

**ARTICLE 11  
GENERAL PROVISIONS**

**Sec. 11.01 GENERAL DIMENSIONAL STANDARDS**

- 11.01.01 **Calculation of (Buildable) Lot Area:** In the calculation of areas required to maintain specific densities, open space requirements and similar needs, no lot or parcel or portion of same shall be used more than once in such calculation, nor shall adjacent outlots or other open space be used in lieu of space contained within the stated boundaries of the subject lot or parcel. In calculating density for residential developments, twenty-five percent (25%) of wetlands area shall be included in computing gross density. Submerged lands shall not be counted towards minimum lot area or density calculations.
- 11.01.02 **Required Area or Space to be Maintained:** No lot or lots in common ownership and no yard, court, parking area, or other space shall be divided, altered or reduced to make such area or dimension less than the minimum required under this Ordinance. If already less than the minimum required, said area or dimension shall not be further divided or reduced.
- 11.01.03 **Access to Dedicated Streets:** Any lot created after the effective date of this Ordinance shall have frontage upon a public street right-of-way or legally recorded access easement meeting the private road or shared driveway requirements of Article 15. Additional access requirements for specific types of uses:
- (a) Single family dedicated lots or condominiums within a planned unit development may have secondary access to a dedicated street through a private road built to Township standards.
  - (b) Multiple family developments, mobile home parks and other types of medium-high density residential development shall have as a minimum, secondary access to a thoroughfare as noted in the Township Master Plan from a private road constructed to Township standards.
  - (d) The Planning Commission may allow secondary access to a dedicated street through a private frontage road, service drive or private road within an approved access easement.

11.01.04 **Projections into Yards:** Certain architectural features may project into the required yards as follows:

**PERMITTED PROJECTIONS INTO REQUIRED YARDS**

Projection	Front Yard	Rear/ Waterfront Yard	Interior Side Yard	Corner Side Yard
Air conditioning equipment shelters	--	5 ft.	3 ft.	3 ft.
Access drives	Permitted up to 4 feet from side lot line			
Arbors and trellises	Permitted up to 4 feet from any lot line			
Awnings and canopies	3 ft.	5 ft.	3 ft.	3 ft.
Bay windows	3 ft.	5 ft.	3 ft.	3 ft.
Decks, open or enclosed*	See Section 11.04.02			
Eaves, overhanging	3 ft.	5 ft.	3 ft.	3 ft.
Fences and walls*	See Section 11.04.04			
Flagpoles	Permitted up to 4 feet from any lot line			
Gardens and landscaping	Permitted in all yards			
Gutters	3 ft.	5 ft.	3 ft.	3 ft.
Laundry drying equipment	--	5 ft.	3 ft.	--
Light standard, ornamental	Permitted in any yard			
Mechanical equipment such as HVAC	--	5 ft.	3 ft.	--
Paved terraces	Permitted up to 4 feet from any lot line			
Unroofed porches and stoops*	3 ft.	5 ft.	3 ft.	3 ft.
Approved signs*	See Article 16			
Stairways, open unroofed	3 ft.	5 ft.	3 ft.	3 ft.
Steps	3 ft.	5 ft.	3 ft.	3 ft.
Television or radio towers or antennas*	--	5 ft.	3 ft.	3 ft.
Window air conditioning units	3 ft.	5 ft.	3 ft.	3 ft.

\* See additional regulations in this ordinance.

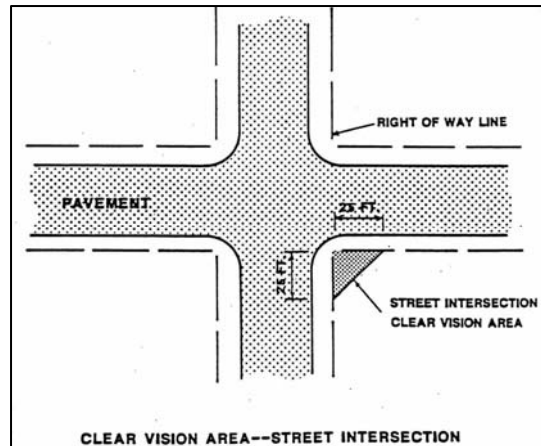
11.01.05 **Supplementary Height Regulations:** The following kinds of structural appurtenances may be permitted to exceed the height limitations for authorized use.

- (a) Schools, churches, hospitals and other institutional buildings may be erected to a height not exceeding sixty (60) feet provided the front, side and rear yards shall not be less than the height of the building wall abutting on such yard.
- (b) Chimneys, church spires, cupolas, domes, towers, penthouses, water tanks, monuments may be erected to a height up to sixty (60); flag poles may be up to forty (40) feet tall. The Township shall be provided with sufficient evidence to assure that adjacent uses and structures are not threatened due to a collapse of the structure for any reason.
- (c) Any mechanical equipment, including water and gas meters, elevator housings, stairways, tanks, heating, ventilation and air conditioning equipment, and other similar equipment, located on the roof of any building shall comply with the following standards:
  - (1) All such equipment shall be screened by a solid wall, fence, landscaping and/or architectural feature that is constructed of the same material and compatible in appearance with the principal building.

- (2) Roof-mounted equipment shall not exceed a height of ten (10) feet above the surrounding roof surface, and shall occupy no more than fifteen percent (15%) of the total roof area. When roof-mounted equipment is located on a building that is adjacent to a residential use or is in view from the adjacent roadway, appropriate architectural screening shall be required.
- (d) Structural extensions appropriate to the building design, such as cornices, shall be limited to five feet above the stated height limit.
- (e) Silos and other farm features shall be limited to fifteen (15) feet above the principal structure height limit.

11.01.06 **Intersection Clear Vision Triangle:** No fence, wall, structure, or planting shall be erected, established, or maintained on any lot which will obstruct the view of drivers in vehicles approaching the intersection adjacent to a corner lot or a driveway on any lot. Fences, walls, structures, or plantings located in the triangular area described below shall not be permitted to exceed a height of thirty six (36) inches above the lowest point of the intersecting road(s). The unobstructed triangular area is described as follows:

- (a) The area formed at the corner intersection of two road right of way or easement lines, the two (2) sides of the triangular area being twenty five (25) feet in length measured along abutting public right of way lines, and third side being a line connecting these two sides, or
- (b) The area formed at the corner intersection of a road right of way or easement and a driveway, the two (2) sides of the triangular area being ten (10) feet in length measured along the right of way line and edge of the driveway, and the third side being a line connecting these two sides.



**Sec. 11.02 USES**

11.02.01 **Principal Building, Structure or Use:** No lot may contain more than one (1) principal building, structure or use, except groups of multiple-family dwellings, under the same ownership, site condominium projects, mobile home parks, farm worker housing, unified retail/business centers, auto dealerships, office complexes or other groups of buildings the Zoning Administrator deems to be a principal use collectively.

11.02.02 **Determination of "Similar Uses":** Since every type of potential use cannot be addressed in the zoning ordinance, each district provides for "similar uses", referencing this section. All applications for a use not specifically addressed in any zoning district shall be submitted to the Planning Commission for review at a public hearing, based on the following standards.

- (a) A finding the proposed use is not listed as a Permitted or Special Land Use in any zoning district.

- (b) If the use is not addressed in the Zoning Ordinance, the Planning Commission shall select the use listed in the zoning ordinance which most closely resembles the proposed use using criteria such as the nature of the use, aesthetics, traffic generated, potential impact on property values, noise, vibration, dust, smoke, odor, glare and other objectionable impacts in terms of health, safety and welfare in the Township.
- (c) Once a similar use is determined, the proposed use shall comply with any conditional use standards that apply to the similar use.
- (d) Where the Planning Commission determines a proposed use is not similar to a use addressed in the Zoning Ordinance, the applicant may petition for an amendment to the Zoning Ordinance, as described in Article 22.
- (e) The determination as to whether a proposed use is similar in nature and class to another Permitted or Special Land Use within a district should be considered as an expansion of the use regulations, not a variance applying to a particular situation. Any use determined by the Planning Commission to be similar shall thereafter be included in the enumeration of the uses. (as amended 12/31/06)

11.02.03 **Changes in Tenancy/Ownership:** All structures or uses which are conforming uses, nonconforming uses, or approved special uses, planned unit developments or site plans with conditions attached for approval, shall comply with these regulations, special approvals or conditions regardless of change of tenancy or ownership of the property or use. Regulations in this Ordinance pertaining to the discontinuance of nonconforming uses, as provided for elsewhere in this Article, shall continue to be met.

