community or area.

29.02 GENERAL STANDARDS

The following standards shall apply to all personal wireless services, public utility, microwave, radio and television broadcast transmitting, radio and television receiving, satellite dish and short-wave radio transmitting and receiving antenna.

- A. A. All obsolete and unused antenna shall be removed within twelve (12) months of cessation of operation at the site unless an exemption is granted by the Zoning Administrator.
- B. All antennae shall follow all City building and electrical code requirements and as applicable shall require related permits.
- C. Structural design, mounting and installation of the antenna shall comply with manufacturer's specifications and as may be necessary, as determined by the Zoning Administrator, shall be verified, and approved by a professional engineer.
- D. When applicable, written authorization for antenna erection shall be provided by the property owner.
- E. No advertising message shall be affixed to the antenna structure.
- F. The height of the antenna shall be the minimum necessary to function satisfactorily, as verified by an electrical engineer or other appropriate professional.

- G. Antennas shall not be artificially illuminated unless required by law or by a governmental agency to protect the public's health and safety.
- H. When applicable, proposals to erect new, antenna shall be accompanied by any required federal, state, or local agency licenses.
- I. If a new tower is to be constructed, it shall be designed structurally, electrically, and in all respects, to accommodate both the applicant's antennas and comparable antennas for at least one (1) additional user, including but not limited to other cellular communication companies, local police, fire, and ambulance companies. Towers shall be designed to allow for future re-arrangement of antennas upon the tower and to accept antennas mounted at varying heights.
- J. Antenna support structures under two hundred (200) feet in height shall be painted a non-contrasting color consistent with the surrounding area, such as blue, gray, brown or silver, or have a galvanized finish to reduce visual impact.
- K. Except as may be applicable in cases where a conditional use permit is required, antennas and support structures for federally licensed amateur radio stations and used in the amateur radio service are exempt from sub-paragraphs C, F, and I above, and must comply with Subd. L. below.
- L. Amateur radio towers must be installed in accordance with the instructions furnished by the manufacturer of that tower model. Because of the experimental nature of the amateur radio service, antennas mounted on such a tower may be modified or changed at any time so long as the published allowable load on the tower is not exceeded and the structure of the tower remains in accordance with the manufacturer's specifications.

29.03 TOWER DESIGN

Wireless communication towers shall be of a monopole design unless the City Council determines that an alternative design requested by the applicant would better blend into the surrounding environment. This provision does not apply to amateur radio towers or commercial and public radio or television towers.

29.04 CO-LOCATION REQUIREMENT

A proposal for a new tower shall not be approved unless the Zoning Administrator finds that the antennas cannot be accommodated on an existing or approved tower, building, or structure within a one mile search radius (one-half mile search radius for towers under one hundred (100) feet in height) of the proposed tower due to one (1) or more of the following reasons:

- A. The planned equipment would exceed the structural capacity of the existing or approved tower, building or structure as documented by a qualified and licensed professional engineer, and the existing or approved tower cannot be reinforced, modified, or replaced to accommodate planned for equivalent equipment at a reasonable cost.
- B. The planned equipment would cause interference materially impacting the usability of other existing or planned equipment at the tower or building as documented by a qualified engineer and interference cannot be prevented at a reasonable cost.

- C. Existing or approved towers, buildings, or structures within the search radius cannot accommodate the planned equipment at a height necessary to function as documented by a qualified and licensed professional engineer.
- D. Other unforeseen reasons that make it unfeasible to locate the antennas upon an existing or approved tower or structure.
- E. Existing or approved towers, buildings, or other structures do not exist in the service area or meet the user's needs. Documentation shall be provided at the time of application clearly showing why existing structures do not meet users' needs.
- F. The applicant shall demonstrate that a good faith effort to co-locate on existing towers or structures was made, but an agreement could not be reached.

29.05 SETBACKS

All towers shall comply with each of the minimum setback requirements:

- A. Towers shall meet the setbacks of the underlying zoning district except for industrial zoning districts, where the tower may encroach into the rear setback area, provided that the rear property line abuts another industrial zoning district, and the tower does not encroach upon any easements.
- B. A tower's setback may be reduced or its location in relation to a public street varied, at the discretion of the City Council, to allow the integration of the structure into an existing or proposed structure, such as a light standard, power line support device, or similar structure.

29.06 ACCESSORY AND SECONDARY USE ANTENNAS

The following standards shall apply to all accessory and secondary use antennas including radio and television receiving antennas, satellite dishes, TVROs three and one-half (3.5) meters or less in diameter, short-wave radio dispatching antennas, or those necessary for the operation of electronic equipment including radio receivers, federally licensed amateur radio stations and television receivers.

- A. Accessory or secondary use antennas shall not be erected in any required yard (except a rear yard) or within public or private utility and drainage easements and shall be set back a minimum of five (5) feet from all lot lines.
- B. Guy wires or guy wire anchors shall not be erected within public or private utility and drainage easements and shall be set back a minimum of five (5) feet from all lot lines.
- C. Accessory or secondary use antennas and necessary support structures, monopoles or towers may extend a maximum of fifteen (15) feet above the normal height restriction for the affected zoning district, except support structures and antennas used in the amateur radio service may extend a maximum of seventy (70) feet for the affected zoning district.

