

ARTICLE XI. - SUPPLEMENTARY REGULATIONS

DIVISION 4. - LIGHTING

Sec. 37-599. - Lighting design standards.

(a) Maximum height for luminaries shall be in accordance with the following:

(1) When light source or luminaire has no cutoff:

District	Height
SF-1, SF-2, IT-SF1, IT-SF2, MF-1, MF-2, IT-NC, IT-MFD	10'
MF-3, MFUniv, IT-MXD, CN	15'
CG, CB1, CB2, CB3, IB, I-1, I-2	20'

(2) When light source or luminaire has total cutoff of light at an angle of ninety (90) degrees or greater:

District	Height
SF-1, SF-2, IT-SF1, IT-SF2, MF-1, MF-2, IT-NC, IT-MFD	15'
MF-3, MFUniv, IT-MXD, CN	25'
CG, CB1, CB2, CB3, IB, I-1, I-2	35'

(3) When light source or luminaire has total cutoff of light at an angle of less than ninety (90) degrees and is located so that the bare light bulb, lamp, or light source is completely shielded from the direct view of an observer five (5) feet above the ground at the point at which the cutoff angle intersects the ground:

District	Height
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SF-1, SF-2, IT-SF1, IT-SF2, MF-1, MF-2, IT-NC, IT-MFD	15'
MF-3, MFUniv, IT-MXD, CN	25'
CG, CB1, CB2, CB3, IB, I-1, I-2	35'

- (b) No luminaire shall be placed within the buffer yard abutting a residential district. Luminaries within twenty (20) feet of a residential district shall have a total cutoff of light at an angle of less than ninety (90) degrees, and is located so that the bare light bulb, or lamp is completely shielded from the direct view of an observer at a point, five feet above the ground at the point at which the cutoff angle intersects the ground. Such light shall face away from any residential district.

DIVISION 5. - FREESTANDING TOWERS⁹

Sec. 37-607. - Freestanding telecommunication towers as provisional uses.

Freestanding telecommunication towers shall be permitted as a provisional use in the I1, I2, CG, CB1, CB2, CB3, CO, IOP and IBP zoning district and shall contain the appropriate level of screening as defined in Table XI-B.*

Sec. 37-608. - Freestanding telecommunication towers as special uses.

- (a) Special use permits shall be required for all freestanding telecommunication towers located within the SF1, SF2, IT-SF1, IT-SF2, MF1, MF2, MF3, MFUniv, CN, MHP, IT-MF, MHP and IT-MX zoning districts.
- (b) A special use permit shall be required if the proposed freestanding telecommunication tower is located on a non-residentially zoned district but within three hundred (300) feet of a residentially zoned district.

Sec. 37-612. - Removal of freestanding telecommunication towers.

- (a) If a freestanding telecommunications tower is no longer being used for the purpose of transmission, the owner shall notify the City within sixty (60) days of the time the use ceases.
- (b) If a freestanding telecommunications tower is believed to be inoperable, the City shall notify the tower owner and seek written proof that the tower is still in operation.
- (c) In the event that a freestanding telecommunications tower becomes inactive for more than sixty (60) days, the tower shall be removed by the owner within one hundred twenty (120) days after written notification from the City.

- (d) In the event that a freestanding telecommunications tower has not been removed within one hundred twenty (120) days after notification by the City, the tower is hereby declared a public nuisance and the provisions in Chapter 22 shall apply.

Exhibit A

Table XI-A			
Zoning District	Permit Process	Max Height	Type
SF1 - Single-Family	Special Use	100 ft.	mono/stealth
SF2 - Two-Family	Special Use	100 ft.	mono/stealth
IT-SF1 - In-town Single-family	Special Use	100 ft.	mono/stealth
IT-SF2 - In-town Two-Family	Special Use	100 ft.	mono/stealth
MF1 - Low Density Multifamily	Special Use	120 ft.	mono/stealth
MF2 - Medium Density Multifamily	Special Use	120 ft.	mono/stealth
MF3 - High Density MF/Limited Business	Special Use	120 ft.	mono/stealth
MFUniv – University Multifamily	Special Use	120 ft.	mono/stealth
IT-MF - In-town Multifamily	Special Use	120 ft.	mono/stealth
IT-MX - In-town Mixed Density	Special Use	120 ft.	mono/stealth
MHP - Manufactured Housing Park	Special Use	120 ft.	mono/stealth
NC - Neighborhood Commercial	Special Use	120 ft.	mono/stealth
CO - Commercial Office	Provisional/SUP	120 ft.	mono/stealth
CB1 – Urban Commercial	Provisional/SUP	200 ft.	mono/stealth
CB2 – Downtown Commercial	Provisional/SUP	200 ft.	mono/stealth
CB3 – Campustown Commercial	Provisional/SUP	200 ft.	mono/stealth