11.02.04 **Voting Place:** The provisions of this Ordinance shall not be so construed as to interfere with the temporary use of any property as a voting place in connection with Township, school or other public election.

11.02.05 **Temporary Construction Buildings and Structures:** Temporary buildings and structures, including trailers, incidental to construction work on a lot, may be placed on such lot subject to the restrictions of this section.

- (a) Temporary buildings and structures may only be used in conjunction with an approved construction project for the storage of construction materials, tools, supplies and equipment, for construction management and supervision offices, sales and for temporary on-site sanitation, solid waste or fuel facilities, related to construction activity on the same lot. No temporary building or structure shall be used as a dwelling unit.
- (b) A land use permit for such building or structure shall be issued by the Zoning Administrator prior to installation.
- (c) Temporary buildings and structures shall be removed from the lot within fifteen (15) days after an occupancy permit is issued by the Building Department for the permanent structure on such lot, or within fifteen (15) days after the expiration of a building permit issued for construction on such lot.

11.02.06 **Open Storage, Parking and Repair of Vehicles:** Except as otherwise provided in this Section, no boat, tractor, trailer, recreation vehicle, commercial vehicle or other equipment

and supplies may be parked or stored on a residentially zoned lot unless they are parked or stored in an enclosed structure, or may be permitted as follows:

- (a) Boats, trailers and recreational vehicles of twenty-four (24) feet or less in length may be parked or stored in a rear or side yard. Boats, trailers and recreational vehicles more than twenty-four (24) feet in length shall not be parked or stored within the minimum required rear or side yard setback.
- (b) Recreation trailers or recreation vehicles may be parked in the front yard for loading, unloading and cleaning purposes for a maximum of 48 hours (see also Section 11.03.03).
- (c) On waterfront lots, no tractor, trailer, commercial vehicle, recreation vehicle or similar equipment and supplies may be parked or stored in the waterfront yard within twenty-five (25) feet of the shoreline except boats, boating supplies and docking equipment. Recreational vehicles may be parked in the front yard driveways of waterfront lots from May 1st through September 30th of each year.
- (d) The parking, carrying out of repair, restoration and maintenance procedures or projects on vehicles in any residential zoning district, when such work is not conducted entirely within the interior of the vehicle, shall be subject to the following limitations:
  - (1) All vehicles parked or being worked on outside shall be on an improved driveway surface, licensed and operable.
  - (2) Procedures exceeding forty eight (48) hours in duration or which require the vehicle to be inoperable in excess of forty eight (48) hours shall be conducted within an enclosed building.
  - (3) Inoperable vehicles and vehicle parts shall be stored inside an enclosed building.
- (e) Parking of commercial vehicles with a rated capacity over one (1) ton shall be prohibited in all residential districts; except this restriction shall not apply to essential public service vehicles, and parking, and storage of larger vehicles for farming or lumbering operations is permitted in agricultural, and residential districts if the Zoning Administrator determines the vehicle is used exclusively for uses or activities permitted in the district.
- (f) It shall be unlawful for the owner, tenant or lessee of any lot to permit the open storage or outdoor parking of semi-tractor (WB-50 or larger) trucks and/or semi-trailers, bulldozers, earth carriers, cranes or any other similar equipment or machinery, unless the storage or display of such vehicles is an approved use or unless the vehicles are temporarily parked while in use for approved construction on such lot (i.e., active land use permit). (as amended 8/24/07)

**11.02.07 Essential Public Services**

- (a) Essential services shall be permitted as authorized under any franchise in effect within the Township, subject to regulation as provided in any law of the State of Michigan or in any ordinance of the Township, provided it is the intent of this section

to ensure conformity of all structures and uses to the requirements of this Zoning Ordinance wherever such conformity shall be practicable and not in conflict with the specific requirements of such franchise, state legislation or Township Ordinance. In the absence of such conflict, the Zoning Ordinance shall prevail. Appeal from the application of this Ordinance in regard to any essential service may be made to the Zoning Board of Appeals. Wireless communication facilities shall be subject to the requirements of Section 11.02.08.

- (b) Necessary utility services shall be provided for all uses. Prior to obtaining a plumbing permit for sewer or water, a land use permit shall be obtained from the Township. On-site septic systems shall be designed in accordance with the standards of the Livingston County Health Department.

**11.02.08 Wireless Communication Facilities**

- (a) Purpose and Intent. The regulations of this Section are intended to conform with federal laws and administrative rules governing facilities needed to operate wireless communication systems and to set forth procedures and standards for review and approval for the location of such facilities within Genoa Township. It is the Township's intent to reasonably regulate the location and design of such facilities to retain the integrity of neighborhoods and the character, property values and aesthetic quality of the township. Given the increase in the number of wireless communication facilities requested as a result of the new technology and the Federal Telecommunications Act of 1996, it is the policy of the township that all users should co-locate on Attached Wireless Communication Facilities and Wireless Communication Support Structures. Collocation is proposed in order to assure the most economic use of land and to prevent the proliferation of duplicative services. In recognition of the Township's concern that technological advances may render certain Wireless Communication Facilities obsolete or unnecessary in the future, requirements are set forth for the removal of unused or unnecessary facilities in a timely manner and provide security for removal.
- (b) Definitions. The following definitions shall apply in the interpretation of this Section:
  - (1) Wireless Communication Facilities. All structures and accessory facilities relating to the use of the radio frequency spectrum for the purpose of transmitting or receiving radio signals. This may include, but shall not be limited to, radio towers, television towers, telephone devices, personal communication transmission equipment and exchanges, microwave relay towers, telephone transmission equipment building and commercial mobile radio service facilities. This definition does not include "reception antenna" for an individual lot as otherwise defined and regulated in this zoning ordinance.
  - (2) Attached Wireless Communication Facilities. Wireless communication facilities affixed to existing structures, including but not limited to existing buildings, towers, water tanks, or utility poles.
  - (3) Wireless Communication Support Structures. Structures erected or modified to support wireless communication antennas. Support structures within this definition include, but shall not be limited to, monopoles, lattice towers, light

poles, wood poles and guyed towers, or other structures which appear to be something other than a mere support structure.

- (4) Collocation. Location by two (2) or more wireless communication providers of wireless communication facilities on a common structure, tower, or building, to reduce the overall number of structures required to support wireless communication antennas within the township.
  
- (c) Zoning Districts and Approval Process for Wireless Communication Facilities. Wireless Communication Facilities may be located within the Township in accordance with the Table set forth below.

Type/Location of Wireless Communication Facility	Districts Permitted	Approval Procedure
<b>1. Attached to existing structures:</b>		
- Attached to an existing conforming structure that will not be materially altered or changed in appearance	All non-single family residential districts	Administrative Land Use Permit approval by the Zoning Administrator
- Attached to an existing utility pole that will not be modified or materially alter the pole or impair sight lines or compromise safety	All districts	Administrative Land Use Permit approval by the Zoning Administrator, provided letter of acceptance is provided by the utility company
- Collocation upon an attached wireless communication facility previously approved for such collocation	All districts	Administrative Land Use Permit approval by the Zoning Administrator
<b>2. Located on a municipally owned site:</b>		
- Monopole up to 150 feet in height <sup>1</sup>	All districts	Special Land Use and Site Plan approval by the Township Board in accordance with Article 19.
<b>3. Located on a site owned by another governmental entity, religious institution, or public school</b>		
- Monopole up to 100 feet in height <sup>1</sup>	All districts	Special Land Use and Site Plan approval by the Township Board in accordance with Article 19.
<b>4. New facility not addressed above:</b>		
- Monopole up to 120 feet tall <sup>1</sup>	PRF, OSD, GCD & RCD Districts	Special Land Use and Site Plan approval by the Township Board in accordance with Article 19.
- Monopole any height	IND District	Special Land Use and Site Plan approval by the Township Board in accordance with Article 19.
- Lattice tower where it can be demonstrated that a monopole is not feasible.	IND District	Special Land Use and Site Plan approval by the Township Board in accordance with Article 19.

1. Height may be increased ten (10) feet where determined necessary to provide future collocation. (as amended 12/31/06)

- (d) Application Requirements. The following information shall be provided with the application, in addition to other submittal requirements for sketch plan or site plan, as required in Article 18.
  - (1) Signed certification by a professional engineer licensed by the State of Michigan with regard to the manner in which the proposed structure will fall in the event of damage, accident or injury (i.e. “fall zone”), and that the setback area provided shall accommodate the structure should it fall or break and provide a reasonable buffer in the event the structure fails.

