

BILL NO. 23

ORDINANCE NO. 1704

AN ORDINANCE APPROVING THE TREE MANUAL AND STANDARDS OF PRACTICE FOR THE CITY OF SUNSET HILLS, MISSOURI.

BE IT ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF SUNSET HILLS, MISSOURI, AS FOLLOWS:

Section 1. The Tree Manual and Standards of Practice for the City of Sunset Hills, Missouri attached hereto as Exhibit "A" and made part hereof is hereby approved.

Section 2. This Ordinance shall take effect immediately upon its passage and approval.

PASSED THIS 13th DAY OF NOVEMBER, 2007.

APPROVED THIS 13TH DAY OF NOVEMBER, 2007.

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MAYOR

ATTEST:

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CITY CLERK

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## INTRODUCTION

Trees and landscaping enhance the ecological environment and increase property values. Plantings allow people to interact with and observe nature because they signal the changing seasons and add different colors and forms at each time of the year. Trees provide food and shelter for small urban dwelling animals, allowing for the enjoyment of watching squirrels scamper up the side of an oak, or listening to birds sing from a nest of a cypress. They define areas in the landscape by framing, emphasizing, and screening. Studies have shown that most people prefer to live in an area that has trees and is landscaped attractively.

With all the benefits that trees provide, it is easy to see the need to protect and expand the city's urban forests. The City of Sunset Hills recognizes the importance of green areas and is making direct efforts to insure the continued development of this invaluable resource.

The Sunset Hills Tree Board and Planning and Zoning Commission developed a Tree Ordinance, which protects its existing urban forest and insures the continued expansion of this resource. This Tree Ordinance allows the City of Sunset Hills to move forward, knowing that a better city environment will be left to all those who follow.

Our Tree Manual contains the technical information necessary to perform the work required by the City of Sunset Hills. This manual is divided into three sections:

- (I) Maintenance and Care of Existing Plantings
- (II) Installation and Establishment of New Plantings
- (III) Tree Preservation Requirements

These sections outline the specific practices that must be followed when working with plant material on City owned property, public right-of-way and for any property requiring tree protection during the construction of a new structure.

The current Tree Manual contains important reference documents. First is a copy of the Tree Removal Permit application that must be approved before any work shall be initiated. Second is the list of acceptable tree species for planting. Third is a selection of details showing proper tree protection, maintenance and planting. These documents will be necessary references for anyone working with public plant material or building a new development within the City of Sunset Hills. The current tree manual is available from the City Engineer and on the City's Web site.

Keeping Sunset Hills beautiful, reducing pollution and erosion, conserving energy, and providing a calm, peaceful environment will require continual team effort. Together the City and its residents and businesses can make it happen.

## DEFINITIONS

In the following list of terms, the definitions provided shall be used throughout this Tree Manual:

**Adjusted Diameter** The actual diameter of a tree measured at 4.5 feet above ground multiplied by the tree's condition factor. For example, if a tree has a diameter of 32 inches in diameter and is in relatively poor health with a condition rating of 40%, its adjusted diameter is 12.8 inches.

**Board of Aldermen** The Board of Aldermen of the City of Sunset Hills.

**Caliper** The diameter of a nursery tree measured at six-inches above ground.

**City Engineer** The qualified designated official of the City of Sunset Hills, Missouri, or his or her designee, assigned to carry out the enforcement of this ordinance related to City right-of-way and other City-owned property except property in City parks.

**City Right-of-Way** Property within the City limits of the City of Sunset Hills, Missouri platted for public streets and/or utilities.

**Condition Factor** A numerical expression of a tree's condition. Typically expressed as a percentage from zero (a dead tree) to 100 (a perfectly healthy tree). The International Society of Arboriculture describes the condition rating process in the manual "Guide for Plant Appraisal", published.

**Construction Site** Any property within the City of Sunset Hills where demolition, construction, grading, or excavation activity of any kind occurs in the public right of way or where such activity occurs on private property and site plan approval is required or where a building permit for a new primary residence is required.

