

ARTICLE 12
LANDSCAPING

SECTION 12.01 INTENT

- A. The intent of this section is to promote the public health, safety, and welfare and improve the visual appearance of the Township by requiring landscaping for each development for which site plan or subdivision plat review is required. It is further the intent of this section to achieve the following:
1. Minimize noise, air, and visual pollution.
 2. Improve the overall aesthetics and appearance, divide the expanse of pavement, and define parking areas and vehicular circulation within off-street parking lots and other vehicular use areas.
 3. Require buffering of residential areas from more intense land uses, buffering of public road rights-of-way and parking lots.
 4. Prevent soil erosion and promote subsurface water retention.
 5. Encourage an appropriate mixture of plant material and species, to protect against insect and disease infestation and produce a more aesthetic and cohesive design.
 6. Promote the integration of existing woodlands and landscape plans.
 7. Protect and preserve the appearance, character, and value of the community.

SECTION 12.02 APPLICATION OF REQUIREMENTS

These requirements shall apply to all uses for which site plan review is required in Article 5, Site Plan Review, Procedures and Standards or subdivision plat review as required under the Subdivision Control Ordinance. No site plan or subdivision plat shall be approved unless a landscape plan is provided which meets the requirements set forth herein.

SECTION 12.03 LANDSCAPE PLAN REQUIREMENTS AND ELEMENTS

- A. A separate, detailed landscape plan shall be submitted to the Planning Commission as part of the site plan review and tentative preliminary plat review. The landscape plan shall demonstrate that all requirements of this Section are met and shall include, but not necessarily be limited to, the following items:

1. On parcels of five (5) acres or more, the professional seal of the registered landscape architect who prepared the plan;
2. A minimum scale of one (1) inch equals fifty (50) feet for property less than three (3) acres or one (1) inch equals one hundred (100) feet for property greater than three (3) acres;
3. On parcels greater than one (1) acre, existing and proposed contours on site and fifty (50) feet beyond the site at intervals not to exceed two (2) feet;
4. The location, spacing, size, and root type (bare root (BR) burlapped (BB) or container (C)) and descriptions for each plant type proposed for use within the required landscape area;
5. Typical straight cross section including slope, height, and width of berms and type of ground cover, or height and type of construction of wall, including footings;
6. Construction and grading details to resolve specific site conditions, such as tree wells to preserve existing trees or culverts to maintain natural drainage patterns;
7. Details in either text or drawing form to ensure proper installation and establishment of proposed plant materials;
8. Identify existing trees and vegetative cover to be preserved and/or installed in accordance with Section 15.02, Natural Resources Inventory and Stewardship Plan;
9. Identify a landscape maintenance program including a statement that all diseased, damaged, or dead materials shall be replaced in accordance with the standards of this Ordinance.

B. Landscape plans shall be subject to the following minimum standards:

1. **Composition.**
 - a. Plant materials shall be of generally acceptable varieties and species, free from insects and diseases, hardy to Oakland County, conform to the current minimum standards for nursery stock of the American Nursery and Landscape Association and shall have proof of any required governmental regulations and/or inspections.
 - b. A mixture of live plant material, such as evergreen and deciduous trees and shrubs, is required as a protective measure against insect and disease infestation. Artificial plant materials are prohibited. A limited mixture of hardy species is recommended rather than a large quantity of different

species to produce a more aesthetic, cohesive design and avoid a disorderly arrangement. Additionally, native species of trees and shrubs shall constitute at least fifty (50%) percent of the total proposed plantings.