- (2) A description of performance guarantee to be posted at the time of receiving a land use permit for the facility to ensure removal of the facility when it is abandoned or is no longer needed. The applicant shall demonstrate that funds will be available to the Township for removal of any structure used for wireless communication in an amount which reasonably reflects the cost of removal of the facility and restoration of the property or structure upon which the facility is located or placed. Adequate funds shall also be provided to cover the Township's administrative costs in the event that the applicant or its successor does not remove the Wireless Communication Facility in a timely manner.

The security shall, at the election of the Township Board, be in the form of: (1) cash; (2) security bond; (3) letter of credit; or, (4) an agreement in a form approved by the Township Attorney and recordable at the office of the Register of Deeds, establishing a promise of the applicant and owner of the property, or their successors, to remove the facility in a timely manner as required under this section of the ordinance. It shall further be provided that the applicant, owner or successor, shall be responsible for payment of any costs or attorney fees incurred by the Township in securing removal.

- (3) A map that illustrates existing and known proposed wireless communication facilities within Genoa Township and adjacent communities, which are relevant in terms of potential collocation or to demonstrate the need for the proposed facility. If and to the extent the information in question is on file with the township, the applicant shall be required only to update as needed. Any such information which is trade secret and/or other confidential commercial information which, if released would result in commercial disadvantage to the applicant, may be submitted with a request for confidentiality in connection with the development of governmental policy MCL 15.243(1)(g). This ordinance shall serve as the promise to maintain confidentiality to the extent permitted by law. The request for confidentiality must be prominently stated in order to bring it to the attention of the community.
- (4) For all new facilities, in recognition of the township's policy to promote collocation, a written agreement, transferable to all assessors and assigns, that the operator shall make space available on the facility for collocation.
- (5) The name, address and phone number of the person to contact for engineering, maintenance and other notice purposes. This information shall be continuously updated during all times the facility is on the premises.
- (e) Design Standards Applicable to All Facilities. In addition to the Criteria of Site Plan Review listed in Article 18 and Special Land Use Review listed in Article 19, all wireless communication facilities shall be constructed and maintained in accordance with the following standards:
- (1) Facilities shall be located and designed to be harmonious with the surrounding areas. The Planning Commission may require unique design of the structure to either diminish the visual impact or to create an architectural feature that will contribute to or enhance community character.

- (2) A permit for the construction and use of a new wireless communication facility shall not be granted until the applicant demonstrates a feasible collocation is not available for the coverage area and capacity needs.
- (3) All new and modified wireless communication facilities shall be designed and constructed to accommodate collocation, with a written agreement in a format approved by the Township Attorney.
- (4) Landscaping shall be provided to screen the structure base, accessory buildings and enclosure from adjacent uses and public rights-of-way.
- (5) Elevations of the accessory buildings shall be provided. All accessory buildings shall be constructed of brick, provided the Planning Commission may waive this requirement for a building that is located in the Industrial district and is not visible from a public right-of-way or non-industrial zoning district.
- (6) Fencing shall be provided for protection of the support structure and security from children and other persons who may otherwise access facilities.
- (7) Any nonconforming situations on the site, such as, but not limited to, outdoor storage, signs, inadequate landscaping, unpaved parking, lack of a sidewalk, improper lighting or similar conditions shall be brought into conformance prior to the erection of the wireless communication facility. If existing buildings or structures are not in conformance with the current zoning standards, improvements shall be made to decrease the nonconformity or additional landscaping shall be provided to reduce the impact of the nonconformity and the wireless facility.
- (8) The operator shall comply with applicable federal and state standards relative to the environmental effects of radio frequency emissions.
- (9) The applicant shall demonstrate that the requested height of the new or modified support structure and antenna shall be the minimum height necessary for reasonable communication by the applicant, including additional height to accommodate future collocation where appropriate.
- (10) Minimum required setbacks for new facility or support structure.
  - a. From any residential district - the height of the structure, plus twenty five (25) feet, provided the engineering information required in (d)(1) is provided. The person or body with authority to approve the facility may decrease this setback to that provided in c below upon a finding that no residential use exists or is expected on the adjacent site.
  - b. From any existing or proposed rights-of-way or other publicly traveled roads or non-motorized improved pathways - half the height of the structure, plus twenty five (25) feet, provided the engineering information required in (d)(1) is provided; otherwise the setback shall be the height of the facility.

- c. From non-residential district - one half the height of the structure, plus ten (10) feet, provided the engineering information required in (d)(1) above demonstrates such setback is adequate.
- (11) Accessory buildings shall be a maximum of fourteen (14) feet high and shall be set back in accordance with the requirements for principal buildings in that zoning district.
- (12) There shall be unobstructed access to the support structure, for operation, maintenance, repair and inspection purposes, which may be provided through or over an easement. This access shall have a width and location determined by such factors as: the location of adjacent thoroughfares and traffic and circulation within the site; utilities needed to service the tower and any attendant facilities; the location of buildings and parking facilities; proximity to residential districts and minimizing disturbance to the natural landscape; and the type of equipment which will need to access the site.
- (13) Where an attached wireless communication facility is proposed on the roof of a building if the equipment enclosure is proposed as a roof appliance or penthouse on the building, it shall be designed, constructed and maintained to be architecturally compatible with the principal building. The equipment enclosure may be located within the principal building or may be an accessory building. If proposed as an accessory building, it shall conform with all district requirements for principal buildings, including yard setbacks.
- (14) The support system shall be constructed in accordance with all applicable building codes and shall include the submission of a soils report from a geotechnical engineer, licensed in the State of Michigan. This soils report shall include soil borings and statements confirming the suitability of soil conditions for the proposed use.
- (15) The requirements of the Federal Aviation Administration, Federal Communication Commission, and Michigan Aeronautics Commission shall be noted. Any aviation hazard lighting shall be detailed on the plans.
- (16) A maintenance plan, and any applicable maintenance agreement, shall be presented and approved as part of the site plan for the proposed facility. Such plan shall be designed to ensure the long term, continuous maintenance to a reasonably prudent standard.
- (f) Removal. As a condition of every approval of a wireless communication facility, adequate provision shall be made for removal of all or part of the facility by users and owners upon the occurrence of one or more of the following events:
  - (1) When the facility has not been used for one hundred eighty (180) days or more. For purposes of this section, the removal of antennas or other equipment from the facility, or the cessation of operations (transmission and/or reception of radio signals) shall be considered as the beginning of a period of non-use.

- (2) Six (6) months after new technology is available at reasonable cost, as determined by the Township Board, which permits the operation of the communication system without the requirement of the support structure.
  - (3) The situations in which removal of a facility is required, as set forth in paragraph 1 above, may be applied and limited to portions of a facility.
  - (4) Upon the occurrence of one or more of the events requiring removal, specified in paragraph (1) above, the property owner or persons who had used the facility shall immediately apply or secure the application for any required demolition or removal permits, and immediately proceed with and complete the demolition/removal, restoring the premises to an acceptable condition as reasonably determined by the Zoning Administrator.
  - (5) If the required removal of a facility or a portion thereof has not been lawfully completed within sixty (60) days of the applicable deadline, and after at least thirty (30) days written notice, the Township may remove or secure the removal of the facility or required portions thereof, with its actual cost and reasonable administrative charge to be drawn or collected and/or enforced from or under the security posted at the time application was made for establishing the facility.
- (g) Collocation.
- (1) Statement of Policy. It is the policy of Genoa Township to minimize the overall number of newly established locations for Wireless Communication Facilities and Wireless Communication Support Structures within the Township and to encourage the use of existing structures for Attached Wireless Communication Facilities. If a provider fails or refuses to permit collocation on a facility owned or controlled by it, where collocation is feasible, the result will be that a new and unnecessary additional structure will be required, in contradiction with Township policy. Collocation shall be required unless an applicant demonstrates that collocation is not feasible.
  - (2) Feasibility of Collocation. Collocation shall be deemed "feasible" for the purpose of this section where all of the following are met:
    - a. The wireless communication provider or property owner where collocation is proposed will accept market rent or other market compensation for collocation and the wireless communication provider seeking the facility will pay such rates.
    - b. The site on which collocation is being considered, taking into consideration reasonable modification or replacement of a facility, is able to provide structural support.
    - c. The collocation being considered is technically reasonable, e.g. the collocation will not result in unreasonable interference, given appropriate physical and other adjustments in relation to the structure, antennas and the like.

