

ARTICLE 14

SPECIAL DEVELOPMENT REGULATIONS

Section 14.01 Open Space Preservation Residential Development.

This Section establishes provisions under which a landowner may exercise the option to develop land with open space preservation in accordance with Section 506 of the Michigan Zoning Enabling Act. The purpose of this development option is to preserve agricultural lands, natural resources, and open space in the Township by providing an alternative method for residential development. The intent of this Section is to allow the same number of home sites to be developed per Article 3.0 (Dimensional Standards), but clustered on no more than fifty percent (50%) of the total buildable area of the subject parcel(s). The remaining unused land would exist perpetually in a undeveloped state by means of a conservation easement or similar legal means that runs with the land.

A. Qualifying Conditions.

Land in the Rural Districts, Rural Residential Districts, R-3 (Single-Family Residential) District, and Planned Community (PC) Special District may be developed, at the option of the property owner(s) or developer(s), with the same number of dwelling units that could otherwise be developed on the land under existing ordinances, laws, and rules, on not more than fifty percent (50%) of the total buildable area of the subject parcel(s), if all of the following apply:

1. The development does not depend upon the extension of a public sewer or public water supply system, unless development of the land without the exercise of the development option provided by these provisions would also depend upon such an extension.
2. The development option provided pursuant to this Section has not previously been exercised with respect to the subject property, and the subject land is not subject to any pre-existing, permanent land conservation encumbrance.
3. Natural resources, open space, or agricultural lands exist on the site that would be preserved through use of this development option.

B. Development Plan.

A development plan under this Section shall be subject to Township review and approval by one of the following means:

1. **Site plan review.** Where the lot division is by metes and bounds, a development plan under this Section shall be submitted to the Planning Commission for review in accordance with Article 10.0 (Site Plan Review). Land divisions shall not be approved by the Township until all site plan approval requirements have been satisfied.

2. **Subdivision plat.** Where a development plan under this Section is a subdivision plat, it shall be submitted in accordance with the approval process provided in the Township's subdivision regulations and the standards of this Ordinance.
3. **Site condominium.** When a development plan under this Section is a condominium subdivision (site condominium), it shall be submitted in accordance with the approval process provided in Article 12.0 (Condominium Regulations).

C. Density Calculations.

The maximum permitted density in an Open Space Preservation Residential Development shall be determined as follows:

1. The maximum permitted net residential density shall not be greater than that normally permitted within the zoning district. The maximum density shall be the maximum number of lots permitted by the approved parallel design plan as outlined within this Section. Density does not guarantee any specific number of lots from any individual parcel or group of parcels. Rather, density refers to the number of lots that can be developed on the subject parcel(s).
2. A parallel design plan shall be prepared by the developer showing a feasible development under the requirements of the specific zoning district in which it is located and the requirements of any and all state, county, and Township regulations. All lots, roads and other improvements shall be designed so that they do not adversely impact wetlands, floodplains or drainage ways, as regulated by federal, state, county or local agencies.
3. It must be determined by the Planning Commission that this parallel design plan is able to be physically constructed and meet all current regulations, should the Open Space Preservation Residential Development be denied or not constructed. If there are questions regarding water, septic, wetlands or floodplains, the Planning Commission may request the applicant to obtain approval from the proper regulatory authority. If the Planning Commission determines, through these responses, that the number of lots proposed is unfeasible, the parallel design plan shall be revised and resubmitted, minus that number of lots. Detailed engineering is not required at this stage.
4. The Planning Commission may also waive the submission of a parallel design plan if the Planning Commission determines that the number of housing units proposed for the Open Space Preservation Residential Development is well below what would be feasible for the site. Such a waiver shall be requested by the applicant in writing, and shall be recorded as part of the motion for approval in the meeting minutes.

D. Clustering.

Dwelling units shall be grouped so that dedicated open space within a development equals a minimum of fifty percent (50%) the total buildable area of the subject parcel(s). Where such clustering would require deviations from the minimum required yard setbacks, lot area, and lot width; and maximum permitted ground floor coverage

(GFC) and floor area ratio (FAR) otherwise required in the zoning district, the following standards shall apply:

1. Planning Commission determination that the deviation is reasonable and necessary to preserve open space and meet the intent and purpose of this Section.
2. Planning Commission determination that all lots created under this option contain adequate lot area and width to provide for development of a principal dwelling and customary accessory structures without need for a variance.
3. Clustering of the dwelling units shall occur in a manner that preserves the basic amenities and qualities normally associated with single-family living (including privacy, personal open space, and adequate natural lighting and ventilation), while still allowing for innovative site layout and open space areas.

E. Standards for Open Space.

At least fifty percent (50%) of the total buildable area of the subject parcel(s) shall remain perpetually in an undeveloped state by means of a conservation easement or similar legal instrument that runs with the land, as approved by the Township. Such open space preservation area(s) shall conform to the following standards:

1. Dedicated open space shall be located to preserve significant natural features and to connect open spaces throughout the development with adjacent open space.
2. Open space along the exterior public roads shall have a minimum depth of 200 feet, as measured from the right-of-way line, either landscaped with natural vegetation or preserved in a natural wooded condition. The Planning Commission may approve a minimum open space depth of 100 feet along the exterior public roads where the reduction would result in saving significant natural vegetation on the rear of the site. The open space along exterior public roads may be landscaped or left natural; existing tree preservation is preferred, and planted vegetation shall be native to the area.
3. Use of preserved open space shall be limited to RURAL USES, outdoor recreation, hunting (where permitted), recreational trails, parks and playgrounds, and similar uses, as approved by the Planning Commission.
4. At the landowner's option, all or part of the open space may be dedicated to the use of the public or transferred to public ownership. The Planning Commission shall be prohibited from requiring such a dedication as part of an approval under this Section. Any proposed transfer of open space ownership to public ownership shall be subject to approval of the receiving jurisdiction.
5. If the land to be developed under this option contains a river, stream, pond or other body of water, the Planning Commission may require a portion of the open space to abut the body of water.
6. All structures shall be located outside of land area designated as preserved open space. Only those structures or improvements that are consistent with the approved development plan and the terms of the conservation easement shall be permitted within the designated open space area.

7. The following areas shall not be considered in the calculation for open space:
 - a. Areas within road and other rights-of-way, and utility, drainage or similar public easements.
 - b. Areas occupied by permitted non-residential uses, golf courses, parking lots, stormwater detention or retention basins, private community wastewater systems (PCWS), and similar facilities.
 - c. Required yard setback areas for individual lots.

F. Conservation Standards.

The applicant shall provide a copy of the conservation easement or similar legal instrument that would run with the land and have the legal effect of preserving in perpetuity in an undeveloped state the open space required by this Section. The legal instrument shall be subject to the following minimum requirements:

1. **Guarantee of Preservation.** The conservation easement or similar legal instrument the conservation easement or similar legal instrument shall guarantee that all dedicated open space will be maintained in the manner approved. Documents shall be presented that bind all successors and future owners in fee title to commitments made as a part of the proposal. This provision shall not prohibit a transfer of ownership or control, provided the land uses continue as approved under this Section and Ordinance.
2. **Irrevocable conveyance.** At a minimum, the instrument shall be irrevocable, shall run with the land, and shall convey all rights to develop the land to a land conservation organization, condominium association, governmental institution, or other governmental or legal entity qualified and able to receive and hold conservation easements in accordance with applicable federal and state laws.
3. **Permitted uses and development.** The instrument shall specify the allowable use(s) of the open space.
4. **Development plan.** The instrument shall require that the open space be maintained in perpetuity in an undeveloped state, without structures or other improvements, except as shown on the approved development plan. The development plan shall be attached to the recorded instrument as an exhibit.
5. **Maintenance plan.** The instrument shall include a detailed maintenance plan that provides standards and a schedule for required maintenance of the open space by the parties who have an ownership interest in the open space; and shall and allows for maintenance to be undertaken by the Township or the easement holder in the event that the open space is inadequately maintained or determined to be a public nuisance, with the assessment of costs upon the property owners.

After Township approval, the applicant shall record the conservation easement or similar legal instrument with the Washtenaw County Register of Deeds office, and shall provide proof of recording and two (2) copies of the recorded documents to the Township Clerk.

Section 14.02 Wireless Communication Facilities.

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 the location of wireless communication facilities within given geographical areas of the Township, while protecting the safety and character of nearby residential areas and the Township as a whole;
2. Require collocation of transmission and receiving apparatus and antennae on existing towers, unless it can be reasonably demonstrated that such collocation is not technically feasible;
3. Require new and replacement wireless communication towers to include provisions for collocation wherever technically feasible;
4. Limit adverse visual impacts through careful design, siting, landscaping and screening elements, and innovative camouflaging techniques;
5. Prevent potential damage to adjacent properties from tower failure, and promote the timely removal of facilities upon the discontinuance of use;
6. Require wireless communication towers and antennae to be configured in a way that minimizes adverse visual impacts, through careful design, siting, landscape screening, and innovative camouflaging techniques;
7. Establish consistent review procedures and information requirements for construction, alteration, and enlargement of wireless communication facilities; and
8. Permit administrative review and approval of certain types of projects that have a limited scope and impact, such as amateur radio antennae, satellite dish antennae, and collocation of additional antennae on an existing, approved wireless communications tower.

A. Type of Review Required.

Wireless communications facilities shall be subject to review and approval in accordance with the following table:

Type of Wireless Communications Facility	Required Review and Approval		
	Conditional Use Approval	Certificate of Zoning Compliance	Exempt
NEW TOWERS AND ANTENNAE			
Construction of a new wireless communication tower or ground equipment enclosure area for a 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.	●		

Type of Wireless Communications Facility	Required Review and Approval		
	Conditional Use Approval	Certificate of Zoning Compliance	Exempt
Antenna(e) installation on an existing principal building or accessory structure where all accessory equipment is installed and maintained within the existing building or structure.		●	
COLLOCATION ON EXISTING TOWERS			
Alteration or enlargement of a wireless communication tower that would continue to 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 14.02B.4. (Special Provisions for Review of Certain Alterations and Collocations).	●		
Alteration or enlargement of a wireless communication tower that would continue to 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 14.02B.4. (Special Provisions for Review of Certain Alterations and Collocations).	●		
Expansion of a previously approved ground equipment enclosure area to a total area less than or equal to 2,500 square feet.		●	
Collocation of a new antenna on an existing tower that would continue to 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 14.02B.4. (Special Provisions for Review of Certain Alterations and Collocations).	●		
Collocation of a new antenna on an existing tower that would continue to 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.		●	
Construction or expansion of ground equipment building(s) within an approved ground equipment enclosure.		●	
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 1.5 meters or larger.		●	

Type of Wireless Communications Facility	Required Review and Approval		
	Conditional Use Approval	Certificate of Zoning Compliance	Exempt
Installation of a satellite dish antenna with a diameter less than 1.5 meters.			●
AMATEUR RADIO ANTENNAE			
Installation of an amateur radio transmission and reception antenna or antenna structure.		●	
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.		●	
Installation of short wave facilities, amateur radio reception-only antenna, television reception antenna or wireless Internet antenna for personal use, or similar facility up to a maximum height of 14 feet.			●
Installation of municipal and other facilities subject to federal or state preemption of local regulatory authority.			●
OTHER PROJECTS			
Repair or service of existing wireless communications facilities, provided that all work complies with applicable regulations and approved plans.			●
Telecommunication facilities as defined by the METRO Act (P.A. 48 of 2002, as amended).			●

1. **Exempt facilities.** Nothing in this Section shall be construed in such a manner to conflict with the regulatory process established for telecommunication facilities as defined and regulated by the METRO Act (P.A. 48 of 2002, as amended). Facilities exempt from review per Section 11.02A (Type of Review Required) shall be permitted by right, subject to the applicable federal and state regulations.

2. **Facilities subject to Zoning Inspector approval.** Facilities subject to certificate of zoning compliance approval per Section 11.02A (Type of Review Required) shall require review and approval by the Zoning Inspector in accordance with the applicable standards of this Section and Section 1.07 (Certificates of Zoning Compliance).

B. Conditional Use Permit.

Wireless communications facilities subject to conditional use approval per Section 11.02A (Type of Review Required) shall require review and approval of a Conditional Use Permit by the Planning Commission, subject to the standards of this Section and Article 11.0 (Conditional Uses).