- D. Installing more than one (1) support structure per property shall require approval of a conditional use permit.

29.07 PERSONAL WIRELESS SERVICE ANTENNAS

A. Agricultural and Residential District Standards:

1. Antennas Located Upon Public Structures or Existing Tower: Personal wireless service antenna located upon public structures or existing towers shall require the processing of an administrative permit and shall comply with the following standards:
 - a. The applicant shall demonstrate by providing a coverage/interference analysis and capacity analysis prepared by a certified engineer that location of the antennas as proposed is necessary to meet the frequency reuse and spacing needs of the personal wireless system and to provide adequate portable personal wireless service coverage and capacity to areas which cannot be adequately served by locating the antennas in a less restrictive district.
 - b. Transmitting, receiving, and switching equipment shall be housed within an existing structure whenever possible. If a new equipment building is necessary for transmitting, receiving, and switching equipment, it shall be situated in the rear yard of the principal use and shall be screened from view by landscaping where appropriate.
 - c. An administrative permit is issued in compliance with Section 6 of this Ordinance.
2. Antennas Not Located Upon A Public Structure or Existing Tower: Personal wireless service antenna not located upon a public structure or existing tower shall require the processing of a conditional use permit and shall comply with the following standards:
 - a. The applicant shall demonstrate by providing a coverage/ interference analysis and capacity analysis prepared by a certified engineer that location of the antennas as proposed is necessary to meet the frequency reuse and spacing needs of the personal wireless service system and to provide adequate portable personal wireless service coverage and capacity to areas which cannot be adequately served by locating the antennas in a less restrictive district.
 - b. If no existing, non-residential structure which meets the height requirements for the antennas is available for mounting purposes, the antennas may be mounted on a monopole tower provided that:
 - i. The pole does not exceed seventy-five (75) feet in height.
 - ii. The setback of the pole from the nearest residential structure is not less than the height of the antenna. Exceptions to such setback may be granted if a qualified structural engineer specifies in writing that any collapse of the pole will occur within a lesser distance under all foreseeable circumstances.
 - c. Transmitting, receiving, and switching equipment shall be housed within an existing structure whenever possible. If a new equipment building is necessary for transmitting, receiving, and switching equipment, it shall be situated in the rear yard of the principal use and shall be screened from view by landscaping where appropriate.

- d. At the City's discretion, a security fence not greater than eight (8) feet high with a maximum opacity of fifty (50) percent should be provided around the support structure.
- e. The conditional use permit provisions of Section 4 of this Ordinance are considered and determined to be satisfied.

B. Business and Institutional District Standards:

- 1. Antennas Located Upon an Existing Structure or Tower: wireless service antenna located upon an existing structure or co-located on an existing tower shall require the processing of an administrative permit and shall comply with the following standards:
 - a. Transmitting, receiving, and switching equipment shall be housed within an existing structure whenever possible. If a new equipment building is necessary for transmitting, receiving, and switching equipment, it shall be situated in the rear yard of the principal use and shall be screened from view by landscaping where appropriate.
 - b. Antennas mounted on public structures shall not extend more than fifteen (15) feet above the structural height of the structure to which they are attached.
 - c. Building-mounted antennas shall not extend more than fifteen (15) feet above the roof and shall be set back at least five (5) feet from the roof edge.
 - d. Wall or facade mounted antennas may not extend more than five (5) feet above the cornice line and must be constructed of a material or color matching the building's exterior.
 - e. An administrative permit is issued in compliance with Section 6 of this Ordinance.
- 2. Antennas Not Located Upon an Existing Structure or Existing Tower: Personal wireless service antennas not located upon an existing structure or tower shall require the processing of a conditional use permit and shall comply with the following standards:
 - a. The applicant shall demonstrate by providing a coverage/interference analysis and capacity analysis prepared by a certified engineer that location of the antennas as proposed is necessary to meet the frequency reuse and spacing needs of the personal wireless service system and to provide adequate portable personal wireless service coverage and capacity to areas which cannot be adequately served by locating the antennas in a less restrictive district.
 - b. If no existing structure which meets the height requirements for the antennas is available for mounting purposes, the antennas may be mounted on a monopole tower provided that:
 - i. The pole does not exceed seventy-five (75) feet in height.
 - ii. The setback of the pole from the nearest residential structure is not less than the height of the antenna. Exceptions to such setback may be granted if a qualified structural engineer specifies in writing that any collapse of the pole will occur within a lesser distance under all foreseeable circumstances.
 - c. Transmitting, receiving, and switching equipment shall be housed within an existing structure whenever possible. If a new equipment building is necessary

for transmitting, receiving, and switching equipment, it shall be situated in the rear yard of the principal use and shall be screened from view by landscaping where appropriate.

- d. At the City's discretion, a security fence not greater than eight (8) feet high with a maximum opacity of fifty (50) percent shall be provided around the support structure.
- e. The conditional use permit provisions of Section 4 of this Ordinance are considered and determined to be satisfied.