- (h) Nonconforming facilities and penalties for not permitting collocation. If a party who owns or otherwise controls a wireless communication facility shall fail or refuse to alter a structure to accommodate a proposed and otherwise feasible collocation, such facility shall thereupon and thereafter be deemed to be a nonconforming structure and use, and shall not be altered, expanded or extended in any respect. In addition, if a party refuses to allow collocation in accordance with the intent of this Section, and this action results in construction of a new tower, the township may refuse to approve a new wireless communication support structure from that party for a period of up to five (5) years. Such a party may seek and obtain a variance from the Zoning Board of Appeals if and to the limited extent the applicant demonstrates entitlement to variance relief which, in this context, shall mean a demonstration that enforcement of the five (5) year prohibition would unreasonably discriminate among providers of functionally equivalent wireless communication services, or that such enforcement would have the effect of prohibiting the provision of personal wireless communication services.
  
- (i) Variances. The Zoning Board of Appeals may consider a variance from the standards of this Section, based upon a finding that one or more of the following factors exist, as appropriate for the type of variance requested:
  - (1) For location, the applicant has demonstrated that a location within a district or location in accordance with the standards of this Section can not reasonably meet the coverage or capacity needs of the applicant.
  - (2) For no collocation the applicant has demonstrated that a feasible collocation is not available for the coverage area and capacity needs because existing structures can not support the facility, that collocation would result in unreasonable interference, or that reasonable financial terms are not available for collocation.
  - (3) For setback, the applicant has provided engineering information that documents that the tower is self collapsing and that the setback area provided shall accommodate the structure should it fall or break and provide a reasonable buffer in the event the structure fails.
  - (4) For height, the height requested is due to signal interference due to topography, tall buildings, masses of trees, or other obstructions, or would reduce the number of towers to the benefit of the township.
  - (5) For all, the applicant has proposed means to mitigate any negative impacts through provision for future collocation, if found to be appropriate by the township, and special design of the facility and site.
  - (6) For all, the wireless communication and accessory facilities shall be designed to be compatible with the existing character of the proposed site, neighborhood and general area such as a steeple, bell tower, or similar form.

**Sec. 11.03 DWELLINGS**

11.03.01 **Single Family Dwelling Design Standards:** Single family dwellings and mobile homes located outside a mobile home park or manufactured housing subdivision shall conform to the standards of this section.

- (a) Certification: If the dwelling unit is a mobile home, the mobile home must either be (i) new and certified by the manufacturer and/or appropriate inspection agency as meeting the Mobile Home Construction and Safety Standards of the U.S. Dept. of Housing and Urban Development, as amended, or any similar successor or replacement standards which may be promulgated, or (ii) used and certified by the manufacturer and/or appropriate inspection agency as meeting the standards referenced in (i) above, and found, on inspection by the Zoning Administrator or his/her designee, to be in excellent condition and safe and fit for residential occupancy.
- (b) Dimensional Standards: Each such dwelling unit shall comply with the minimum standards listed in Article 3 for the Zoning District in which it is located, including minimum lot area, minimum lot width, minimum floor area, required setbacks and maximum building height.
- (c) Dimensions: Each such dwelling unit shall have a minimum width across any front, side or rear elevation of 20 feet and comply in all respects with the Michigan State Construction Code Commission, including minimum heights for habitable rooms. Where a dwelling is required by law to comply with any federal or state standards or regulations for construction and where such standards or regulations for construction are different than those imposed by the Michigan State Construction Code Commission, then such federal or state standard or regulation shall apply.
- (d) Foundation: Each such dwelling unit shall be firmly attached to a permanent foundation constructed on the site in accordance with the Michigan State Construction Code Commission and shall have a wall of the same perimeter dimensions of the dwelling and constructed of such materials and type as required in the applicable building code for single-family dwellings. If said dwelling is a mobile home, the dwelling shall be securely anchored to the foundation to prevent displacement during windstorms.
- (e) Undercarriage: In the event that such dwelling unit shall be a mobile home, the wheels, tongue, hitch assembly and other towing appurtenances shall be removed before attachment to a permanent foundation. The foundation or masonry skirting shall fully enclose the undercarriage and chassis prior to occupancy.
- (f) Sewage disposal and water supply: Each such dwelling unit shall be connected to a public sewer and water supply approved by the Township or to such private facilities approved by the Livingston County Health Department.
- (g) Code compliance: Each such dwelling unit shall comply with all pertinent building and fire codes. In the case of a mobile home, all construction and all plumbing, electrical apparatus and insulation within and connected to said mobile home shall be of a type and quality conforming to the "Mobile Home Construction and Safety Standards" as promulgated by the United States Department of Housing and Urban Development, being 24 CFR 3280, and as from time to time such standards may be amended. Additionally, all dwellings shall meet or exceed all applicable roof snow load and strength requirements.
- (h) Storage area: Each such dwelling unit shall contain a storage area equal to 10% of the square footage of the dwelling or 100 square feet, whichever shall be less. This

storage area shall consist of a basement, attic, closet areas or attached garage, or in a separate detached accessory structure which complies with the standards of this Article regarding accessory buildings and structures.

- (i) **Compatible Building Design:** All newly constructed single family and two family homes shall be aesthetically compatible in design and appearance with other residences in the vicinity. This shall be accomplished by maintaining the architectural styles, details, building materials and design themes of dwelling units on both sides of the street, within five hundred (500) feet of the subject lot and in the same zoning district. Similarity and compatibility with surrounding dwelling units in terms of the following design requirements and features must be provided in order to meet this requirement:
  - (1) roof drainage systems that concentrate roof drainage at collection points along the sides of the dwelling;
  - (2) minimum of two exterior doors with one facing the front lot line and the second one being in either the rear or side of the dwelling;
  - (3) steps connected to exterior door areas or to porches connected to the door areas where a difference in elevation requires the same;
  - (4) roof pitch of no less than four (4) feet of rise for each twelve (12) feet of horizontal run;
  - (5) front facade appearance that is manifestly designed as a front façade containing a door, windows and other architectural features customary of the front facade of a residence; and
  - (6) exterior building materials compatible with surrounding dwellings;
- (j) **Compatibility determination:** The compatibility of design and appearance shall be determined in the first instance by the Township Zoning Administrator. An applicant may appeal to the Board of Zoning Appeals within a period of fifteen (15) days from the receipt of notice of said Zoning Administrator's decision. The determination of compatibility shall be based upon the building compatibility design standards listed in Section 11.03.01(i) above and all other design standards outlined in this Section. The foregoing shall not be construed to prohibit innovative design concepts involving such matters as solar energy, view, unique land contour, or relief from the common or standard designed home.
- (k) **Additions:** Each such dwelling unit shall contain no addition or room or other area which is not constructed with similar quality workmanship as the original structure, including permanent attachment to the principal structure and construction of a foundation as required herein. In addition, the dwelling unit shall have no less than two (2) exterior doors, with one being either at the rear or side of the dwelling unit.
- (l) **Building permit:** All construction required herein shall be commenced only after a building permit has been obtained in accordance with the applicable Michigan State Construction Code provisions and requirements.

- (m) Exceptions: The foregoing standards shall not apply to a mobile home located in a licensed mobile home park except to the extent required by state or federal law or otherwise specifically required in this ordinance and pertaining to such parks. Mobile homes which do not conform to the standards of this section shall not be used for dwelling purposes within the Township unless located within a mobile home park or a mobile home subdivision district for such uses, or unless used as a temporary residence as otherwise provided in this Ordinance.

**11.03.02 Dwellings Outside of the Agricultural and Residential Districts:**

- (a) The construction of dwellings in nonresidential districts is prohibited except for housing used exclusively by security, custodial maintenance or management personnel and approved by the Planning Commission. The use of trailers and recreational vehicles for housing such security and custodial personnel, or other persons, is prohibited.
- (b) The use of recreation vehicles and trailers is permitted as a temporary residence between May 1st and October 1st each year provided the vehicles and trailers are located in a designated recreation vehicle/trailer park, and that they are connected to appropriate sewer, water and electric facilities serving the park.

**Sec. 11.03.03 Regulations on Accessory Dwellings**

- (a) Recreational vehicles or camping trailers may be used for living purposes when accessory to single-family or two-family dwellings, provided such use shall only be permitted for a cumulative total of no more than twenty one (21) days in any twelve (12) month period. Any such recreational vehicle parked in a front yard shall be parked in the driveway.
- (b) For lots of 120 acres or more in the Agricultural District, one additional principal building (a total of two) shall be permitted if the additional principal building is occupied by a member of the family who occupies the principal building, or employees working on the property for farming purposes, raising livestock or training horses, provided each accessory dwelling unit meets the minimum size for a one (1) bedroom unit as specified in Section 3.04.
- (c) The use of any portion of the basement of a partially completed building, or any detached garage or accessory building for dwelling or sleeping purposes in any zoning district is prohibited.

