

6-7-2010 AS RECOMMENDED BY PLANNING COMMISSION

STATE OF MICHIGAN

COUNTY OF WASHTENAW

ANN ARBOR CHARTER TOWNSHIP

ORDINANCE NO. _____ - 2010

AMENDMENT TO CHAPTER 74
TREE AND WOODLAND PROTECTION ORDINANCE

PLANNING COMMISSION RECOMMENDATION

An Ordinance to amend Chapter 74, Article I, Section 74.2(b), Definitions, of the Ann Arbor Charter Township Zoning Code and to add new Section 74-605 to Chapter 74, Article V, Supplementary District Regulations to the Ann Arbor Charter Township Zoning Code.

The Ann Arbor Charter Township Board of Trustees ordains:

Article I. In General

Sec. 74-2. Definitions and Interpretation.

[Subsection (a) *Interpretation* remains the same.]

(b) *Definitions.* The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this subsection, except where the context clearly indicates a different meaning:

[The following definitions shall be added to Section 74.2(b)]

Caliper. The method by which nursery tree stock is measured. This measurement is taken six (6) inches above the ground if caliper measurement is four (4) inches or less; if caliper measurement is larger, then the measurement is taken 12 inches above the ground.

Critical root zone (CRZ). The circular area surrounding a tree which contains tree roots within 18 inches of the ground surface. The radius of the critical root zone is, in feet, the same numerical value as the tree's diameter at breast height (DBH) in inches and is measured outward from the center of the tree. For example, the critical root zone of a 12 inch DBH tree has a radius of 12 feet.

Diameter Breast Height (DBH). A tree's diameter in inches measured by diameter tape at four and one-half (4-1/2) feet above the ground. On multi-stem trees, the largest diameter stem shall be measured.

Dripline. The line extending vertically from the exterior edge of a tree's live crown to the ground.

Ecological Characterization Report. A report that provides reliable and factual data and information describing the ecological components, functions and value of tree and Woodland resource areas, such as native plant species (tree, understory and groundlayer), wildlife, habitat resources, wetland and riparian areas, steep slopes, and other information.

Forestry Operations. Activities related to the harvesting, reforestation, and other management activities, including, but not limited to, thinning, pest control, fertilization, and wildlife management, that are consistent with principles of sustainable forestry.

Gross basal area. A measurement of the cross section area of a tree trunk, expressed in square feet, measured at breast height (4.5' above the ground) and inclusive of bark.

Grubbing. Removal of understory and ground layer vegetation from a Woodland area.

Sustainable Forestry. Forestry practices that are designed to meet present and future wood product needs by employing a land stewardship ethic that integrates the reforestation, managing, growing, nurturing, and harvesting of trees for useful products with the conservation of soil, air and water quality, wildlife and fish habitat, and visual changes.

Tree. Any self-supporting, woody plant of a species which normally grows to an overall height of fifteen (15) feet or more and/or has a minimum DBH of three (3) inches.

Tree, invasive. Trees that are non-native and are likely to cause harm to local ecosystems by crowding out natives and thus reducing the diversity of the ecosystem as further defined in Section 74-605(i).

Tree, native. A tree species that has naturally evolved in an area over thousands of years under certain soil, hydrologic, and other site conditions. Where "native" tree or plant is used in the text, this means a straight species, not a cultivar of a species.

Tree, non-invasive. A plant species which spread is controlled in some manner and is NOT listed in this ordinance as an invasive tree.

Tree, non-native. A plant species that has evolved in a country or region other than Washtenaw County, Michigan, and has been introduced by human activity.

Tree, Landmark. Any tree in a healthy, live condition that is not an "invasive tree" as defined herein, that is 24 inches DBH or greater, or meets the minimum size (DBH) requirements of the species listed in this ordinance as further defined in Section 74-605(j).

Tree, Protected. Any tree in a healthy, live condition that is not an “invasive tree” as defined herein, is at least 15 feet tall, and has a single stem trunk of six (6) inches DBH or greater, or a multi-stem trunk system where one or more of the stems is four (4) inches DBH or greater.

Tree/Woodland Removal Permit. A permit issued pursuant to Section 74-605(c).

Tree/Woodland Survey. A survey that describes, through plans, graphics and written narrative, the location, species, condition, and other details, as required by this ordinance, of existing tree and Woodland resources as further defined in Section 74-605(k).