1. **Limitation on review fees.** Per Section 3514 of the Michigan Zoning Enabling Act, fees required for a Conditional Use Permit application per Section 14.02A

(Type of Review Required) shall not exceed the Township's actual, reasonable costs to review and process the application or \$1,000.00, whichever is less.

2. **14-day time limit to determine eligibility and completeness.** Per Section 3514 of the Michigan Zoning Enabling Act, the Clerk shall immediately transmit a copy of any application materials and plans filed in accordance with this Section for a Conditional Use Permit per Section 14.02A (Type of Review Required) to the Township Planner to determine whether the application is administratively complete per Section 11.38B (Application Information).
 - a. 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.
 - b. The application shall be deemed administratively complete if no written response is transmitted to the Clerk and applicant within the 14 business day period.
3. **90-day time limit on Planning Commission action.** For any Conditional Use Permit application not subject to the additional requirements of Section 14.02B.4. (Special Provisions for Review of Certain Alterations and Collocations) below, the Planning Commission shall complete its review and take final action per Section 11.05 (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.
4. **Special provisions for review of certain alterations and collocations.** Per Section 3514 of the Michigan Zoning Enabling Act, Township review of proposed alterations to existing wireless communication towers or ground equipment enclosures subject to Conditional Use Permit approval per Section 14.02A (Type of Review Required) and referencing this subsection shall be modified as follows:
 - a. **60-day time limit on Planning Commission action.** The Planning Commission shall complete its review and take final action on the application per Section 11.05 (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 time period.
 - b. **Limitation on conditions of approval.** Planning Commission authority per Section 11.06 (Conditions of Approval) and 14.02B.8. (Conditions of Approval) to impose conditions on any approval of an application subject to the additional requirements of this subsection shall be limited to conditions intended to:
 - (1) Verify compliance with the applicable requirements of this Ordinance; or

- (2) Ensure that the wireless communication facility meets the requirements of federal and state laws and other Township ordinances before the facility begins operation [amended 12/16/2013, Ord. 174-14].
5. **Modifications to an approved Conditional Use Permit.** The following changes to an existing wireless communication facility for which a valid Conditional Use Permit was previously approved shall be subject to review and approval as a modification to the approved Permit:
 - a. Alteration or enlargement of an existing wireless communication tower; or
 - b. Expansion of an approved ground equipment enclosure area.
6. **New Conditional Use Permit required.** All other wireless communication facilities subject to Conditional Use Permit approval shall require review and approval of a new Permit by the Planning Commission.
7. **Information required.** In addition to any information required by Article 11.0 (Conditional Uses), applicants for a Conditional Use Permit for a wireless communication facility shall submit the following information:
 - a. **Site inventory.** Each applicant shall provide an inventory of the existing towers, antennae, or sites approved for towers or antennae that are either within Superior Charter Township or within one (1) mile of the border thereof, including specific information about the location, height, and design of each tower, and the following:
 - (1) The separation distance between the proposed wireless communication facility and other structures shown on the site inventory. The applicant shall also identify the type of construction and owner(s)/operator(s) of existing towers, if known.
 - (2) A description of the feasible location(s) of future wireless communication facilities proposed or anticipated by the applicant within the Township, based on existing physical, engineering, technological, or geographical limitations in the event the proposed tower is erected.
 - (3) The Growth Management Plan classification of the site and all properties within the on the site inventory area.

Such information may be shared with other applicants applying for approvals under this Section or other organizations seeking to locate towers or antennae within Superior Charter Township. The sharing of such information shall not constitute a representation or warrant by the Township that such sites are available or suitable.

- b. **Site plan.** A preliminary and a final site plan shall be submitted that include the following minimum required information, and any other

information deemed by the Planning Commission to be necessary to assess compliance with this Section:

- (1) All applicable information required for preliminary and final site plan approval per Article 10.0 (Site Plan Review).
 - (2) The location, type and height of the proposed tower; on-site and abutting land uses and zoning, including across road rights-of-way; adjacent roadways and proposed means of access; on-site topography and parking; setbacks from property lines; and elevation drawings of the proposed tower and any other structures.
 - (3) A maintenance plan to ensure long term, continuous maintenance to a reasonably prudent standard, and any applicable maintenance agreement identifying who will be responsible for maintenance of the facility, including access, landscaping, screening, and security improvements.
 - (4) Legal description of the parent tract and leased parcel (if applicable).
 - (5) Setback distances between the proposed tower and the nearest residential unit, platted residentially zoned properties, and unplatted residentially zoned properties.
 - (6) Fencing and screening details, proposed methods of camouflage where applicable, and details of any tower illumination.
 - (7) A landscape plan showing the specific sizes, species, amounts, and planting details for proposed landscape materials.
- c. **Removal agreement.** The applicant shall submit a signed and notarized removal agreement for the future removal of the facility in accordance with Section 11.02J (Cessation of Operation). The applicant shall submit an estimate for the cost of removal of the facility and restoration of the site, certified by a licensed professional engineer and verified by the Township Engineer.
- d. **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 Planning Commission that this condition has been satisfied.
- e. **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 such franchises shall be filed with the Township.
- f. **Collocation information.** A notarized statement by the applicant indicating whether the proposed tower will accommodate collocation of additional antennae for future users.

- g. **Additional required information.**
- (1) Identification of the entities providing the backhaul network for the tower(s) described in the application and other sites owned or operated by the applicant in the Township.
 - (2) A description of the suitability of the use of existing towers, other structures, or alternative technology not requiring the use of towers or structures to provide the proposed wireless communication services.
 - (3) Technical analyses setting forth the minimum height necessary for reasonable communication by the applicant, and evaluating alternative designs that may require fewer towers and/or lower tower heights.
 - (4) An environmental impact statement disclosing any potential impact on local wetlands, flood plains, wilderness areas, wildlife preserves, endangered species, historical sites, or other environmental considerations.
8. **Conditions of approval.** In granting a Conditional Use Permit, the Planning Commission may impose conditions to the extent that the Planning Commission determines are necessary to minimize any adverse impact of the facility on nearby properties, in addition to the conditions of approval specified in Article 11.0 (Conditional Uses). The Planning Commission may also require that a performance guarantee be posted with the Township as a condition of Conditional Use Permit approval, subject to the following:
- a. The purpose of this guarantee is to ensure the facility's future removal and site restoration if the owner or operator fails to do so as required by Section 11.02J (Cessation of Operation).
 - b. The security shall be in the form of: cash, surety bond, or letter of credit, together with a written and notarized agreement in the form approved by the Township providing for the future removal of the facility.
 - c. The security shall be in an amount equal to the greater of \$5,000 or the cost estimate for removal of the facility and restoration of the site, as certified by a licensed professional engineer and verified by the Township Engineer.
9. **Factors to consider in granting a Conditional Use Permit.** In addition to any standards for consideration of Conditional Use Permit applications contained in Article 11.0 (Conditional Uses), the Planning Commission shall consider the following factors in determining whether to issue a Conditional Use Permit. The Planning Commission may waive or reduce one (1) or more of these criteria upon determination that the purposes of this Section are better served thereby:
- a. Height of the proposed tower.

- b. Proximity of the tower to residential structures and residential district boundaries.
 - c. Nature of uses on adjacent and nearby properties.
 - d. Surrounding topography.
 - e. Surrounding tree coverage and foliage.
 - f. Design of the tower and ground equipment enclosure area, with particular reference to design characteristics that have the effect of reducing or eliminating visual obtrusiveness.
 - g. Proposed ingress and egress.
 - h. Availability of suitable existing towers, other structures, or alternative technologies not requiring the use of towers or structures.
10. **Availability of suitable existing towers, other structures, or alternative technology.** No new tower shall be permitted unless the applicant demonstrates to the reasonable satisfaction of the Planning Commission that no existing tower, structure or alternative technology that does not require the use of towers or structures can accommodate the applicant's proposed antenna(e). An applicant shall submit information requested by the Planning Commission related to the availability of suitable existing towers, other structures or alternative technology.
- The Township may employ specialized experts to review data submitted by the applicant. The applicant shall incur all costs associated with such review. Evidence submitted to demonstrate that no existing tower, structure or alternative technology can accommodate the applicant's proposed antenna(e) may consist of any of the following:
- a. No existing towers or structures are located within the geographic area that meet the applicant's engineering requirements.
 - b. Existing towers or structures are not of sufficient height to meet applicant's engineering requirements.
 - c. Existing towers or structures do not have sufficient structural strength to support the applicant's proposed antenna and related equipment.
 - d. The applicant's proposed antenna(e) would cause electromagnetic interference with antennae on existing towers or structures, or the antennae on existing towers or structures would cause interference with the applicant's proposed antenna(e).
 - e. The fees, costs, or contractual provisions required by the owner in order to share an existing tower or structure or to adapt an existing tower or structure for sharing are unreasonable. Costs exceeding new tower development are presumed to be unreasonable.
 - f. The applicant demonstrates that there are other limiting factors that render existing towers and structures unsuitable.

- g. The applicant demonstrates that an alternative technology that does not require the use of towers or structures, such as a cable microcell network using multiple low-powered transmitters/receivers attached to a wireline system, is unsuitable. Costs of alternative technology that exceed new tower or antenna development shall not be presumed to render the technology unsuitable.

C. General Regulations.

All wireless communication facilities shall be subject to the following regulations:

1. **Grounded.** Antennae and metal structures shall be grounded for protection against a direct strike by lightning. The electrical wiring and connections on all structures shall comply with all applicable local, state, and federal statutes, regulations, and standards.
2. **Wind load.** Structures with antennae shall be designed to withstand a uniform wind loading as prescribed in the State Construction Code.
3. **State and federal regulations.** All wireless communication facilities shall meet or exceed applicable federal and state regulations and standards, subject to the following:
 - a. If more restrictive federal or state regulations or standards are adopted in the future, then the facility owner or operator shall bring the facility into compliance with such revised standards and regulations within 180 calendar days of their effective date, unless a different compliance schedule is mandated by the controlling state or federal agency.
 - b. If, upon inspection, the Township determines that a facility constitutes a danger to persons or property, then the facility owner or operator shall have 30 calendar days from the date of receipt of such notice from the Township to remove the facility or bring it into compliance with applicable standards.
 - c. Failure to take such action as required shall be considered a violation of this Ordinance, and shall constitute grounds for the facility's removal at the owner's expense. The facility owner and operator shall be responsible for all costs for testing and compliance verification.
4. **Franchises.** Owners or operators of wireless communication facilities shall certify that all franchises required by law for the construction or operation of a wireless communication system have been obtained, and shall file a copy of all required franchises with the Township.
5. **Engineering certification.** Any civil, mechanical or structural engineering information supplied by the applicant shall be certified by a licensed professional engineer.
6. **Not essential services.** Structures and antennae shall be regulated and permitted pursuant to this Section and shall not be regulated or permitted as essential services, public utilities, or private utilities.

7. **Signage.** The wireless communication facility shall not be used for advertising purposes and shall contain no signs except a permitted nameplate and as otherwise required by the Federal Aviation Administration (FAA).
8. **Climb prevention.** All wireless communication towers and antenna structures shall be protected by anti-climbing devices; such as security fences or anti-climbing devices. Anchor points for guy wires or anchoring points shall be enclosed by a fence or shall be located within the confines of a yard that is completely fenced.

D. Standards for Wireless Communication Towers.

Wireless communication towers shall be subject to the following:

1. **Permitted zoning districts.** Wireless communications towers shall only be permitted on parcels in the A-1 (Agricultural), A-2 (Agricultural), R-1 (Single-Family Residential), R-2 (Single-Family Residential), PC (Planned Community), MS (Medical Services), PM (Planned Manufacturing), and PSP (Public/Semi-Public Services) Districts.
2. **Collocation.** The applicant shall submit evidence that there are no reasonable and suitable alternatives for location of equipment on an existing tower within the service area of the proposed tower.
3. **Location.** A tower shall have a minimum setback from all property boundaries equal to the height of the tower. Guys and accessory buildings shall satisfy minimum zoning district dimensional standards.
 - a. No tower shall be located within two (2) miles of another commercial communication unless it can be demonstrated by the applicant that there is a need for an additional wireless communication tower.
 - (1) The Planning Commission shall make the determination of necessity based on the technical requirements of the tower, the service needs of the Township residents, and other factors as may be appropriate on a case by case basis.
 - (2) The Planning Commission may employ specialized experts to review the data submitted by the applicant to support the location. The applicant shall incur all costs associated with such review.
 - (3) Under no circumstance shall a wireless communication tower be permitted to locate less than one (1) mile from another wireless communication tower.
 - b. No tower shall be located closer than 200 feet from the boundary of any Rural, Rural Residential or Urban Residential Districts, including any Planned Community (PC) or other Special District incorporating residential uses.