**Sec. 11.04 ACCESSORY BUILDINGS AND STRUCTURES**

**11.04.01 Accessory Buildings, Structures and Uses in General**

- (a) Relation to Principal Building: Accessory buildings, structures and uses are permitted only in connection with, incidental to and on the same lot with a principal building, that is occupied by a use permitted in the particular zoning district. In the Agricultural District an accessory building or structure may be permitted on a separate lot in conjunction with activity of a permitted use on another lot under same ownership. No accessory building, structure or use shall be occupied or utilized unless the principal structure to which it is accessory is occupied or utilized.

- (b) Permit Required: Any accessory building shall require a land use permit, except one (1) accessory building one hundred twenty (120) square feet or less shall be allowed without a land use permit.
- (c) Restrictions in Front Yard: Detached accessory buildings shall not be erected in any front yard, except accessory buildings are permitted in the front yards as follows:
  - (1) Waterfront lots in the Lakeshore Resort Residential District.
  - (2) Lots of at least five (5) acres when the front setback is equal to or greater than the average setback of established buildings on adjoining lots, as determined by the Zoning Administrator. If the adjacent lots are undeveloped, then front yard accessory buildings are permitted with a minimum front yard setback of two hundred (200) feet.
  - (3) In the case of attached residential dwelling complexes, detached parking garages or carports may be permitted in the non-required front yard provided the Planning Commission approves the site plan, elevation drawings and construction materials. In reviewing such structures, the Planning Commission shall consider the impact of headlights and views from nearby public streets and adjacent properties.
- (d) Required Setbacks (Attached): Where the accessory building, structure or use is structurally attached to a principal building, structure or use, it shall be subject to all the regulations of this section applicable to principal buildings, structures and uses, except for unenclosed decks as noted in Section 11.04.02 and privacy walls as noted under section 11.04.04 "Fences, Walls and Screens."
- (e) Required Setbacks (Detached, one hundred twenty (120) square feet or less total floor area): Detached accessory buildings or structures with one hundred twenty (120) square feet or less total floor area shall be at least four (4) feet from any principal building, and at least four (4) feet from any lot line.
- (f) Required Setbacks (Detached, over one hundred twenty (120) square feet total floor area): Detached accessory buildings and structures over one hundred twenty (120) square feet of total floor area shall be at least ten (10) feet from any principal building, and at least ten (10) feet from any side or rear lot line; except as follows:
  - (1) On lots greater than one (1) acre detached accessory buildings and structures over one hundred twenty (120) square feet of total floor area shall meet the setback requirements for principal structures.
  - (2) On lots in the Lakeshore Resort Residential District a detached accessory building over one hundred twenty (120) square feet of total floor area shall be allowed to reduce one (1) side yard setback to at least five (5) feet as follows:
    - a. The accessory building shall be setback at least ten (10) feet from the other side lot line.
    - b. There shall be a minimum of ten (10) feet of separation from buildings on adjacent lots.

- (g) **Setback from Shoreline:** Detached accessory buildings shall be setback at least fifty (50) feet from the nearest edge of any lake shoreline, except in the Lakeshore Resort Residential District where accessory buildings shall meet the shoreline setback requirements for the principle structure as specified in Table 3.04.02. Detached accessory buildings shall be setback at least twenty-five (25) feet from the edge of any wetland.
- (h) **Maximum Size:** The combined total of all accessory buildings in any residential district shall be a maximum of nine hundred (900) square feet in area for lots less than two (2) acres and one thousand two hundred (1200) square feet in area for lots equal to or greater than two (2) acres. Accessory buildings and structures located on conforming lots in Agricultural and Country Estates Districts shall not be limited by size, provided all required setback are met.
- (i) **Maximum Number:** No more than two (2) detached accessory buildings shall be permitted on any lot in any district except the Agricultural and Country Estate Districts.
- (j) **Maximum, Height:** The maximum building height of any detached accessory building shall be fourteen (14) feet (see Article 25 for calculation of building height), except as follows:
  - (1) Antenna heights may be as noted in Section 11.04.06
  - (2) Accessory buildings on conforming lots in the Agricultural, Country Estate Districts and Rural Residential districts may exceed the maximum height restrictions for principal buildings by up to fifteen (15) feet.
- (k) **Restrictions on Use:** Accessory garages shall only be used to store vehicles or equipment associated with a Permitted Use.
- (l) **Not used for dwelling:** Accessory buildings shall not be occupied for dwelling purposes nor used for any business profession, trade or occupation except for agricultural uses in an Agricultural District as permitted in Section 3.03. (as amended 12/31/06 and 3/5/10)

**11.04.02 Decks**

- (a) Attached or unattached uncovered decks and porches without a roof or other form of solid enclosure shall be permitted to extend a maximum of twenty five (25) feet from the rear building line of the principal building, provided they shall be at least four (4) feet from any side lot line and ten (10) feet from any rear lot line. Decks and porches with roofs shall be considered to be part of the principal building for purposes of determining setbacks. One gazebo as regulated in (d) is permitted.
- (b) For condominiums, the placement of decks shall be stipulated in the Condominium Master Deed and Exhibit B Site Plan, in conformance with the regulations of this section. Where there are no property (site condominium) lines between the two condominium units, decks shall be setback a minimum of four (4) feet from the halfway point between the two units, provided the decks are separated a minimum of eight (8) feet (combined four (4) foot setback of both decks).

- (c) Shoreline Lots: Decks without roofs on a waterfront lot shall extend a maximum fifteen (15) feet from the rear building line of the principal structure. A minimum fifteen (15) foot wide open space greenbelt shall be provided between the deck and the closest edge of the shoreline. A separate deck or patio of one hundred (100) square feet or less shall be permitted along the shoreline, with a maximum length along the shoreline of ten (10) feet and a maximum height of six (6) inches above the mean grade.
- (d) Gazebos: Decks may include a roofed gazebo with a maximum size of one hundred fifty (150) square feet and a maximum height of fourteen (14) feet (see Article 25 for calculation of building height). (as amended 5/13/05 and 3/5/10)

11.04.03 **Swimming Pools**

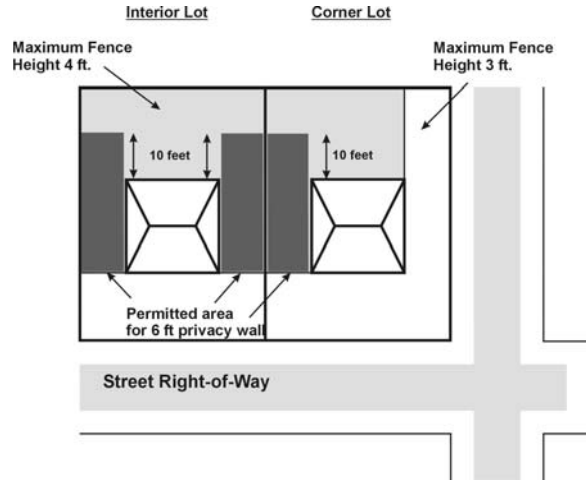
- (a) Requirement for Fence: Every person owning land on which there is located a swimming pool, spa, hot tub, or similar device (below ground or above ground) which contains twenty-four (24) inches or more of water in depth at any point, shall erect and maintain thereon a fence or enclosure approved by the Building Official surrounding the device sufficient to make such device inaccessible to small children. Such fence or enclosure, including the gates, shall not be less than four (4) feet or greater than (6) feet above grade. All gates shall be self-latching with latches placed no less than four (4) feet above grade or otherwise made inaccessible from the outside to small children. A hot tub with a locking cover shall not require a fence.
- (b) Relationship of Height to Setback: Swimming pools, spas, hot tubs, similar facilities and surrounding decks with an elevation measured from the mean grade at any point adjacent to such facility of three (3) feet or less shall be at least ten (10) feet from any lot line. Where the elevation is greater than three (3) feet above grade at any point, the setback shall be at least fifteen (15) feet from any lot line.
- (c) Restriction from Front Yard: Swimming pools, spas, hot tubs and similar devices shall not be located in any front yard.

11.04.04 **Fences, Walls and Screens**

- (a) Unless specifically authorized elsewhere in this Ordinance, fences, walls or screens located within the front yard in any residential zoning district shall not exceed three (3) feet in height, or be in excess of forty nine (49) percent (%) solid or impervious.
- (b) Chain link fences shall not be erected in any front yard within a residential district, unless enclosing a retention pond that has been approved by the Planning Commission. Fences shall not be permitted in the required waterfront yard.

