

ARTICLE 16.0

SUPPLEMENTARY DEVELOPMENT REGULATIONS

Section 16.01 Wireless Communication Facilities.

Wireless communications systems, facilities, towers, and antennae in the Township shall be subject to the following:

A. Purpose.

The purpose of this Section is to carry out the will of the United States Congress by permitting facilities within the Township that are necessary for the operation of wireless communications systems, and facilitating adequate and efficient provisions for wireless communications facility sites. It is the intent of this Section to:

1. Permit location of wireless communication facilities, while limiting adverse visual impacts through careful design, siting, landscaping and screening elements, and innovative camouflaging techniques to preserve the character of the Township;
2. Require provisions for collocation of antennae on existing towers, and on new and replacement towers, unless it can be reasonably demonstrated that such collocation is not technically feasible;
3. Prevent potential damage to adjacent properties from tower failure, and promote the timely removal of facilities upon the discontinuance of use; and
4. Establish review procedures for construction, alteration or enlargement of such facilities consistent with Michigan Zoning Enabling Act requirements, and to permit administrative review and approval of certain types of projects that have a limited scope and impact.

B. Application Information.

The following information shall be provided with any application for approval of a wireless communications facility:

1. **Applicant information.** Name, address, and contact information for the applicant, property owner, tower operator, and installation contractor; and the address or parcel identification number of the proposed facility site.
2. **Facility inventory.** If the application includes a new wireless communication tower, the applicant shall provide the following minimum inventory of existing towers in the Township and within one (1) mile of the Township's boundaries:
 - a. Identification of the owner or operator, location, height, type, and design of each tower.
 - b. A description and assessment of the suitability of existing towers, other structures or alternative technology not requiring the use of towers or structures to provide the proposed wireless communication services.
 - c. An assessment and illustration of feasible location(s) of future towers or antennae in the Township under the requirements of this Ordinance,

based on the location of the proposed tower and existing physical, engineering, technological, and geographical limitations.

- d. An environmental impact statement disclosing any anticipated impacts on local wetlands, floodplains, wildlife corridors, natural habitat areas, and other environmental considerations.
3. **Location map.** A location map for the proposed wireless communications facility, showing adjacent public roads, intersections, and other significant landmarks. If a new tower is proposed, the location map shall show the setback distance(s) from the nearest tower(s) included in the facility inventory.
 4. **Service area coverage maps.** A map of the area served by the provider's existing wireless communications facilities shall be provided, along with a second map of the same area also showing the proposed service area coverage.
 5. **Site plan.** A scaled site plan that indicates the type of wireless communications facility, as defined in this Ordinance, and includes the following:
 - a. A parcel survey, with easements, setback dimensions and the location of all existing and proposed structures and facilities on the subject parcel.
 - b. Zoning district classifications and existing land uses for the subject parcel and all adjacent parcels, including across road rights-of-way.
 - c. A description of the type and design of the proposed wireless communication facility.
 - d. Legal description of the subject parcel and any leased area, if applicable.
 - e. Setback distances between any proposed tower(s) and the nearest boundaries of any residential zoning district or lot occupied by a dwelling.
 - f. Proposed means of access and other proposed site improvements.
 - g. Details of proposed landscaping and screening materials; including species, size, and amounts, and a detailed maintenance plan.
 - h. Details of proposed fencing, lighting, and security elements and materials; including color and type of materials, and method of illumination and fixture specifications for all light sources.
 - i. Any other information deemed necessary by the Planning Commission to assess compliance with this Section.
 6. **Elevation drawings.** Elevation drawings of the proposed wireless communication facility, ground equipment enclosure(s), and associated structures. The drawings shall identify the type, design, materials, and height for the proposed wireless communications facility, enclosure(s), and associated structures; and the name and location of the tower manufacturer, if applicable.
 7. **Compliance with applicable laws and regulations.** The applicant shall provide documentation of proper licensing as a wireless communication services

provider, and compliance with applicable federal and state standards relative to the environmental effects of radio frequency emissions.

8. **Permission to locate.** The applicant shall submit copies of an executed lease or purchase agreement or similar proof of permission to locate a wireless communications facility on the site.
9. **Collocation agreement.** The applicant for a new tower shall submit a signed and notarized agreement, transferable to all successors and assigns, stating that the tower operator shall make space available on the tower for collocation. Proposed future antenna and equipment locations shall be indicated on the site plan and elevation drawings.
10. **Insurance certificate.** The applicant shall submit a valid certificate of insurance, to be renewed annually, listing the Township as the certificate holder and naming the Township, its past, present and future elected officials, representatives, employees, boards, commissions, consultants, and agents as additional named insured.
 - a. The certificate shall also state that if any of the described policies are to be canceled before the expiration date thereof, the issuing company will mail 30 days written notice to the Township as certificate holder.
 - b. The Township may require the applicant to supply a \$1,000.00 cash bond to the Township, which shall be used to reimburse administrative expenses in the event the certificate is allowed to lapse.
11. **Maintenance agreement.** The applicant shall submit a plan for the long-term, continuous maintenance of the facility. The plan shall identify who will be responsible for maintenance of the facility, including access, landscaping, screening, and security improvements.
12. **Removal agreement and guarantee.** The applicant shall submit a signed and notarized removal agreement and a performance guarantee for the future removal of the facility, subject to the following:
 - a. The agreement shall be in accordance with the requirements of Section 16.01P (Removal of Wireless Communications Facilities).
 - b. The applicant shall submit an estimate of the cost of removal of the facility and restoration of the site, certified by a licensed engineer.
 - c. The performance guarantee shall be in accordance with Section 2.07C (Performance Guarantees), and shall be sufficient to ensure removal of the wireless communication facility, restoration of the site, and reimbursement of associated administrative costs incurred by the Township in the event that the applicant, property owner or their successors fail to remove the facility in a timely manner.
13. **Tax-related information.** The applicant shall supply to the Township Assessor all tax-related information as requested for appraisal purposes. Upon receipt of requested information, the Assessor shall provide notice to the Zoning Administrator that this condition has been satisfied.

14. **Backhaul network information.** Identification of the entities providing the backhaul network for the wireless communication facility described in the application and other sites owned or operated by the applicant in the township.
15. **Franchise information.** Written documentation shall be provided to certify that all franchises required by law for the construction and operation of the wireless communication facility have been obtained. A copy of all such franchises shall be filed with the Township.
16. **Engineering certification.** Written certification shall be provided from a professional engineer licensed by the State of Michigan demonstrating:
 - a. The manner in which the structure will fall in the event of accident, damage or failure, and that the setback area will accommodate the facility and provide an adequate buffer from adjacent parcels;
 - b. That the facility is designed in accordance with applicable dead load and wind pressure standards; and
 - c. That the facility is designed to conform with the State Construction Code and all other applicable building, electrical, and fire codes.
17. **Airport zoning information.** A statement of compliance regarding the requirements of the Airport Zoning Act (Public Act 23 of 1950, as amended), Tall Structures Act (Public Act 259 of 1959, as amended), airport approach plans, and Federal Aviation Administration (FAA) regulations; including identification of any anticipated variances from local airport zoning ordinance standards.

C. Type of Review Required.

Wireless communications facilities shall be reviewed in accordance with the following:

Type of Wireless Communications Facility	Required Review and Approval		
	Planning Commission	Zoning Administrator	Exempt
NEW TOWERS AND ANTENNAE			
Construction, alteration or enlargement of a wireless communication tower.	●		
Antenna(e) installation on an existing principal building or accessory structure that includes use of a ground equipment enclosure area outside of the existing building or structure.	●		
Antenna(e) installation on an existing principal building or accessory structure where all accessory equipment is installed within the existing building or structure.		●	
EXISTING TOWERS			
Alteration or enlargement of a wireless communication tower that would conform to maximum height requirements with an increase in the overall tower height by more than 20 feet or 10% of its original height, whichever is greater. Also see Section 16.01F.	●		

Type of Wireless Communications Facility	Required Review and Approval		
	Planning Commission	Zoning Administrator	Exempt
Alteration or enlargement of a wireless communication tower that would conform to maximum height requirements without increasing the overall tower height by more than 20 feet or 10% of its original height, whichever is greater.		●	
Expansion of a previously approved ground equipment enclosure to a total area greater than 2,500 square feet. Also see Section 16.01F.	●		
Expansion of a previously approved ground equipment enclosure area to a total area less than or equal to 2,500 square feet.		●	
Construction or expansion of equipment building(s) within an approved ground equipment enclosure.		●	
Collocation of new antennae on an existing tower that would conform to maximum height requirements with an increase in the overall tower height by more than 20 feet or 10% of its original height, whichever is greater. Also see Section 16.01F.	●		
Collocation of new antennae on an existing tower that would conform to maximum height requirements without increasing the overall tower height by more than 20 feet or 10% of its original height, whichever is greater.		●	
Installation of new ground equipment within an approved ground equipment building or enclosure.		●	
SATELLITE DISH ANTENNAE			
Installation of a satellite dish antenna with a diameter of less than 1.5 meters.			●
Installation of a satellite dish antenna with a diameter 1.5 meters or larger.		●	
AMATEUR RADIO ANTENNAE			
Installation of an amateur radio transmission and reception antenna or antenna structure up to a maximum height of 60 feet.		●	
Installation of any amateur radio transmission and reception antenna or antenna structure that exceeds 60 feet in height, or exceeds the maximum permitted height in the zoning district.	●		
Installation of a citizen band radio base station antenna structure, contractor's business antenna structure, television reception antenna or wireless Internet antenna for personal use, or similar facility exceeding 14 feet in height, up to the maximum permitted height in the zoning district.		●	
Installation of short wave facilities, amateur radio reception-only antenna, television reception antenna or wireless Internet antenna, or similar facility up to a maximum height of 14 feet.			●

Type of Wireless Communications Facility	Required Review and Approval		
	Planning Commission	Zoning Administrator	Exempt
OTHER PROJECTS			
Installation of municipal and other facilities subject to federal or state preemption of local authority.			●
Repair, service or maintenance of an existing wireless communications facility, provided that all work conforms to approved plans, permits, and applicable codes.			●

D. Exempt Facilities.

Facilities listed as exempt from review in Section 16.01C (Type of Review Required) shall be permitted by right, subject to the applicable federal and state regulations.

E. Facilities Subject to Zoning Administrator Approval.

Facilities requiring Zoning Administrator approval per Section 16.01C (Type of Review Required) shall be subject to zoning permit review and approval in accordance with the applicable standards of this Section and Section 2.03 (Zoning Permits).

F. Special Provisions for Review of Certain Alterations and Collocations.

In accordance with Section 3514 of the Michigan Zoning Enabling Act, Township review of proposed alterations to existing wireless communication towers or ground equipment enclosures subject to special use approval per Section 16.01C (Type of Review Required) and referencing this subsection shall be modified as follows:

1. **60-day time limit on Planning Commission action.** The Planning Commission shall complete its review and take final action on the application in accordance with Section 16.01H (Planning Commission Action) within 60 calendar days after the date that the application is considered to be administratively complete. The application shall be deemed approved if the Planning Commission takes no final action within this 60 calendar day period.
2. **Limitation on conditions of approval.** Planning Commission authority, per Section 16.01H.4.d. (Approval Subject to Conditions), to impose conditions on any approval of an application subject to the additional requirements of this subsection shall be limited to conditions intended to:
 - a. Verify compliance with the applicable requirements of this Ordinance; or
 - b. Ensure that the wireless communication facility meets the requirements of federal and state laws and other Township ordinances before the facility begins operation.

G. Special Use Permits for Wireless Communication Facilities.

Wireless communications facilities subject to special use approval per Section 16.01C (Type of Review Required) shall require review and approval of a special use permit by the Planning Commission, subject to the standards of this Section.