2. **Berms.** Berms shall be constructed with slopes not to exceed a one to three (1:3) gradient. Berm slopes shall be protected with sod, seed, or other form of natural ground cover.
3. **Coordination with Utilities.** Provision shall be made to coordinate landscaping with existing and proposed underground and overhead utility lines so as to avoid interference with plant growth.
4. **Existing Trees.** The preservation and incorporation of existing trees in a landscape plan is encouraged. Where existing trees are used to satisfy the requirements of this Section, the following requirements shall apply:
 - a. Paving, or other site improvements, shall not encroach upon the dripline of the existing tree(s) to be preserved.
 - b. If existing plant material is labeled "To Remain" on site plans by the applicant or required by the Township, protective techniques, such as, but not limited to, fencing or barriers placed at the dripline around the perimeter of the plant material shall be installed during construction. No vehicle or other construction equipment shall be parked or stored within the dripline of any plant material intended to be saved. Other protective techniques may be used provided such techniques are approved by the Township.
 - c. In the event that healthy trees which are used to meet the minimum requirements of this Ordinance or those labeled to remain are cut down, destroyed, damaged, or excavated at the dripline, as determined by the Township, the applicant shall replace them with trees which are either equivalent in size or replace the total d.b.h. of the trees which have been removed.
5. **Stormwater Retention and Detention Ponds.** The integration of stormwater retention and detention ponds in the overall landscape concept is recommended. Ponds with a natural, rather than square or rectangular, design and appearance shall be encouraged.
6. **Installation, Maintenance, and Completion.**
 - a. All landscaping required by this Ordinance shall be planted before obtaining a certificate of occupancy or the appropriate financial surety as required in Article 3, Administration and Enforcement.

- b. All landscaping and landscape elements shall be planted, and earth moving or grading performed, in a sound workmanlike manner, according to accepted planting and grading procedures.
- c. Landscaping required by this Ordinance shall be maintained in a reasonably healthy condition, free from refuse and debris. All unhealthy and dead material shall be replaced within one (1) year of damage or death or the next appropriate planting period, whichever comes first. All landscaped areas shall be provided with irrigation or a readily available and acceptable water supply.
- d. Failure to install and maintain approved landscaping shall be considered a violation of this Ordinance.

SECTION 12.04 SCREENING BETWEEN LAND USES

- A. A landscape buffer shall be constructed to create a visual screen at least six (6) feet in height along all adjoining boundaries when a proposed use is either more intense or incompatible with an adjoining property. A landscape buffer shall consist of berms and living materials so as to maintain a minimum opacity of at least eighty percent (80%). Opacity shall be measured by observation of any two (2) square yard area of landscape screen between one (1) foot above the established grade of the area to be concealed and the top or the highest point of the required screen. The plantings must meet this standard based upon reasonably anticipated growth over a period of three (3) years.
- B. Where a land use activity creates noise, light, dust or other similar nuisance that cannot be effectively screened by a landscape buffer, the Planning Commission may require a solid wall or fence. Such wall or fence shall be a minimum of six (6) and a maximum of eight (8) feet in height as measured on the side of the proposed wall having the higher grade. A required wall shall be located on the lot line except where underground utilities interfere and in instances where this Article requires conformity with front yard setback requirements. Upon review of the landscape plan, the Planning Commission may approve an alternate location of a wall. The Planning Commission and Zoning Administrator shall approve the construction materials of the wall or fence which may include masonry, stone or wood.

SECTION 12.05 PARKING LOT LANDSCAPING

- A. **Required Landscaping Within Parking Lots.** Separate landscape areas shall be provided within parking lots so as to break up the broad expanse of pavement, guide the circulation of vehicular and pedestrian traffic, and moderate the changes to the micro climate which results from additional pavement. The following minimum requirements shall apply:

1. There shall be a minimum of one (1) tree and three (3) shrubs for every eight (8) parking spaces.
2. Landscaping shall be arranged in curbed islands within the parking lot which shall not be less than two hundred (200) square feet in area. The Planning Commission may consider an alternate design to accommodate creative designs such as rain gardens, bio-swales, or other landscape/storm water management techniques.
3. Where vehicles abut a landscape island or strip, a minimum distance of five (5) feet from the backside of the curb and the proposed landscape plantings shall be provided.

Vehicles shall not overhang landscape islands unless the island is increased in size to accommodate such overhang. Landscaping shall be arranged so that it is not damaged by vehicles.