- (c) Unless specifically authorized elsewhere in this Ordinance, fences, walls or screens located within the required side yard or required rear yard in any zoning district shall not exceed a height of four (4) feet, except the Zoning Administrator may approve the following:

- (1) A privacy fence or wall up to six (6) feet high within the required side yard provided the wall does not extend beyond the front building line or more than ten (10) feet beyond the rear building line;
- (2) A six (6) foot high dog run or pet enclosure enclosing a maximum of twenty percent (20%) of the required rear yard or two hundred (200) square feet maximum area within the required rear yard, whichever is less



- (3) A six (6) foot high fence in an Agricultural or Country Estate District, which does not exceed forty nine percent (49%) solid or impervious area subject to 11.04.04(c)(1) above.;
- (4) An eight (8) foot high security fence of a permitted essential public service building, essential public service storage yard, towers, commercial use or industrial use, which may also include a maximum of one (1) additional foot of barb wire.
- (d) Fences, walls or screens shall not be erected within any public right-of-way or maintained in such a way as to obstruct the vision of motorists exiting driveways or within the triangular area formed by the intersection of the street right-of-way lines and a line connecting two points located on those intersecting right-of-way lines twenty-five (25) feet from the point of intersection with the right-of-way lines.
- (e) The use of electric current or charge on any fence or part thereof is prohibited, except for low voltage fences in the Agricultural and Country Estate Residential District, intended to enclose permitted livestock, or electronic fences buried beneath the ground. (as amended 12/31/06 and 3/5/10)

**11.04.05 Waterfront Accessory Structures:** Waterfront structures and appurtenances are permitted structures on waterfront property, subject to the requirements of this section. The following requirements apply to all structures and appurtenances within the required waterfront yard (i.e. the minimum required setback from the ordinary high water mark.) in all zoning districts.

- (a) Only the following structures and appurtenances shall be permitted within the required waterfront yard:
- (1) docks and mooring apparatus;

- (2) decks, subject to the requirements of Section 11.04.02(c);
- (3) no more than one gazebo, subject to the requirements of Section 11.04.02(d).
- (b) Allowable accessory use of the waterfront in a single family residential district shall be limited to not more than (1) dock per lot or per dwelling unit. Boat houses shall not be permitted.
- (c) No more than one (1) boat slip per dwelling unit shall be permitted for multiple-family dwellings.
- (d) Commercial boat rental shall be prohibited in residential districts.
- (e) Boat launching sites and boat docks within a common use riparian lot and dockminiums shall comply with the provisions of Section 13.03.

11.04.06 **Reception Antennas and Towers:** Radio or television antennas or towers, including satellite dish antennas and transmission or reception antennas erected or installed in any zoning district as an accessory structure to a permitted use shall comply with the standards below. Wireless communication facilities, such as cellular antenna and commercial broadcasting antenna, shall be subject to the requirements of Section 11.02.08

- (a) Intent and Exceptions: The intent of this section is to provide reasonable regulations for reception antenna facilities to achieve the objectives listed below.
  - (1) Promote safety and prevent hazards to persons and property resulting from accidents involving antenna facilities which could fall from building or structural mountings due to wind load, snow load or other factors.
  - (2) Promote utilization of ground mounting for antennae facilities where reasonably feasible.
  - (3) Require screening of ground-mounted facilities and minimize visibility to roof or structure mounted facilities to maintain architectural integrity and aesthetic quality of property improvements and preserve property values.
  - (4) Exclude from provisions of this section are conventional VHF and UHF television antennae, satellite dishes less than one (1) meter in diameter and short wave radio antennae based upon the following findings: there is relatively minor concern for wind and snow load issues due to an established safety record; there has been an historical acceptance of such facilities from architectural and aesthetic standpoints; and the cost of complying with the procedure for application and review would be unreasonable in relation to the cost of purchasing and installing the facility.
  - (5) Balance regulations on the placement and manner of reception antenna installation to the minimum required to achieve the objectives herein.
  - (6) Promote and protect the public health, safety and welfare by the exercise of Township police powers in relation to a property owner's right to construct and use reception antennae to receive signals without reasonable restriction.

- (b) Requirements: A ground mounted regulated reception antenna or tower, shall be located only in a rear yard and shall not be within the required side yard setback. For lots with lake frontage, regulated reception, antenna and towers shall be located in the side or front (street side) yard. A roof mounted regulated reception antenna shall be placed on a section of the roof in the rear yard.
- (1) Conventional VHF and UHF television antennae, satellite dishes less than one (1) meter in diameter and short wave radio antennae shall be exempt from the regulations of this section and not require a land use permit, provided the equipment is not located in the front yard or on the portion of the building facing the front lot line.
  - (2) No portion of a regulated reception antenna shall be located closer than six (6) feet, measured on a horizontal plane, from any side or rear lot line or placed on any easement.
  - (3) Ground-mounted antenna in a front yard within one hundred (100) feet of a public street or within fifty (50) feet of a residential lot line shall be screened from such street by landscaping or a wall with a sketch plan approved by the Zoning Administrator prior to erection of the antenna. If there is no conforming location on the property where the facility may be so obscured from view, screening shall be accomplished to the extent reasonably feasible, as approved by the Zoning Administrator or if the antenna is mesh type, screening need not exceed six (6) feet in height.
  - (4) The color of all antennae shall be of tones similar to the surroundings. Ground-mounted antennae shall not be white unless they are of a mesh type or unless the background consists primarily of a white building. Bright or pastel colors shall not be used in any instance.
  - (5) Ground mounted reception antenna shall be secured to the ground with cement or similar material.
  - (6) The diameter of a regulated reception antenna shall not exceed twelve (12) feet.
  - (7) Regulated reception antenna and towers shall extend a maximum of twenty (20) feet above the rooftop.
  - (8) No advertising or identification display shall be placed on any portion of a reception antenna or tower, except for the name of the manufacturer and serial number.
  - (9) All electrical and antenna wiring shall be placed underground, where applicable.
  - (10) The antenna shall be located and designed to meet the manufacturer specifications to withstand a wind force of one hundred (100) miles per hour.
  - (11) If a usable signal cannot be obtained by locating the antenna in the rear yard, the antenna may be located in the side yard of the property subject to the submission of a written affidavit and approval of the Zoning Board of

Appeals provided the placing of an antenna in a side yard shall remain subject to all other conditions set forth in this section.

- (12) Erection of regulated reception antenna or towers shall require a land use permit from the Township Zoning Administrator.

## **Sec. 11.05 WIND ENERGY CONVERSION SYSTEMS (WECS)**

### **11.05.01 General:**

- (a) **Intent:** The intent of these regulations is to provide for sustainable energy sources by allowing the development of Wind Energy Conversion Systems (WECS), while providing regulations that limit the impact of these facilities as follows:
  - (1) Protect public health, safety, welfare, and quality of life by minimizing the potential adverse impacts of a WECS.
  - (2) Protect the aesthetic quality of the natural, rural open spaces of the Township.
  - (3) Protect neighboring property owners from noise and safety impacts.
  - (4) Protect waterfowl and birds.
  - (5) Ensure structures do not exceed a height that would impact aviation safety.
  - (6) To establish standards and procedures by which the siting, design, engineering, installation, operation, and maintenance of a WECS shall be governed.
- (b) **Applicability:** WECS shall comply with the standards below.
  - (1) On-site use WECS up to a height of seventy two (72) feet shall be allowed in any zoning district as an accessory structure, subject to the requirements of Section 11.05.02.
  - (2) On-site use WECS over a height of seventy two (72) feet shall be allowed in certain zoning districts as an accessory structure, subject to the requirements of Section 11.05.03.
  - (3) A utility grid WECS shall be allowed as a principal use of land in certain zoning districts, subject to the requirements of Section 11.05.03.
- (c) **Definitions:** For the purpose of this section, the following words and phrases shall have the meanings respectively ascribed to them as follows:
  - (1) **Ambient Noise:** The amount of background noise at a given location prior to the installation of a WECS which may include, but is not limited to, traffic, machinery, lawnmowers, general human activity and the interaction of the wind with the landscape. Ambient Sound Level is measured on the Decibel – dB (A) – weighted scale as defined by the American National Standards

Institute (ANSI). Such noise levels shall be measured on the property line or on the adjacent property, which is receiving the noise.