Woodland. A forested area (including all trees, shrubs and ground cover thereon) of one acre or more with a gross basal area of 60 square feet per one acre, containing 40 trees per one acre greater than 6 inches in diameter at breast height (DBH), or a plantation of one acre or more with a minimum average DBH of 10 inches. The critical root zone of all trees in the perimeter of the forested area or plantation defines the area of a Woodland.

Woodland Stewardship Plan. A written document listing activities that enhance or improve Woodland resources (wildlife, timber, soil, water, recreation and aesthetics) on private land over a ten-year period as further defined in Section 74-605(l).

[There are no other amendments to Section 74.2(b)]

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Article V. Supplementary District Regulations

[The following new Section 74-605 is added to Chapter 74, Article V]

Sec. 74-605. Tree and Woodland Resource Preservation.

(a) *Introduction.* Trees and Woodlands provide for a number of public benefits, including reduction of erosion, siltation and flooding; protection of groundwater supply and water quality; maintenance of base flow in streams and rivers which reduces the risk of degradation of riparian vegetation, wildlife, wetlands and surface water systems; increasing economic value for most land uses; preserving human health through noise mitigation, and absorption of air pollution and carbon dioxide; and serving as an essential component for the general welfare of Township residents by maintaining natural beauty, recreation, and natural heritage. Uncontrolled development or tree removal in the Township could result in an unregulated and, in many cases, unnecessary removal of trees, Woodlands and related natural resources. Therefore, it is the intent of this ordinance to protect trees, Woodlands and related natural resources, and promote the preservation of important physical, aesthetic, recreational, and economic assets for both present and future generations.

(b) *Purpose.* The purpose of this Section is as follows:

- (1) To encourage the preservation of trees and related natural resources of the Woodland ecosystem on undeveloped land and in connection with the development of land;
- (2) To provide for the protection, preservation, proper maintenance and use of trees and Woodlands in order to minimize damage from erosion and siltation, loss of wildlife and vegetation, and/or from the destruction of the natural habitat;
- (3) To protect trees and Woodlands for their economic support of local property values when allowed to remain uncleared and/or unharvested in whole or in significant part, and for their natural beauty, character, and ecological or historical significance;
- (4) To prohibit clear-cutting of Woodland areas or removal of certain trees from land in certain circumstances including prior to or in anticipation of development without prior approval from the Planning Commission; and
- (5) To provide for the paramount public concern for these natural resources in the interest of the health, safety and general welfare of the residents of the Township, in keeping with Article IV, Section 52 of the Michigan Constitution of 1963 and the intent of the Michigan Natural Resources and Environmental Protection Act, PA 451 of 1994.

(c) *Applicability.* Unless exempted pursuant to (d) below, a Tree/Woodland Removal Permit shall be required prior to any tree removal or Woodland disturbance in the following circumstances:

- (1) Site plan review as defined in Chapter 74, Article II, Division 4 is required, or subdivision plat review as defined in Chapter 58, Article II, Division 2 is required, and Landmark Trees or Woodlands exist on the site and will be disturbed by the proposed activity.
- (2) Removal of gross basal area of 60 square feet of Protected Trees from a parcel or parcels greater than one acre within a 5 year period, unless exempt as a farm operation or exempt pursuant to a Woodland Stewardship Plan.

This Section shall apply to all land located in the Township including parcels that are in the process of being annexed to the City of Ann Arbor until the date that such annexation is final and notice of such official annexation is provided to the Township by the State of Michigan.

(d) *Exemptions.* Tree and Woodland removal associated with the following shall be exempt from the requirements of this Section:

- (1) Farming operations, as defined by the Right to Farm Act, that are lawfully existing and operating in accordance with Generally Accepted Agricultural Management Practices as adopted by the Michigan Department of Agriculture.

- (2) Forestry operations conducted in compliance with a Woodland Stewardship Plan that has been filed with the Township Building Official prior to the start of any forestry operations.
- (3) Installation, repair or maintenance of public utilities lawfully operating in the Township in accordance with an operating permit or right-of-way permit issued by the Township.
- (4) Work within an existing public road right-of-way or an existing private road easement to the extent necessary for protection of the public health, safety and welfare in accordance with an operating permit or right-of-way permit issued by the Township.
- (5) Any trees which are demonstrated by the property owner to the satisfaction of the Township Building Official, in consultation with the Township Woodland Consultant, to have a health and condition standard factor of less than fifty percent (50%) based upon the standards established by the International Society of Arboriculture.

(e) *Authorization.* Under certain conditions defined in this Section, a Tree/Woodland Removal Permit may be authorized by the Planning Commission to allow limited removal of tree/Woodland resources, or construction, activity, use, or operations within a Woodland area, if preservation techniques described in this Section have been applied to the greatest extent practical, and tree and/or Woodland removal is found by the Planning Commission to be unavoidable.