CG - General Commercial	Provisional/SUP	200 ft.	mono/stealth
IOP - Interstate Office Park	Provisional/SUP	300 ft.	mono/stealth
IBP - Interstate Business Park	Provisional/SUP	300 ft.	mono/stealth/lattice/guy-wire
CI - Commercial Industrial	Provisional/SUP	300 ft.	mono/stealth/lattice/guy-wire
I1 - Light Industrial	Provisional/SUP	300 ft.	mono/stealth/lattice/guy-wire
I2 - Heavy Industrial	Provisional/SUP	300 ft.	mono/stealth/lattice/guy-wire

DIVISION 6. - WIND ENERGY CONVERSION SYSTEMS

Sec. 37-618. - Site Requirements.

In addition, to meeting any other applicable requirements in this Code, wind energy conversion systems shall be constructed in accordance with the restrictions set forth in this Section:

- a. *Wind Energy Conversion Structure Height and Rotor Blade Diameter Restrictions.* The height of a wind energy conversion structure and the diameter of the motor blade shall not exceed the following restrictions for various uses and zoning districts. The height of a wind energy conversion structure shall be measured from ground level to the top of the highest blade at the highest point extended.
 - 1. For Single and Two-Family dwellings, Multi-Family dwellings, and Non-Residential uses within the SF1, SF2, MF1, MF2, MF3, MFUniv, MHS, MHP, IT-SF1, IT-SF2, and IT-MF Zoning Districts the maximum height of a wind energy conversion structure, shall be may not exceed one hundred (100) feet. The maximum diameter, as measured from the tip of the rotor or blade to the center of the turbine multiplied by two (2), shall not exceed fifty (50) feet.
 - 2. For any use that is located in a non-residential district and located within 1,000 feet of the boundary of a lot zoned or planned for residential land use, the maximum height of a wind energy conversion structure shall be one hundred (100) feet and the maximum diameter of the rotors, or the blades, shall be fifty (50) feet. For any use that is located in a non-residential district and more than 1,000 feet away from any boundary of a lot zoned or planned for residential use the maximum height of a wind energy conversion structure shall be one hundred seventy five (175) feet. The maximum diameter of the rotors, or the blades, for wind energy conversion systems shall not exceed one hundred (100) feet.
 - 3. Building mounted Wind Energy Conversion Systems in residential zoning districts shall not exceed ten (10) feet higher than the highest point on the roof of the structure it is mounted to.
- b. *Setbacks.*
 - 1. Setback requirements for wind energy conversion structures. The minimum setback from the property line for any wind energy conversion structure shall be the total height of said structure measured from ground level.

c. *Noise.*

1. No wind energy conversion system or combination of wind energy conversion systems on a single parcel shall create noise that exceeds the regulatory standards set by the Illinois EPA Pollution Control Board at any property line where the property on which the wind energy conversion system is located. Measurement of sound levels shall not be adjusted for, or averaged with, non-operating periods. Any wind energy conversion system exceeding this level shall immediately cease operation upon notification by the City of Champaign Zoning Administrator and may not resume operation until the noise levels have been reduced in compliance with the required standards and verified by an independent third party inspector, approved by the City of Champaign, at the property owner's expense. Upon review and acceptance of the third party noise level report,

d. *Multiple Wind Systems.*

1. Multiple wind systems may be allowed if they meet all regulations as required herein.
2. The number of wind turbines on any given parcel of land shall be limited to:
 - i. Three (3) wind energy conversion structures for parcels of land having an area of five (5) acres or less.
 - ii. Five (5) wind energy conversion structures for parcels of land having an area, greater than five (5) acres and not exceeding ten (10) acres.
 - iii. There shall be no limit to the number of wind energy conversion structures for parcels of land having an area greater than ten (10) acres.
3. There shall be no limit to the number of roof mounted wind energy conversion systems on any given parcel of land.

e. *Force Wind Standards.*

1. Wind Energy Conversion Systems must be engineered to withstand wind forces of up to one hundred ten (110) miles per hour.