- c. A tower shall be set back from all lot boundaries and road rights-of-way a minimum distance equal to the height of the tower. Guys and accessory buildings shall satisfy the minimum zoning district dimensional standards.
4. **Access.** Unobstructed access, constructed in accordance with all provisions of this Ordinance, shall be provided to the tower and ground equipment building and enclosure to ensure service by police, fire, and emergency vehicles.
5. **Structural design and installation.** The plans for the tower construction shall be certified by a registered structural engineer, and the applicant shall submit verification that the installation is in compliance with all applicable codes. All structures must meet all applicable standards of the Federal Aviation Administration (FAA) and Federal Communications Commission (FCC).
 - a. To ensure its structural integrity, the owner of a tower shall ensure that it is maintained in compliance with the State Construction Code, other applicable building, fire, and electrical codes, and applicable standards for structures as published by the Electronic Industries Association.
 - b. All signal and remote control conductors extending substantially horizontally above the ground between a tower or antennae and a structure, or between structures, shall be at least eight (8) feet above the ground at all points, unless buried underground.
 - c. The base of the tower shall occupy no more than 500 square feet.
6. **Lighting.** Structures shall not be artificially illuminated, unless required by the FAA or other applicable authority. If lighting is required, the lighting alternatives and design chosen must cause the least disturbance to the surrounding views. The use of strobe lights on a tower shall be prohibited in the absence of a demonstrated need.
7. **Height.** Structures shall not exceed 180 feet in height, as measured from the finished grade of the parcel to the highest point on the tower or other structure, including the base pad and any antennae.
8. **Design.** The design of the tower, antennae, ground equipment building(s) and enclosure shall use, to the maximum extent possible, materials, textures, screening, and landscaping that will blend them into the natural setting and surrounding buildings.
 - a. The area of the proposed ground equipment enclosure shall be the minimum necessary to accommodate all proposed and planned future users of the facility.
 - b. The antennae shall be painted to match the exterior treatment of the tower.
 - c. The paint scheme of the tower and antennae shall be designed to minimize off-site visibility of the facility.

- d. Advertising, signs, and identification intended to be visible from the ground or other structures shall be prohibited, except as required for emergency purposes.
 - e. Metal structures shall be constructed of or treated with corrosive-resistant material.
9. **Fencing and screening.** The tower and ground equipment enclosure shall be secured by fencing a minimum of six (6) feet in height. The ground equipment enclosure area and fencing shall be screened with a dense evergreen screen per Section 14.10D (Methods of Screening) along each side of such fencing and building.
- a. The screening shall be maintained in good condition at all times so as to continue its effectiveness.
 - b. Existing mature on-site vegetation and natural landforms shall be preserved to the maximum extent feasible.
 - c. The Planning Commission may waive the screening requirements of this subsection where natural growth around the property perimeter may provide sufficient buffer, such as facilities sited on large, wooded lots.
10. **Employees.** No employees shall be located on the site on a permanent basis to service or maintain the tower or antennae. Occasional or temporary repair and service activities are excluded from this restriction.

E. Standards for Antennae Located on Principal Buildings and Accessory Structures.

Antennae shall be permitted on principal buildings or accessory structures in any zoning district, subject to approval per Section 11.02A (Type of Review Required) and the following standards:

- 1. The antenna and support structure shall not extend into any required yard setback areas, and shall not exceed the structure height by more than ten (10) feet.
- 2. The antennae, supporting structure, and electrical and mechanical equipment shall be of a neutral color that is identical to, or closely compatible with, the color of the principal building or accessory structure, so as to make the antenna and related equipment as visually unobtrusive as possible.
- 3. The antenna and support structure shall not be illuminated, unless required by the FAA or other agency with jurisdiction.
- 4. Such antenna shall be securely attached and anchored to the structure. Structural improvements needed to support the added weight of the antenna and support structure shall conform to State Construction Code standards.
- 5. All accessory ground equipment shall be located within the building or structure, except where otherwise permitted as part of a Conditional Use Permit approval.

F. Standards for Satellite Dish Antennae.

Satellite dish antennae shall be permitted in any zoning district, subject to approval per Section 11.02A (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 shall be permitted per lot. The antenna shall conform to the minimum yard setbacks of the zoning district where the antenna 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.

G. Standards for Amateur Radio Antennae.

Amateur radio antennae shall be permitted in any zoning district, subject to approval per Section 11.02A (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 maximum height of 60 feet and 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.

H. 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. Collocation of additional antennae on such existing towers shall be permitted in accordance with the requirements of this Section and Ordinance.

I. Rescinding Approval.

Failure of the owner, operator or leaseholder of an approved wireless communications facility to renew or replace any required performance guarantee 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 1.14 (Public Hearing Procedures), at which time the owner or operator 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.

J. Cessation of Operation.

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

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 wireless communication 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 14.03 Development Agreement.

A Development Agreement may be entered into between the Township and the owner(s)/developer(s) of any property upon which any RESIDENTIAL USES, OFFICE, SERVICE, AND COMMUNITY USES, COMMERCIAL USES, or INDUSTRIAL, RESEARCH, AND LABORATORY USES are to take place following final site plan approval or equivalent final development plan approval under this Ordinance or other Township ordinances, and prior to the commencement of or 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; and
8. Address other issues that the Township and owner(s)/developer(s) deem appropriate.

B. Approval of a Development Agreement.

The proposed Development Agreement may be subject to review by designated Township officials and consultants; and shall be subject to approval by the Township Board. Following approval, the Township Clerk or designee shall record the approved Development Agreement in the Washtenaw County Register of Deeds office, and shall provide a copy of the recorded Agreement to the owner(s)/developer(s) of the subject property. The owner(s)/developer(s) shall be responsible for reimbursing the Township for all costs associated with recording of the Development Agreement.

Section 14.04 Design Review.

The intent of this Section is to establish procedures and guidelines to ensure that the character and environmental objectives of the Growth Management Plan for the Dixboro community will be achieved. This Section is intended to:

1. Establish a Dixboro Design Review Board to provide advisory recommendations to the Planning Commission;
2. Provide procedures and standards for advising residents, property owners, builders, architects, developers, and other interested parties in improving the quality of design of buildings and sites as part of redevelopment, expansion, and new construction projects in the Dixboro community; and
3. Encourage a harmonious blending of contemporary design and construction with Dixboro's existing structures and environmental character.

This Section is not intended to stifle creativity in design or construction, or to require replication of past building styles.

A. Scope.

The scope of design review under this Section for development and building projects in the Dixboro community, as defined in the adopted Growth Management Plan, shall be in accordance with the following:

1. Such reviews shall be limited to sites which are located in a VC (Village Center) or NSC (Neighborhood Shopping Center) zoning district within the Dixboro community, or that abut any of the following road rights-of-way:
 - a. Plymouth Road between Old Ford Road/Tanglewood Drive and Dixboro Road;
 - b. Church Street;
 - c. Short Street;
 - d. Cherry Hill Road south from Plymouth Road to Fleming Creek; and
 - e. Dixboro Road south from Church Street to the Ann Arbor Charter Township boundary.
2. The Dixboro Design Review Board shall have responsibility for reviewing and making advisory recommendations to the Planning Commission on minor or preliminary site plan, preliminary condominium site plan, conditional use permit, and special district area plan applications, prior to Planning Commission action, consistent with this Section and the adopted Design Guidelines for the Historic Village of Dixboro.
3. The Dixboro Design Review Board shall also have responsibility for reviewing and making advisory recommendations to the Zoning Inspector on applications for approval of new single-family dwellings, consistent with this Section and the adopted Design Guidelines for the Historic Village of Dixboro.

4. The Zoning Inspector shall have responsibility for reviewing applications for administrative site plan approval per Section 10.02C (Administrative Approval) and certificates of zoning compliance per Section 1.07 (Certificates of Zoning Compliance). The Zoning Inspector shall make available relevant section(s) of the adopted Design Guidelines for the Historic Village of Dixboro to the applicant, and shall make recommendations on the application to encourage consistency with these guidelines.
5. Any person may meet with the Dixboro Design Review Board during a regularly scheduled meeting without charge to seek input from the Board regarding a proposed development or building project in the Dixboro community. The fee for a special Board meeting shall be as provided for in the Township's adopted fee schedule [amended 8/16/2010, Ord. 174-04].

B. Dixboro Design Review Board.

The Design Review Board shall have seven (7) members, appointed by the Township Supervisor, with approval by the Township Board.

1. Each member shall have a demonstrated interest in the design and environmental character of neighborhoods. The Board shall have in its membership one (1) Planning Commission member, one (1) Township Board member, one (1) architect registered in the State of Michigan, and one (1) person with expertise in real estate, building finance, or a related profession.
2. An employee or contractor of the Township Board shall not serve as a member of the Dixboro Design Review Board.
3. The term of office of each member shall be for three (3) years, except for members serving because of their membership on the Planning Commission or Township Board, whose terms shall be limited to the time they are members of those bodies.
4. All vacancies for unexpired terms shall be filled for the remainder of the term. Members may be reappointed.
5. The Design Review Board shall elect officers for one (1) year terms. Officers shall consist of a Chair, Vice-Chair, and Secretary. An elected officer of the Township shall not serve as Chair.
6. The Design Review Board shall adopt rules for the conduct of its meetings. The rules shall be approved by the Township Board.
7. A member shall abstain from voting on any question in which he or she has a conflict of interest. Failure of a member to abstain in such cases shall constitute malfeasance of office.
8. A member may be removed from office by the Township Board for misfeasance, malfeasance, or nonfeasance in office, upon written charges and following a public hearing held in accordance with Section 1.14 (Public Hearing Procedures). Minutes of the meeting at which the hearing is held shall record the reasons for

the hearing, the motion or resolution, if any, regarding removal from office, and the roll call vote of the Township Board.

9. A quorum shall consist of a majority of all members of the Design Review Board. All advisory recommendations shall be made by majority vote of the members present and voting at any meeting where a quorum exists.
10. Design Review Board meetings shall be open to the public, with proper notice given for each meeting. The Design Review Board shall keep minutes of each meeting, with all findings, recommendations, and votes recorded in the minutes. The vote, absence or abstention of each member shall be recorded into the minutes of the meeting. All minutes shall be filed in the Township Clerk's office.

C. Design Review Board Responsibilities.

The Dixboro Design Review Board shall have the following advisory responsibilities under this Section:

1. The Design Review Board shall meet on request from an applicant for design review. Review of applications for design review shall be subject to the following procedural requirements:
 - a. The applicant shall file with the Township Clerk a completed application form, ten (10) copies of all drawings on standard letter, legal, or tabloid size paper, five (5) sets of scaled architectural drawings, and all other information required by this Section for design review. At the time of application for design review, the applicant shall deposit required review fees and escrow deposits with the Township Treasurer. The Clerk shall promptly transmit copies of the application to the Design Review Board. Each application for design review shall contain the following information:
 - (1) All information required for the associated application for approval under this Ordinance or other Township ordinances.
 - (2) Complete, scaled architectural elevations of proposed construction and relating existing structures.
 - (3) Two (2) section profiles through the site, showing proposed improvements and existing improvements that will remain.
 - (4) Type, color, and texture of primary exterior materials, including samples.
 - (5) Location, size, height, lighting, and materials for proposed signs, with elevation drawings.
 - (6) Location, height, type of light fixtures, method of shielding, and intensity of lighting.
 - (7) Existing and proposed landscaping.
 - (8) Photographs showing the site, existing buildings, and adjacent buildings and features necessary to explain the proposed project.

- b. The Design Review Board shall hold a public meeting on each proposal, review the proposal in terms of the purpose of the zoning district in which the property is located and the standards of this Section, and make written findings and recommendations to the Planning Commission.
 - c. The Design Review Board may hold more than one (1) meeting for the purpose of making recommendations, provided that any recommendation to the Planning Commission shall be made within 65 calendar days following receipt of the request for design review by the Township Clerk.
 - d. The Design Review Board's recommendation shall consist of a written copy of its findings and subsequent resolution. The Planning Commission shall, in reviewing a development or use approval application for a site in the Dixboro community under this Ordinance or other Township ordinances, consider any findings and advisory recommendations of the Design Review Board made in accordance with this Section.
2. The Design Review Board may assist residents, property owners, builders, architects, developers, and other interested parties in determining design features that are appropriate for the Dixboro community in accordance with the adopted Growth Management Plan policies.
 3. The Design Review Board may advise the Township Board and Planning Commission of appropriate guidelines and standards to carry out the objectives of this Section.
 4. The Design Review Board may advise the Township Board and Planning Commission of design and environmental policies appropriate for the Dixboro community.