1. **Special provisions.** In accordance with Section 3514 of the Michigan Zoning Enabling Act, Township review of any application for a special use permit per Section 16.01C (Type of Review Required) shall be modified as follows:
 - a. **Limitation on review fees.** A fee required to accompany an application for a special use permit under this Section shall not exceed the Township's actual, reasonable costs to review and process the application or \$1,000.00, whichever is less.
 - b. **14-day time limit to determine eligibility and completeness.** After an application for a special use permit under this Section is filed in accordance with this Section, the Clerk shall immediately transmit a copy of the application materials and plans to the Township Planner to determine whether the application is administratively complete per Section 16.01B (Application Information).
 - (1) The Township Planner shall transmit a written response to the Clerk and the applicant within 14 business days stating either that the application is administratively complete or listing the specific information needed for a complete application.
 - (2) The application shall be deemed administratively complete if no written response is transmitted to the Clerk and applicant within the 14 business day period.
2. **90-day time limit on Planning Commission action.** For any special use permit application not subject to the additional requirements of Section 16.01F (Special Provisions for Review of Certain Alterations and Collocations), the Planning Commission shall complete its review and take final action per Section 16.01H (Planning Commission Action) within 90 calendar days after the date that the application is considered to be administratively complete. The application shall be deemed approved if the Planning Commission takes no final action within this 90 calendar day period.
3. **Modifications to an approved special use permit.** Alteration or enlargement of an existing wireless communication tower or expansion of an approved ground equipment enclosure area shall be subject to review and approval as a modification to a previously approved Special use permit.
4. **New special use permit required.** All other wireless communication facilities subject to special use permit approval shall require review and approval of a new Permit by the Planning Commission.

H. Planning Commission Action.

After a complete and accurate application has been received by the Township in accordance with the requirements of Section 16.01B (Application Information), wireless communications facilities subject to Planning Commission approval per Section 16.01C (Type of Review Required) shall be reviewed in accordance with the following:

1. **Technical review.** Prior to Planning Commission consideration, copies of the application shall be distributed to designated Township officials, the Township Planner, and other designated Township consultants for review and comment.

- a. The Township may retain, at the applicant's expense, services of wireless communications and engineering experts to review application materials.
- b. The Zoning Administrator or Planning Commission may also request comments from outside agencies with jurisdiction.
2. **Public hearing.** A public hearing shall be held for all wireless communications facilities subject to Planning Commission approval in accordance with Section 2.10 (Public Hearing Procedures).
3. **Planning Commission consideration.** Subsequent to the hearing, the Planning Commission shall review the proposed wireless communications facility, together with any reports and recommendations from Township officials, the Township Planner, other designated Township consultants, local agencies or departments with jurisdiction, and any public comments.
 - a. The Planning Commission shall verify whether all required information has been provided per Section 16.01B (Application Information).
 - b. The Planning Commission shall verify whether the facility is in compliance with all applicable requirements of this Section and Ordinance.
4. **Planning Commission action.** The Planning Commission is authorized to table, approve, approve subject to conditions or deny the proposed wireless communications facility as follows:
 - a. **Postponement.** Upon determination by the Planning Commission that the application is incomplete or inaccurate, failure of the applicant to attend the meeting, or upon request by the applicant, the Planning Commission may postpone consideration until a later meeting.
 - b. **Denial.** Upon determination that the application is not in compliance with all applicable standards of this Section for the type of wireless communication facility, or would require extensive modifications to comply with such standards, the application shall be denied. If the application is denied, a written record shall be provided to the applicant listing the findings of fact and conclusions or reasons for such denial. Failure of the applicant to attend two (2) or more meetings shall be grounds for the Planning Commission to deny the application.
 - c. **Approval.** The proposed wireless communications facility may be approved by the Planning Commission upon determination that it is in compliance with all applicable standards of this Section.
 - d. **Approval subject to conditions.** Planning Commission approval of such facilities may be subject to reasonable conditions:
 - (1) Designed to protect natural resources, the health, safety, welfare, and social and economic well-being of users or patrons of the use under consideration, residents and landowners immediately adjacent to the proposed use, or the community as a whole;
 - (2) Related to valid exercise of police power and impacts of the use; or

- (3) Necessary to meet the intent and purposes of this Section and Ordinance, related to the standards established in this Section, and necessary for compliance with those standards.

Conditions of approval shall remain unchanged except upon mutual consent of the Planning Commission and the landowner. Any such changes shall be entered into Township records and recorded in the minutes of the Planning Commission meeting at which the action occurred.

5. **Recording of Planning Commission action.** Planning Commission action on the application shall be recorded in the Planning Commission meeting minutes, stating the description and location of the proposed wireless communications facility, address and tax identification number of the parcel, the findings of fact and conclusions or grounds for the Planning Commission's action, and any conditions of approval. The Secretary or Chair shall file one (1) copy of the written record with the Township Clerk for the permanent Township record, and shall forward one (1) copy to the applicant as evidence of approval.
6. **Effect of action.** Approval of the wireless communications facility by the Planning Commission shall allow the Zoning Administrator to issue a zoning permit for the work associated with the application.
 - a. No work may take place on the site except in accordance with an approved zoning permit and plans approved by the Planning Commission.
 - b. If the Planning Commission denies the wireless communications facility, the applicant may submit a new wireless communications facility application that corrects any deficiencies in the denied application materials, facility design or location.
7. **Expiration of approval.** Approval of a wireless communications facility shall expire 365 days after the date of approval, unless a zoning permit has been issued or construction has commenced. Upon written request received by the Township prior to the expiration date, the Planning Commission may grant an extension of up to 180 days, provided that site conditions have not changed in a way that would affect the character, design or use of the site, and that the approved wireless communications facility plans remains in conformance with the purpose and provisions of this Section.

I. Compliance with Airport Zoning.

The height and location of all wireless communication facilities shall conform to the requirements of the Airport Zoning Act (Public Act 23 of 1950, as amended), Tall Structures Act (Public Act 259 of 1959, as amended), adopted airport approach plans, and Federal Aviation Administration (FAA) regulations. Proof of compliance and approval under local airport zoning ordinance requirements shall be provided to the Township prior to the start of construction.

J. Standards for Wireless Communications Towers.

The following shall apply to all wireless communications towers, television, radio, and microwave transmission towers and antenna arrays, and similar tower structures:

1. **Availability of suitable existing towers, other structures or alternative technology.** No new tower shall be permitted unless the applicant demonstrates to the Planning Commission's satisfaction that:
 - a. There exists a need for the facility in the area of the proposed location, based on one (1) or more of the following factors:
 - (1) Proximity to an expressway or state highway, areas of population, or commercial, industrial or other business centers not presently or adequately served by existing facilities;
 - (2) Areas where signal interference has occurred due to tall buildings, topography, masses of trees or other obstructions; or
 - (3) Other identified reason(s) accepted by the Planning Commission.
 - b. No existing towers or structures located within the geographic area meet the applicant's engineering or operating requirements.
 - c. Existing towers or structures do not have sufficient structural strength to support the applicant's proposed antenna(e) and equipment.
 - d. The applicant's proposed antenna(e) would cause electromagnetic interference with antenna(e) on an existing tower, or vice versa.
 - e. The fees, costs or contractual provisions required by the owner to share an existing tower or structure, or to adapt an existing tower or structure for collocation, exceed the cost of new tower development.
 - f. Other limiting factors render existing towers or structures unsuitable.
 - g. There is no suitable alternative technology available which would not require the use of additional towers or structures. Costs of alternative technology that exceed new facility development shall not be presumed to render the technology unsuitable.
2. **Permitted locations.** Permitted wireless communications tower locations shall be limited to the following:
 - a. Wireless communications towers shall only be permitted on land in the following locations and with sufficient lot area to accommodate the setback requirements of this Section:
 - (1) On a lot in the RF (Rural Small Farm) or C-2 (Community Commercial) zoning district.
 - (2) On the Delta College campus in Section 3 of the Township.
 - (3) On a Township-owned lot in any section of the Township.
 - (4) On a lot in the AG (Agricultural) zoning district directly abutting the I-75 expressway right-of-way.
 - b. No tower shall be located within one (1) mile of another wireless communication tower, irrespective of Township boundaries. The Planning

Commission may waive this restriction upon determination that the facility's technical requirements make necessary an additional tower.

- c. No tower shall be located closer than 800 feet to the boundary of any Residential District or any Planned Unit Development (PUD) incorporating RESIDENTIAL USES.
3. **Maximum height.** Towers shall not exceed 200 feet in height as measured from certified grade to the highest point of the tower, including antennae attached to the tower. The Planning Commission may approve a taller tower upon determination that the additional tower height:
 - a. Will result in improved access to wireless services for Township residents, beyond what could be achieved by a shorter tower;
 - b. Will expand opportunities for collocation of additional antennae beyond the capacity of a shorter tower, which may lessen the number of future towers needed to serve Township residents; and
 - a. Will not adversely impact abutting lots and uses to an extent greater than a tower that conforms to the maximum permitted height standard.
 4. **Minimum setbacks.** A tower and any anchoring cables shall be set back from all parcel boundaries a minimum distance equal to one hundred percent (100%) of the height of the tower. Ground equipment enclosures and accessory structures shall satisfy minimum zoning district setback requirements, with a minimum required setback of 50 feet.
 5. **Ground equipment enclosure.** All wireless communications towers, accessory structures and equipment enclosures shall be completely enclosed by an eight (8) foot high fence with a lockable gate to prevent unauthorized access. The tower shall also be protected by anti-climbing devices, and anchor points for guy wires supporting the tower shall be secured to prevent unauthorized access.
 6. **Screening.** A dense evergreen screen shall be provided on all sides of the ground equipment enclosure per Section 16.10D (Methods of Screening). Existing site vegetation and landforms shall be preserved to the maximum extent feasible. The Planning Commission may waive screening requirements upon determining that existing site vegetation or landforms provide a sufficient buffer.
 7. **Collocation.** Wireless communications towers shall be designed, constructed, and maintained in a manner that accommodates collocation of multiple antennae on a single tower.
 8. **Access.** Unobstructed permanent access to the tower and ground equipment enclosure shall be provided for emergency vehicles. Access may be provided by an easement. Upon Township request, the tower owner shall install and maintain a "Knox Box" or other acceptable means of emergency access.
 9. **Design.** All new towers shall conform to the following design standards:
 - a. The tower and associated antennae shall not be illuminated, unless required by the FAA or Michigan Aeronautics Commission. Any required

lighting shall be the minimum necessary for the purpose, and shall be shielded from ground level visibility to the maximum extent feasible. Fixtures with red or other highly saturated color filters or light sources shall be utilized to minimize off-site glare.

- b. The tower and associated antennae shall be painted a color or color combination found acceptable by the Planning Commission to minimize distraction, reduce visibility, maximize aesthetic appearance, and ensure compatibility with surroundings.
 - c. Advertising, signs, and identification of any kind visible from the ground or abutting parcels or road rights-of-way shall be prohibited, except as required by agencies with jurisdiction for identification purposes.
 - d. All new towers shall be of a monopole design, and constructed of or treated with corrosive resistant materials. The base of the tower shall occupy no more than 500 square feet.
10. **Land division.** The division of property for the purpose of locating a wireless communication tower shall be prohibited unless all requirements of this Ordinance and other Township ordinances have been met.
 11. **Employees.** No employees shall be located on-site on a permanent basis. Employee access shall be limit to temporary repair and service activities.
 12. **Tower address.** Each wireless communications tower shall be designated with a specific and unique street address.

K. Standards for Antennae Located on Structures.

Antennae located on principal or accessory structures shall be permitted in any zoning district, subject to approval per Section 16.01C (Type of Review Required) and the following standards:

1. Such antennae shall be limited to structures in any zoning district that have a minimum height of 50 feet.
2. The antenna and support structure shall be permanently secured to the structure, and shall not exceed the structure height by more than 10 feet.
3. The antennae shall be designed and arranged to minimize visibility and to blend with the primary building materials and colors.
4. The antenna and support structure shall not be illuminated, unless required by the FAA, Michigan Aeronautics Commission or other agency with jurisdiction.

L. Standards for Satellite Dish Antennae:

Satellite dish antennae shall be permitted in any zoning district, subject to approval per Section 16.01C (Type of Review Required) and the following standards:

1. Such antennae shall be accessory to a principal building on the same lot, and shall be located in the rear yard area.

2. Satellite dish antennae shall be limited to lots with adequate lot area to accommodate the minimum requirements setback of this subsection.
3. One (1) satellite dish antenna with a diameter 1.5 meters or larger shall be permitted per lot. The antenna shall conform to the minimum yard setbacks of the zoning district where it is located.
4. Construction and placement of satellite dish antennae shall meet manufacturers' specifications, and shall conform to the State Construction Code and all applicable electrical and fire codes.
5. Satellite dish antennae with a diameter of 1.5 meters or larger and located within 100 feet of a road right-of-way or the boundary of a lot occupied by a dwelling shall be screened by a wall, fence, berm, evergreen plantings, or combination of these elements so as not to be visible from the neighboring residence or road. If the antenna is a mesh type, screening need not exceed six (6) feet in height.