C. Industrial District Standards:

- 1. Antennas Located Upon an Existing Structure or Existing Tower: Personal wireless service antennas located upon an existing structure or co-located on an existing tower structure shall require the processing of an administrative permit and shall comply with the following standards:
 - a. Building-mounted antennas shall not exceed more than fifteen (15) feet above the roof and shall be set back at least five (5) feet from the roof edge.
 - b. Wall or facade mounted antennas may not extend more than five (5) feet above the cornice line and must be constructed of a material or color matching the building's exterior.
 - c. An administrative permit is issued in compliance with Section 5 of this Ordinance.
- 2. Antennas Not Located Upon An Existing Structure or Existing Tower: Personal wireless service antennas not located upon an existing structure or tower shall require the processing of an administrative permit and shall comply with the following standards:
 - a. If no existing structure which meets the height requirements for mounting the antennas, the antennas may be mounted upon a monopole tower not exceeding one hundred fifty (150) feet in height. The tower shall be located on a parcel having a dimension equal to the height of the tower measured between the base of the tower located nearest the property line and said property line, unless a structural engineer specifies in writing that the collapse of the tower will occur within a lesser distance under all foreseeable circumstances.
 - b. An administrative permit is issued in compliance with Section 5 of this Ordinance.
- 3. Temporary Mobile Towers: Personal wireless service antennas located upon a temporary mobile tower used on an interim basis until a permanent site is constructed shall require the processing of an administrative permit and shall comply with the following standards:
 - a. Temporary mobile towers are exempt from co-location and permanent tower structure design standards contained in Sections 29.03 and 29.04 of this Ordinance.
 - b. The termination date of the permit shall not exceed one hundred twenty (120) days. Temporary mobile towers located on a site longer than one hundred twenty (120) days shall require the processing of an interim use permit subject to the standards contained in Section 5 of this Ordinance.

- c. Guyed towers are prohibited.
- d. Mobile units shall have a minimum tower design wind load of eighty (80) miles per hour or be set back from all structures a distance equal to the height of the tower.
- e. All towers shall be protected against unauthorized climbing.
- f. The height of the tower shall not exceed ninety (90) feet.

29.08 SATELLITE DISHES

- A. Agricultural and Residential District Standards: Single satellite dish TVROs greater than two (2) meters in diameter may be allowed as a conditional use within the agricultural and residential zoning districts of the City and shall comply with the following standards:
 - 1. All accessory and secondary use provisions of Sections 29.02 and 29.03 of this Ordinance are satisfactorily met.
 - 2. The lot on which the satellite dish antenna is located shall be of sufficient size to assure that an obstruction-free receive window can be maintained within the limits of the property ownership.
 - 3. Except where the antenna is screened by a structure exceeding the antenna height, landscape buffering and screening shall be maintained on all sides of the satellite dish antenna in a way growth of the landscape elements will not interfere with the receive window.
 - 4. The satellite dish antenna is not greater than three and one-half (3.5) meters in diameter.
 - 5. The conditional use permit provisions of Section 4 of this Ordinance are considered and determined to be satisfied.
- B. Business District Standards: Satellite dish antennas within the business zoning districts of the City shall be limited to those listed as permitted accessory and secondary uses in the applicable zoning district subject to the provisions of Subd. 29.02 and Subd. 29.03 of this Ordinance.
- C. Industrial District Standards Commercial, private, and public satellite dish transmitting or receiving antenna more than three and one-half (3.5) meters may be allowed as a conditional use within industrial districts of the City and shall comply with the following standards:
 - 1. All accessory and secondary use provisions of Sections 29.02 and 29.03 of this Ordinance are satisfactorily met.
 - 2. The lot on which the satellite dish antenna is located shall be of sufficient size to assure that an obstruction free transmit-receive window or windows can be maintained within the limits of the property ownership.
 - 3. Except where the antenna is screened by a structure exceeding the antenna height, landscape buffering and screening shall be maintained on all sides of the satellite dish antenna in a way growth of the landscape elements will not interfere with the transmit-receive window.

The conditional use permit provisions of Section 4 of this Ordinance are considered and determined to be satisfied.

29.09 COMMERCIAL AND PUBLIC RADIO AND TELEVISION TRANSMITTING ANTENNAS AND PUBLIC UTILITY MICROWAVE ANTENNAS

Commercial and public radio and television transmitting and public utility microwave antennas shall comply with the following standards:

- A. Such antenna shall be considered allowed conditional use within the I-1 District of the City and shall be subject to the regulations and requirements of Section 4 of this Ordinance.
- B. The antennas, transmitting towers, or array of towers shall be located on a continuous parcel having a dimension equal to the height of the antenna, transmitting tower, or array of towers measured between the base of the antenna or tower located nearest a property line and said property line, unless a registered structural engineer specifies in writing that the collapse of any antenna or tower will occur within a lesser distance under all foreseeable circumstances.
- C. Unless the antenna is mounted on an existing structure, at the discretion of the City, a fence not greater than eight (8) feet in height with a maximum opacity of fifty (50) percent shall be provided around the support structure and other equipment.