**Container** A planting container that shall be of sufficient size to support and sustain plant material and shall be not less than twenty-four (24) inches in depth and thirty (30) inches in diameter, inside dimensions.

**Diameter (DBH)** The diameter of a tree at breast height, which shall be measured at 4 ½ feet above ground.

**Directional Pruning** Directional, or target pruning, involves removing only those limbs that will come in contact with energized conductors. This reduces the number of times the tree must be pruned and directs growth away from the power lines, thus allowing the tree to achieve its natural height and shape.

**Director of Planning and Development** The qualified designated official of the City of Sunset Hills, Missouri, or his or her designee, assigned to carry out the enforcement of this ordinance related to private property.

**Landmark Trees** A tree in fair or better condition, which equals or exceeds the diameter sizes as follows:

Large hardwoods (oaks, hickories, etc.) – 24” DBH;

Large softwoods (pines, spruces, etc.) – 20” DBH;

A tree in “fair or better” condition is defined as a tree having a normal life expectancy, a relatively sound and solid trunk with no extensive decay, no more than one major and several minor dead limb (hardwoods only), and no major insect or disease problems. A lesser-sized tree can be considered a landmark tree if it is a rare or unusual species, of exceptional quality, or of historical significance. The Board of Aldermen may designate Landmark Trees after recommendation by the Tree Board.

**Limit of Disturbance** A line as shown on the site plan and Tree Preservation Plan that identifies the limit of construction, demolition, grading, or excavation activity of any kind. This line will typically delineate the Tree Preservation Area.

**Maintenance** Any measure considered vital or beneficial to the proper care and cultivation of any tree, shrub, or other plant material. This includes pruning, irrigating, fertilizing, spraying or otherwise applying pesticides, staking, bracing, guying, cabling, wrapping, mulching, insect and disease control, and any other horticultural practices performed as seen necessary to promote the general health of plant material.

**Parks and Recreation Director** The qualified designated official of the City of Sunset Hills, Missouri, or his or her designee, assigned to enforce the provisions of this ordinance that relate to City parks and to advise the City Engineer regarding the enforcement of this ordinance related to City-owned and private property.

**Park Trees** Any tree on city-owned property within parks, green spaces, and /or City-owned property to which the public has free access.

**Property Owner** The record owner or contract purchaser of any parcel of land.

**Street Trees** Trees on City-owned property within the right-of-way of all streets, avenues, or ways within the City.

**Topping** The drastic removal, or cutting back, of large branches in mature trees leaving large, open wounds, which subjects the tree to disease and decay. Topping causes immediate injury to the tree and may ultimately result in its early failure or death. Other names for topping include “heading”, “tipping”, “hat-racking”, and “rounding-over”.

**Tree** A woody plant typically growing as a single stem (rarely a multiple stem) in an upright form that will attain a mature height of at least fifteen feet and a DBH of at least two inches.

**Tree Canopy Coverage** The area of ground taken up when measuring the branch spread of a tree from branch tip to branch tip, or the area covered by a group or cluster of trees with contiguous (or nearly contiguous) canopies.

**Tree Lawn Garden** Any planting or architectural enhancements placed or planted in the city right of way.

**Tree and Landscape Manual** A manual that contains the technical information necessary to perform the work outlined in this ordinance.

**Tree Removal Permit** A permit obtained from the City of Sunset Hills as follows:

(A) **Private Property** - Application must be made and the appropriate fee paid (as determined by a fee schedule approved from time to time by the Board of Aldermen) by property owner or developer to the City Engineer for the following: **(1)** to remove 10,000 square feet or more of tree canopy coverage on private property from a tract two acres or greater in size within a five year period. **(2)** to remove any Valued Tree on private property from a tract less than two acres in size when the removal is associated with any activity requiring a site plan approval or for construction of a new primary structure.