4. The Planning Commission may approve an equivalent amount of landscape plantings at the perimeter of parking lots where landscaping within parking lots would be impractical due to the size of the parking lot, detrimental to safe and efficient traffic flow, or would create an unreasonable burden for maintenance and snowplowing.

B. Required Landscaping at the Perimeter of Parking Lots. Separate landscape areas shall be provided at the perimeter of parking lots in accordance with the following requirements:

1. Parking lots that are more intense or incompatible with an adjoining property shall meet the screening requirements set forth in Section 12.04, Screening Between Land uses; and
2. Parking lots shall be screened from view with a landscaped berm at least three (3) feet in height along the perimeter of those sides that are visible from all road rights-of-way. The Planning Commission may approve alternative landscape plantings or a solid wall that does not exceed three (3) feet in height, where it is found that space limitations or visibility for vehicular circulation prevent construction of a landscape berm.

SECTION 12.06 GREENBELTS

A greenbelt, as defined in Article 2, Rules of Construction and Definitions, shall be provided in accordance with the following requirements:

- A. The greenbelt shall be a minimum of twenty (20) feet in width for all non-residential uses except that Highland Station shall follow the regulations set forth in Article 9,

Supplementary District Regulations. For curbed parking areas, the greenbelt shall be at least twenty-two (22) feet wide.

- B. The greenbelt shall be landscaped with a minimum of one (1) deciduous tree for every thirty (30) lineal feet, or fraction thereof, of frontage abutting a public road right-of-way. Deciduous trees within a greenbelt shall be a minimum caliper of two and a half (2 1/2) inches or greater.
- C. Creative placement of the trees, such as staggering, clustering and/or other methods, is encouraged in an effort to eventually achieve a canopy.
- D. In addition to the required trees within the greenbelt, the remainder of the greenbelt shall be landscaped with grasses, ground covers, shrubs and other natural landscape materials.
- E. Access drives from public rights-of-way through required greenbelts shall be permitted, but such drives shall not be subtracted from the lineal dimension used to determine the minimum number of trees.

SECTION 12.07 SITE LANDSCAPING

In addition to any landscape, greenbelt and/or parking lot landscaping required by this Section, at least fifteen percent (15%) of the site area, excluding existing public rights-of-way, shall be landscaped. Such site area may include a combination of the preservation of existing tree cover, planting of new trees and plant material, landscape plazas, gardens and building foundation planting beds. Site area landscaping shall be provided to screen potentially objectionable site features such as, but not limited to, retention/detention units, loading areas, and trash areas. The landscaping design shall promote compatibility, and preserve the character of the site, in relation to the immediately surrounding area and in relation to the general area in which the property is situated.

SECTION 12.08 SCREENING OF TRASH CONTAINERS

- A. Outside trash disposal and grease containers shall be screened on all sides with an opaque fence or wall, and gate at least as high as the container, but no less than six (6) feet in height, and shall be constructed of durable material and construction which is compatible with the architectural materials used in the site development.
- B. Containers shall be consolidated to minimize the number of collection sites and located in close proximity to the building they serve.
- C. Containers and enclosures shall be located away from public view.
- D. Containers and enclosures shall be situated so that they do not cause excessive nuisance or offense to occupants of nearby buildings.

- E. Concrete pads and aprons of appropriate size and construction shall be provided.
- F. For storage of recyclable materials, the enclosure area and pad size shall be increased to amply accommodate the extra materials and their containers.