D. Standards.

The Design Review Board shall consider the following criteria in making findings regarding the acceptability of the exterior design of a proposed building in the Dixboro community. These criteria shall be evaluated in terms of the purpose of the zoning district where the property is located and adopted Growth Management Plan policies.

1. Building height.
2. Proportion of the building's front facade; its relationship of height to width.
3. Proportion of openings in the front facade; the relationship of width to height of windows and doors.
4. The rhythm of solids and voids in the front facade.
5. The rhythm of entrance and front porch projections.
6. Relationship of exterior materials, textures, colors, and architectural details.
7. Relationship of roof shapes.
8. Building scale.
9. Directional expression of the front elevation; structural shape, placement of openings.
10. Relationship of landscaping.

Section 14.05 Natural Features Protection.

This Section is intended to establish minimum regulations necessary to protect groundwater recharge and inflow areas, preserve quality of receiving surface waters and wetlands, minimize soil erosion and siltation, and preserve woodlands and individual trees.

A. Review Standards.

The Planning Commission shall consider and make findings of fact based upon the following criteria as part of the review of a development application subject to this Section:

1. Sufficient information has been provided to determine that the proposed development conforms to all applicable standards of this Section.
2. The standards for approval for the type of plan (e.g. preliminary site plan, final site plan, etc.) have been met by the applicant.
3. The protection and conservation of natural resources from pollution, impairment, or destruction is of paramount concern. Therefore, woodlands, trees, and other natural features regulated by this Section shall have priority over development when there are location alternatives on the development site for proposed structures and other improvements that would permit reasonable use and development of the land in accordance with this Ordinance and other Township ordinances.
4. The integrity of woodland areas and other natural features regulated by this Section will be maintained, regardless of whether such features cross property lines.
5. Where natural features regulated by this Section are proposed to be altered or removed, the applicant has demonstrated that the applicant has considered and pursued all development options available under this Ordinance to preserve such features in a manner that would permit reasonable use and development of the land in accordance with this Ordinance and other Township ordinances.
6. The proposed alteration and/or removal of natural features regulated by this Section is the minimum necessary to allow reasonable use and development of the parcel(s) in accordance with this Ordinance and other Township ordinances.
7. Proposed measures to mitigate the alteration and/or removal of natural features regulated by this Section are sufficient and conform to Ordinance requirements.
8. The proposed protection measures will minimize disturbance of preserved trees and woodlands, and prevent damage to protected natural features from erosion and siltation and/or construction activities.
9. Where the proposed activity involves residential development, the residential structures shall be designed, located, and constructed in a manner that minimizes impacts upon and the need for mitigation of natural features.
10. Notwithstanding the foregoing, no application shall be denied solely on the basis that trees are growing on the parcel subject to review under this Section.

B. Watercourses and Wetlands.

The standards of this subsection 14.05B (Watercourses and Wetlands) shall apply to all parcels proposed for development requiring review and approval of a site plan, site condominium plan, subdivision plat, or Special District Area Plan under this Ordinance or other Township ordinances. The standards of this subsection shall also apply to development of a private road under the Township's Private Road Ordinance (Ord. No. 163) and any construction project requiring a certificate of zoning compliance under this Ordinance.

The following minimum setbacks from wetlands and certain watercourses shall be required for the purpose of protecting groundwater recharge and inflow areas, protecting the quality of receiving surface waters, and minimizing erosion and siltation:

1. **Setback from rivers and streams.** A minimum open space setback of 50 feet shall be maintained from the ordinary high water mark of any rivers and streams.
2. **Setback from wetlands.** A minimum open space setback of 25 feet shall be maintained from the boundary or edge of any wetland, as defined and regulated in the Township Wetlands Ordinance (Ord. No. 135). Where a residential development subject to this Section includes common open space areas, the boundaries of individual single-family residential lots shall be located entirely outside of required wetland setback areas.
3. **Setback from county drains.** A minimum open space setback of 25 feet shall be maintained from the boundary of any dedicated county drain easement not otherwise regulated by this subsection, or a minimum of 50 feet from the centerline of any county drain without a dedicated easement. If a river or stream is also designated as a county drain, the standards for rivers and streams shall apply.
4. **Standards for such open space setback areas.** The following standards shall apply to all open space setback areas required under this subsection:
 - a. Detention basins and similar stormwater management facilities may be constructed within a required setback, provided that appropriate replacement plantings are provided and maintained.
 - b. Docks and similar waterfront structures may be constructed within a required setback, subject to Michigan Department of Environmental Quality (MDEQ) regulations and applicable Township ordinances.
 - c. Trails, paths, boardwalks, and similar passive recreational improvements may be constructed within a required setback, provided that appropriate measures are taken to minimize soil erosion.
 - d. Farming operations and agricultural activities as regulated by the Right to Farm Act (P.A. 93 of 1981, as amended) and the Generally Accepted Agricultural Management Practices (GAAMPS) established by the Michigan Department of Agriculture shall be permitted within a required setback.
 - e. The following activities shall be restricted within any open space setback area required under this subsection:

- (1) Removal of trees and other vegetation shall be limited to removal of invasive or poisonous species and dead or diseased trees, and minimal land clearing and grubbing for activities permitted by this subsection.
 - (2) Fences may be placed within required setback areas, provided that no fence shall impede surface drainage or water flow.
 - (3) No road, driveway, sidewalk or similar improvement shall be located in a required open space setback, except to cross in a more or less perpendicular direction for the purpose of providing access to the property from an adjacent street right-of-way.
- f. The following activities shall be prohibited within any open space setback area required under this subsection:
- (1) Drainage by ditching, underdrains, or other systems.
 - (2) Deposition of any materials, including soil, compost, gravel, garbage, concrete or asphalt debris, and other fill materials.
 - (3) Removal of soils or minerals.
 - (4) Construction or relocation of any parking lot, ground sign, dwelling, building, or other permanent structure.
- g. Before development, land clearing, filling, or any property alteration, the developer or builder shall provide and maintain suitable barriers such as snow fencing, cyclone fencing etc., to protect open space setback areas required under this subsection.

C. Slopes.

The standards of this subsection 14.05C (Slopes) shall apply to all parcels proposed for development requiring review and approval of a site plan, site condominium plan, subdivision plat, or Special District Area Plan under this Ordinance or other Township ordinances. The standards of this subsection shall also apply to development of a private road under the Township's Private Road Ordinance (Ord. No. 163).

No development shall be permitted in areas where the soil is highly erodible, or in any area with existing steep slopes of twenty five percent (25%) or greater. Land areas with slopes of at least twelve percent (12%) but less than twenty five percent (25%) shall be subject to the following:

1. Where such land areas contain other natural features to be preserved in accordance with applicable provisions of this Section, the integrity and profile of such slopes shall also be maintained.
2. Where parcels containing such land areas abut rivers and streams, the integrity and profile of such slopes shall be maintained. Buildings may be built into such slopes, subject to compliance with the applicable requirements of this Ordinance, the State Construction Code, other Township ordinances, and Township engineering standards.

3. Other land areas with such slopes may be developed in accordance with this Ordinance, subject to the following:
 - a. Buildings may be built into such slopes, subject to the applicable requirements of the State Construction Code, other Township ordinances, and Township engineering standards.
 - b. Cut and fill activities within existing and planned road rights-of-way, and for public utility and other public improvements, shall be limited to the minimum necessary to comply with the applicable engineering standards of the Township and outside agencies with jurisdiction.
 - c. Retaining walls may be used to maximize preservation of existing slopes.
 - d. Except as otherwise provided in the foregoing subsections of this Section 14.05C.3., the integrity and profile of the slope shall be maintained.

D. Floodplains.

The standards of this subsection 14.05D (Floodplains) shall apply to all parcels proposed for development requiring review and approval of a site plan, site condominium plan, subdivision plat, or Special District Area Plan under this Ordinance or other Township ordinances. The standards of this subsection shall also apply to development of a private road under the Township's Private Road Ordinance (Ord. No. 163).

Where a description and delineation of floodplains is required in accordance with this Ordinance or other Township ordinances, the following shall apply:

1. Development shall be prohibited within the 100-year floodplain of any existing watercourse or wetland.
2. It shall be the applicant's responsibility to delineate the 100-year floodplain boundaries. Where there is any uncertainty, contradiction, or conflict as to the location of the floodplain boundaries, the final determination of the boundaries shall be made by the Township Engineer or designated wetlands consultant after referral from the Planning Commission.

E. Groundwater Recharge Areas.

The standards of this subsection 14.05E (Groundwater Recharge Areas) shall apply to all parcels proposed for development requiring review and approval of a site plan, site condominium plan, subdivision plat, or Special District Area Plan under this Ordinance or other Township ordinances.

Where a description and delineation of groundwater recharge areas is required in accordance with this Ordinance or other Township ordinances, the following shall apply:

1. Stormwater management facilities shall be designed to maintain or improve natural retention and infiltration characteristics of groundwater recharge areas.
2. Site plans shall delineate the location and extent of any contaminated soils or groundwater on the site or that may affect the proposed development.
3. The applicant shall demonstrate how the proposed site design and layout of uses on the development site will:

- a. Preserve the groundwater recharge areas and the infiltration capacity of the soils;
 - b. Prevent polluted materials from infiltrating into groundwater;
 - c. Minimize impervious areas through site planning that makes most efficient use of paved, developed space and that maximizes open space areas; and
 - d. Manage stormwater runoff to maximize on-site infiltration and provide adequate pre-treatment and filtering of sediments and other impurities.
4. The Planning Commission may require the use of buffer zones to protect surface vegetation, or the installation and use of such other techniques it deems necessary to mitigate or retain stormwater runoff or protect groundwater recharge areas.

F. Woodlands and Tree Preservation.

The standards of this subsection 14.05F (Woodlands and Tree Preservation) shall apply to all parcels proposed for development requiring review and approval of a site plan, site condominium plan, subdivision plat, or Special District Area Plan under this Ordinance or other Township ordinances. The following tree and woodland preservation and mitigation standards shall apply to all developments subject to this Section:

1. **Intent.** Rapid growth and increasing demands upon natural resources have encroached upon, despoiled or eliminated many of the trees and other forms of vegetation, and associated processes, that constitute important physical, aesthetic, recreational, and economic assets to existing and future residents of the Township. Specifically, the Township finds that woodlands and trees:
 - a. Protect public health and safety by reducing noise and the mental and physical impacts of noise pollution; absorbing air pollutants and carbon dioxide; reducing flood risk and conserving surface water quality by minimizing soil erosion and siltation; providing buffering to reduce wind and storm impacts; and maintaining visual screening with its accompanying summer cooling effect.
 - b. Contribute significantly to the Township's general welfare by maintaining natural beauty, providing recreational and educational opportunities, and representing an irreplaceable heritage for existing and future residents.
 - c. Are matters of paramount public concern, as provided by the Michigan Constitution (1963, Article IV, Section 52), and the Natural Resource and Environmental Protection Act of 1994 (P.A. 451 of 1994, as amended).
2. **Purpose.** The woodlands and landmark tree preservation and mitigation standards of this Section are hereby established to:
 - a. Provide for the protection, preservation, replacement, proper maintenance, and use of trees and woodlands located in the Township; minimize disturbance; prevent damage from erosion and siltation and/or construction activities; and prevent loss of wildlife habitat and vegetation.

In this regard, it is the intent of this Section to protect the integrity of woodlands as a whole, recognizing that woodlands serve as part of an ecosystem, and to place priority on preservation of woodlands and trees.

- b. Protect the woodlands and trees of the Township, support local property values, and promote the natural beauty of the Township.
- c. Prevent owners or developers of property from removing trees from land prior to or in anticipation of development.
- d. Provide for the replacement of trees removed, where no reasonable alternative site development is available.
- e. Respond to public concern for preservation of natural resources in the interest of public health, safety and general welfare of Township residents.