M. Standards for Amateur Radio Antennae:

Amateur radio antennae shall be permitted in any zoning district, subject to approval per Section 16.01C (Type of Review Required) and the following standards:

1. Such antennae shall be accessory to a principal building on the same lot, and shall be located in the rear yard area.
2. Amateur radio antennae shall be limited to lots with adequate lot area to accommodate the minimum requirements setback of this subsection.
3. A maximum of one (1) amateur radio antenna shall be permitted per zoning lot, with a minimum setback from all lot boundaries equal to one hundred percent (100%) of its height.
4. For retractable, telescoping, or tilt-down antennae, the minimum required setback distance shall be equal to the height of the antenna structure in the "down" or retracted position. Such antennae shall be maintained in the "down" or retracted position when not in use.

N. Existing Wireless Communications Facilities.

Wireless communications facilities existing prior to the effective date of this Ordinance shall be allowed to continue, provided that such facilities are maintained in accordance with applicable federal, state, and county laws and regulations, and all approved plans, permits, and conditions of approval.

O. Rescinding Approval of Wireless Communications Facilities.

Failure of the owner, operator or leaseholder of an approved wireless communications facility to renew or replace any required bonds or insurance certificates, provide information to the Township about the facility as required by this Section or maintain and operate the facility in compliance with the provisions of this Section shall be grounds for the Township to rescind any previous approval to construct or operate the facility. Such action shall be subject to the following:

1. **Public hearing.** Such action may be taken only after a public hearing has been held by the Planning Commission in accordance with Section 2.10 (Public Hearing Procedures), at which time the owner, operator or leaseholder of the wireless communications facility shall be given an opportunity to present evidence in opposition to rescission.
2. **Determination.** Subsequent to the hearing, the decision of the Planning Commission with regard to the rescinding of approval shall be made and written notification provided to said owner, operator or designated agent.

P. Removal of Wireless Communications Facilities.

The owner or operator shall remove a wireless communications facility for which approval has been rescinded, that has ceased operation for more than 365 consecutive days, or that has been determined by the Township to be abandoned, as follows:

1. Such facilities shall be removed within 90 calendar days of receipt of notice from the Township requesting such removal. Failure of the owner or operator to respond within 90 calendar days of such a request shall be grounds for the Township to rescind any previous approval to construct or operate the facility.
2. Failure by the owner to remove such facilities in accordance with this Section or an approved removal agreement shall be grounds for the Township to remove the facility at the owner's expense, and to make use of any performance guarantee or other security provided for that purpose.
3. Removal of the tower shall include removal of any structures in the ground, including concrete footings, support structures, or other appurtenances such as ground radial systems. In-ground structures and appurtenances shall be removed to a depth of 48 inches, and the land re-graded and restored to the original grade prior to the removal.
4. The Township reserves the right to require submittal of evidence of ongoing operation at any time after construction or installation of an approved facility.
5. If there are two (2) or more antennae on a single tower, this subsection shall not take effect until all users cease using the tower.
6. Any wireless communication facility that is not operated for a continuous period of 365 calendar days shall be deemed abandoned.

Section 16.02 Access Management.

The location and design of driveway access, acceleration or deceleration lanes or tapers, and provision of shared access and service drives for lots and land uses abutting the divided highway portion of state highway M-84 shall be subject to the following requirements:

A. Purpose and Intent.

The purposes of this Section are to increase safe access by emergency vehicles; protect the substantial public investment in the road system by preserving capacity and avoiding the need for unnecessary and costly reconstruction; and ensure reasonable access to properties, though not always by the most direct access. The standards of this Section, including shared access, parking lot connections and service drives, and minimum

driveway spacing, are intended to preserve traffic flow along M-84 and to minimize traffic conflict areas caused by multiple driveways in close proximity, while retaining reasonable access to an owner's property.

B. Scope.

The provisions of this Section shall apply only to segments of M-84 that are divided by a median or boulevard strip and to a depth extending along a line 660 feet in length, perpendicular from the centerline of the M-84 right-of-way. Only those lots and land uses within this corridor that have frontage on M-84 or access to M-84 via easements across property with frontage on M-84 shall be subject to the provisions of this Section. Single-family residential and agricultural driveways shall be exempt. In instances where there is a conflict between a provision of this Section and some other provision of this Ordinance, the provision of this Section shall control.

C. Access.

Driveway access to the M-84 road right-of-way shall be limited, as follows:

1. Each contiguous lot of record under common ownership as of November 26, 2009 with less than 450 feet of M-84 frontage within the corridor described in Section 16.02C (Scope) shall be referred to herein as a "parent parcel" and shall be entitled to a maximum of one (1) driveway or road access into the M-84 road right-of-way.
2. Where a lot of record has access to M-84 via an easement across another lot with less than 450 feet of M-84 frontage, such lot of record shall share use of the same M-84 driveway as the frontage lot.
3. All driveways or access points located on a lot of record with more than 450 feet of M-84 frontage shall be set back a minimum of 450 feet from the nearest access point on the same lot or any adjacent lot on the same side of the road.
4. A second driveway may be permitted upon written request by the applicant and Planning Commission determination that topographic conditions on the site, curvature on the road, lot size or shape, sight distance limitations or the nature of the land use to be served warrant a second driveway within a lesser distance.
5. Where a lot of record is divided by M-84, each portion of the lot on either side of the M-84 road right-of-way shall be entitled to access per this Section.
6. All subsequent land divisions of a parent parcel shall not increase the number of driveways or road accesses beyond those entitled to the parent parcel.
7. The location, design and construction of any driveway directly accessing M-84, and any acceleration or deceleration lanes or tapers within the right-of-way, shall also be subject to Michigan Department of Transportation (MDOT) approval.

D. Shared Access.

Indirect or shared access to the M-84 road right-of-way shall be subject to the following:

1. **Indirect access required.** Indirect or shared access to the M-84 road right-of-way via a side street, a shared driveway, a parking lot connection, service drive

or similar means of access may be required by the Planning Commission as an alternative to direct driveway access to M-84 under the following circumstances:

- a. Where the driveway spacing standards of this Section cannot be met.
 - b. Where the driveway could potentially interfere with traffic operations or turning movements at an existing or planned traffic signal location.
 - c. Where the site is along segments of M-84 experiencing congestion, high traffic volumes or a relatively high number of crashes.
 - d. Where the road frontage has limited sight distance.
 - e. Where the fire or emergency services department recommends a second means of emergency access.
 - f. Where the Planning Commission determines that other circumstances warrant restricting new access points or reducing the number of existing access points to have a beneficial impact on traffic operations and safety while preserving the property owner's right to reasonable access.
2. **Future shared access.** In areas where frontage roads or rear service drives are recommended, but adjacent properties have not yet developed, the site shall be designed to accommodate future shared access or service drive improvements that would conform to the requirements of this Ordinance.
3. **Temporary access.** The Planning Commission may approve temporary means of direct access to M-84 as part of site plan approval for a lot or land development that cannot otherwise meet the access requirements of this Section, upon determination that no alternative means of reasonable access are available to the public road system. Such temporary access shall be subject to the following:
- a. A performance guarantee shall be provided in accordance with Section 2.07C (Performance Guarantees) to ensure removal of the temporary access when a permanent service road or other means of shared access becomes available.
 - b. Conditions may be included in the temporary access approval including but not limited to:
 - (1) A requirement for installation of a planned service drive or other means of permanent shared access within a specified time period.
 - (2) A limitation on development intensity on the site until adjoining lots develop or a service drive or other means of shared access becomes available.
4. **Service drive standards.** To ensure safe and adequate continuity of a service drive between contiguous parcels, a front or rear service drive may be established on a lot of record that abuts only one (1) public road, subject to Planning Commission approval as part of the site plan review process and the following standards:

- a. Service drives shall generally be parallel to the front lot line or road right-of-way, and may be located in front of or behind principal buildings. No service drive shall be established on existing public right-of-way. Such service drives may be placed in required yards, subject to the requirements of Section 5.204 (Yard Standards).
 - b. A service drive shall be within an access easement permitting traffic circulation between lots.
 - c. A minimum of six (6) feet of snow storage area shall be set aside along both sides of any service drive.
 - d. Access to a service drive shall be located so that there is no undue interference with the free movement of service drive and emergency vehicle traffic, where there is safe sight distance, and where there is a safe driveway grade. Design and construction of the service drive shall be subject to applicable Township engineering standards. Pavement markings shall be required to promote pedestrian safety and efficient traffic circulation.
 - e. The elevation of a service drive shall be uniform or gently sloping between adjacent lots or land development sites.
 - f. A greenbelt buffer shall be provided along both sides of the service drive per the requirements of Section 16.10 (Landscaping and Screening).
 - g. Vehicle parking, loading, and unloading shall be prohibited along service drives, with the exception of one-way service drives designed with additional width for on-street parallel parking in a manner that will not significantly affect the capacity, safety or operation of the service drive.
 - h. A maintenance agreement for the service drive and landscaping shall be executed by the adjoining property owners, prior to construction.
 - i. In the case of expansion, alteration to redesign of existing development where preexisting conditions prevent installation of a service drive, the Planning Commission may require an alternate cross access through the interconnection of main circulation aisles serving adjacent parking lots. Signage and design elements shall be included to delineate the route and guide traffic through the site.
5. **Agreements and easements.** The property owner or developer shall record all required agreements and easements with the Bay County Register of Deeds office, and shall furnish paper copies and digital copies (in a format compatible with Township systems) of the recorded documents to the Township Clerk.

Section 16.03 Stormwater Management Facilities.

Facilities for management of stormwater run-off from a developed site shall be designed to protect groundwater resources, maximize on-site infiltration, provide adequate filtering of sediments and impurities, and retain the natural capacity and function of associated wetlands or watercourses. Drainage improvements shall conform to the requirements of the Bay County Drain Commissioner, this Ordinance, and applicable Township engineering standards.

Section 16.04 Natural Resources Protection.

This Section is intended to establish minimum regulations necessary to preserve natural resources on sites subject to development. The preservation of natural resources is essential to maintain the continued character and quality of life for current and future Township residents and visitors. Protection of the natural features of the Township will promote the general public health, safety and welfare, encourage the use of lands in accordance with their character and adaptability, protect the natural environment, and conserve natural resources and energy.

A. Scope.

The standards of this shall apply to all development projects and parcels subject to site plan approval per Article 17.0 (Site Plan Review), condominium site plan approval per Article 19.0 (Condominium Regulations), planned unit development approval per Article 20.0 (Planned Unit Development District), or subdivision plat approval in accordance with the Land Division Act and Township subdivision regulations.

B. Watercourses, Wetlands, and Floodplains.

No person shall alter, obstruct, fill or otherwise vary the shoreline, area, course, water level or flow, vegetation or natural conditions of any lake, river, stream or other watercourse, wetland or drainage way, except in conformance with this Ordinance and the requirements of outside agencies with jurisdiction.

1. The following setbacks from wetlands and watercourses shall apply:
 - a. A minimum 50-foot open space setback shall be maintained from the ordinary high water mark of any lake, river, stream or other watercourse, provided that development shall be prohibited in the 100-year floodplain.
 - b. A minimum 25-foot open space setback shall be maintained from the edge of any wetland, as defined in Section 25.03 (Definitions).
 - c. A minimum 25-foot open space setback shall be maintained from the boundary of any county drain easement, or a minimum of 50 feet from the centerline of any county drain without a dedicated easement.
2. Detention basins and similar stormwater management facilities may be constructed within a required setback, provided that appropriate replacement plantings are provided and maintained.
3. Development shall be prohibited within the 100-year floodplain of any existing watercourse or wetland. It shall be the applicant's responsibility to delineate the 100-year floodplain boundaries, subject to confirmation by the Township.