SECTION 12.09 SUBDIVISION AND SITE CONDOMINIUM LANDSCAPING

Landscaping for subdivisions and site condominiums shall be provided in accordance with the following standards:

- A. **Street Trees.** The frontage of all internal public or private streets shall be landscaped with the equivalent of one (1) tree for every fifty (50) lineal feet, or fraction thereof. Such street trees shall meet the minimum size, spacing and species requirements set forth in Sections 12.10, Minimum Size and Spacing Requirements and 12.11, Prohibited Species.
- B. **Screening Between Land Uses.** Where a subdivision or site condominium contains uses which are more intense or incompatible with an adjoining property, the screening requirements set forth in Section 12.04, Screening Between Land Uses shall be met.
- C. **Screening From Public Roads.** Where a subdivision or site condominium abuts a public road right-of-way located outside of the proposed subdivision or site condominium, the screening requirements set forth in Section 12.04, Screening Between Land Uses shall be met.
- D. **Other Site Improvements.** A landscape plan for a subdivision or site condominium development shall also include landscaping details of the entrance to the development, stormwater retention and/or detention areas, community buildings and other recreational areas, and any other site improvement which would be enhanced through the addition of landscaping.

SECTION 12.10 MINIMUM SIZE AND SPACING REQUIREMENTS

Where landscaping is required, the following minimum size and spacing requirements set forth in Table 12.1 for representative landscape materials shall be applicable, unless otherwise specified in this Section:

**TABLE 12.1
Minimum Size and Space of Landscape Planting**

	MINIMUM SIZE ALLOWABLE							MAXIMUM ON-CENTER SPACING**											
	Height			Caliper Spread				Feet											
	5'-6'	3'-4'	2'-3'	2"	2.5"	18"-2'	2 gal.	30	25	15	10	6	5-6	5	4	3	2	1	
Large Evergreen Trees:																			
Fir (Abies)																			
Spruce (Picea)																			
Pine (Pinus)																			
Hemlock (Tsuga)																			
Douglas Fir (Pseudotsuga)																			
Tamarack; Larch (Larix)																			
Narrow Evergreen Trees:																			
Red Cedar (Juniperus)																			
Arborvitae (Thuja)																			
Juniper (Juniperus)																			
Large Evergreen Shrubs:																			
Hicks Yew (Taxus)																			
Upright Yew (Taxus)																			
Spreading Yew (Taxus)																			
Upright Juniper (Juniperus)																			
Spreading Juniper (Juniperus)																			
Mugho Pine (Pinus)																			
Small Evergreen Shrubs:																			
Spreading Yew																			
Dwarf Spreading Juniper																			
Dwarf Mugho Pine																			
Euonymous varieties*																			
Vines:																			
Euonymous varieties*																			
Virginia Creeper																			
Wisteria																			
Riverbank Grape																			
American Bittersweet																			
Large Deciduous Trees:																			
Oak (Quercus)																			
Maple* (Acer)																			
Beech (Fagus)																			
Linden or Basswood (Tilia)																			
Sweetgum (Liquidambar)																			
Ginkgo (Male Only) (Ginkgo)																			
Honeylocust (Gleditsia)																			
Birch (Betula)																			
Sycamore (Plantanus)																			
Hickory (Carya)																			
Black Cherry (Prunus)																			
Tulip Tree (Liriodendron)																			
Blackgum (Nyssa)																			
* Refer to prohibited exotic invasive species list.																			

	MINIMUM SIZE ALLOWABLE							MAXIMUM ON-CENTER SPACING**											
	Height			Caliper Spread				(Feet)											
	5'-6'	3'-4'	2'-3'	2"	2.5"	18"-2'	2 gal.	30	25	15	10	6	5-6	5	4	3	2	1	
Small Deciduous Trees (Ornamental):																			
Dogwood																			
Flowering Cherry, Plum, Pear																			
Hawthorn																			
Redbud																			
Magnolia																			
Flowering Crabapple																			
Mountain Ash																			
Hornbeam																			
Sassafras																			
Ironwood																			
Serviceberry; Juneberry																			
Ground Cover:																			
Euonymus varieties*																			
Wild Strawberry																			
Wild Ginger																			
Large Deciduous Shrubs:																			
Lilac																			
Sumac																			
Pyracantha																			
Weigela																			
Flowering Quince																			
Cotoneaster*																			
Sargent Crabapple																			
Dogwood (Red Osier, Grey, Silky)																			
Euonymus varieties*																			
Viburnum varieties																			
Witch-hazel																			
Ninebark																			
Vaccinium (Blueberry)																			
Holly																			
Spicebush																			
Hazelnut																			
Chokeberry																			
Large Deciduous Shrubs (cont.):																			
Chokeberry																			
Buttonbush																			
American Elder																			
Small Deciduous Shrubs:																			
Fragrant Sumac																			
Cotoneaster*																			
Potentilla																			
Meadowsweet																			
Leatherleaf																			
Rubus/Rubus varieties																			
* Refer to prohibited exotic invasive species list.																			
** "Maximum on-center" spacing refers to the largest space allowed between <i>the centers</i> of plants of the same species/variety.																			