(B) **Public Right-of-Way** - Application must be made and the appropriate fee paid (as determined by a fee schedule approved from time to time by the Board of Aldermen) by a property owner or contractor to the City Engineer to plant, remove, excavate within the tree canopy coverage, or otherwise disturb any tree or shrub on any public right-of-way. No person shall be required to obtain a Tree Permit from the City for the routine mowing of grass on public right-of-way. Also, no person shall be required to obtain a Tree Permit for the routine pruning or maintenance of trees or plants upon public rights-of-way, so long as the right of way adjoins the person's real property and the property owner performs the work. Only the City shall remove any tree within the public rights-of-way without a Tree Permit as provided in **Section II** of this manual.

**Tree Preservation Area** The tree canopy coverage on a site proposed for development that will not be disturbed by grading or storage of materials or disturbance of any kind. Tree preservation area is a “no-violation” zone that is typically bordered by the limit of disturbance line.

**Tree Preservation Plan (TPP)** A map-based plan prepared that provides detailed information about the species, diameter (DBH), condition, location, and value of existing trees. The following existing trees shall be shown on the plan: all trees of a caliper of eight inches (DBH) and larger, that are on a Construction

Site or within ten feet of the property line upon which the Construction Site is located. Trees meeting the definition of “Landmark Trees” shall be so identified. The dollar value of each Valued Tree shall be calculated using methodology developed by the International Society of Arboriculture and described in their guidebook “Guide to Plant Appraisal” (available at [www.isa-arbor.com](http://www.isa-arbor.com)). The plan shall provide the City with a professional opinion regarding the survivability of trees on the site and shall provide detailed information about which trees are planned for protection and which trees are to be removed. Details shall be included about protective measures, including the use of root pruning, retaining walls, etc. A “Limit of Disturbance Line” shall indicate the border of areas where no grading is to occur and shall delineate the Tree Preservation Areas. An aerial photo of the site at a scale similar to or equal to the TPP map shall be included. In areas where large groupings (>10,000 square feet of contiguous tree canopy coverage) of trees greater than a caliper of eight inches (DBH) exist, individual trees within the interior of the grouping need not be plotted if no grading or other tree disturbance is planned. Trees located within twenty feet of the edge of the grouping, adjacent to areas planned for grading, shall be mapped and identified. On sites where tree replacement is required, or proposed, the new plantings shall be shown and identified as to species, location and size. A table shall be provided that lists the quantity and size, by species, of each tree to be planted along with a tabulation of the total number of caliper inches required and the total number of caliper inches provided by replanting.

**Valued Tree** Any Park Tree or any tree of a caliper of 8 inches or greater.

## SECTION I

### MAINTENANCE AND CARE OF EXISTING PLANTINGS

Applications for a permit to perform any of the work outlined in this section are available at the Sunset Hills City Hall. Copies of the applications are also included in the current tree manual. Completed applications must be submitted with building permit application, if a building permit is not required, submittal must be at least ten business days before the proposed work is to begin.

The following section outlines the standards of practice that must be followed when performing maintenance on any plant material located on City-owned property or the public right-of-way. These practices will not be enforced on those performing work on private property, but they serve as an excellent reference.

### **PRUNING STANDARDS**

Outlined in this section are specific standards of practice that must be adhered to when pruning any plant material located on City owned property.

No tree, shrub, or other plant material shall be pruned in such a manner as to impair the health or irreversibly alter the natural growing form of the plant.