f. *Removal of nuisance wind systems or turbines.*

1. The Wind Energy Conversion System or individual turbine is hereby declared to be a public nuisance if it has been inoperable or has not been operated to generate any electricity for one hundred eighty (180) or more consecutive days.
2. Upon receipt of written notice from the Zoning Administrator or Administrator's designee that a Wind Energy Conversion System or individual wind turbine has become a public nuisance as defined in paragraph (1) above, the Owner of a wind energy conversion system and associated facilities shall have one hundred eighty (180) days to restore the wind energy conversion system or individual turbine to operating condition and operation for the generation of electricity or remove it from the property, provided that in the event the Zoning Administrator or Administrator's designee determines that, because of its condition, the WECS or individual turbine poses a great and immediate threat to the public health, safety, or welfare, then the City may remove the structure(s) that specifically pose such a great and immediate threat without any prior notice to said owner, assess the owner for all costs incurred for said removal and file a lien for said costs in the manner provided herein.
3. A written notice of public nuisance described herein may be personally delivered to the owner or authorized agent of the WECS in question, or delivered by First Class U.S. Mail. A written notice delivered by First Class U.S. Mail shall be deemed received by said owner three (3) business days after its deposit in the U.S. Mail system.
4. The failure of any owner to comply with the requirements to either restore to operation or remove a public nuisance WECS or individual turbine as provided herein shall be deemed a violation of this Zoning Ordinance and shall be deemed implied consent by said owner to the City to allow the City to remove, or hire someone else to remove said wind system or

individual turbine, as the case may be, and to charge said owner for the entire cost of said removal. Said cost of removal incurred by the City shall be deemed a lien against the property, and the City shall be authorized to file a notice of said lien in the Office of the Champaign County Recorder of Deeds for the cost of removing the wind energy conversion system. Removal of a wind energy conversion system that constitutes a public nuisance shall include removal of: the turbines, tower, and any above ground improvements, including fencing.

5. The City may foreclose upon any lien for removal costs as provided herein in accordance with the procedures provided for foreclosure of a mortgage in the Illinois Mortgage Foreclosure Law, 735 ILCS 5/15-1101 et seq.
- g. *Signage.*
 1. Commercial marking, messages, banners, or signs of any kind on the wind energy conversion system or tower shall be prohibited.
- h. *Tower Access.*
 1. The tower shall not be accessible for climbing. No rungs shall be provided for the first twelve (12) feet of the tower, the climbing apparatus shall be covered, and any other approved preventative measures, which may be applicable.
- i. *Color.*
 1. The exterior color of the wind energy conversion system shall be limited to black, white, off-white, and grey, and the surface shall be non-reflective.
- j. *Lighting.*
 1. No lights shall be installed on the tower, unless required to meet FAA regulations.
- k. *Permit for Extra-territorial Wind Energy Conversion Systems.*
 1. An application to site and construct an extraterritorial WECS shall be considered by the City in the same manner as if the applicant had submitted an application for the placement of a WECS within the corporate limits of the city. The applicant, facility owner, operator and any participating landowner with respect to any approved application for an extraterritorial WECS shall be subject to the terms and conditions of this Code and any approving ordinance or resolution in the same fashion and to the same extent as if the WECS were located within the corporate limits of the City.
- l. *Shadow Flicker.*
 1. Wind Conversion Energy Systems shall be designed and located to minimize shadow flicker. Shadow flicker expected to fall on a roadway or a residential structure shall be acceptable under the following circumstances:
 - i. The flicker, assuming sunlight will not be obscured by cloud cover during the entire course of the year, will not fall on the location of concern for more than thirty (30) hours per year; and
 - ii. With regards to flicker falling on roadways, the traffic volumes are less than five hundred (500) vehicles per day on the roadway.
 2. The applicant shall provide a shadow flicker model for any wind energy conversion system over one hundred fifty (150) feet tall. The shadow flicker model shall demonstrate that the wind energy conversion system meets the stated provisions.
- m. *Vibrations.*
 1. The Wind Energy Conversion Structure shall not cause any vibrations detectible by persons without the aid of scientific instruments on any adjacent property.
- n. *Tower Type.*