- (2) **Anemometer tower:** A freestanding tower containing instrumentation such as anemometers that is designed to provide present moment wind data for use by the supervisory control and data acquisition (SCADA) system used by utility companies to monitor energy production from a central control unit, which is an accessory land use to a utility grid WECS.
- (3) **ANSI:** The American National Standards Institute.
- (4) **dB (A):** dB (A) means the sound pressure level in decibels measured on the "A" scale of a standard sound level meter having characteristics defined by the American National Standards Institute, Publication ANSI s1.4-1971.
- (5) **Decibel:** The unit of measure used to express the magnitude of sound pressure and sound intensity (dB).
- (6) **Horizontal axis WECS:** A WECS which converts wind energy into electricity through the use of a wind turbine generator with a horizontal axis of rotation. This type of WECS is directional in that it achieves optimal energy production while pointed into or away from the direction of the wind.
- (7) **IEC:** The International Electrotechnical Commission.
- (8) **ISO:** The International Organization for Standardization.
- (9) **Lease unit boundary:** The boundary around property leased for purposes of a WECS, including adjacent parcels to the parcel on which the WECS tower or equipment is located. For purposes of setback, the lease unit boundary shall not cross road right-of-ways.
- (10) **On site WECS:** A land use for generating electric power from wind that is accessory to a legal principal use and intended to primarily serve the needs of the electric power consumer at that site.
- (11) **Rotor:** An element of a WECS that acts as a multi-bladed airfoil assembly, thereby extracting through rotation, kinetic energy directly from the wind.
- (12) **Shadow flicker:** Alternating changes in light intensity caused by the moving blades of a WECS casting shadows on the ground and stationary objects, such as but not limited to a window at a dwelling.
- (13) **Tower height:** The vertical distance as measured from the ground level of the base of a wind energy conversion system tower to the uppermost vertical extension of a rotor blade, or the maximum height reached by any part of a WECS.
- (14) **Utility grid WECS:** The use of wind power to generate electric power for the principal purpose of supplying electric power to the energy grid, with little or no on-site use of the generated power.

- (15) **Vertical axis WECS:** A WECS which converts wind energy into electricity through the use of a wind turbine generator with a vertical axis of rotation. This type of WECS is not directional in that it does not need to be pointed into or away from the direction of the wind in order to achieve optimal energy production.
- (16) **Wind energy conversion system (WECS):** A land use for generating power by use of wind; utilizing wind turbine generators, including the turbine, blades, and tower as well as related electrical equipment. This does not include wiring to connect the WECS to the electric utility grid. See also on-site WECS and utility grid WECS.
- (17) **Wind site assessment.** An assessment to determine the wind speeds at a specific site and the feasibility of using that site for construction of a WECS.

11.05.02 **On-site Use WECSs:** An On-site Use WECS up to seventy two (72) feet tall is an accessory use which shall meet the following standards:

- (a) **Locations Where System Allowed:** An accessory WECS up to seventy two (72) feet tall shall be permitted in all districts with administrative land use permit approval by the Zoning Administrator.
- (b) **Number of Systems:** An on-site use WECS is to be designed to primarily serve the needs of a home, farm, or on-site business. One (1) on-site use WECS shall be permitted per property.
- (c) **Clearance above Ground:** The minimum blade or rotor clearance will be at least ten (10) feet from the ground.
- (d) **System Attached to a Structure or Roof:** A WECS may be attached to an existing structure. Roof-mounted equipment shall not exceed a height of fifteen (15) feet above the surrounding roof surface.
- (e) **Property Setback:** The minimum distance between an on-site use WECS and the owner's property lines shall be equal to the height of the WECS tower including the top of the blade in its vertical position. No part of the WECS structure, including guy wire anchors, may extend closer than ten (10) feet to the owner's property lines, or the distance of the required setback in the respective zoning district, whichever results in the greater setback. Where a WECS is located in the front yard, it shall be setback two hundred (200) feet from the front lot line.
- (f) **Color:** WECS shall be painted a non-obtrusive (light color such as white, beige or light gray) color that is non-reflective. No striping or color shall be visible on the blades or tower. No lettering, company insignia, advertising, or graphics shall be on any part of the tower, hub, or blades. Nacelles may have lettering that exhibits the manufacturer's identification.
- (g) **Towers:** WECS shall use tubular towers. Lattice towers shall be prohibited.
- (h) **Sound Pressure Level:** On site use WECS shall not create noise levels that exceed sixty (60) dB (A) measured at the property line.

- (i) **Construction Codes, Towers, & Interconnection Standards:** On-site use WECS, including towers shall comply with all applicable state construction and electrical codes and local building permit requirements. On-site use WECS including towers shall comply with Federal Aviation Administration requirements, the Michigan Airport Zoning Act (Public Act 23 of 1950, MCL 259.431 *et seq.*), and the Michigan Tall Structures Act (Public Act 259 of 1959, MCL 259.481 *et seq.*).
- (j) **Connection to Energy Grid:** An interconnected on-site use WECS shall comply with Michigan Public Service Commission and Federal Energy Regulatory Commission standards. Off-grid systems are exempt from this requirement.
- (k) **Safety:** An on-site use WECS shall have automatic braking, governing, or a feathering system to prevent uncontrolled rotation or over speeding. All wind towers shall have lightning protection. If a tower is supported by guy wires, the wires shall be clearly visible to a height of at least eight (8) feet above the guy wire anchors.
- (l) **Accessibility:** Towers shall be designed and constructed in such a manner that integrated tower climbing devices are a minimum of twelve (12) feet above the base of the tower and only accessible by using a separate climbing device.
- (m) **Labeling of WECS Tower Subsystem:** The following information shall be provided on labels attached to the tower in a visible, easily read, and easily accessible location:
  - (1) Equipment weight of the tower subsystem;
  - (2) Manufacturer's name and address;
  - (3) Model number;
  - (4) Serial number;
  - (5) The survival wind speed in miles per hour and meters per second;
  - (6) Name of installer;
  - (7) Name of person responsible for maintenance;
  - (8) Emergency telephone number in force for (6) and (7) above.
- (n) **Labeling of WECS Power Conversion Subsystem:** The following information shall be provided on labels attached to the WECS power conversion subsystem in a visible, easily read, and easily accessible location:
  - (1) Maximum power input (KW), rated voltage (volts) and rated current output (amperes) of the generator, alternator, etc.;
  - (2) Manufacturer's name and address;
  - (3) Model number;
  - (4) Serial number;

- (5) Emergency and normal shutdown procedures;
- (6) Underwriters label, where appropriate.
- (o) **Utilities:** Power lines shall be placed underground. If the WECS is connected to a public utility system for net metering purposes, it shall meet the requirements for interconnection and operation as set forth in the public utility's current service regulations that meet federal, state and industry standards applicable to wind power generation facilities. Any such connection shall be inspected and approved by the appropriate utility company.
- (p) **Removal of Abandoned Facilities:** Any WECS that is not operated for a continuous period of twelve (12) months shall be considered abandoned and the owner of such WECS shall remove the WECS within ninety (90) days of receiving an abandonment notification from the Township. Failure to remove an abandoned WECS within ninety (90) days shall be grounds for the Township to remove the WECS at the owner's expense.

11.05.03 **Utility Grid WECS, Anemometer Towers and On-site Use WECS Over Seventy Two (72) Feet High:** A utility grid WECS and anemometer towers, or on-site use WECS over seventy two (72) feet high shall meet the following standards:

- (a) **Locations Where System Allowed:** Utility grid WECS and on-site WECS over seventy two (72) feet in height shall be permitted in the AG, CE, PRF and IND districts with special land use approval by the Township Board in accordance with Article 19 and site plan approval by the Planning Commission in accordance with Article 18.
- (b) **Clearance above Ground:** The minimum blade or rotor clearance for a horizontal axis tower mounted WECS will be at least twenty (20) feet above ground or above any outdoor areas intended for human use. The minimum rotor clearance for a vertical axis WECS installed on-grade will be at least ten (10) feet above ground.
- (c) **System attached to a Structure or Roof:** A WECS may be attached to an existing structure so that the appearance of the structure will not be materially altered or changed. Roof-mounted equipment shall not exceed a height of twenty (20) feet above the surrounding roof surface. The equipment shall not be attached to a portion of the roof that is highly visible.
- (d) **Height:** No utility grid WECS or on-site use WECS shall exceed one hundred fifty (150) feet in height.
- (e) **Property Setback:** The minimum distance between a WECS and the property lines shall be equal to the height of the WECS tower including the top of the blade in its vertical position. The minimum distance between an anemometer tower and the owner's property lines shall be equal to the height of the tower. No part of the WECS structure, including guy wire anchors, may extend closer than ten (10) feet to the owner's property lines, or the distance of the required setback in the respective zoning district, whichever results in the greater setback. Any operations and maintenance office building, a sub-station, or ancillary equipment shall comply with any property set-back requirement of the respective zoning district. Where a WECS

is located in the front yard, it shall be setback two hundred (200) feet from the front lot line.