(f) *Filing of application; fee.* Application for proposed Tree/Woodland Removal Permit shall be made by filing an application form approved by the Township with the required information and the required fee with the Township Clerk. The fees shall be set by resolution of the Township Board. The application shall include the following information in addition to the information required by this Section: (i) the applicant's name, address and telephone number; (ii) the names and addresses of all owners of record and proof of ownership; (iii) the applicant's interest in the property, and if the applicant is not the fee-simple owner, the owner's signed authorization for the application; and (iv) legal description, address and tax parcel number of the property. If a Tree/Woodland Removal Permit is being applied for in conjunction with activities that require site plan approval, as described Chapter 74, Article II Division 4, Site Plan Review, then the permit application shall be filed at the same time as the preliminary site plan application pursuant to Section 74-173. If a Tree/Woodland Removal Permit is being applied for in conjunction with activities that require subdivision plat approval, as described Chapter 58, Article II Division 2, Subdivision Plat, Tentative Approval, then the permit application shall be filed at the same time as the preliminary plat, tentative approval application pursuant to Section 58-72. In all other cases, the procedure for submission of the application and determination that the application is complete shall be in accordance with Section 74-173 (a), (b) and (c)1.

(g) *Application procedure for Tree/Woodland Removal Permit.* The procedure for review and approval of a Tree/Woodland Removal Permit is as follows:

- (1) *When site plan or subdivision plat review is required.* If Landmark Trees or Woodlands are proposed for removal as part of a development proposal, a

Tree/Woodland Survey is required as a component of the preliminary site plan submission pursuant to Section 74-175, or the preliminary plat, tentative approval pursuant to Section 58-72. All Landmark Trees, Protected Trees and Woodlands to be removed, and all Landmark Trees, Protected Trees and Woodlands to remain shall be clearly indicated and a Tree Replacement Plan (see Tree Replacement Options Section 74-605 (n)) shall be submitted as part of the preliminary site plan review submission information, or the preliminary plat, tentative approval submission information.

The Planning Commission shall review the Tree/Woodland Survey, any Tree Replacement Plan, and all information required by this Section and the site plan or plat review Sections, as applicable. For site plans, the review shall be conducted as a part of the preliminary site plan review process to ensure compliance with Section 74-175 and the standards in Section 74-175(b). For subdivision plats, the review shall be conducted as part of the preliminary plat, tentative approval review process to ensure compliance with Section 58-72 and the standards in Section 58-111. The Planning Commission shall approve, approve with conditions or deny the applicant's proposed Tree/Woodland Survey, Tree Replacement Plan, and Tree/Woodland Removal Permit as part of its decision on the preliminary site plan or the preliminary plat in accordance with the standards set forth in this Section and the site plan or plat review Sections, as applicable.

- (2) *When site plan or subdivision plat review is not required.* For projects that do not require a site plan or subdivision plat, but meet the criteria of 74-605(c)(2), the applicant shall submit to the Planning Commission for review a Tree/Woodland Survey and Tree Replacement Plan.

The Planning Commission shall review the information submitted and shall approve, approve with conditions or deny the applicant's proposed activities and Tree/Woodland Removal Permit in accordance with the standards set forth in this Section.

(h) *Review criteria.* In determining whether the proposed disturbance or removal of trees and/or Woodlands is limited to the minimum necessary to allow a reasonable use of the land, the Planning Commission shall apply the following criteria:

- (1) The importance and overall value of the trees/Woodlands on the site. In general, the importance of trees/Woodlands increases with rarity, size, and age.
- (2) The existence of overlapping natural features such as wetlands, 100 year flood plains, Woodlands, Landmark Trees, steep slopes or endangered species in one area. Overlapping natural features increase the importance and overall value for preservation of the area.
- (3) The impact of the proposed disturbance on the integrity of ecological systems or the continuity between natural features. Wherever possible, ecological systems and continuity between natural features should be preserved.
- (4) The amount of disturbance in relation to the scale of the proposed development.
- (5) The adequacy of the Tree Replacement Plan or other mitigation plan.

(6) The justification for forestry management practices, the benefits of the proposed disturbance and proposed coordination with the recommendations in the Woodland Stewardship Plan.

(i) *Invasive trees.* The following species are considered invasive and shall not be considered a Protected Tree under this ordinance.