C. Trees and Woodlands.

The following tree and woodland preservation and mitigation standards shall apply to all developments subject to this Section:

1. **Required plan information.** The following required information shall be incorporated into the applicable development review processes of this Ordinance or other Township ordinances:

Required Development Plan Information for Woodlands and Tree Preservation	Preliminary Plan	Final Plan
All information required by this Section shall be provided by a land surveyor, civil engineer, landscape architect or arborist, who shall verify the contents by seal or signature, whichever applies.	●	●
The most current available aerial photograph of the site, at a scale not less than one (1) inch equals 100 feet.	●	●
General evaluation of the quality of woodland areas and trees on and around the site, including but limited to the following: 1. Diversity of tree species, tree sizes, and density. 2. Health and vigor of the trees, including general documentation of dying and diseased trees by species and condition. 3. Soil conditions and drainage characteristics of the site. 4. Other factors such as the value of the woodland area as a scenic asset, wind block, noise buffer or other environmental benefit.	●	
General assessment of trees in adjacent road-rights-of-way, and trees located beyond the lot boundaries that may be affected by development-related access or utility improvements, grading, or other changes; with trees identified by location, size, and species.	●	●
Tree inventory of all regulated trees as specified in Section 16.04C.5. in a form acceptable to the Planning Commission, including: 1. A topographical map at the same scale as the related site plan, plat or survey drawing for the division of the land. 2. All regulated trees shall be inventoried by field survey and shown on the topographical map by identifying tag number, type, location, and crown spread drawn to scale. 3. Existing trees and woodlands shall be superimposed on the related site plan, plat or survey drawing for division of land. 4. Groups of trees whose individual bases are located at a ground elevation within one (1) foot of each other may be shown as a group with the overall crown spread drawn to scale, with estimated number and size of each predominant species. 5. A detailed inventory of woodlands not impacted by the development shall not be required, provided that the inventory includes the general outline and an evaluation of such areas. 6. The inventory shall include regulated trees within adjoining road rights-of-way or beyond the lot boundaries where the drip line of such trees overlaps a lot boundary or right-of-way line.		●
Proposed locations of any existing trees to be relocated, together with a description of how such trees are to be removed, protected, and transplanted during land clearance, development, and construction; and how they are to be maintained after construction.		●
A statement of compliance setting forth how existing trees to be preserved will be protected during land clearance and construction and on a permanent basis thereafter, including proposed use of tree wells, protective barriers, directional drilling, retaining walls, etc.		●

Required Development Plan Information for Woodlands and Tree Preservation	Preliminary Plan	Final Plan
Invasive species information, including the general locations of invasive plants and woody shrubs found on the site, a description of the extent of growth of such species on the site, and a plan for eradication and control of such invasive plants and woody shrubs as part of the development.	●	●
A general grading plan prepared by a registered engineer or land surveyor showing the anticipated drainage patterns, including the location of any areas where cut and fill operations are likely to occur and their potential impact on the viability of the existing trees.	●	●
Such other information and detail as may be required to demonstrate compliance with the requirements of this Section.	●	●

2. **Tree preservation and replacement.** Any development subject to this Section shall not conduct land clearing or grubbing activities; or remove, replace, transplant, damage, or destroy any woodland or individual tree regulated by this Section, except in accordance with the following:

Standards for Tree Preservation and Replacement	Existing Trees	Replacement Trees																		
<p>The following trees located within the lot boundaries, along with trees adjacent to the lot boundaries or in adjacent road rights-of-way where the drip line overlaps a lot boundary or right-of-way line, shall be considered to be regulated trees for purposes of this Section, and shall be replaced if removed as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Regulated Trees</th> <th style="text-align: center;">Replacement Ratio (number of replacement trees per removed tree)</th> </tr> </thead> <tbody> <tr> <td colspan="2" style="text-align: center;">Coniferous (height)</td> </tr> <tr> <td style="text-align: center;">6.0 to 15.0 feet</td> <td style="text-align: center;">one to one (1:1)</td> </tr> <tr> <td style="text-align: center;">15.01 to 50.0 feet</td> <td style="text-align: center;">three to one (3:1)</td> </tr> <tr> <td style="text-align: center;">More than 50.0 feet</td> <td style="text-align: center;">five to one (5:1)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Deciduous (D.B.H.)</td> </tr> <tr> <td style="text-align: center;">6.0 to 10.0 inches</td> <td style="text-align: center;">one to one (1:1)</td> </tr> <tr> <td style="text-align: center;">10.01 to 18.0 inches</td> <td style="text-align: center;">three to one (3:1)</td> </tr> <tr> <td style="text-align: center;">More than 18.0 inches</td> <td style="text-align: center;">five to one (5:1)</td> </tr> </tbody> </table>	Regulated Trees	Replacement Ratio (number of replacement trees per removed tree)	Coniferous (height)		6.0 to 15.0 feet	one to one (1:1)	15.01 to 50.0 feet	three to one (3:1)	More than 50.0 feet	five to one (5:1)	Deciduous (D.B.H.)		6.0 to 10.0 inches	one to one (1:1)	10.01 to 18.0 inches	three to one (3:1)	More than 18.0 inches	five to one (5:1)	●	●
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The development shall preserve and leave standing a minimum of twenty-five percent (25%) of the total number of regulated trees within the development site as currently existing or that have existed on the subject site within the last five (5) years.	●	●																		

Standards for Tree Preservation and Replacement	Existing Trees	Replacement Trees
<p>No replacements shall be required for following trees otherwise regulated by this Section, subject to documentation and verification as part of the required plan information. Such trees shall not count towards the minimum required percentage of preserved trees:</p> <ol style="list-style-type: none"> 1. Dying and diseased trees. 2. Any invasive species subject to a plan for eradication and control in accordance with the requirements of this Section. 3. Any of the following species of trees: Box Elder (<i>acer negundo</i>), Silver Maple (<i>acer saccharinum</i>), Cottonwood (<i>populus deltoids</i>), Ash varieties (<i>fraxinus x</i>), and Red Cedar (<i>juniperus virginiana</i>). 	●	●
<p>If regulated trees were removed within the past five (5) years, the Township Planner or designee shall use historical aerial photos and other available data to determine the number, characteristics, and extent of such trees; and the amount of additional tree mitigation required for such removed trees.</p>	●	●
<p>Removal of regulated trees shall be limited to the following:</p> <ol style="list-style-type: none"> 1. When necessary for location of a structure or site improvement where no alternative location can be identified after consideration of all development options available per this Ordinance. 2. Where necessary, as determined by the Township Engineer, to provide reasonable drainage on the site, and when no reasonable alternative drainage is available without the removal of the trees. 3. Land clearing shall be minimized and limited to designated road rights-of-way, drainage and utility easements, minimum building and driveway envelopes, and other minimum areas necessary for site improvements, considering the development options available under this Ordinance. 	●	
<p>Regulated trees shall be tagged in the field, using non-corrosive metal tags, with by the identifying number designated on the required tree inventory.</p>	●	
<p>All trees to be removal shall be so identified on site by fluorescent orange spray paint (chalk base) or by red flagging tape prior to any activity. Trees selected for transplanting shall be flagged with a separate distinguishing color.</p>	●	
<p>Replacement trees shall be of a species suitable for the habitat and location that is on the list of landmark trees in this Section or otherwise native to Michigan, except those listed in Section 16.10H (Prohibited Plant Materials).</p> <p>Trees of such species otherwise required by this Ordinance for screening purposes may also be used to satisfy up to fifty percent (50%) of the replacement tree requirements of this Section.</p>		●

Standards for Tree Preservation and Replacement	Existing Trees	Replacement Trees
<p>Replacement trees shall conform to Section 16.10B (General Plant Material Standards) and Section 16.10C (Standards for Size and Variety of Plant Materials). Such trees shall be:</p> <ol style="list-style-type: none"> 1. Nursery grown or comparable relocated from the same lot, with a straight trunk and a well-developed crown. 2. Tree spade transplanted while in the dormant state or, if not in the dormant state, balled and burlapped with a solid, well laced root ball when in the dormant state. 		●
<p>The location of any replacement tree shall be on the same lot as the removed tree wherever feasible, as determined by the Township. If tree replacement on the same lot is not feasible, the Township may:</p> <ol style="list-style-type: none"> 1. Accept an alternative planting location within the Township; or 2. Allow a deposit into a tree-planting fund maintained by the Township in an amount acceptable by the Township, based upon the current retail market value for the tree replacement, to be utilized for planting, maintenance, and preservation of trees and woodland areas in the Township. 		●
<p>Installation and maintenance shall conform to Section 16.10I (Plant Material Installation and Maintenance), and the following:</p> <ol style="list-style-type: none"> 1. Replacement and transplanted trees shall be staked, fertilized, watered, and mulched to ensure their survival in a healthy, growing condition and replaced at the developer's expense if they die within three (3) years. 2. Prior to the issuance of the first building permit, the developer shall post a performance guarantee with the Township [per Section 1.08C (Performance Guarantee)] in an amount estimated by the developer and approved by the Township to ensure preservation or installation of required trees for a period of three (3) years from the date of receiving written notification from the developer that the last required tree has been planted or preserved, and has been inspected in accordance with this Section. 3. The developer shall be responsible for replacing any tree used to satisfy the replacement requirements of this Section that is determined by the developer, Zoning Administrator or Township Planner to be diseased, dead or dying within three (3) years after installation. 4. The developer shall be responsible for replacing any regulated tree preserved within the development area that is that is determined by the developer, Zoning Administrator or Township Planner to have been damaged due to on-site construction activity, or that is determined to be diseased, dead, dying, or otherwise destroyed or removed within three (3) years after final approval of a site plan or subdivision plat. Such identified tree(s) shall be replaced in accordance with the replacement ratio specified in this Section. 	●	●

Standards for Tree Preservation and Replacement	Existing Trees	Replacement Trees
Three (3) years after all trees have been planted within the development, the Township shall release the guarantee, less any funds needed to complete required tree replacement.	●	●
After this initial three (3) period, the developer or any successor entity responsible for common area maintenance shall be responsible for replacing any healthy regulated tree or replacement tree within a general common element or other common area of the development that is that is determined by the Zoning Administrator or Township Planner to have been damaged, destroyed or otherwise removed from the site. Such identified tree(s) shall be replaced in accordance with the replacement ratio specified in this Section. No replacements shall be required for dead or diseased trees.	●	●
Road rights-of-way, utility easements, and large land areas separate from the construction or land-clearing area may be cordoned by placing stakes a minimum of 50 feet apart and tying ribbon, plastic tape, or other brightly visible materials at least 30 inches above the ground from stake to stake along the perimeter.	●	
Protected area around trees preserved under this Section, defined by the drip line of all woodlands and individual trees designated to remain, plus an area outside of the drip line defined by a parallel boundary line placed a minimum of five (5) feet outward from the drip line, shall be protected and maintained during development, land clearing, filling or any alteration or construction activity.	●	
Protective barriers of wood, metal or other suitable materials (such as snow or cyclone fencing) acceptable to the Township Engineer shall be placed parallel to the outer perimeter of protected areas.	●	
No person shall conduct any construction activity; place, park or store solvents, building materials, equipment, soil, gravel, debris, vehicles, trailers, temporary structures or similar items; or attach a device or wire to any remaining tree within such protected areas except to cordon off such areas as required.	●	
Protective barriers shall remain in place and be maintained in proper condition until the Township authorizes their removal or issues a final certificate of occupancy, whichever occurs first.	●	
Removal of brush, invasive species, and other land grubbing activities within the protected area of a landmark tree or sovereign tree shall be done by hand. No tracked or wheeled vehicles or machinery shall be permitted within this area.	●	

3. **Additional tree removals.** Additional removal of regulated trees resulting from review or approval of construction plans or outside agency permits or approvals, or any action by the developer following final development plan approval, shall be subject to the requirements of this Section.
4. **Inspections.** To ensure compliance with this Section, the Township may perform periodic inspections of subject lots or parcels during all phases of construction and development as well as for up to three (3) calendar years after completion of the development project.

Sections 16.05 – 16.06 Reserved.

Sec. 16.07 Wind Energy Conversion Systems.

The location, construction, operation, and maintenance of wind energy conversion systems (WECS) in the Township shall be subject to the following requirements:

A. Intent.

The intent of this Section is to permit the effective and efficient use of wind energy conversion systems (WECS) in a manner that protects the public health, safety, and welfare of neighboring property owners and the residents of the Township. This Section is further intended to reduce dependency on electricity produced fossil fuels by providing a means by which residents, farmers, and businesses in certain zoning districts may use WECS to satisfy a portion of their electricity needs. This Section is further intended to promote a healthy agricultural economy by providing an opportunity for farmers to diversify their income sources and/or reduce energy costs; and to limit potential impacts of WECS units through reasonable restrictions. The standards of this Section have been determined to be the minimum necessary to meet the intent and purposes of this Section and Ordinance.