3. **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
Required information shall be provided by a registered land surveyor, engineer or landscape architect, or a certified 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 by means of a reasonable sampling, including: <ul style="list-style-type: none"> 1. Diversity of tree species. 2. Tree sizes and density. 3. Health and vigor of the trees, including general documentation of dying and diseased trees by species and condition. 4. Soil conditions and drainage characteristics of the site. 5. 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; by means of a reasonable sampling with trees identified by location, size, and species.	●	

<p align="center">Required Development Plan Information for Woodlands and Tree Preservation</p>	Preliminary Plan	Final Plan												
	<p>Tree inventory of all regulated trees as specified in Section 14.05F.5., in a form acceptable to the Planning Commission, as follows:</p> <ol style="list-style-type: none"> 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. General outline and evaluation of woodlands outside the development site and not otherwise impacted by the development. Detailed inventory of such trees shall only be required where necessary to verify compliance with the minimum tree preservation requirements of this Section. 		●											
<p>Identify all regulated trees to be removed, relocated or preserved.</p>		●												
<p>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.</p>		●												
<p>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.</p>		●												
<p>Invasive species information, including the general locations of the following invasive species, a description of the extent of growth, the condition and size range of such species on the site, and percentage of the site covered by such species:</p> <table border="1"> <thead> <tr> <th>Common Name</th> <th>Species</th> </tr> </thead> <tbody> <tr> <td>Common (European) and Glossy Buckthorn</td> <td><i>Rhamnaceae family</i></td> </tr> <tr> <td>Autumn Olive</td> <td><i>Elaeagnus umbellata</i></td> </tr> <tr> <td>Honeysuckle</td> <td><i>Lonicera tartarica</i></td> </tr> <tr> <td>Multiflora Rose</td> <td><i>Rosa multiflora</i></td> </tr> <tr> <td>Phragmites</td> <td><i>Phragmites australis</i></td> </tr> </tbody> </table>	Common Name	Species	Common (European) and Glossy Buckthorn	<i>Rhamnaceae family</i>	Autumn Olive	<i>Elaeagnus umbellata</i>	Honeysuckle	<i>Lonicera tartarica</i>	Multiflora Rose	<i>Rosa multiflora</i>	Phragmites	<i>Phragmites australis</i>		●
Common Name	Species													
Common (European) and Glossy Buckthorn	<i>Rhamnaceae family</i>													
Autumn Olive	<i>Elaeagnus umbellata</i>													
Honeysuckle	<i>Lonicera tartarica</i>													
Multiflora Rose	<i>Rosa multiflora</i>													
Phragmites	<i>Phragmites australis</i>													
<p>A plan for eradication and control of these four (4) invasive species as part of the development project.</p>		●												

Required Development Plan Information for Woodlands and Tree Preservation	Preliminary Plan	Final Plan
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.	●	●
A statement of compliance with the tree preservation and replacement tree requirements of this Section, including the numbers of regulated trees to be preserved and removed, percentages of regulated trees on the site before and after any removal, and all required calculations.		●
Such other information and detail as may be required to demonstrate compliance with the requirements of this Section.		●

[amended 2/21/2017, Ord. 174-19]

4. **Landmark and sovereign tree standards.** A landmark tree, as regulated by this Section, shall be any tree that has a diameter at breast height (D.B.H.) of 24 inches or greater; or that is of a type and D.B.H. equal to or greater than that shown on the following table. A sovereign tree, as regulated by this Section, shall be any tree that is registered on the National Big Tree Registry or a similar national or state registry accepted by the Planning Commission; that has been documented by the Township, a historian, or other means accepted by the Planning Commission to be closely associated with an event, person, or place of historical significance to the Township; or that is of a species and diameter at breast height (D.B.H.) equal to or greater than that shown on the following table:

Common Name	Species	Landmark Tree D.B.H.	Sovereign Tree D.B.H.
Any tree species that has a diameter at breast height (D.B.H.) of at least:		24 inches	
Basswood	<i>Tilia americana</i>	18 inches	54 inches
Beech	<i>Fagus grandifolia</i>	18 inches	45 inches
Buckeye, Ohio	<i>Aesculus glabra</i>	18 inches	
Catalpa	<i>Catalpa</i> spp.	18 inches	45 inches
Cherry, Black	<i>Prunus serotina</i>	18 inches	54 inches
Elm, American	<i>Ulmus americana</i>	18 inches	50 inches
Fir	<i>Abies</i> spp.	18 inches	
Fir, Douglas	<i>Pseudotsuga menziesii</i>	18 inches	
Kentucky Coffee Tree	<i>Gymnocladus dioicus</i>	18 inches	40 inches
Pine	<i>Pinus</i> spp.	18 inches	
Sycamore or London Plane	<i>Platanus</i> spp.	18 inches	54 inches
Spruce	<i>Picea</i> spp.	18 inches	

Common Name	Species	Landmark Tree D.B.H.	Sovereign Tree D.B.H.
Tulip-tree	<i>Liriodendron tulipifera</i>	18 inches	54 inches
Walnut, Black	<i>Juglans nigra</i>	18 inches	54 inches
Hickory, various	<i>Carya spp.</i>	16 inches	35 inches
Maple	<i>Acer spp.</i>	16 inches	48 inches
Oak	<i>Quercus spp.</i>	16 inches	48 inches
Birch	<i>Betula spp.</i>	12 inches	36 inches
Cherry	<i>Prunus spp.</i>	12 inches	36 inches
American Chestnut	<i>Castanea dentata</i>	Six (6) inches	18 inches
Butternut	<i>Juglans cinerea</i>	Six (6) inches	18 inches

5. **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 in accordance with the following schedule:</p>			
Regulated Trees	Replacement Ratio (number of replacement trees per removed tree)		
Coniferous (height)			
10.0 to 15.0 feet	one to one (1:1)		
15.01 to 30.0 feet	three to one (3:1)		
More than 30.0 feet	six to one (6:1)		
Landmark coniferous tree	one (1) tree per inch of removed tree D.B.H.	●	●
Deciduous (D.B.H.)			
8.0 to 12.0 inches	one to one (1:1)		
12.01 to 16.0 inches	three to one (3:1)		
More than 16.0 inches	six to one (6:1)		
Landmark deciduous tree	one (1) tree per inch of removed tree D.B.H.		
Sovereign (D.B.H.)			
Sovereign tree	two (2) trees per inch of removed tree D.B.H.		

Standards for Tree Preservation and Replacement	Existing Trees	Replacement Trees
<p>A minimum of thirty percent (30%) of the total number of regulated trees as currently existing or that have existed on the subject site within the last five (5) years shall be preserved and left standing. This calculation shall be made based upon the number of regulated trees either within the:</p> <ol style="list-style-type: none"> 1. Defined area of the development site as shown on the development plan, where woodlands outside of this area and not otherwise impacted by the development will not be disturbed; or the 2. Lot boundaries of the development parcel, where all such trees have been included in the detailed tree inventory. <p>The Planning Commission shall consider preserved woodlands outside of the development site as part of determining whether the development plans conform to this requirement.</p>	●	
<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, and 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 woody shrub species listed in Section 14.05F.3. 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>), 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>Regulated tree removal shall be limited to any of the following:</p> <ol style="list-style-type: none"> 1. When necessary for the location of a structure or site improvement where no reasonable alternative location for the structure or improvement can be identified, after consideration of all development options available under this Ordinance. 2. When necessary for the location of a structure or site improvement where no reasonable alternative location for the structure or improvement can be identified, after consideration of all development options available under this Ordinance. 3. 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. <p>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>	●	

Standards for Tree Preservation and Replacement	Existing Trees	Replacement Trees
The Planning Commission may require that sovereign trees on a development parcel subject to this Section be preserved and incorporated into the proposed development, and will consider creative arrangements and clustering of lots or development areas to preserve additional landmark and sovereign trees.	●	
Regulated trees shall be tagged in the field, using non-corrosive metal tags, with by the identifying number designated on the required tree inventory.	●	
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.	●	
Replacement trees shall be of the same or a more desirable 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 14.10H (Prohibited Plant Materials). Trees of such species that are otherwise required by this Ordinance for screening or buffering purposes may also be used to satisfy up to fifty percent (50%) of the replacement tree requirements of this Section.		●
Replacement trees shall conform to Section 14.10B (General Plant Material Standards) and Section 14.10C (Standards for Size and Variety of Plant Materials). Such trees shall be: <ol style="list-style-type: none"> 1. Nursery grown or comparable relocated from the same lot. 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. Burlap to be removed or cut open at planting. 3. Number I grade, with a straight, unsecured trunk and a well-developed uniform crown (park grade acceptable). 		●
The location of any replacement tree shall be on the same parcel as the removed tree wherever feasible, as determined by the Township. If tree replacement on the same parcel is not feasible, the Township may: <ol style="list-style-type: none"> 1. Accept an alternative planting location in 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. 		●
Replacement trees shall be approved through inspection by the Zoning Inspector or designated representative.		●

6. **Installation and maintenance.** Installation, care, and maintenance of all existing trees and replacement trees subject to the requirements of this Section shall conform to the requirements of Section 14.10I (Plant Material Installation and Maintenance), and the following:

Installation and Maintenance Requirements	Existing Trees	Replacement Trees
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.	●	●
Prior to the issuance of the first building permit, the developer shall post a performance guarantee with the Township [per Section 1.12C (Performance Guarantee)] in an amount estimated by the developer and approved by the Township Engineer 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 by the designated Township official.	●	●
The developer shall be responsible for replacing any tree used to satisfy the replacement requirements of this Section determined by the developer, Zoning Inspector or designated Township representative to be diseased, dead or dying within three (3) years after installation.	●	●
The developer shall be responsible for replacing any regulated tree determined by the developer, Zoning Inspector or designated Township representative 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.	●	●
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) year 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 determined by the Zoning Inspector or designated Township representative 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.	●	●

Installation and Maintenance Requirements	Existing Trees	Replacement 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 outer perimeter of areas to be cleared.	●	
Protected area around preserved trees shall be 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. Such areas around preserved trees shall be protected before and during development, filling, land clearing, or any property alteration or construction activity.	●	
Protective barriers of wood, metal, or other suitable materials (such as snow fencing, cyclone fencing, etc.) acceptable to the Township Engineer shall be placed parallel to the outer perimeter of each protected area.	●	
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 motorized vehicles or machinery shall be permitted within this area.	●	

7. **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. Tree replacement shall not be required for removal of regulated trees from within a road right-of-way by written order of the county or state road authority with jurisdiction for traffic safety purposes; or from within the boundaries of an adjoining parcel of land by the independent action of a landowner not associated with the development subject to this Section.

8. **Woodland protection.** In accordance with Master Plan objectives and policies for woodlands protection, developers of land subject to this Section are encouraged to conserve woodlands through the use of conservation easements, inclusion of such areas within the development's general common elements or other common areas, or by other methods of long-term protection.

- a. The official Township Woodland Map is on file at the Township offices, and all notations, references, and information shown thereon shall be as much a part of this Section as if fully described herein.
 - b. If, because of problems with scale or detail, there is any ambiguity as to whether a particular area is a part of a woodland, that determination shall be made by or through the direction of the Planning Commission.
9. **Verification of plan information.** The Township may engage the services of a landscape architect, certified arborist or other consultant whose expertise the Township values to confirm the accuracy of the tree survey and related documentation of compliance with this Section before a final decision is made. Such expenses shall be subject to reimbursement by the applicant per Section 1.12B (Escrow Deposits for Variable Costs and Expenses).
10. **Inspections.** To ensure compliance with this Section, the Township may perform periodic inspections of subject lots or parcels prior to mass grading and during all phases of construction and development, as well as for up to three (3) calendar years after completion of the development project. The Township may employ a landscape architect, certified arborist or other consultant whose expertise the Township values to verify compliance with the approved final site plan, and to inspect and verify the health and condition of any tree designated to remain, any transplanted tree, and any replacement trees under this Section. The applicant shall incur all costs associated with such inspections [amended 6/16/2014, Ord. 174-15].

Section 14.06 Water Supply and Sanitary Sewerage Facilities.

Dwellings, lots, and principal buildings for which provision of a potable water supply or a sanitary sewage disposal facility is required by state or county regulation or otherwise necessary before occupancy by any use permitted under this Ordinance shall be subject to the following:

1. **Connection to public water and sewer required.** The following structures and uses shall be connected to publicly owned and operated sanitary sewerage and water supply systems:
 - a. All dwelling units in the Urban Residential Districts.
 - b. All buildings in the Medical Services (MS) Special District.
 - c. All buildings in the Business Districts, Planned Manufacturing (PM) Special District, and all other zoning districts located within an Urban Service Area as defined in the adopted Growth Management Plan.