COMMON NAME	BOTANICAL NAME
Alder (Black)	<i>Alnus glutinosa</i>
Buckthorn	<i>Rhamnus utilis</i>
Buckthorn(Common European)	<i>Rhamnus cathartica</i>
Buckthorn(Glossy, Tallhedge)	<i>Rhamnus frangula</i>
Elm (Siberian)	<i>Ulmus pumila</i>
Horse Chestnut	<i>Aesculus hippocastanum</i>
Locust (Black)	<i>Robinia pseudoacacia</i>
Locust (Bristly)	<i>Robinia hispida</i>
Locust (Clammy)	<i>Robinia viscosa</i>
Maple (Amur)	<i>Acer ginnala</i>
Maple (Norway)	<i>Acer platanoides</i>
Mulberry (Russian, White)	<i>Morus alba</i>
Olive (Autumn)	<i>Elaeagnus umbellate</i>
Olive (Russian)	<i>Elaeagnus angustifolia</i>
Poplar (Lombardy)	<i>Populus nigra var. italica</i>
Poplar (Silver, White)	<i>Populus alba</i>
Spindle Tree	<i>Euonymus europea</i>
Tree of Heaven	<i>Ailanthus altissima</i>
Willow (Crack)	<i>Salix fragilis</i>
Willow (Gray)	<i>Salix cinerea</i>
Willow (Laurel/Bayleaved)	<i>Salix pentandra</i>
Willow (White)	<i>Salix alba</i>

(j) *Landmark Trees.* The following species that meet the minimum size (DBH) requirement are considered Landmark Trees.

COMMON NAME	BOTANICAL NAME	LANDMARK TREE SIZE (DBH)
Any healthy tree with a DBH 24" or greater, except invasive species, or a healthy tree of the species described below with the minimum DBH listed.		
Ash	<i>Fraxinus</i>	18"
Basswood	<i>Tilia</i>	18"
Beech, American	<i>Fagus grandifolia</i>	18"
Black Cherry	<i>Prunus serotina</i>	18"
Black Walnut	<i>Juglans nigra</i>	18"
Buckeye, Ohio	<i>Aesculus glabra</i>	18"
Douglas Fir	<i>Pseudotsuga menziesii</i>	18"
Elm	<i>Ulmus</i>	18"
Fir	<i>Abies</i>	18"
Kentucky Coffeetree	<i>Gymnocladus dioicus</i>	18"
London Planetree/American Sycamore	<i>Platanus</i>	18"
Maple (Silver)	<i>Acer saccharinum</i>	18"
Pine (All species)	<i>Pinus</i>	18"
Spruce	<i>Picea</i>	18"
Tulip Poplar	<i>Liriodendron tulipifera</i>	18"
Hickory	<i>Carya</i>	16"

Honey Locust	<i>Gleditsia tricanthos</i>	16"
Maple (Red)	<i>Acer rubrum</i>	16"
Maple (Sugar)	<i>Acer saccharum</i>	16"
Oak (All species)	<i>Quercus</i>	16"
Arborvitae	<i>Thuja</i>	12"
Bald Cypress	<i>Taxodium distichum</i>	12"
Birch	<i>Betula</i>	12"
Black Tupelo	<i>Nyssa sylvatica</i>	12"
Cherry, Flowering	<i>Prunus spp.</i>	12"
Crabapple/Hawthorne	<i>Malus/crataegus</i>	12"
Dawn Redwood	<i>Metasequoia glyptostroboides</i>	12"
Ginkgo	<i>Ginkgo</i>	12"
Hackberry	<i>Celtis occidentalis</i>	12"
Hawthorn	<i>Crataegus</i>	12"
Hemlock	<i>Tsuga</i>	12"
Larch/Tamarack	<i>Larix</i>	12"
Magnolia	<i>Magnolia</i>	12"
Pear	<i>Pyrus spp.</i>	12"
Persimmon	<i>Diospyros virginiana</i>	12"
Poplar	<i>Populus except for p. deltoides, alba</i>	12"
Sassafras	<i>Sassafras albidum</i>	12"

Landmark Trees (Continued)