B. Permitted Locations.

Wind energy conversion systems (WECS) shall only be permitted in the zoning districts as specified in Table 16.07-1, and shall be prohibited in all other zoning districts. WECS shall be subject to review and approval in accordance with the following:

Table 16.07-1 Permitted Locations

Type of Wind Energy Conversion System (WECS) Installation or Alteration on a Single Lot	Zoning District			Applicable WECS Standards in Section 16.07
	AG	RF	PR	
One (1) Agricultural WECS up to 100.0 feet in height	P	P	P	Subsections C - E
One (1) Agricultural WECS between 100.01 and 200.0 feet in height	S	S	S	Subsections C - E
Two (2) or more Agricultural WECS up to 200.0 feet in height	S	S	S	Subsections C - E
One (1) Private WECS up to 100.0 feet in height	P	P	P	Subsections C - D
Two (2) or more Private WECS up to 100.0 feet in height	S	S	S	Subsections C - D
One (1) or more Attached WECS units on a building or accessory structure	S	S	S	Subsections C - D, F

Symbol	Key
P	Administrative Permit Approval
S	Special Use Approval

(Amended by or. 79E, eff. March 7, 2019)

- Administrative approval.** WECS subject to administrative permit approval per Table 16.07-1 shall be subject to zoning permit review and approval in accordance with the standards of this Section and Section 2.03 (Zoning Permits).

2. **Special use approval.** WECS subject to special use approval per Table 16.07-1 shall require Planning Commission review and approval of a special use permit subject to the standards of this Section and Article 18.0 (Special Land Uses).
3. **WECS in a Planned Unit Development (PUD) District.** A WECS may be permitted as part of a Planned Unit Development (PUD) project, subject to the standards of Article 20.0 (Planned Unit Development District) and the following:
 - a. A separate special use approval shall not be required for a WECS approved as part of a PUD.
 - b. The WECS as a planned structure and land use within the development, as shown on the approved PUD Area Plan.
 - c. All other standards of this Section shall apply to a WECS in a PUD.
4. **Other permits and approvals.** WECS units shall conform to all applicable federal, state, and local regulations and permitting requirements, including compliance with the State Construction Code and other applicable building and electrical codes. Copies of all applicable outside agency permits and approvals shall be submitted to the Township, prior to the start of construction.
5. **Commercial WECS prohibited.** The Township has made the following findings and determinations related to Commercial WECS, as defined in Section 25.03 (Definitions):

(Amended by or. 79E, eff. March 7, 2019)

- a. The placement of Commercial WECS units in the Township is contrary to the purposes of this Ordinance, and the goals and objectives of the Township's Master Plan.

(Amended by or. 79E, eff. March 7, 2019)

- b. The height and size of Commercial WECS units and any other WECS unit over 200.0 feet in height are not compatible with the proximity and height restrictions associated with regional airports to the immediate east and west of the Township's boundaries.

(Amended by or. 79E, eff. March 7, 2019)

- c. The placement of Commercial WECS units and any other WECS unit over 200.0 feet in height in the Township would result in visual pollution and adverse off-site noise and shadow flicker impacts for lots and uses well away from the site of the Commercial WECS units.

(Amended by or. 79E, eff. March 7, 2019)

- d. Commercial WECS units and any other WECS unit over 200.0 feet in height are not appropriate in the Township's Rural Districts and undeveloped areas, as they are out-of-scale with permitted structures and would detract from the Township's visual appearance and rural character that is attractive to visitors and residents and a significant benefit to the local agricultural economy.

(Amended by or. 79E, eff. March 7, 2019)

- e. In accordance with the above findings, Commercial WECS units and any other WECS unit over 200.0 feet in height shall be prohibited in the Township.

(Amended by or. 79E, eff. March 7, 2019)

C. Required Application Information.

The following information shall be submitted with any application for WECS approval:

1. Documentation of any potential interference that the proposed WECS may cause with microwave transmissions, residential television reception or radio reception.
2. Documentation of compliance with applicable federal and state regulations for the installation.
3. A plan for the long-term, continuous maintenance of the facility, including who will be responsible for maintenance of the facility, including access, landscaping, screening, and security improvements.
4. Elevation drawings of the proposed WECS and any associated facilities. The drawings shall identify the type, design, materials, and height for the proposed WECS and associated facilities; and the name and location of the WECS manufacturer, if applicable.
5. Written certification shall be provided from an Authorized Factory Representative or Professional Engineer registered in the State of Michigan demonstrating:
 - a. The manner in which the structure will fall in the event of accident, damage or failure, and that the setback area will accommodate the facility and provide an adequate buffer from adjacent parcels;
 - b. That the facility is designed in accordance with applicable dead load, dynamic load, and wind pressure standards; and
 - c. That the facility is designed to conform to the State Construction Code and all other applicable building, electrical, and fire codes.
 - d. For WECS subject to special use approval per Table 16.07-1, this written certification shall only be provided by a Professional Engineer registered in the State of Michigan.
6. The applicant shall submit an agreement for the future removal of the facility upon cessation of operation, signed and notarized by the property owner and WECS owner/operator. This agreement shall be binding on all owners, operators, successors, and assigns.

D. General WECS Standards.

All WECS units shall be designed, constructed, operated, and maintained to be harmonious with the existing or intended character of the area in which it is located, and shall conform to the following standards:

1. **Minimum lot area.** The minimum of two (2) acres of gross lot area shall be required for a WECS in any zoning district.
2. **Schedule of regulations.** All WECS projects shall conform to the following:

Table 16.07-2 Schedule of Regulations

Type of Wind Energy Conversion System (WECS) Installation or Alteration on a Single Lot	Maximum Noise Level [dB(A)]	Minimum Yard Setback (percentage of WECS height)	Maximum WECS Height (feet)
One (1) Agricultural WECS up to 100.0 feet in height	45	200%	100.0
One (1) Agricultural WECS between 100.01 and 200.0 feet in height	45	200%	200.0
Two (2) or more Agricultural WECS up to 200.0 feet in height	45	200%	200.0
One (1) Private WECS up to 100.0 feet in height	40	200%	100.0
Two (2) or more Private WECS up to 100.0 feet in height	40	200%	100.0
One (1) or more Attached WECS units on a building or accessory structure	40	Same as yard setbacks for the district	15.0 feet above the building or structure height

(Amended by or. 79E, eff. March 7, 2019)

- a. Height shall be measured from grade to the top of the tower or blade tip in a vertical position, whichever is higher.
- b. Yard setbacks shall be measured in a straight and level line from the vertical plane of all lot boundaries and road rights-of-way to the base of the tower or blade tip in a horizontal position, whichever is nearer.
- c. Noise levels shall be measured from a point no closer to the WECS than an abutting road right-of-way, or any boundary of the subject lot upon which the WECS is located.
- d. WECS height shall conform to the requirements of the Airport Zoning Act (Public Act 23 of 1950, as amended), Tall Structures Act (Public Act 259 of 1959, as amended), airport approach plan(s) adopted by the Michigan Aeronautics Commission, and applicable Federal Aviation Administration (FAA) regulations.

(Amended by or. 79E, eff. March 7, 2019)

- e. **Ground clearance.** No WECS shall be installed with any moving part less than 15 feet above grade.
3. **Climb prevention.** All WECS towers shall be secured against unauthorized access by perimeter fencing, siting within the interior of large parcels, use of anti-climbing devices, and/or similar security methods.

4. **Nuisances, signage, and lighting prohibited.** A WECS shall not cause interference with microwave transmissions, residential television reception or radio reception. Advertising, signs, and identification of any kind intended to be visible from the ground or other structures shall be prohibited, except as required for emergency purposes. The WECS shall not be illuminated, unless required by federal or state regulation. Any required lighting shall be the minimum necessary for the purpose, and shall be shielded from ground level visibility to the maximum extent feasible. Fixtures with red or other highly saturated color filters or light sources shall be utilized to minimize off-site glare.

(Amended by or. 79E, eff. March 7, 2019)
5. **Shadow flicker.** The property owner and WECS owner/operator shall be responsible for any off-site impacts from the visible shadow flicker effect when rotating blades cast a repeating pattern of light and shadow on the ground and nearby structures during daylight hours:
 - a. WECS units shall be located within the subject parcel so as to prevent shadow flicker from passing over any off-site road right-of-way, occupied dwelling or other principal building during daylight hours from one (1) hour after sunrise to one (1) hour before sunset.
 - b. A letter from the WECS owner/operator or installation contractor verifying compliance with this subsection shall be included with any application for approval under this Section and Ordinance.
 - c. Three (3) or more documented complaints of shadow flicker passing over any off-site road right-of-way, occupied dwelling or other principal building received and verified by the Zoning Administrator within any 365 calendar day period shall be grounds for the Township to require that the WECS unit be shut down and secured against movement during the hours when such off-site impacts have occurred.
6. **Design safety certification.** An Authorized Factory Representative or Professional Engineer registered in the State of Michigan shall certify the safety of the design of all WECS units. The standard for certification shall be included with the permit application.
7. **Controls and brakes.** All WECS units shall be equipped with manual and automatic controls to limit rotation of blades to a speed below the designed limits of the WECS. The Authorized Factory Representative or Professional Engineer shall certify that the rotor and overspeed control design and fabrication conform to applicable design standards. No changes or alterations from the certified design shall be permitted.
8. **Installation certification.** The Authorized Factory Representative or Professional Engineer shall certify that the construction and installation of the WECS project meets or exceeds the manufacturer's construction and installation standards.
9. **Subdivisions and site condominiums.** WECS shall be prohibited within an approved residential subdivision plat or site condominium development, except as part of an approved Planned Unit Development (PUD).

(Amended by or. 79E, eff. March 7, 2019)

10. **Color.** WECS shall be painted a neutral color that minimizes off-site visibility, or as otherwise required by law.

(Amended by or. 79E, eff. March 7, 2019)

11. **Waste.** All solid wastes, whether generated from supplies, equipment parts, packaging, operation or maintenance of the WECS, including old parts and equipment, shall be removed from the site immediately and disposed of in an appropriate manner. All hazardous waste generated by the operation and maintenance of the WECS, including but not limited to lubricating materials, shall be removed from the site immediately and disposed of in a manner consistent with all local, state, and federal rules and regulations.

(Amended by or. 79E, eff. March 7, 2019)

12. **Liability insurance.** The property owner or WECS owner/operator shall maintain a current insurance policy with a bond rating acceptable to the Township to cover installation and operation of the WECS project. For a Private WECS accessory to a dwelling, proof of homeowner's insurance with specific coverage for the WECS shall satisfy this requirement.

(Amended by or. 79E, eff. March 7, 2019)

13. **Shadow casting study.** A shadow casting study shall be required for any proposed WECS unit over 100.0 feet in height, including maps and/or a computer animation in a format compatible with Township computer systems. A qualified professional shall prepare the study, with all costs to be paid by the applicant. The study shall identify projected shadow arcs and all areas anticipated to be impacted by shadow flicker from the proposed WECS over one (1) calendar year, including:

- a. All land areas anticipated to be impacted during daylight hours from one (1) hour after sunrise to one (1) hour before sunset.
- b. Additional land areas anticipated to be impacted during the first one (1) hour after sunrise and the last one (1) hour before sunset.
- c. Approximate locations of all dwellings and other principal buildings within the shadow flicker impact areas.

(Amended by or. 79E, eff. March 7, 2019)

14. **Migratory bird study.** An avian study shall be required to determine any potential impacts that any proposed WECS unit over 100.0 feet in height may present to migratory birds. A qualified professional shall prepare the study, with all costs to be paid by the applicant. Recommended mitigation measures or other alternatives to eliminate such impacts shall be provided with the study.

(Amended by or. 79E, eff. March 7, 2019)

15. **Decommissioning plan and escrow.** All WECS projects shall include a decommissioning plan to ensure it is properly decommissioned upon the end of the project life or facility abandonment. Decommissioning shall include removal of all structures (including transmission equipment and fencing) and debris to a depth of four (4) feet, restoration of the soil, and restoration of vegetation within 180 calendar days of the end of project life or facility abandonment. The decommissioning plan shall also include an agreement between the applicant and the Township with the following:
- a. The decommissioning plan shall state how the facility will be decommissioned and include a Professional Engineer's estimated cost of decommissioning, the financial resources to be used to accomplish decommissioning, and the identity and contact information for the escrow agent with which the resources shall be deposited.
 - b. The financial resources for decommissioning shall be in the form of a cash bond, irrevocable letter of credit, or other surety deemed acceptable by the Township Board in an amount equal to the Professional Engineer's estimated cost of decommissioning.
 - c. The Township shall have access to these financial resources for the expressed purpose of completing decommissioning if decommissioning is not completed by the applicant within 180 calendar days of the end of project life or facility abandonment.
 - d. The Township is granted the right of entry onto the site, pursuant to reasonable notice, to effect or complete decommissioning.
 - e. The Township is granted the right to seek injunctive relief to effect or complete decommissioning, as well as the Township's right to seek reimbursement from the property owner, WECS owner/operator or successor for decommissioning costs in excess of the amount deposited in escrow and to file a lien against any real estate owned by the property owner, WECS owner/operator or successor, or in which they have an interest, for the amount of the excess, and to take all steps allowed by law to enforce said lien. Financial provisions shall not be so onerous as to make wind power projects unfeasible.