Individual lots in such zoning districts in existence at the time of adoption of this Ordinance may use independent, on-site wells and septic systems approved by the Washtenaw County Environmental Health Division if publicly owned and operated sanitary sewerage and water supply systems are not available.

2. **Private community wastewater systems (PCWS).** Private wastewater systems (PCWS) for sanitary sewage treatment shall be prohibited in all zoning districts except as part of a Planned Community (PC) Special District and in compliance with the Private Community Wastewater System Ordinance (Ord. No. 166, as amended.)
3. **Screening standards for sewage treatment and disposal facilities.** In addition to any state or county requirements, all private community wastewater facilities and publicly owned and operated sewage treatment and disposal facilities and operations shall be completely enclosed by a fence not less than six (6) feet high. Such facilities and operations shall be surrounded on all sides by a buffer strip at least 200 feet wide within which dense evergreen screening shall be placed in accordance with Section 14.10D (Methods of Screening) to screen the installation from view.

Section 14.07 Wind Energy Conversion Systems.

This Section is intended 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. The siting, design, location, and installation regulations of this Section have been determined to be the minimum necessary to meet the intent and purposes of this Section and Ordinance. In no case shall the establishment of this Section guarantee wind rights or establish access to the wind. Wind energy conversion systems (WECS) in the Township shall be subject to the following:

A. Agricultural WECS Approval.

Agricultural WECS shall be permitted accessory to a permitted farm or agricultural operation on a lot of record in the Rural Districts, subject to Zoning Inspector approval in accordance with Section 1.07 (Certificate of Zoning Compliance) and the following:

1. The parcel where the agricultural WECS is proposed to be located shall have a minimum lot area of two (2) acres. The number of permitted agricultural WECS per parcel shall be subject to the following:

Minimum Lot Area	Maximum Number of Permitted WECS
2.0 to 40.0 acres	one (1)
Over 40.0 acres	two (2)

2. Agricultural WECS under this subsection shall not exceed a maximum height of 75 feet, measured from the base of the structure to the highest reach of its blade.
3. All agricultural WECS projects shall be set back from lot boundaries, road rights-of-way, and principal building(s) a minimum distance equal to one hundred fifty percent (150%) of the height of the structure.
4. All agricultural WECS project towers or poles shall be protected by anti-climbing devices; such as fences with locking portals at least six feet high; anti-climbing devices 12 feet from base of pole; or anchor points for guy wires supporting tower shall be enclosed by a six-foot high fence or shall be located within the confines of a yard that is completely fenced.
5. The agricultural WECS shall not cause interference with microwave transmissions, residential television reception or radio reception.
6. All agricultural WECS projects shall adhere to all applicable electrical codes and standards, shall remove fuel sources (such as vegetation) from the immediate vicinity of electrical gear and connections, and shall utilize twistable cables on turbines.
7. The noise level measured at the property line of the property on which the agricultural WECS project has been installed shall not exceed 55 decibels.

8. Agricultural WECS shall be painted a neutral color that minimizes off-site visibility, provided that historical-style agricultural WECS not exceeding 50 feet in height with a fan containing more than twelve (12) blades and not exceeding ten (10) feet in diameter shall be exempted from this requirement.
9. Upon determination by the Zoning Inspector that an application to install agricultural WECS on more than one (1) parcel under common ownership or control meets the "commercial WECS" definition per Section 17.03 (Definitions), the commercial WECS standards and approval process shall apply.

B. Other WECS Approval.

All agricultural WECS exceeding 75 feet in height, all private WECS, and all commercial WECS shall require Conditional Use Permit approval in accordance with Article 11.0 (Conditional Uses) and the standards of this Section. The following additional 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 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 to the State Construction Code and all other applicable building, electrical, and fire codes.

C. Permitted Locations.

Wind energy conversion systems shall only be permitted on parcels with a minimum lot area of two (2) acres in the Rural Districts and the PSP (Public/Semi-Public Uses) District.

D. General WECS Standards.

The following standards shall apply to private and commercial WECS in the Township:

1. **Design safety certification.** A Professional Engineer registered in the State of Michigan shall certify the safety of the design of all private and commercial WECS towers. The standard for certification shall be included with the permit application.
2. **Controls and brakes.** All private and commercial WECS projects shall be equipped with manual and automatic controls to limit rotation of blades to a speed below the designed limits of the WECS. The Professional Engineer shall certify that the rotor and overspeed control design and fabrication conform to applicable design standards. No changes or alterations from certified design shall be permitted unless accompanied by a Professional Engineer's statement of certification.
3. **Electrical components.** All electrical compartments, storage facilities, wire conduit and interconnections with utility companies will conform to national and local electrical codes.
4. **Compliance with Township ordinances.** All private and commercial WECS projects shall be in compliance with all requirements of this Section and Ordinance, and other applicable Township ordinances.
5. **Setbacks.** All private and commercial WECS projects shall be set back from lot boundaries, road rights-of-way, and principal building(s) a minimum distance equal to one hundred fifty percent (150%) of the height of the structure, measured from the base of the structure to the highest reach of its blade.
6. **Height.** Private WECS projects shall conform to the maximum height standards of the zoning district. Commercial WECS projects shall be exempt from the height requirements of this Ordinance, subject to the provisions of Article 11.0 (Conditional Uses), and compliance with Federal Aviation Administration (FAA) regulations.
7. **Installation certification.** The Professional Engineer shall certify that the construction and installation of the private or commercial WECS project meets or exceeds the manufacturer's construction and installation standards.
8. **Climb prevention.** All private and commercial WECS project towers or poles shall be protected by anti-climbing devices; such as fences with locking portals at least six feet high; anti-climbing devices 12 feet from base of pole; or anchor points for guy wires supporting tower shall be enclosed by a six-foot high fence or shall be located within the confines of a yard that is completely fenced.
9. **Interference.** The private or commercial WECS shall not cause interference with microwave transmissions, wireless communications, residential television reception, or radio reception.

10. **Fire risk.** All private and commercial WECS projects shall adhere to all applicable electrical codes and standards, shall remove fuel sources (such as vegetation) from the immediate vicinity of electrical gear and connections, and shall utilize twistable cables on turbines.
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.
12. **Noise levels.** The noise level measured at the property line of the property on which the private or commercial WECS project has been installed shall not exceed 55 decibels.
13. **Liability insurance.** The owner or operator of the private or commercial WECS project shall maintain a current insurance policy with a bond rating acceptable to the Township to cover installation and operation of the WECS project. The amount of the policy shall be established as a condition of Conditional Use Permit approval. For a private WECS projects accessory to a principal residence, proof of homeowner's insurance with specific coverage for the WECS shall satisfy this requirement.

E. Additional Standards for Commercial WECS Projects.

The following additional standards shall apply to all commercial wind energy conversion systems in the Township:

1. **Color.** Towers and blades shall be painted a neutral color that minimizes off-site visibility, or as otherwise required by law.
2. **Compliance with FAA.** It shall be the responsibility of the person in charge of the commercial WECS project to complete the proper FAA applications and obtain the proper permits for the WECS project. It shall also be the responsibility of the person in charge of the commercial WECS project to obtain a determination of no significant impact to air navigation from the FAA.
3. **Warnings.** A visible warning sign of high voltage may be required by the Township to be placed at the base of all commercial WECS projects. Such signs shall be located a maximum of 300 feet apart and at all points of site ingress and egress.
4. **Annual inspection.** Every commercial WECS project shall be inspected 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. Such records shall be submitted to the Zoning Inspector and considered a part of the continuing Conditional Use Permit approval.

5. **Compliance with additional regulations.** It shall be the responsibility of the person in charge of the commercial WECS project to contact the FCC and FAA regarding additional permits necessary or any other applicable Federal or State regulations for the installation.
6. **Migratory birds.** The Township may require an avian study conducted by a qualified professional to determine any potential impacts the commercial WECS project may present to migratory birds. The study as part of the special use permit shall provide assurances that the WECS project does not negatively impact the path of migratory birds.
7. **Decommissioning plan and escrow.** Commercial 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 state how the facility will be decommissioned, the Professional Engineer's estimated cost of decommissioning, the financial resources to be used to accomplish decommissioning, and the escrow agent with which the resources shall be deposited. The decommissioning plan shall also include an agreement between the applicant and the Township that:

- a. The financial resources for decommissioning shall be in the form of a performance guarantee in accordance with the requirements of Section 1.08C (Performance Guarantees).
- b. The Township shall have access to the performance guarantee 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.
- c. The Township is granted the right of entry onto the site, pursuant to reasonable notice, to effect or complete decommissioning.
- d. 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 applicant or applicant successor for decommissioning costs in excess of the amount deposited in escrow and to file a lien against any real estate owned by applicant or applicant's 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.

Section 14.08 Trash Storage and Disposal Standards.

Garbage, trash, and similar refuse to be stored outside a building occupied or intended to be occupied by a multiple-family residential or non-residential use in any zoning district shall be kept within lidded containers and stored within a screened enclosure. Such trash storage areas and enclosures shall be subject to the following:

1. **Garbage, trash, and refuse.** Outdoor trash storage shall be limited to normal refuse collected on a regular basis and maintained in a neat, orderly and sanitary condition.
 - a. In no instance shall any refuse be visible above required screening.
 - b. The Planning Commission may require internal storage and the use of trash compactors where, in the determination of the Commission, such measures are necessary to serve the public health, safety, and welfare.
2. **Outdoor trash storage area screening.** Outdoor trash storage areas shall be screened and secured in accordance with the following:
 - a. The enclosure shall be constructed of a solid, obscuring material, such as wood, concrete block, or brick, which is architecturally compatible with the architectural materials used in the site development. The enclosure walls shall be a minimum of six (6) feet in height.
 - b. The enclosure shall be secured by steel-reinforced and lockable gate at least six (6) feet in height, and constructed of opaque material compatible with the wall materials.
 - c. Concrete-filled bollards or similar protective devices shall be installed at the opening and to the interior rear of the enclosed area to prevent damage to the walls.
 - d. A concrete pad at least four (4) inches thick shall be provided under the trash storage area, extending out a minimum of ten (10) feet in front of the enclosure's gates.
 - e. Such storage area shall be located and arranged as to minimize visibility from adjacent road rights-of-way.

Section 14.09 Building Form and Composition.

The composition, orientation, and form of new construction and new buildings in the Township shall be subject to the following:

A. Scope.

The standards of this Section shall apply to all new construction, subdivision and site condominium developments, and new buildings subject to site plan review per Article 10.0 (Site Plan Review), condominium site plan approval per Article 12.0 (Condominium Regulations), Special District Area Plan approval per Article 7.0 (Special District Regulations), or Zoning Inspector approval per Section 1.07 (Certificates of Zoning Compliance). The requirements of this Section are not intended to regulate structural quality, workmanship or the performance and maintenance characteristics of various materials.

B. Residential Building Exteriors.

This Section has been established to promote the consistent, orderly development of the Township's residential neighborhoods by assuring that a satisfactory and harmonious relationship will exist between proposed development and existing and prospective development of contiguous lands and adjacent neighborhoods. The following shall apply to all single family, two family, and multiple family attached and detached dwellings.

1. If vinyl, aluminum, or steel siding is to be installed on any dwelling, the area of all such siding shall not exceed fifty percent (50%) of the total area on the front and side dwelling elevations.
 - a. All exposed exterior surfaces of a building's front and side elevations, inclusive of window and door surfaces, shall be calculated to represent one hundred percent (100%) of the exterior wall surface.
 - b. The following shall apply where a rear dwelling elevation faces towards and is visible from an abutting primary road as classified by the master transportation plans of the Township, or county or state road authorities:
 - (1) The rear elevation shall be improved with exterior façade materials consistent with the types and percentages of such materials as required for the front dwelling elevation.
 - (2) This standard shall not apply to rear dwelling elevations where a landscape strip will screen the rear elevation from view, as shown on an approved final landscape plan. The landscape strip shall conform to the requirements of Section 3.203F (Landscape Strip).
2. A minimum six (6) inch roof overhang shall be provided at all dwellings eaves and gables.