COMMON NAME	BOTANICAL NAME	LANDMARK TREE SIZE (DBH)
Sweetgum	<i>Liquidamber styraciflua</i>	12"
Yellow Wood	<i>Cladrastis lutea</i>	12"
Blue-Beech/Hornbeam	<i>Carpinus caroliniana</i>	8"
Butternut	<i>Juglans cinera</i>	8"
Cedar of Lebanon	<i>Cedrus spp.</i>	8"
Chestnut	<i>Castanea</i>	8"
Dogwood, Flowering	<i>Cornus florida</i>	8"
Eastern Red Cedar	<i>Juniperus virginiana</i>	8"
Hop-Hornbeam/Ironwood	<i>Ostrya virginiana</i>	8"
Maple, Mountain/Striped	<i>Acer spicatum/pensylvanicum</i>	8"
Paw Paw	<i>Asimina triloba</i>	8"
Redbud	<i>Cercis canadensis</i>	8"
Serviceberry	<i>Amelanchier</i>	8"

(k) *Tree/Woodland Survey*. A Tree/Woodland Survey shall meet the following requirements:

- (1) *Plan requirements*. If a Tree/Woodland Survey is required as part of the site plan or subdivision plat review process as set forth in 74-605(c)(1), then the scale of the Tree/Woodland Survey shall be the same as either the Site Survey, the Site Plan, and/or the Subdivision Plat. If a Tree/Woodland Survey is required for other Woodland or Protected tree removal as set forth in 74-605(c)(2) or (3), the Tree/Woodland Survey shall be a scaled drawing and the scale shall not exceed 100 feet to the inch.
- (2) *Plan contents*. In all cases a Tree/Woodland Survey shall contain the following:

- a. Location of all Protected trees and Landmark Trees accurately plotted;
- b. Common and botanical names of all Protected trees and Landmark Trees, their size in inches at their DBH, and a description of each tree's health;
- c. Ecological Characterization Report, prepared by a professional or professionals qualified in the areas of ecology, botany, wildlife biology or other relevant discipline that includes, at a minimum, the following information.
 1. The plant species, plant communities/associations (paying particular attention to Michigan endangered, threatened, and special concern species) that the Woodland contains;
 2. The wildlife use and habitat (paying particular attention to Michigan endangered, threatened, and special concern species) showing the species using the Woodland, wildlife movement corridors, the times or seasons that the Woodland is used by those species and the "functions" (meaning feeding, watering, cover, nesting, roosting, and/or perching) that the Woodland provides for such wildlife species;
 3. The boundary of wetlands that are located within, either partially or wholly, the Woodland and a description of the vegetation and ecological functions provided by those wetlands;
 4. The pattern, species, and location of native trees, native tree stands, and other native site vegetation including their relationship to adjacent areas;
 5. The top of the bank or shoreline of any inland lake or stream located, either partially or wholly, within the Woodland; and
 6. The general ecological functions provided by the Woodland and its features.
 7. Other information necessary or advisable for a proper evaluation of the site and proposed tree removal.

If the proposed activity or proposed Woodland impacts are minimal as determined by the Planning Commission, and as assisted by the Building Official, Woodlands Consultant, or others, the Planning Commission may, in its discretion, waive the requirement for an Ecological Characterization Report.

- (3) *Tree tags.* All Protected and Landmark Trees shall be numbered and non-corrosive tags bearing that number shall be attached to each respective tree.
- (4) *Professional qualifications.* The Tree/Woodland Survey must be sealed by a forester registered in the State of Michigan, an International Society of Arboriculture certified

arborist, or a forester certified by the Society of American Forestry. The ecological characterization report that is part of the Tree/Woodland Survey must be signed by the ecologist, botanist, wildlife biologist or other, stating their qualifications to prepare such report.

- (5) *Extent of Survey.* In the case of large or heavily wooded parcels, plotting of Protected trees and Landmark Trees that are more than 100 feet outside of the edge of the area to be disturbed may be waived by the Planning Commission at the request of the applicant and upon a recommendation by the Township Woodland consultant.

(1) *Woodland Stewardship Plan.* When this Section requires a Woodland Stewardship Plan, the plan shall meet the following requirements:

- (1) *Plan contents.* The contents of a Woodland Stewardship Plan must comply with the requirements established by the State of Michigan's Forest Stewardship Program including:

- a. Property Identification and Overview: Landowner and plan writer's names, addresses, phone numbers and signatures; acreage under the stewardship plan; date; landowners goals; location of site and directions to property; cover page with FSP logo, date, etc.; completed Landowner Assessment form; interaction with surrounding landscape.
- b. Property Maps and Location Information: General property description; forest type map; activity map; soils map, legend, and soils description.
- c. Resource Descriptions: Narrative description of management unit; stands described by cover type and acreage; major species; stand size class, density soil type, site quality; stand quality, including age, health, growth rate, volume, timber quality, threatened and endangered species database checked, habitat class information, culturage heritage data, stand history, wildlife habitat quality and uses, timber production potential, recreational opportunities, wetlands and water quality issues, and aesthetics.
- d. Prescriptions/Recommendations: Schedule of prescribed activities for the next 10 years; stand/management unit specific goals statement; how prescriptions use the appropriate best management practices to minimize damage to the resources in each management unit; long-range silvicultural objectives for each stand or cover type clearly stated and related to landowners' goals.