(Amended by or. 79E, eff. March 7, 2019)

16. **Warnings.** A high voltage warning sign shall be visibly placed at the base of all WECS units and at all points of ingress and egress to the WECS unit.

(Amended by or. 79E, eff. March 7, 2019)

17. **Annual safety inspection.** All WECS units shall be inspected at least annually by an Authorized Factory Representative or Professional Engineer to certify that it is in good working condition and not a hazard to the public. The property owner or WECS owner/operator shall provide a written and signed copy of this certification to the Zoning Administrator by December 31 of each calendar year.

(Amended by or. 79E, eff. March 7, 2019)

18. **Additional conditions.** To minimize off-site impacts from any WECS unit subject to special use approval per Table 16.07-1, the Planning Commission may impose conditions on the approval, including are not limited to:

- a. Limiting hours of WECS operation;
- b. Requiring a dense obscuring screen of closely spaced evergreen trees of sufficient height and density at planting to reduce noise and shadow flicker impacts, to be planted along lot boundaries abutting residential land uses and/or along abutting road rights-of-way; and/or
- c. Other conditions consistent with Section 502(4) of the Michigan Zoning Enabling Act and Article 18.0 (Special Land Uses) of this Ordinance.

(Amended by or. 79E, eff. March 7, 2019)

E. Agricultural WECS Standards.

The following additional standards shall apply to Agricultural WECS in the Township:

1. Agricultural WECS shall be accessory to a permitted farm or agricultural operation in the zoning district.
2. The number of Agricultural WECS units on a single lot shall be limited so that the majority of the total generating capacity of such units serves the needs of the farm or agricultural operation and associated farm dwelling(s).

F. Attached WECS Standards.

The following additional standards shall apply to Attached WECS in the Township:

1. Attached WECS units shall be prohibited on dwellings and residential accessory structures.
2. In the AG (Agricultural), RF (Rural Small Farm), and PR (Public/Recreation) districts, such WECS units may be attached to buildings and structures accessory to a farm or agricultural operation.
3. In the RF (Rural Small Farm) and PR (Public/Recreation) districts, such WECS units may be attached to principal buildings occupied by non-residential uses.

(Amended by or. 79E, eff. March 7, 2019)

4. The number and location of Attached WECS units on a building or structure shall be subject to a Planning Commission determination of compliance with Section 18.05 (Standards for Special Use Approval).

Sections 16.08–16.09 Reserved.

Section 16.10 Landscaping and Screening.

Screening and land use buffers are necessary to ensure reasonable compatibility between land uses of differing intensity or impacts. Screening elements enhance the visual environment; preserve natural features; protect property values; alleviate the impact of noise, traffic, and more intensive land uses; and minimize visual impacts of parking lots, loading areas and storage areas. The purposes of this Section are to establish minimum standards for the design,

installation, and maintenance of screening elements and plant materials; and to establish reasonable standards for screening of specific areas from road rights-of-way and adjacent lots. It is the intent of this Section that required screening and buffering elements shall be immediately effective in achieving the purpose of this Section, and shall maintain that effectiveness as the plant materials mature.

A. Scope.

The standards of this Section shall apply to all development projects and parcels subject to site plan approval per Article 17.0 (Site Plan Review), condominium site plan approval per Article 19.0 (Condominium Regulations), planned unit development approval per Article 20.0 (Planned Unit Development District), or subdivision plat approval in accordance with the Land Division Act and Township subdivision regulations.

B. General Standards.

The following standards shall apply to all landscaping and screening elements required by provisions of this Ordinance or determined necessary by the Planning Commission as part of site plan approval:

1. **Visibility.** Landscaping and screening materials and layout shall conform to the requirements of Section 5.208 (Corner Clearance Areas), and shall not conflict with visibility for motorists or pedestrian access.
2. **Plantings near utility lines and fire hydrants.** Required plant materials and screening shall be arranged to avoid conflicts with underground and overhead utilities.
3. **Protection.** Where pavement and landscape areas interface, curbing or similar measures shall be provided to protect plants from vehicle encroachment.
4. **Plant material standards.** The following shall apply to all plant materials:
 - a. All plant material shall conform to size and description set forth in the current edition of "American Standard for Nursery Stock" sponsored by the American Association of Nurserymen, Inc. and approved by the American National Standards Institute, Inc.
 - b. All plant material shall be true to name in conformance to the current edition of "Standardized Plant Names" established by the American Joint Committee on Horticultural Nomenclature, or other source accepted by the Township.
 - c. All plant material shall be nursery grown; hardy to the climate of Michigan; appropriate for the soil, climatic and environmental conditions; and resistant to disease and insect attack. Artificial plant material shall be prohibited within required screening areas.
 - d. The use of plant materials native to the State of Michigan is encouraged.
5. **Groundcovers.** The following shall apply to all groundcover materials:
 - a. Lawn areas shall be planted in species of grass normally grown as permanent lawns in Michigan. Grass may be sodded or otherwise planted

using techniques suitable to the climate, with adequate measures taken to maximize seed germination and minimize soil erosion. Sod or seed shall be clean and free of weeds and noxious pests or disease.

- b. The creative use of groundcover alternatives is encouraged; such as native prairie grasses, wildflowers, and similar plantings. Groundcover plantings shall be labeled on the site plan, and designed to present a finished appearance after one (1) growing season.
 - c. Synthetic materials shall not be used as a permitted groundcover. Use of stone and gravel as a groundcover shall be limited to decorative accents within a planting bed, subject to Planning Commission approval.
6. **Mulch.** Planting beds shall present a finished appearance; with shredded hardwood bark mulch or similar natural material. Mulch used around trees and shrubs shall be a minimum depth per landscape industry specifications. An effective edge treatment shall be provided to contain and prevent migration of the mulch.
7. **Topsoil.** A minimum four (4) inches of topsoil shall be provided for all lawn areas, ground covers and planting beds.
8. **Maturity.** The mix of plant material species and sizes at installation shall be designed to provide immediate screening or buffering benefits, and to achieve at least eighty percent (80%) of the mature density of vegetation within five (5) years.

C. Standards for Size and Variety of Plant Materials.

To ensure adequate variety, and to avoid monotony and uniformity within a site, required plant materials shall not include more than thirty percent (30%) of any single plant species, and shall comply with the following:

Screening Materials	Minimum Size at Installation
Deciduous Shade Trees	2.0 - 3.0 caliper-inches diameter and 8.0 feet in overall height
Evergreen Trees	5.0 - 6.0 feet in overall height
Deciduous Ornamental Trees	2.0 caliper-inches diameter and 6.0 feet overall height
Shrubs	30 inches in height or 24 inches in spread

D. Methods of Screening.

Required landscaping and screening elements shall be provided by one (1) or more of following methods as best suited to the existing conditions, subject to Planning Commission approval:

- 1. **Greenbelt buffer.** The purpose of this method is to establish a buffer between adjacent land uses, or between uses and adjacent road rights-of-way. This method is intended to provide a partial visual screen, particularly where the adjacent uses (including uses that are adjacent across a road right-of-way) are less intense than the use of the subject site. Greenbelt buffers shall consist of the following (see illustration at end of Section):

- a. Greenbelts shall have a minimum width of 20 feet, and may be interrupted only to provide for pedestrian or vehicular access.
 - b. A mixture of deciduous shade trees, ornamental trees, evergreen trees, and shrubs shall be planted along the greenbelt buffer at a minimum concentration of two (2) trees and three (3) shrubs per 10 linear feet of greenbelt length. The Planning Commission may require additional plantings to achieve the screening objectives of this Section.
 - c. Such required plant materials may be placed at uniform intervals, at random or in groupings.
 - d. The greenbelt length shall be measured along the centerline of the greenbelt for its entire length, inclusive of all driveways.
2. **Hedgerow.** The purpose of this method is to visually screen parking lots, adjacent uses, and road rights-of-way. This method is intended to create an effective obscuring screen within a limited land area. This method shall consist of shrubs planted and maintained as a continuous visual screen, subject to the following (see illustration at end of Section):
- a. The maximum permitted spacing between individual plants shall not exceed three (3) feet on-center, unless a different separation distance is determined by the Township Planner to be more appropriate for the type of shrub proposed.
 - b. Maintained plant height at maturity shall be adequate for the intended screening function.
 - c. Low height shrubs [two (2) to four (4) feet in height] shall be used to provide necessary ground-level screening to block headlight glare or similar low-level impacts.
 - d. Larger shrubs [exceeding four (4) feet in height] shall be used to establish a landscaped barrier between land uses of differing intensities, or to provide more complete screening.
3. **Fence.** The purpose of this method is to visually screen parking lots, outdoor storage areas, and similar uses where predominant impacts are at or below eye level. This method shall consist of an ornamental, rail or privacy fence constructed along the lot or district boundary, or around the perimeter of the area to be screened, subject to the following (see illustration at end of Section):
- a. Required fences shall have a minimum height of three (3) feet, and shall not exceed six (6) feet in height above grade unless a higher fence height is determined by the Planning Commission to be necessary to provide adequate screening.
 - b. The fence materials, height, location, and design shall be consistent with existing fences on adjacent lots, and shall be subject to Planning Commission approval. Fence maintenance shall conform to Section 3.06D (Fence and Wall Maintenance)

4. **Berm.** The purpose of this method is to effectively screen visual and noise impacts using natural-appearing landforms. This method is intended to provide an obscuring screen to block noise and light from adjacent uses or road rights-of-way, or to create a buffer between developed and undeveloped areas. Berms shall consist of a combination of a sculpted earth mound and plantings, which shall meet the following standards (see illustration at end of Section):
 - a. Berms shall have side slopes no steeper than one (1) foot vertical to three (3) feet horizontal (1:3 ratio).
 - b. The berm and combination of plantings shall be of sufficient height to meet screening requirements.
 - c. The interior face of the berm may be constructed as an earthen slope, or may be retained by means of a wall, terrace or similar means acceptable to the Planning Commission.
 - d. The berm shall be designed to blend with existing topography, and sodded, hydro-seeded or planted with appropriate groundcovers.
 - e. The Planning Commission may require greenbelt buffer plantings on the berm in accordance with the requirements of this Section.
 - f. For the purpose of determining any required plant materials, the length of any required berm shall be measured from one toe of the berm (the farthest point at one end of the berm's long dimension where the berm height equals the surrounding grade level) along the berm's centerline to the toe at the opposite end of the berm.
5. **Evergreen screen.** The purpose of this method is to create a dense obscuring screen that meets the objectives of this Section. This method is intended to establish a year-round screening barrier between land uses of differing intensities, to effectively block noise and light, or to completely separate developed and undeveloped portions of a site.

This method shall consist of closely spaced evergreen trees with year-round screening characteristics. A mix of coniferous tree species consistent with Section 1610C (Standards for Size and Variety of Plant Materials) shall be planted a maximum of 15 feet apart in at least two (2) staggered rows (see illustration at end of Section).
6. **Masonry wall.** The purpose of this method is to create a solid, year-round barrier and obscuring screen to effectively block noise, light, and other impacts between land uses of differing intensities. Such walls shall be subject to the following (see illustration at end of Section):
 - a. Masonry walls shall have a minimum height of two (2) feet, and shall not exceed six (6) feet in height above grade unless a higher wall height is determined by the Planning Commission to be necessary to provide adequate screening.
 - b. Walls shall be solid in character and capped with stone or concrete.

- c. Wall materials shall be coordinated with the principal building materials on the site. The Planning Commission may require that decorative masonry (brick, stone, or decorative block) materials be incorporated into the wall design and construction.

E. Parking Lot Landscaping and Perimeter Screening.

Parking lot landscaping and perimeter screening shall be designed and arranged to enhance the appearance of the parking area, improve the level of safety for pedestrians and motorists, guide traffic movement, and define ingress/egress points. Parking lot landscaping and perimeter screening shall be subject to the following:

1. **Perimeter screening.** Parking lots shall be screened from all abutting RURAL USES, RESIDENTIAL USES, residential zoning districts, and road rights-of-way per Section 16.10D (Methods of Screening).
2. **Snow storage area.** Adequate snow storage area shall be provided within the site. Plant materials in snow storage areas shall be hardy, salt-tolerant species characterized by low maintenance requirements.
3. **Landscaping within parking lots.** Landscaped islands shall be provided at the ends of parking rows, and as otherwise required by this Ordinance or the Planning Commission to break up large expanses of pavement and guide traffic flow. Landscaped islands shall be subject to the following (see illustration):
 - a. Planting islands shall have a minimum width of ten (10) feet, and a minimum area of 180 square feet.
 - b. A minimum of two (2) deciduous shade or ornamental trees shall be provided for each planting island. Shrubs and live groundcover plantings may be used to cover the remaining areas of the island.
 - c. All landscaping and perimeter screening, except designated snow storage areas, shall be protected from vehicle encroachment with concrete curbing or similar permanent means.
 - d. Rain gardens, bioswales, and similar naturalized stormwater management systems with appropriate plantings may be incorporated into required parking lot landscaping.