SECTION 12.11 PROHIBITED SPECIES

A. As of the effective date of this ordinance, the following species shall not be newly planted in landscaping. These plants are not native to the area, reproduce profusely and have potentially harmful effects on natural ecosystems.

Trees

<u>Common Name</u>	<u>Scientific Name</u>
White Ash *	<i>Fraxinus americana</i>
Green Ash *	<i>Fraxinus pennsylvanica</i>
American Elm	<i>Ulmus Americana</i>
Norway Maple	<i>Acer platanoides</i>
Amur Maple	<i>Acer ginnala</i>
Tree of Heaven	<i>Ailanthus altissima</i>
European Alder	<i>Alnus glutinosa</i>
Goldenraintree	<i>Koelreuteria paniculata</i>
Amur Cork Tree	<i>Phellodendron amurense</i>
White Poplar	<i>Populus alba</i>
Black Locust **	<i>Robinia pseudocacia</i>
Siberian Elm	<i>Ulmus pumila</i>

* A native species, but prohibited due to Emerald Ash Borer.

**A native species, but tends to be invasive.

Shrubs and Vines

<u>Common Name</u>	<u>Scientific Name</u>
Porcelainberry	<i>Ampelopsis brevipedunculata</i>
Japanese barberry	<i>Berberis thunbergii</i>
Common barberry	<i>Berberis vulgaris</i>
Oriental Bittersweet	<i>Celastrus orbiculatus</i>
Autumn Olive	<i>Eleagnus umbellata</i>
Russian Olive	<i>Eleagnus angustifolia</i>
Burningbush	<i>Euonymus alatus</i>
Wintercreeper	<i>Euonymus fortunei</i>
English Ivy	<i>Hedra helix</i>
Privet	<i>Ligustrum vulgare</i>
Japanese Honeysuckle	<i>Lonicera japonica</i>
Amur Honeysuckle	<i>Lonicera maackii</i>
Morrow Honeysuckle	<i>Lonicera morrowi</i>
Tartarian Honeysuckle	<i>Lonicera tatarica</i>
Common Buckthorn	<i>Rhamnus cathartica</i>

Shrubs and Vines (cont')

<u>Common Name</u>	<u>Scientific Name</u>
Glossy Buckthorn	<i>Rhamnus frangula</i>
Multiflora Rose	<i>Rosa multiflora</i>
Guelder Rose	<i>Viburnum opulus var. opulus</i>

Grasses and Grass-Like Plants

<u>Common Name</u>	<u>Scientific Name</u>
Chinese Silver Grass	<i>Miscanthus sinensis</i>
Giant Reed	<i>Phragmites communis</i>
Reed Canary Grass	<i>Phalaris arundinacea</i>

Flowers and Groundcovers

<u>Common Name</u>	<u>Scientific Name</u>
Garlic Mustard	<i>Alliaria officinalis</i>
Spotted Knapweed	<i>Centaurea maculosa</i>
Crown Vetch	<i>Coronilla varia</i>
Queen Ann's Lace	<i>Daucus carota</i>
Foxglove	<i>Digitalis purpurea</i>
Japanese Knotweed	<i>Fallopia japonica</i>
Dame's Rocket	<i>Hesperis matronalis</i>
Purple Loosestrife	<i>Lythrum salicaria</i>