- (2) *Professional qualifications.* All Woodland Stewardship Plans must be prepared by a certified forester. Certified foresters are foresters registered with the State of Michigan or a conservation district forester.

(m) *Preservation of existing trees and Woodlands.* Protected Trees, Landmark Trees and Woodlands shall be preserved to the greatest extent practicable through the use of site development techniques including but not limited to the following:

- (1) In general, Landmark Trees should not be removed for development. Site design should consider any Landmark Tree on a site as an important design element. Removal of Landmark Trees should occur rarely and should be considered only after alternatives are studied and found to be not feasible.
- (2) Locate development in areas of the site that are already disturbed or cleared of trees and woody vegetation.
- (3) Minimize clearing and grading of the site by working with the site's existing topography. Grading, roads, walkways, utility lines, and all other aspects of soil disturbance shall be minimized to the extent possible considering standards of sound design and public safety. Clearing for buildings should be limited to the smallest area needed for safe and effective building work. Excavated soil and materials from basements and grading shall not be spread in the Woodland area. Careful handling of trees and use of adequate tree protection measures should be undertaken, especially for trees near the building envelope.
- (4) Use retaining walls and other techniques to minimize grade changes near trees.
- (4) Provide tree and understory/groundlayer protection during all construction phases of the project. Woodland areas excluded from development should be protected from all intrusions during development by well-maintained barrier fencing. (See Subection (m) *Tree protection during construction* below for minimum requirements.) If construction or grading is to occur within a portion of Woodlands those Woodland areas excluded from development should be clearly marked and/or fenced off during development. Unpermitted intrusions include any activity that could adversely affect the plants (trees, shrubs, and herbaceous/groundlayer plants) within the fenced-off Woodland including, but not limited to, the following: driving vehicles and/or heavy equipment; stockpiling, storage or parking of any soils, materials, equipment or vehicles; spreading excess fill/soil; dumping of construction or landscaping wastes; and clearing/removal of the understory or groundlayer of vegetation within the Woodland.
- (5) Minimize the building/construction footprint on individual lots to preserve trees within lot boundaries.
- (6) Maintain grades and moisture conditions within the Critical Root Zone (CRZ) of trees. Many of the native hardwood trees: oaks, hickories, maples and beeches, for example, and most old trees do not adapt to environmental changes brought about by construction. Grading changes should not occur within the CRZ of a tree. In addition, grading on a site should neither increase or decrease moisture conditions within a tree's CRZ. The area of concern around an important tree may be significantly larger than the

CRZ. The drip line of the tree shall be used for comparison, and if larger than the CRZ, the dripline should be used to determine how best to protect an important tree.

- (7) Locate utility lines away from trees to be retained. If this is not possible, install utility lines through bored tunnels instead of trenches.
- (8) Conduct any necessary excavation around trees by hand.

(n) *Tree replacement options and requirements.* Regulations regarding tree removals and tree replacement options are provided below. The tree replacement requirements herein are separate from and in addition to the landscape requirements set forth in Chapter 15 of the Ann Arbor Township Land Development Standards or any codification thereof.

- (1) *Protected tree replacement.* For every one (1) inch DBH of Protected trees removed, one (1) inch DBH of replacement trees shall be planted on the parcel, each of which replacement trees shall have a 2.0 inch minimum caliper for deciduous trees, or six (6) feet in height for coniferous trees. To compensate for the disparity between DBH and caliper inch measurements, replacement trees using caliper measurements must be provided at 140% of the DBH removed. Replacement trees shall be species native to Michigan, and non-sterile varieties. If more than 20 replacement trees are required, a mixture of three (3) or more species must be used.

EXAMPLE:

Trees to be Removed in Woodland Area Greater than One (1) Acre = 200 DBH inches
 $200 \text{ DBH} \times 140\% = 280 \text{ caliper inches of replacement trees}$
 $280 / 2.0 = 140 \text{ replacement trees at 2.0 caliper inch replacement trees required}$

- (2) *Landmark Tree replacement.* For every one (1) inch DBH of Landmark Trees removed, one (1) inch DBH of replacement trees shall be planted on the parcel, each of which replacement trees shall have a 2.0 inch minimum caliper for deciduous trees, or six (6) feet in height for coniferous trees. To compensate for the disparity between DBH and caliper inch measurements, replacement trees using caliper measurements must be provided at 140% of the DBH removed. Replacement trees shall be species native to Michigan, and non-sterile varieties. If more than 20 replacement trees are required, a mixture of three (3) or more species must be used.