F. Loading, Storage, and Service Area Screening.

Loading, storage, and service areas, public utility and essential service uses and structures, ground equipment shelters, ground-mounted transformers, generators, and HVAC units, electric sub-stations, gas regulator stations, and similar facilities shall be screened from road rights-of-way and adjacent uses in accordance with Section 16.10D (Methods of Screening).

G. Detention and Retention Basin Screening.

Where a detention or retention basin, or similar stormwater management facility is required, such facilities shall comply with the following:

1. To the extent possible, basin configurations shall be incorporated into the natural topography. Where this is not practical, the basin shall be shaped to emulate a

naturally formed or free form depression. The basin edge shall consist of sculptured landforms to filter and soften views of the basin.

2. Basins shall be designed to avoid the need for perimeter fencing. Where such fencing is necessary, the location and design shall be subject to Planning Commission approval.
3. Basins shall be planted with a mixture of groundcover and wetland-based plantings native to Michigan, such as native grasses or wildflowers.
4. A perimeter greenbelt buffer shall be provided in accordance with this Section and the following:
 - a. Plantings shall be clustered around the basin to achieve a variety of plant materials, and to replicate a natural environment. Deciduous shade trees shall be clustered around the south and west sides of the basin to provide shade and minimize solar heating of the water.
 - b. Trees shall be planted above the freeboard line of the basin. Any plantings proposed below the freeboard line shall be tolerant of wet or moist soil conditions. The location of plant materials shall take into consideration the need to provide access for routine basin maintenance.

H. Prohibited Plant Materials.

The following trees have been determined by the Township to be undesirable for the landscaping and screening purposes of this Ordinance, and shall not be used to satisfy the requirements of this Section except in the following limited circumstances:

Species	Common Name
<i>Acer negundo</i>	Box Elder
<i>Ulmus x</i>	Elm varieties; except disease-resistant cultivars, such as 'Regal', 'Pioneer', 'Homestead', 'Jacan' and 'Accolade'
<i>Aesculus x</i>	Horse Chestnut; except for use in greenbelts and transition zones between developed and un-developed areas of a site
<i>Populus x</i>	Poplar varieties
<i>Elaeagnus x</i>	Olive varieties
<i>Salix x</i>	Willow varieties; except ornamental willows and use in appropriate wetland ecosystems
<i>Catalpa x</i>	Catalpa varieties; except for use in greenbelts and transition zones between developed and un-developed areas of a site
<i>Ailanthus altissima</i>	Tree of Heaven
<i>Ginkgo biloba</i>	Ginkgo (female); male trees are acceptable
<i>Robinia pseudoacacia</i>	Black locust, except select sterile varieties
<i>Morus alba</i>	Mulberry (white)
<i>Acer saccharinum</i>	Silver Maple
<i>Juglans nigra</i>	Black Walnut; except for use in greenbelts and transition zones between developed and un-developed areas of a site
<i>Fraxinus x</i>	Ash varieties

I. Installation and Maintenance.

Screening elements and plant materials shall be installed in a manner consistent with American Association of Nurserymen standards, approved site plans, and the following:

1. **Deadline for installation.** Installation of required screening elements and plant materials shall be completed within 365 calendar days from the date of site plan approval for the project.
2. **Extension.** The Township Planner or Zoning Administrator may extend the deadline to allow installation of required plant materials by the end of the next planting season, upon determination that weather conditions, development phasing, or other factors would jeopardize required plant materials and prevent their installation by the deadline specified in this Section.
3. **Performance guarantee.** The Township Planner or Zoning Administrator may require submittal of a performance guarantee, per Section 2.07C (Performance Guarantees), to cover the cost of installing required screening elements and plant materials. After installation has been completed, the Township Planner or Zoning Administrator shall conduct an inspection of the plant materials before the guarantee may be released.
4. **Maintenance.** All screening elements and plant materials shall be maintained in accordance with the approved site plan, and the following:
 - a. Maintenance procedures and frequencies to be followed shall be specified on the site plan, along with the manner in which the effectiveness, health, and intended functions of the screening elements and plant materials on the site will be ensured.
 - b. Adequate provisions shall be made to regularly supply water to required plant materials as necessary to ensure proper growth and development.
 - c. Plant materials shall be kept in a neat, orderly and healthy growing condition, free from weeds, debris and refuse. Tree stakes, guy wires and tree wrap shall be removed after one (1) year.
 - d. Pruning of plant materials shall be limited to the minimum necessary to ensure proper maturation of plants to achieve their intended purpose.
 - e. Required screening elements and plant materials shall be planted and maintained in accordance with an approved site plan. Failure to maintain required screening, including the removal and replacement of dead or diseased plant materials, shall be a violation of this Ordinance.
 - f. The replacement or removal of plant materials in a manner not consistent with an approved site plan shall be a violation of this Ordinance.

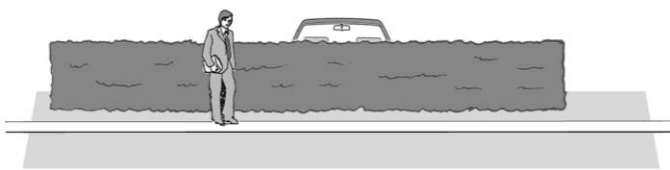
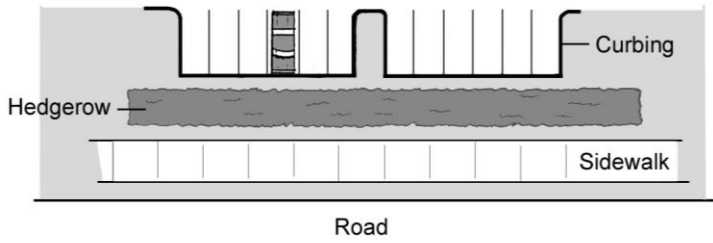
K. Modifications.

The Planning Commission shall have the authority to approve alternative designs or plant materials as part of final site plan approval upon determination that the alternative landscape designs or plant materials would meet the purpose and objectives of this

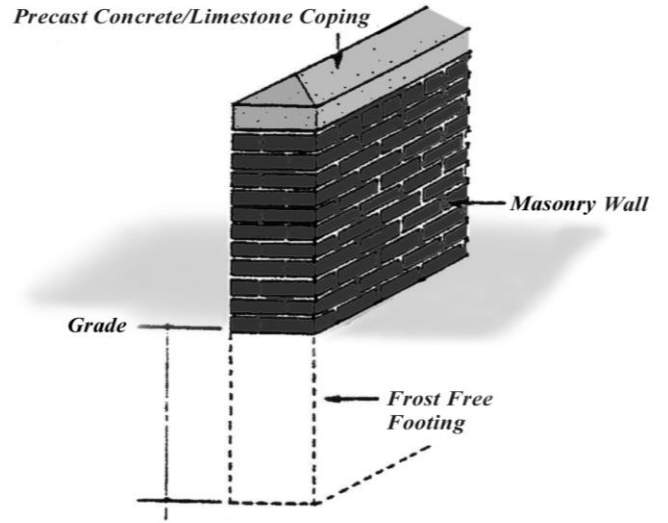
Section; or the requirements of this Section have been satisfied by existing topography, vegetation or other acceptable means.

Where an existing building is undergoing renovation, expansion, or change in use, required landscaping and screening improvements shall be in reasonable proportion to the size and configuration of the site and the scale of proposed improvements, as determined by the Planning Commission in accordance with the purpose and objectives of this Section.

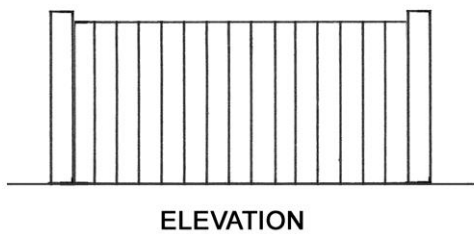
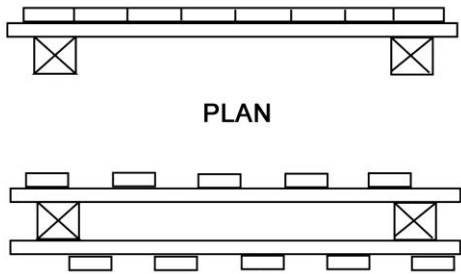
ILLUSTRATIONS



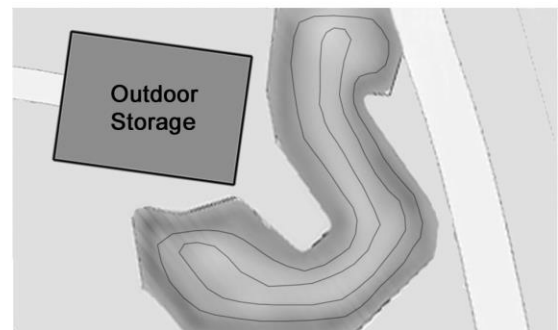
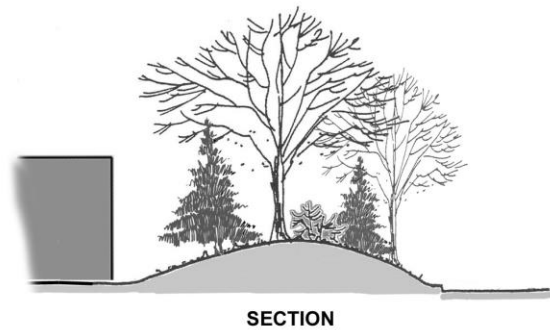
Hedgerow



Screen Wall

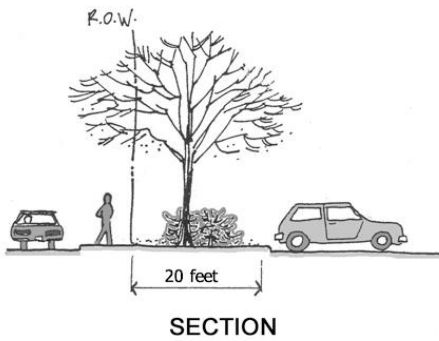
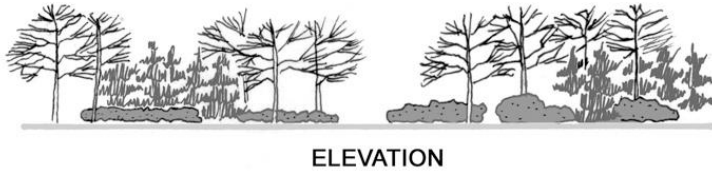
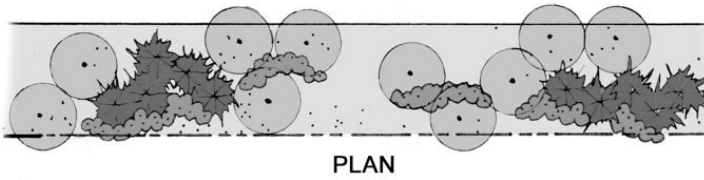


Fence

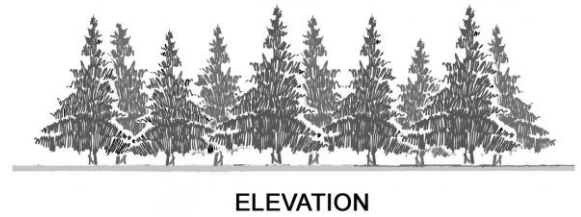
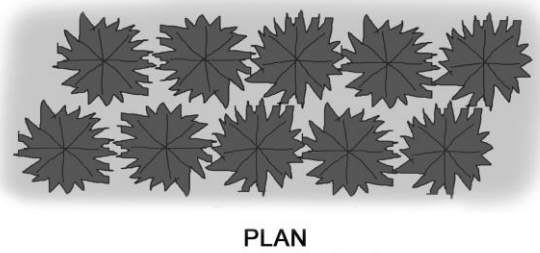


Berm

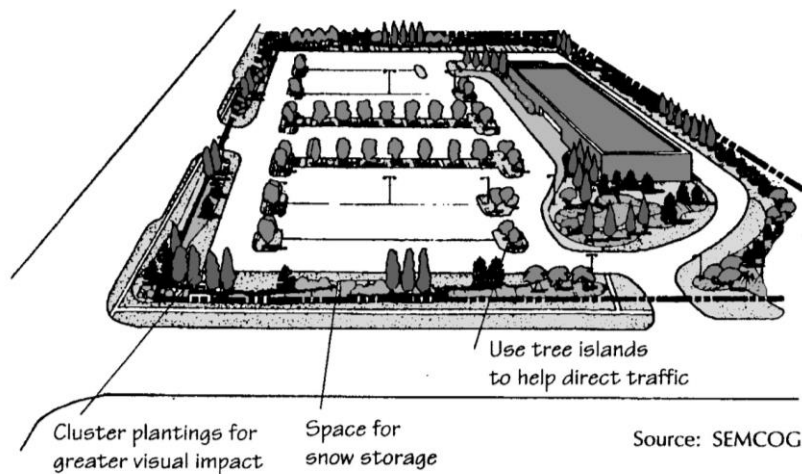
ILLUSTRATIONS



Greenbelt Buffer



Evergreen Screen



Landscaping Within Parking Lots

Section 16.11 Development Agreement.