C. Non-Residential Building Exteriors.

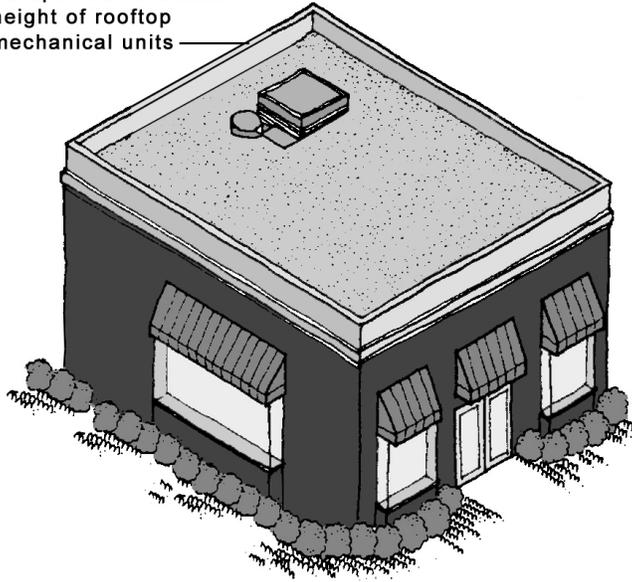
The quality of non-residential building design, placement, and composition is essential to provide a comfortable, human-scale environment in the Township, and maintain the

Township's attractiveness and economic vitality. Accordingly, it is the purpose of this Section to maintain the visual environment of the Township, protect the general welfare by ensuring that the Township's property values, appearance, character, and economic well-being are preserved through minimum non-residential building composition and placement standards. 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:

1. **Materials.** If vinyl, aluminum, or steel siding is to be installed on any building, the area of all such siding shall not exceed fifty percent (50%) of the total area on the front and side building elevations. All exposed exterior surfaces of a building's front and side elevations, inclusive of window and door surfaces, shall be calculated to represent one hundred percent (100%) of the exterior wall surface.
2. **Facade variation.** Building facade walls exceeding 100 feet in length shall be subdivided into bays, through the location and arrangement of architectural features and design variations. Such features and design elements may include, but are not limited to projections, bays, recesses, enhanced facade materials and architectural detailing, and variations in building height, roof forms, and window patterns (see illustration).
3. **Public entrances.** Buildings shall have at least one (1) public entrance that faces a public road right-of-way or internal development street. Additional public entrances shall be permitted on the rear or side facade, including primary access to other uses in a multi-tenant building.
4. **Rear facade.** 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.
5. **Rooftop 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).
6. **Security and safety equipment.** Exterior security gates or roll-down security doors shall be prohibited. Link or grill type security devices shall be permitted on the interior of the building. 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

Parapet wall exceeds
height of rooftop
mechanical units



Roof Design



Facade Variation

Section 14.10 Screening and Land Use Buffers.

Screening and land use buffers are necessary for the protection and enhancement of the environment, and 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. Screening and buffering also contribute to a healthy development pattern, and increase the level of privacy for residential uses in the Township.

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 be considered the minimum necessary to achieve the purposes of this Section and Ordinance. The standards of this Section shall apply to all uses, lots, and sites altered, developed or expanded after the effective date of this Ordinance that are subject to review per Section 10.0 (Site Plan Review), condominium site plan approval per Article 12.0 (Condominium Regulations), or Special District Area Plan approval per Article 7.0 (Special District Regulations). Where existing sites have been developed without adequate screening or buffering, the purposes of this Section shall be achieved through improvements that are in reasonable proportion to the scale and scope of proposed building and other site improvements.

B. General Plant Material 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 3.208 (Corner Clearance Zones), 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 utility lines, and access to or visibility of fire hydrants. The anticipated height at maturity of trees planted near overhead utility lines shall not exceed the line height above grade.
3. **Protection.** Where pavement and landscape areas interface, concrete 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 southern Lower Peninsula 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 hydro-seeded, provided that adequate measures are taken to 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 used in lieu of grass shall be planted 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 at a minimum depth of three (3) inches. Mulch used around trees and shrubs shall be a minimum of four (4) inches deep, and shall be pulled one (1) inch away from tree trunks. 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.

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 schedule for minimum sizes at planting:

Screening Materials	Minimum Size at Installation
Deciduous Shade Trees	2½ - 3 caliper-inches diameter
Evergreen Trees	6.0 feet overall height
Deciduous Ornamental Trees	2.0 caliper-inches diameter or 6 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):
 - a. Greenbelts shall have a minimum width of ten (10) feet, and may be interrupted only to provide for pedestrian or vehicular access.
 - b. Greenbelts shall be sodded, hydro-seeded, or planted with appropriate groundcovers.
 - c. A mixture of deciduous shade trees, ornamental trees, evergreen trees, and shrubs shall be planted along the greenbelt buffer at a minimum concentration of one (1) tree and three (3) shrubs per 15 linear feet of greenbelt length. The Planning Commission may require additional plantings to achieve the screening objectives of this Section.
 - d. Such required plant materials may be placed at uniform intervals, at random or in groupings.
 - e. 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):
 - 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 the predominant impacts are at or below eye level. This method shall consist of an ornamental, rail or privacy fence constructed along the lot or zoning district boundary, or around the perimeter of the area to be screened, subject to the following (see illustration):
- 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.
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):
- a. Berms shall have side slopes no steeper than four (4) feet horizontal to one (1) foot vertical (4:1 ratio).
 - b. Berms shall have a minimum height of three (3) feet above the grade elevation. Overall berm height shall be adequate for the intended screening function. Grade elevation shall be the ground elevation at the nearest lot line adjacent to the proposed berm.
 - 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 and graded 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. Such trees shall be planted a maximum of 15 feet apart in at least two (2) staggered rows (see illustration).

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):
- 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 a stone or concrete cap.
 - 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 arranged to improve the safety of pedestrian and motorists; guide traffic movement; define egress/ingress points, traffic circulation, and fire lanes; and improve the appearance of the parking area. 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 14.10D (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 shall be used to cover the remaining areas of the island. The Planning Commission may require additional plantings to achieve the objectives of this Section.
 - 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. The use of rain gardens, bioswales, and similar naturalized stormwater management systems with appropriate plantings is encouraged, provided that such systems shall conform to the Township's adopted engineering standards.

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 14.10D (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 are not considered desirable plant materials because of various problems, except where removal of existing trees would result in a loss of screening or buffering, or where noted below:

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 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
<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. Plant Material Installation and Maintenance.

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

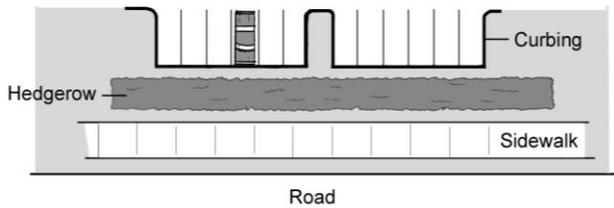
1. **Deadline for installation.** Installation of required screening elements and plant materials shall be completed within 365 calendar days from the date of site plan approval for the project.
2. **Extension.** The Township Planner or Zoning Inspector may extend the deadline to allow installation of 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 Inspector may require submittal of a performance guarantee, per Section 1.08C (Performance Guarantees), to cover the cost of installing required screening elements and plant materials. After installation has been completed, the Township Planner or Zoning Inspector 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 all 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. All 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.

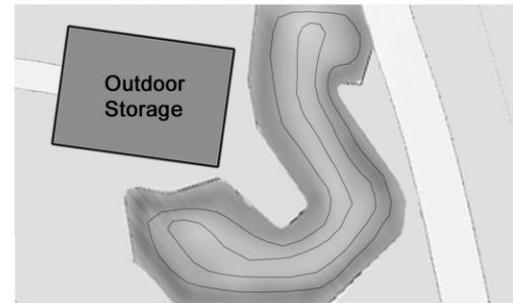
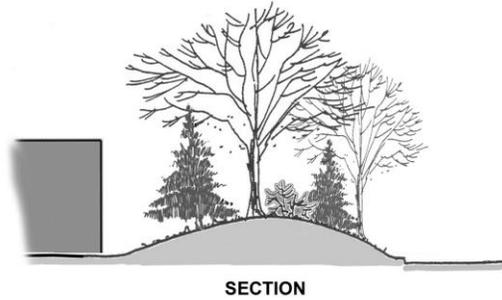
The Planning Commission shall have the authority to approve alternative designs or plant materials, and to determine how the standards of this Section apply to existing conditions and redevelopment sites in accordance with the following:

1. **Alternative designs or materials.** The Planning Commission may approve alternative landscape designs or plant materials upon determination that the alternative would meet the purpose and objectives of this Section.
2. **Existing conditions.** The Planning Commission shall have the authority to determine that requirements of this Section have been satisfied by existing topography, vegetation or other means acceptable to the Planning Commission.
3. **Redevelopment sites.** 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.

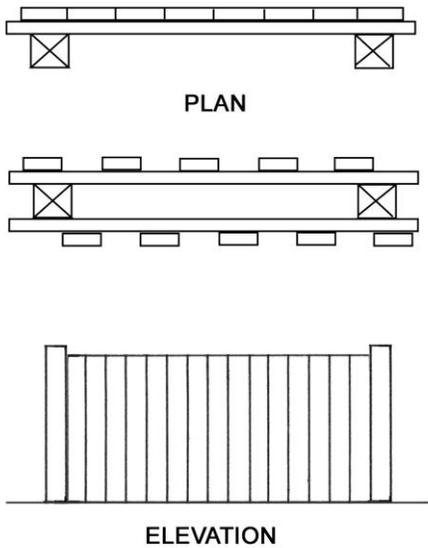
ILLUSTRATIONS



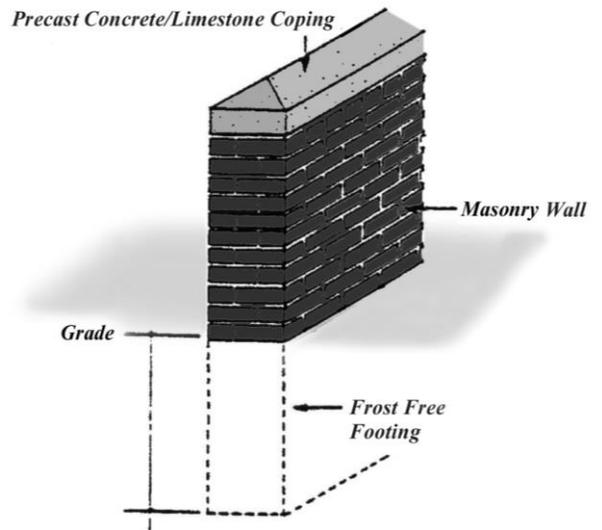
Hedgerow



Berm

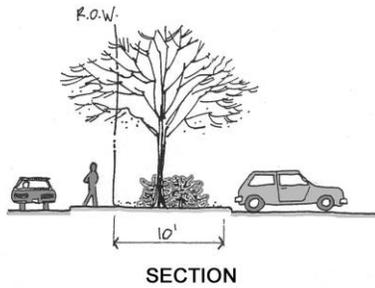
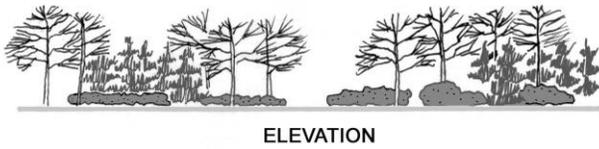
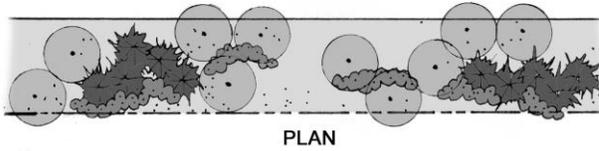


Fence

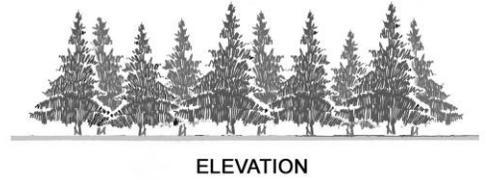
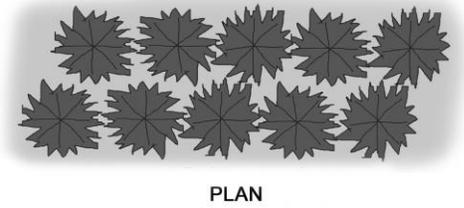


Screen Wall

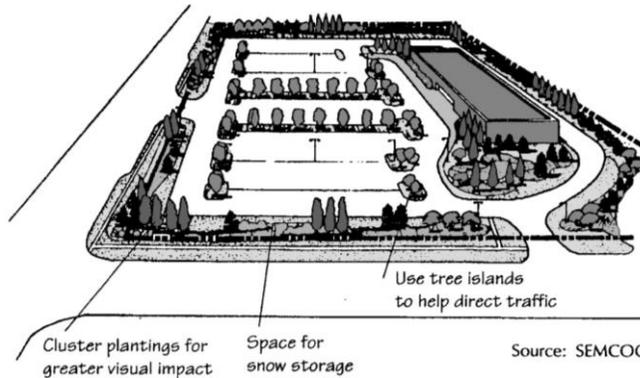
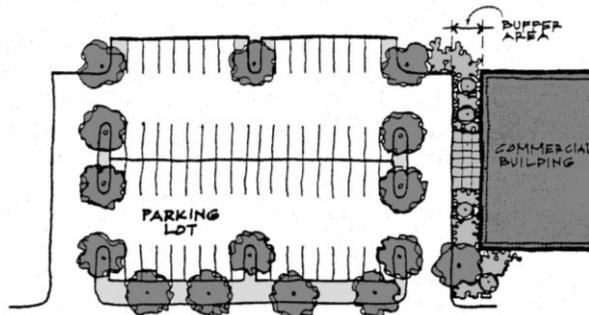
ILLUSTRATIONS



Greenbelt Buffer



Evergreen Screen



Landscaping Within Parking Lots

Section 14.11 Exterior Lighting.