EXAMPLE:

Landmark to be Removed = 50 DBH inches
 $50 \text{ DBH} \times 140\% = 70 \text{ caliper inches of replacement trees}$
 $70 / 2.0 = 35 \text{ replacement trees at 2.0 caliper inch replacement trees required}$

- (3) *Tree Replacement and Woodland Stewardship Plans.* If removal of Protected or Landmark Trees is conducted in compliance with a Woodland Stewardship Plan, then replacement trees are not required.
- (4) Tree Replacement Plan Contents.

- a. *Plan requirements.* If a Tree Replacement Plan is required as part of the site plan review or subdivision plat review process as set forth in 74-605(c)(1), then the scale of the Tree Replacement Plan shall be the same as either the Site Survey, the Site Plan, and/or the Subdivision Plat. If a Tree Replacement Plan is required for other Woodland or Protected tree removal as set forth in 74-605(c)(2) or (3), the Tree Replacement Plan shall be a scaled drawing and the scale shall not exceed 100 feet to the inch.
- b. *Plan contents.* In all cases a Tree Replacement Plan shall contain the following:
1. Property boundaries, existing and proposed buildings and structures, pavement, overhead and underground utilities, and other permanent features of the property.
 2. Existing natural features such as edges of Woodlands, Protected and Landmark Trees to remain, wetlands, water courses and water features (ponds, lakes, etc.).
 3. Location, size, species (common and botanical names), and number of all proposed trees;
- (5) *Tree removal without permission.* If Protected or Landmark Trees are removed without the required review and approval, or without filing any required Woodland Stewardship Plan, then, in addition to sanctions for violation of this Chapter, each one (1) inch DBH removed must be replaced with two (2) DBH inches in replacement trees. Replacement trees shall meet the same minimum size, species, and diversity requirements as noted in (1) and (2) above. Plans showing the location, size, species, and other relevant information regarding tree mitigation and replacement as required by this subsection shall be submitted to the Township Building Official for review and approval, in consultation with the Township's Woodlands Consultant.
- (6) *Transplanting trees.* Where native Woodland species are being displaced by development, smaller sized native trees transplanted from the disturbed area of the site may be used to fulfill tree replacement requirements. Transplanted trees shall be native species, no less than 1.0" caliper for deciduous trees or 3' for evergreen trees, and the total number of plants used adds up to the size requirements for a single species. For example, two rescued 1.0" caliper oaks can be used instead of 1, 2.0" caliper oak. Native species transplanted from the site shall not be removed from undisturbed areas of the site, or areas designated as preservation or conservation areas. Federal and state laws protecting native plant species designated as endangered, threatened or of special concern must be adhered to and under no circumstances shall these plants be damaged, destroyed or removed from the site.
- (7) *Woodland restoration.* If deemed appropriate by the Planning Commission, Woodland areas disturbed by development activities may be mitigated by the creation of an area planted with a native plant community appropriate to the area. The proposed plant community shall be illustrated on a Tree Replacement Plan, including information

about all proposed plant material. In reviewing such a proposal, the Planning Commission shall apply the following standards:

- a. The use of existing Woodland soils from the site to establish necessary soil conditions for Woodland plants to establish themselves.
 - b. The native species diversity proposed for tree, understory and groundlayer plants.
 - c. The age diversity of the proposed tree canopy. (Native trees and shrubs of various ages and sizes are appropriate for this type of planting. Therefore the minimum tree size requirements do not apply here.)
 - d. The use of plants with local genotypes, including rescued plants from the disturbed portion of the site, seed, and propagates from the local plant populations.
 - e. The habitat values created by the proposed mitigation, including plant species proposed adjacent to other site features, such as contiguous Woodlands, tree rows, wetlands, streams, or other features.
- (8) *Security.* After issuance of a permit under this Section the applicant shall deposit with the Township security in the form of cash, surety bond or letter of credit, in an amount recommended by the Township Woodland Consultant and approved by the Planning Commission, and in a form approved by the Township Building Official and Township attorney to ensure survival of replacement trees, transplanted trees, and/or Woodland plants for a period of three (3) years after the later of (i) planting, (ii) issuance of a certificate of occupancy for the Project, or (iii) final permit approval. The Tree Replacement Plan shall include a description of the proposed amount and type of security to be posted. The applicant and the Township shall enter into an escrow agreement pertaining to the conditions for release of the security in a form approved by the Township attorney and Building Official at the time the security is posted.
- (9) *Alternative Mitigation Measures.* The Planning Commission shall be authorized to waive a portion of the tree replacement requirements of this Section when site factors, tree condition or development requirements make conformity to the tree replacement requirements of this Section difficult or undesirable. In such case, the applicant shall propose either (i) a plan for planting a portion of the required replacement trees or other plantings in other areas of the Township, or (ii) a monetary contribution to the Township Woodlands/Natural Features Fund, which contribution shall be in an amount reasonably related to the cost of the tree replacement requirement waived. The Planning Commission shall review such proposal and may request revisions to the proposal and may approve, approve with modifications and conditions, or deny such proposal for waiver of tree replacement requirements.