A Development Agreement shall be entered into between the Township and the owner(s)/developer(s) of any property upon which a residential, commercial, industrial, or other land use is to take place following final site plan approval and prior to the commencement of any site work or construction. The cost to prepare and record this Agreement shall be borne by the owner(s)/developer(s). Preparation and approval of a Development Agreement shall be subject to the following:

A. Contents of a Development Agreement.

At a minimum, a Development Agreement shall:

1. Set forth any conditions of development approval to be met by an applicant or developer with respect to an approved project;
2. Provide for any dedication of easements, rights-of-way, and other dedications incorporated into the approved project;
3. Provide for maintenance of any common facilities and open space areas;
4. Identify any covenants, deed restrictions, and other limitations to be imposed upon the uses of the land and structures;
5. Describe the phasing and timing of development activities;
6. Detail the cost of installing all required infrastructure improvements and utilities, and manner for enforcement of any assessments and costs;
7. Describe any required escrow accounts or performance guarantees;
8. Include the approved development plans and any associated development documents as exhibits; and
9. Address other issues that the Township and owner(s)/developer(s) deem appropriate.

B. Approval of a Development Agreement.

The proposed Development Agreement shall be subject to review by the Township Planner and Township Attorney, and approval by the Township Board. The owner(s)/developer(s) of the subject property shall record the approved Development Agreement with the Bay County Register of Deeds office, and shall furnish paper copies and digital copies (in a format compatible with Township systems) of the recorded documents to the Township Clerk.

Section 16.12 Building Form and Composition.

The composition, orientation, and form of new construction and new buildings occupied or intended to be occupied by Office, Service, and Community Uses and Commercial Uses in the Township shall be subject to the following:

A. Purpose.

The quality of building design, placement, and composition is essential to provide a comfortable, human-scale environment in the Township, and maintain the Township's attractiveness and economic vitality. Accordingly, it is the purpose of this Article to maintain the visual environment, protect the general welfare, and ensure that the Township's property values, appearance, character, and economic well being are preserved through minimum composition and placement standards. This Section is further intended to encourage creativity, imagination, innovation, and variety in architectural design and building composition through complementary and appropriate use of scale, massing, and architectural details.

B. Scope.

This Section is not intended to supersede or supplant established building and fire code regulations, nor to regulate the quality, durability, maintenance, performance, load capacity, fire resistance characteristics or workmanship of building materials. The provisions of this Section shall apply to new construction and new buildings occupied or intended to be occupied by OFFICE, SERVICE, AND COMMUNITY USES and COMMERCIAL USES subject to Article 17.0 (Site Plan Review).

C. Requirements.

Building construction and other work subject to the provisions of this Section shall comply with the following general requirements:

1. **Façade variation.** Building façade walls exceeding 100 feet in length shall be subdivided into bays through the location and arrangement of architectural features and design variations; including but are not limited to projections, bays, recesses, enhanced façade materials and architectural detailing, and variations in building height, roof forms, and window patterns (see illustration).
2. **Composition.** All sides of a building shall be complementary in design, details, and materials. Side and rear facades shall include building materials and architectural features similar to those present on the front facade of the building.
3. **Public entrances.** Buildings shall have at least one (1) public entrance facing a road right-of-way. Additional public entrances shall be permitted on the rear or side facade, including primary access to other uses in a multi-tenant building.
4. **Roof-top equipment screening.** Roof-top mechanical equipment, HVAC systems, exhaust stacks, elevator housings, and other equipment shall be screened from public rights-of-way and adjacent uses by a parapet wall or similar device that exceeds the height of the roof-top equipment and extends around all sides of the building (see illustration).
5. **Security and safety equipment.** Exterior security gates or roll-down security doors shall be prohibited. Link or grill type security devices shall be permitted

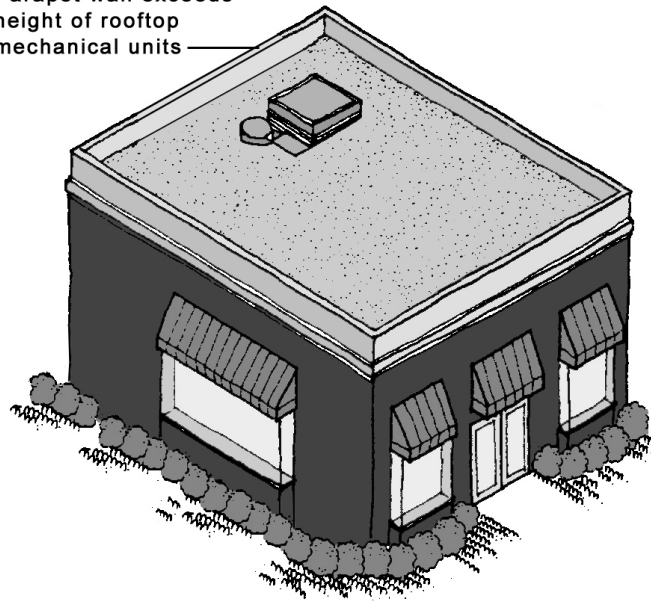
only if installed on the interior of the building, within the window or doorframes. Such security equipment shall be recessed and completely concealed during regular business hours, and shall be predominantly transparent to allow maximum visibility of the interior.

ILLUSTRATIONS



Facade Variation

Parapet wall exceeds height of rooftop mechanical units



Roof Design

Section 16.13 Private Roads.

New private roads, extensions of an existing road as a private road, and other private road improvements shall be subject to the following design standards and review procedures:

A. Scope.

Prior to the creation of new lots or any increase in the number of lots to be served for ingress and egress purposes by an existing private road lawfully established prior to the effective date of this Ordinance, the private road shall conform to the requirements of this Section. This Section shall also apply to all new private roads and any extension of an existing road as a private road.

B. Development Review.

Private road review and approval shall take place concurrently with review of any associated development plan, as follows:

1. **Plat or condominium review.** A private road subject to this Section may be reviewed as part of review and approval of a subdivision plat under the provisions of the Land Division Act and Township subdivision regulations, or a condominium development under Article 19.0 (Condominium Regulations) and the Condominium Act.
2. **Site plan review.** Where a private road is proposed to serve lots created by metes and bounds lot splits permitted by the Land Division Act and Township land division regulations or is otherwise required to be improved to conform to the requirements of this Section, the private road shall be subject to site plan review and approval in accordance with Article 17.0 (Site Plan Review).

C. Public Hearing.

A public hearing shall be required for all private road applications. The public hearing shall be scheduled and held before the Planning Commission, in accordance with Section 2.10 (Public Hearing Procedures).

D. Required Information.

Applications for private road approval under this Section shall be made by filing at least eleven (11) paper copies and two (2) digital copies (in a format compatible with Township systems) of a complete and accurate application with the Township Clerk or designee, along with the required review fee and escrow deposit. Any application that does not satisfy the information requirements of this Section and Ordinance shall be considered incomplete, and shall be returned to the applicant without further review. At a minimum, such applications shall include the following:

1. **Development plan.** The development plan shall include all information required for subdivision plat, condominium development or site plan approval, as applicable, and the following:
 - a. An existing conditions survey of the development site, showing lot lines, zoning districts, topography at two (2) foot contour intervals, water courses, drainage patterns, existing and proposed roads and road rights-of-way, easements, regulated wetlands, floodplains, woodlands, and any

additional features uniquely affecting the site. For alterations or extensions of existing private roads, the survey shall also include:

- (1) The location, extent, and dimensions of the existing road right-of-way, driving surface, drainage improvements, and utilities;
 - (2) All existing lot boundaries, easements, private driveways, and structures within 100 feet of the road right-of-way; and
 - (3) A cross-section detail of the existing road.
- b. Documentation of compliance with the private road development standards of this Ordinance, including proposed roadway cross-sections.
 - c. Documentation from the Bay County Environmental Health Division or other agency with jurisdiction that all lots and dwellings located outside of the service area for publicly-owned and operated water supply and sanitary sewerage systems can be adequately served by private well and septic or other approved wastewater treatment and disposal systems.

E. Minimum Design Standards.

Private roads in the Township shall conform to the following minimum design standards:

1. **Right-of-way.** New private roads and extensions of existing roads as a private road shall be located within a dedicated road right-of-way with a minimum width of 66 feet or the applicable BCRC standard, whichever is greater. Where additional lots of record are created on land abutting an existing private road with a right-of-way of less than 66 feet, no additional right-of-way dedication shall be required.
2. **Road design and surfacing.** At a minimum, any new private road or extension of an existing, unpaved road as a private road shall meet or exceed the BCRC road and drainage design specifications, subject to the following:
 - a. A bituminous asphalt or concrete road surface shall not be required for private roads, unless the private road is an extension of an existing road paved with concrete, bituminous asphalt or similar hard surfacing.
 - b. Where the road right-of-way or easement of an existing private road lawfully established prior to the effective date of this Ordinance is less than 66 feet, minimum required driving surface, base course, and drainage improvements shall be proportional to the available width and otherwise consistent with the BCRC specifications.
 - c. A cul-de-sac meeting minimum BCRC radius and design standards shall be required at the end of any dead-end private road.
3. **Signage.** Private road name assignment and installation of road signs shall be in accordance with BCRC standards.
4. **Future connections.** To establish an integrated road network in the Township, new private roads and extensions of existing private roads shall be connected to

adjacent public and private roads. To facilitate road connections, stub road ends and road rights-of-way shall be provided to the lot boundaries of adjacent land planned for future development, subject to Planning Commission approval. Road ends shall be marked and barricaded per Bay County Road Commission standards, with details shown on the development plan.

F. Maintenance Agreement.

For any new private road subject to the requirements of this Section, or the new extension portion of an existing road, there shall be a recorded private maintenance agreement or restrictive covenant agreement that runs with the land and ensures that the road will be regularly maintained in accordance with the requirements of this Section, applicable BCRC specifications, and any conditions of Township approval.

1. All owners of land abutting the new private road subject to the requirements of this Section, or the new extension portion of an existing road, shall be signatory parties to the agreement, which shall be a continuing obligation on the land and any future landowners.
2. At a minimum, the agreement shall specify who will be responsible for road maintenance and improvements, reference the applicable standards, approved plans, and any conditions of private road approval, and describe how the funds for such work will be collected and administered.
3. Owners of land abutting a new private road subject to the requirements of this Section, or an extension portion of an existing road, shall agree to indemnify and hold harmless the Township and its representatives from any and all claims for personal injury and property damage arising out of the use of the private road.
4. A disclosure statement shall be placed in the maintenance agreement informing the purchaser that the road abutting or servicing the parcel is private and is not required to be maintained by any government agency.
5. The property owner or developer shall record all private road easements and maintenance agreements with the Bay County Register of Deeds office, and shall furnish paper copies and digital copies (in a format compatible with Township systems) of the recorded documents to the Township Clerk.

G. Special Assessment District.

The owner(s) of land to be served by any new private road subject to the requirements of this Section, or the new extension portion of an existing road, shall be required to file petition(s) verified both as to signature and ownership, with the Township Clerk to request establishment by the Township Board of a special assessment district for maintenance of the private road in accordance with applicable state statutes.

Owners of land served by existing private roads are encouraged to petition the Township Board to establish a special assessment district for maintenance of the private road. Not less than 51% of the record owners of land within the proposed special assessment district must have signed such petitions.