The purpose of this Section is to preserve the lawful nighttime use and enjoyment of all properties in the Township through the establishment and enforcement of reasonable and consistent exterior lighting standards. Exterior lighting shall be designed, installed, and maintained to control glare and light trespass; conserve energy and resources; and prevent the degradation of the nighttime visual environment. The standards of this Section are intended to protect the general welfare by allowing sufficient but not excessive lighting for parking areas, walkways, driveways, building entrances, loading areas, and common areas; to minimize the adverse effects of inappropriate lighting; and to provide for the safety and security of people and property in the Township.

A. Scope.

The standards of this Section shall apply to all exterior lighting sources; all light sources visible from any road right-of-way or adjacent lot; and all projects subject to site plan review per Article 10.0 (Site Plan Review), condominium site plan approval per Article 12.0 (Condominium Regulations), Special District Area Plan approval per Article 7.0 (Special District Regulations), and zoning compliance approval per Section 1.07 (Certificates of Zoning Compliance), except as follows:

1. Exterior lighting accessory to farms, greenhouses, private riding stables, and single- and two-family (duplex) dwellings shall be exempt from the requirements of this Section.
2. Holiday decorations displayed for temporary periods not to exceed 90 calendar days shall be exempt from the requirements of this Section.
3. Lighting for a permitted temporary circus, fair, carnival, or civic use shall be exempt from the requirements of this Section, except that the Planning Commission or Zoning Inspector may impose reasonable restrictions on the use of such lighting where necessary to protect the public health, safety and welfare.
4. Shielded pedestrian walkway lighting and shielded lighting of flags of the United States of America and/or State of Michigan shall be exempt from the requirements of this Section.
5. This Section shall not apply to circumstances where federal or state laws, rules or regulations take precedence over the provisions of this Section; or where fire, police, emergency, or repair personnel need light for temporary or emergency situations.
6. This Section shall not apply to fossil fuel light produced directly or indirectly from the combustion of natural gas or other utility-type fossil fuels (e.g., gas lamps).

B. General Provisions.

The following general standards shall apply to all light sources regulated by this Section:

1. **Fully-shielded.** Exterior lighting shall be fully shielded, using concealed source fixtures directed downward and away from adjacent lots and road rights-of-way. All exterior light fixtures shall utilize full cutoff housings, louvers, glare shields, optics, reflectors or other measures to prevent off-site glare and minimize light pollution (see illustration).
2. **Glare and light trespass.** Exterior lighting shall be designed, constructed, and maintained in a manner that minimizes off-site glare, light trespass on neighboring lots, and traffic hazards for motorists.
3. **Lamp wattage.** Lamp wattages and types shall be consistent with fixture’s style and function, as follows:
 - a. Fixtures in parking lots and high traffic areas shall use low or high-pressure sodium, metal halide or similar lamp types with a maximum lamp wattage of 250 watts per fixture up to 20 feet in height above grade. A maximum of 400 watts per fixture shall be permitted for fixtures exceeding 20 feet in height above grade.
 - b. Decorative exterior light fixtures shall be limited to lamps with a maximum wattage of 100 watts per fixture.
4. **Intensity.** The maximum intensity of light within any site shall not exceed the following standards:

Light Intensity	Maximum (footcandles)
At any point within the site	10.0
At any lot boundary or road right-of-way line	0.2

C. Standards by Type of Fixture.

The following additional standards shall apply to specific types of exterior light fixtures, in addition to the provisions of Section 14.11B (General Standards):

1. **Freestanding pole lighting.** The maximum height of all freestanding, pole-mounted fixtures shall be directly proportional to the fixture’s proximity to the boundary of a lot or parcel in a residential zoning district or occupied by any RURAL USES or RESIDENTIAL USES, as follows:

Fixture Location	Maximum Fixture Height
Less than 50 feet	15 feet
50 feet to 300 feet	20 feet
More than 300 feet	25 feet

2. **Architectural lighting.** Exterior illumination of building facades shall be limited to fully shielded fixtures directed towards the facade. All light from such fixtures shall be concentrated on the wall surface. Unshielded luminous tube (neon) or fluorescent lighting shall be prohibited as an architectural detail on the exterior of any structure; including but not limited to rooflines, cornices, eaves, windows, and door openings.
3. **Window lighting.** All interior light fixtures visible through a window from a road right-of-way or abutting lot shall be shielded to prevent glare impacts at the lot boundary or within the right-of-way. Unshielded luminous tube (neon) and fluorescent light fixtures shall be prohibited where the light source would be visible from an abutting lot or road right-of-way.

D. Measurements.

Exterior lighting intensity levels shall be measured on the horizontal plane at grade level within the site; and on the vertical plane of the lot or road right-of-way boundaries at a height of five (5) feet above grade. Fixture height shall be measured from grade level to the highest point of the light source (see illustration).

E. Prohibited Lighting.

The following types of exterior light sources and activities shall be prohibited:

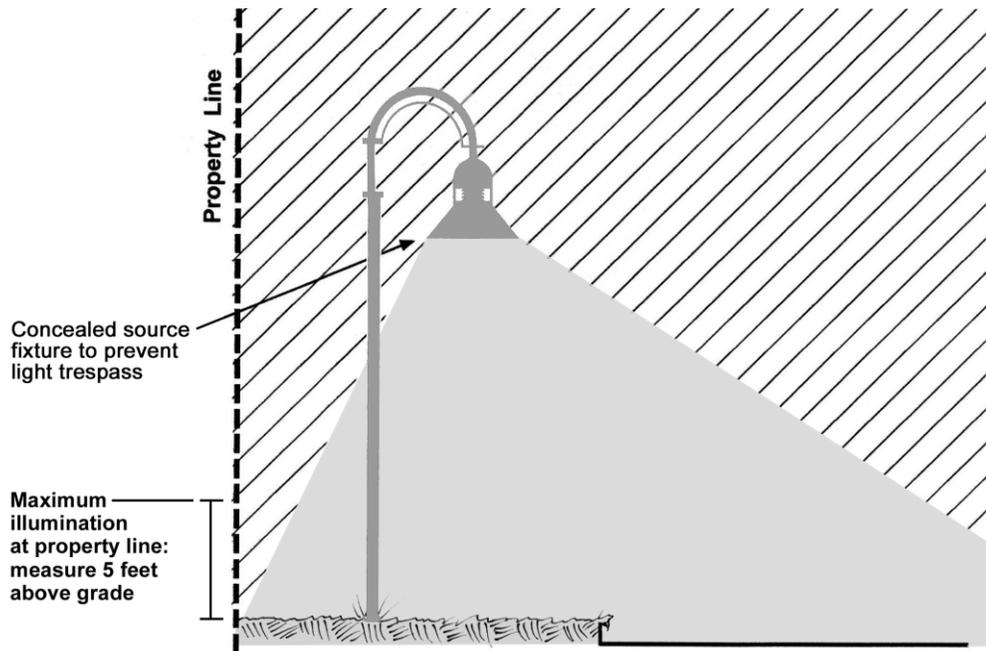
1. **Mercury vapor lighting.** The installation of mercury vapor fixtures shall be prohibited.
2. **Animated lighting.** Lighting shall not be of a flashing, moving, animated or intermittent type.

F. Alternatives and Alterations.

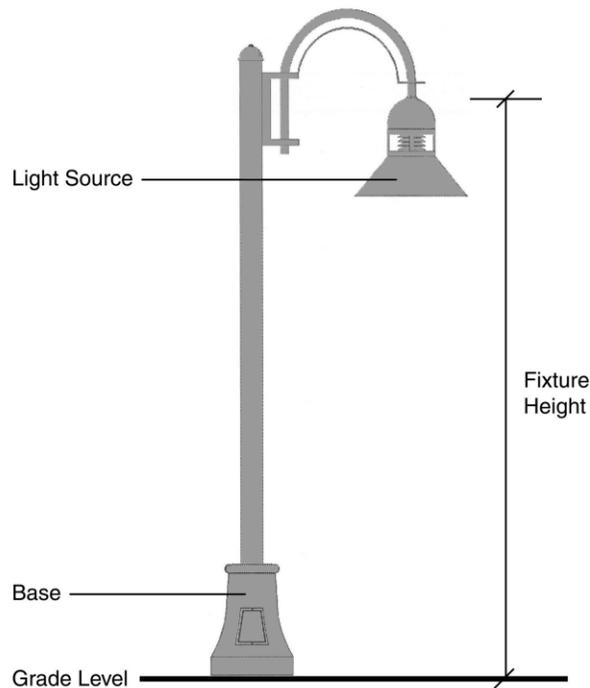
Specific lighting design alternatives or fixture substitutions may be permitted in accordance with the purpose of this Section and the following:

1. **Decorative light fixtures.** The Planning Commission may approve the use of decorative light fixtures as an alternative to fully shielded fixtures, where such fixtures would enhance the aesthetics of the site without causing off-site glare or light trespass.
2. **Fixture alteration or replacement.** Light fixtures regulated by this Section shall not be altered or replaced after approval has been granted, except where the Township Planner or Zoning Inspector has verified that the alteration or substitute fixture conforms to the requirements of this Section.

ILLUSTRATIONS



Lighting Fixture Orientation and Shielding



Light Fixture Height

Section 14.12 Fleming Creek Area Developments.

The intent of this Section is to provide for additional evaluation of new development projects for RESIDENTIAL USES or COMMERCIAL USES on land within the Fleming Creek Watershed. This Section is not intended to stifle creativity in site design, or to restrict development that conforms to the requirements of this Ordinance.

A. Scope.

The Fleming Creek Advisory Council may evaluate and make advisory recommendations to the Planning Commission regarding development plans for new RESIDENTIAL USES or COMMERCIAL USES on sites within the Fleming Creek Watershed, as defined in Section 17.03 (Definitions).

Development plans subject to this Section shall include applications for preliminary site plan or preliminary condominium site plan approval per Article 10 (Site Plan Review); and applications for tentative approval of a preliminary plat per the requirements of the Township's Subdivision Ordinance (Ord. No. 42).

B. Evaluation of Development Projects.

The Township Clerk shall promptly transmit a copy of the application and plans for any development project subject to this Section to the Fleming Creek Advisory Council, along with an invitation to provide written comments or advisory recommendations to the Planning Commission.

1. Where a Council member is determined to have a conflict of interest associated with the project, a summary of the conflict and any Council actions taken in response should be noted in the communication to the Planning Commission.
2. Any Fleming Creek Advisory Council comments or advisory recommendations received by the Township Clerk in accordance with this Section shall be forwarded to the Planning Commission for consideration as part of the review process for the development project.
3. The Planning Commission may defer consideration of the Council's comments or advisory recommendations to review of a final site plan, final condominium site plan or final approval of a preliminary subdivision plat for the development project upon determination that the project has limited potential to adversely impact water resources in Fleming Creek.

[amended 6/18/2018, Ord. 174-21]