1. In residential districts, the type of tower a wind turbine may be mounted on shall be restricted to a monopole tower.
- o. *Minimum Ground Clearance.*
 1. The blade tip of a Wind Energy Conversion System, at its lowest point, shall have a ground clearance of no less than twenty (20) feet.
- p. *Electromagnetic Interference.*
 1. The Wind Energy Conversion System shall not cause any electromagnetic interference with any radio, television, microwave communication, or satellite navigation on other properties.
 2. If the Wind Energy Conversion System is found to cause electromagnetic interference on other properties, the owner shall make any necessary and reasonable changes to the Wind Energy Conversion System within ninety (90) days of notice from the Zoning Administrator, including removal or relocation of the Wind Energy Conversion System to eliminate any electromagnetic interference.
- q. *Energy Efficient Subdivision.*
 1. Any subdivision which is developed with the specific intention of providing wind energy to the property owners within the subdivision shall be allowed to construct a Wind Energy Conversion System on a commons lot to be maintained by the home owners association.
 - a. A wind energy conversion system within an energy efficient subdivision shall not be required to meet any setbacks.
 - b. A wind energy conversion system within an energy efficient subdivision shall be required to be constructed prior to the issuance of any building permits for any structures within the subdivision.
 - c. A wind energy conversion system within an energy efficient subdivision shall not exceed a maximum height of a wind energy conversion structure shall be one hundred seventy-five (175) feet. The maximum diameter of the rotors, or the blades, for wind energy conversion systems more than one hundred (100) feet.
 - d. A wind energy conversion system within an energy efficient subdivision shall meet all other requirements of this chapter.
- r. *Proposed Wind Energy Conversion Systems exceeding the Height regulations of this ordinance.*
 1. Proposed Wind Energy Conversion Systems which exceed the height limitation of this ordinance shall be required to submit a Special Use Permit application in compliance with Article V of this Chapter.
 2. The proposed Special Use Permit shall meet the following findings of fact:
 - i. That the proposed wind energy conversion system is designed, located, and proposed to be operated so that it will not be unreasonably injurious or unreasonably detrimental to the district in which it may be located or otherwise injurious to the public welfare. It shall be the applicant's burden to submit evidence to demonstrate the anticipated impacts of the proposed wind energy conversion system.
 - ii. Other than height regulations in this division, the proposed use conforms to all the applicable regulations and standards of the district in which it shall be located.
 - iii. That the proposed use is consistent with the City of Champaign Comprehensive Plan.
 3. The issuance of a Special Use Permit for a Wind Energy Conversion System to exceed the height limitations of this chapter shall only be allowed in the CI, IOP, IBP, I1, and I2 Zoning Districts. A special use permit for a Wind Energy Conversion System to exceed the height limitations shall be allowed in the City of Champaign's Extra-territorial Jurisdiction in areas that are one thousand five hundred (1,500) feet away from any residential land use or areas

planned for residential land uses by the City of Champaign Future Land Use Map in the Comprehensive Plan and its subsequent amendments and updates.

4. The applicant shall submit the following documentation as part of the Special Use Permit application:
 - i. A noise study, prepared by a qualified professional, demonstrates that except for intermittent episodes, the wind energy conversion system shall not emit noise in excess of the limits established by the State of Illinois Pollution Control Board. The noise study shall include:
 - a. A description and map of the projects noise producing features, including the range of noise levels expected, and the basis of the expectation.
 - b. A description and map of the noise sensitive environment, including any sensitive noise receptors e.g. residences, hospitals, libraries, schools, places of worship, parks, area with outdoor workers and other facilities where quiet is important or where noise could be a nuisance within one thousand (1,000) feet.
 - c. A description and map of the cumulative noise impacts of any problem area identified.
 - d. A description of the project's proposed noise control features and specific measures proposed to mitigate noise impacts for sensitive receptors as identified above to a level of insignificance.
 - ii. A shadow flicker model that demonstrates that shadow flicker shall not fall on, or in, any existing residential structure and that establishes that shadow flicker expected to fall on a roadway or a portion of a residentially zoned parcel may be acceptable if the flicker does not exceed thirty (30) hours per year at the location of concern; and the flicker will fall more than one hundred feet (100') from an existing residence; or the traffic volumes are less than five hundred (500) vehicles on the roadway that is impacted by the flicker. The shadow flicker model shall:
 - a. Map and describe within a one thousand-foot radius of the proposed dispersed wind energy system the topography, existing residences and location of their windows, locations of other structures, wind speeds and directions, existing vegetation and roadways. The model shall represent the most probable scenarios of wind constancy, sunshine constancy, and wind directions and speed;
 - b. Calculate the locations of shadow flicker caused by the proposed project and the expected durations of the flicker at these locations, calculate the total number of houses per year of flicker at all locations;
 - c. Identify problem areas where shadow flicker will interfere with existing of future residences and roadways and describe proposed mitigation measures, including, but not limited to, a change in siting of the wind energy conversion system, a change in the operation of the wind energy conversion system, or grading or landscaping mitigation measures.

Secs. 37-619—37-630. - Reserved.