The Township Woodlands/Natural Features Fund shall be a separate Township fund which shall serve as the depository for all monetary contributions as provided in this subsection.

The Township Board shall administer and use the Township Woodlands/Natural Features Fund for the public purposes of planting and maintaining trees, Woodlands, and other natural features within the Township, and for other public purposes related to stewardship, preservation and restoration of natural features, trees or Woodlands in the Township in accordance with specific programs developed by the Planning Commission and approved by the Township Board. Such programs may include but are not limited to the following, all to be conducted within the Township: (i) invasive species removal, (ii) stream bank restoration, (iii) park path way restoration, (iv) assessment, mapping or surveys of waterways, (v) replacement of dead ash trees along roads, or (vi) installation of trees as windbreaks.

(o) *Tree protection during construction.*

(1) *Critical Root Zone.* No disturbance or construction activities may occur within the Critical Root Zone of any Protected or Landmark Tree designated to remain as shown on the Tree/Woodland survey, site plan, or subdivision plat.

(2) *Protected barrier.* The applicant, and the applicant's agents and successors shall erect and maintain suitable barriers as approved by the Township to protect trees designated to remain as shown on the approved site plan or subdivision plat. Protected barriers shall be placed at the outer limits of the Critical Root Zone, or drip line if larger and if required by the Planning Commission to provide greater protection for an important tree, and shall remain in place until the Township authorizes removal based on tree protection factors or issues a final certificate of zoning compliance, whichever occurs first.

(3) *Inspections.* The Township shall have the right to periodically inspect the site during site plan or subdivision plat review, land clearing, and/or construction to ensure compliance with this Section.

(4) *Construction damage.* Any Woodland, Protected Tree or Landmark Tree that is determined to be dead, dying or severely damaged due to construction activity within three (3) years after the later of issuance of a certificate of occupancy or final permit approval for development authorized by an approved site plan, subdivision plat, or Tree/Woodland Removal Permit shall be replaced by the applicant in the amount specified in the requirements for mitigation of Woodlands. Plans showing the location, size, species, and other relevant information regarding tree mitigation shall be submitted to the Township Building Official for review and approval, in consultation with the Township's Woodlands Consultant.

(p) *Appeals and variances.* All appeals or requests for variances from the provisions of this Section shall be made to the Ann Arbor Township Zoning Board of Appeals. Any appeal must be received in writing by the Township Clerk within 28 days after the date of the meeting at which the Planning Commission made its decision.

(q) *Violations and penalties.*

- (1) Any person found in violation of the provisions of this Section shall be subject to the provisions in Article II, Division 2 of this chapter, and may be cited for each day of violation. The Township, in addition to other remedies, may institute any appropriate action or proceeding to prevent, abate or restrain the violation.

- (2) In addition to the provisions contained in this Section, the Planning Commission, at a regular or special meeting, shall have the authority to direct the Zoning Officer or other designated person to notify the Township Supervisor that a stop work order (or stop construction order as described in section 74-98) shall be issued upon any project subject to this Section, with the concurrence of the Township Supervisor, when it is determined that a violation has occurred.

CERTIFICATION

It is hereby certified that the foregoing Ordinance was adopted by the Township Board of Ann Arbor Charter Township, Washtenaw County, Michigan at a meeting of the Board duly called and held on _____, 2010.

ANN ARBOR CHARTER TOWNSHIP

By: _____
Michael C. Moran, Supervisor

By: _____
Rena Basch, Clerk

Public Hearing April 5, 2010
Recommended by Planning Commission June 7, 2010
Township Board Approval _____, 2010
Published _____, 2010
Effective _____, 2010

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