- (f) **Color:** WECS shall be painted a non-obtrusive (light color such as white, beige or light gray) color that is non-reflective. No striping or color shall be visible on the blades or tower.
- (g) **Sound Pressure Level:** WECS shall not create noise levels that exceed sixty (60) dB (A) measured at the property line.
- (h) **Safety Requirements:** WECS shall be designed to prevent unauthorized access to electrical and mechanical components and shall have access doors that are kept securely locked at all times when service personnel are not present. All spent lubricants and cooling fluids shall be properly and safely removed in a timely manner from the site of the WECS. A sign shall be posted near the tower or operations and maintenance office building that will contain emergency contact information. Signage placed at the road access shall be used to warn visitors about the potential danger of falling ice.
- (i) **Accessibility:** Towers shall be designed and constructed in such a manner that integrated tower climbing devices are a minimum of twelve (12) feet above the base of the tower and only accessible by using a separate climbing device.
- (j) **Performance Security:** Performance guarantee, pursuant to Section 21.03 of this Ordinance, shall be provided for the applicant making repairs to public roads damaged by the construction of the WECS.
- (k) **Utilities:** Power lines shall be placed underground. If the WECS is connected to a public utility system for net metering purposes, it shall meet the requirements for interconnection and operation as set forth in the public utility's current service regulations that meet federal, state and industry standards applicable to wind power generation facilities. Any such connection shall be inspected and approved by the appropriate utility company. Utility grid WECS shall comply with applicable utility, Michigan Public Service Commission, and Federal Energy Regulatory Commission interconnection standards.
- (l) **Permits:** WECS shall comply with all applicable state construction and electrical codes and County building permit requirements.
- (m) **Aviation Hazard:** WECS shall comply with Federal Aviation Administration (FAA) requirements, the Michigan Airport Zoning Act (Public Act 23 of 1950 as amended, M.C.L. 259.431 et seq.), and the Michigan Tall Structures Act (Public Act 259 of 1959 as amended, M.C.L. 259.481 et seq.). The minimum FAA lighting standards shall not be exceeded. All tower lighting required by the FAA shall be shielded to the extent possible to reduce glare and visibility from the ground. The tower shaft shall not be illuminated unless required by the FAA.
- (n) **Standards:** The following standards apply only to utility grid WECS:
  - (1) **Visual Impact:** Utility grid WECS projects shall use tubular towers and all utility grid WECS in a project shall be finished in a single, non-reflective matte finished color. A project shall be constructed using WECS of similar

design, size, operation, and appearance throughout the project. No lettering, company insignia, advertising, or graphics shall be on any part of the tower, hub, or blades. Nacelles may have lettering that exhibits the manufacturer's and/or owner's identification.

- (2) **Decommissioning:** A decommissioning plan for the WECS and any anemometer towers shall be provided that indicates 1) the anticipated life of the project, 2) the estimated decommissioning costs net of salvage value in current dollars, 3) the method of ensuring that funds will be available for decommissioning and restoration, 4) the anticipated manner in which the project will be decommissioned and the site restored and 5) performance guarantee, pursuant to Section 21.03 of this Ordinance.
- (3) **Electromagnetic Interference:** Utility grid WECS shall not be installed in any location where its proximity to existing fixed broadcast, retransmission, or reception antennae for radio, television, or wireless phone or other personal communication systems would produce electromagnetic interference with signal transmission or reception unless the applicant provides a replacement signal to the affected party that will restore reception to at least the level present before operation of the WECS. No utility grid WECS shall be installed in any location within the line of sight of an existing microwave communications link where operation of the WECS is likely to produce electromagnetic interference in the link's operation unless the interference is proven to be insignificant.
- (o) **Site Plan:** Site plan requirements for utility grid WECS and on-site WECS over seventy two (72) feet in height are as follows:
  - (1) Documentation that sound pressure level, construction code, tower, interconnection (if applicable), and safety requirements have been reviewed and the submitted site plan is prepared to show compliance with these issues.
  - (2) Proof of the applicant's general liability insurance for at least three million dollars (\$3,000,000) for the project to cover the operator, the landowner and the Township.
  - (3) A copy of that portion of all the applicant's lease(s) with the land owner(s) granting authority to install the anemometer tower and/or utility grid WECS; legal description of the property(ies), lease unit(s); and the site plan shows the boundaries of the leases as well as the boundaries of the lease unit boundary.
  - (4) The phases, or parts of construction, with a construction schedule.
  - (5) The project area boundaries.
  - (6) The location of all dwellings within three hundred (300) feet of the system.
  - (7) The location of all guy wires or other support devices.
  - (8) The location, height, and dimensions of all existing and proposed structures and fencing.

- (9) The location, grades, and dimensions of all temporary and permanent on-site and access roads from the nearest county or state maintained road.
- (10) All new above ground infrastructure related to the project.
- (11) A copy of manufacturers' material safety data sheet(s) which shall include the type and quantity of all materials used in the operation of all equipment including, but not limited to, all lubricants and coolants.
- (12) For utility grid WECS only:
  - a. A copy of a noise modeling and analysis report and the site plan shall show locations of equipment identified as a source of noise. Equipment shall be placed so that the WECS will not exceed the maximum permitted sound pressure levels. The noise modeling and analysis shall conform to IEC 61400 and ISO 9613. After installation of the utility grid WECS, sound pressure level measurements shall be done by a third party, qualified professional according to the procedures in the most current version of ANSI S12.18. All sound pressure levels shall be measured with a sound meter that meets or exceeds the most current version of ANSI S1.4 specifications for a Type II sound meter. Documentation of the sound pressure level measurements shall be provided to Genoa Township within sixty (60) days of the commercial operation of the project.
  - b. A visual impact simulation showing the completed site as proposed on the submitted site plan. The visual impact simulation shall be from four viewable angles and conducted adjacent to property lines or the lease unit boundaries.
  - c. A copy of an environment analysis by a qualified professional to identify and assess any potential impacts on the natural environment including, but not limited to wetlands and other fragile ecosystems, historical and cultural sites, and antiquities. The applicant shall take appropriate measures to minimize, eliminate or mitigate adverse impacts identified in the analysis, and shall show those measures on the site plan. The applicant shall identify and evaluate the significance of any net effects or concerns that will remain after mitigation efforts.
  - d. A copy of an avian and wildlife impact analysis by a qualified professional to identify and assess any potential impacts on wildlife and endangered species. The applicant shall take appropriate measures to minimize, eliminate or mitigate adverse impacts identified in the analysis, and shall show those measures on the site plan. The applicant shall identify and evaluate the significance of any net effects or concerns that will remain after mitigation efforts. (Sites requiring special scrutiny include wildlife refuges, other areas where birds are highly concentrated, bat hibernacula, wooded ridge tops that attract wildlife, sites that are frequented by federally and/or state listed endangered species of birds and bats, significant bird migration pathways, and areas that have landscape features known to attract large numbers of raptor.)

1. At a minimum, the analysis shall include a thorough review of existing information regarding species and potential habitats in the vicinity of the project area. Where appropriate, surveys for bats, raptors, and general avian use should be conducted. The analysis shall include the potential effects on species listed under the federal Endangered Species Act and Michigan's Endangered Species Protection Law.
  2. The analysis shall indicate whether a post construction wildlife mortality study will be conducted and, if not, the reasons why such a study does not need to be conducted.
- e. A copy of a shadow flicker analysis for residential buildings and livestock areas within one thousand (1,000) feet of the proposed system. The analysis shall to identify the locations of shadow flicker that may be caused by the project and the expected durations of the flicker at these locations from sun-rise to sun-set over the course of a year. The analysis shall identify problem areas where shadow flicker may affect residents and livestock within one thousand (1,000) feet. The analysis shall also show measures that shall be taken to eliminate or mitigate the problems.
- f. A second site plan which shows the restoration plan for the site after completion of the project which includes the following supporting documentation:
1. The anticipated life of the project.
  2. The estimated decommissioning costs net of salvage value in current dollars.
  3. The method of ensuring that funds will be available for decommissioning and restoration.
  4. The anticipated manner in which the project will be decommissioned and the site restored.
- g. A description of the complaint resolution process developed by the applicant to resolve complaints from nearby residents concerning the construction or operation of the project. The process may use an independent mediator or arbitrator and shall include a time limit for acting on a complaint. The process shall not preclude the local government from acting on a complaint. During construction the applicant shall maintain and make available to nearby residents a telephone number where a project representative can be reached during normal business hours.

(as amended 3/5/10)