The following general rules must be adhered to when performing approved maintenance pruning on plant material located on city-owned property:

1. All pruning tools must be kept adequately sharp to insure smooth cuts.
2. All tools used on disease-infected trees or shrubs must be properly disinfected before being used on any other plant material. Tools must also be disinfected between pruning infected and uninfected plant areas within the same plant material. Disinfecting can be accomplished by wiping the tools with isopropyl alcohol or ten percent bleach to water solution.
3. No spurs, climbing irons or spike shoes are permitted for use on City trees.
4. All tree-pruning cuts must be made just outside the branch collar. This method will favor the earliest possible covering of the wound by natural callous growth. Flush cuts are not allowed.
5. When only a portion of the branch is being removed, all cuts must be made at a node or branch crotch, and no stubs shall be left.
6. When large tree branches are being removed they must be controlled in an appropriate manner to prevent damage to property, persons, other plants, or other parts of the tree itself. At least one responsible worker must serve to coordinate safe operations from the ground at all times. This may require branches to be secured by ropes and lowered safely in a controlled manner. It may also require branches to be cut in two stages, with the first cut being one to two feet beyond the intended final cut. The final cut should be made in a manner to prevent tearing back of the bark and wood.
7. No individual will be permitted to prune any tree branch, which touches any utility line. The utility company, the city, or the city's approved contractor will prune all trees with their branches touching utility lines.
8. When large tree sections are being cut, the work area must be barricaded using street and sidewalk barriers, highway cones, and / or signs to warn the public of danger.
9. Whenever streets must be blocked off, Police, Fire, Ambulance, and the Street Division of Public Works must be notified of the location and length of time that the street will be blocked. These departments must also be notified when the barriers are removed or if the barriers are to remain longer than originally expected.

10. Flashing signals or flares must be placed on all barriers or obstructions remaining in the area after dark.
11. Whenever barricades or work areas block any portion of a street, flagmen must be stationed to insure as little obstruction to the flow of traffic as possible.
12. Under no circumstances shall workers leave the scene of operation with any severed or partially cut branches remaining in any trees.
13. All debris from any pruning operation must be cleaned up and removed before workers leave the site. The work area must be kept clean to prevent hazards or unsafe conditions during operations. Debris must not be placed in any manner, which would result in a hazardous situation to workers or the public.
14. Exceptions to these standards may occur in emergency situations where immediate danger to persons or property exists. Any such emergency procedures performed must be reported to the Director of Parks and Recreation and/or City Engineer.
15. Any questions should be directed to the Sunset Hills Director of Parks and Recreation and/or City Engineer.

### **THREE CATEGORIES OF TREE PRUNING**

***Minimum*** or ***Safety Prune*** consists of the minimum pruning necessary to correct extreme or undesirable conditions, which may be hazardous to persons or property. It includes the following:

1. Remove all dead or dying branches.
2. Remove all broken or loose branches lodged in the trees.
3. Remove any lower limbs, which constitute a threat to persons or property. (The City discourages removing lower limbs to the point that the trunk exceeds one-third of the height of the tree.)

***Medium Prune*** includes the steps taken in Minimum Prune in addition to the removal of any branches, which may menace the future health, strength, and / or attractiveness of the tree. In addition to the specifications for Minimum Prune, it includes the following:

1. Remove all dead and live branch stubs from previously broken or poorly cut branches.
2. Remove any live branches that interfere with the trees structural strength and healthy development. These include:
  - a. Crossed or rubbing branches
  - b. Multiple leaders in a single leader type tree
  - c. Undesirable sucker and sprout growths

- d. Excessively heavy branch ends.
- e. Multiple branches near the end of broken or stubbed limbs.
3. Remove or sever all girdling roots.
4. Remove any branch tips that extend beyond the natural form or outline of the tree.

**Head Back Prune** is reducing up to one-third of the height and / or spread of the tree. Head Back Prune is discouraged and should be used only under extreme circumstances. *Head-Back Prune* techniques should only be used when plant growth endangers overhead utility lines, interferes with adjacent structures, or otherwise creates a specific hazard to persons to property. The City of Sunset Hills strongly discourages this type of pruning.

1. *Head-Back Pruning* shall only be done by the drop-crotch method.
2. No more than one-third of the crown of the tree shall be removed.
3. *Head-Back Pruning* will not be permitted when the result would be a tree with a seriously unbalanced metabolism, weakening its entire structure.
4. **Absolutely NO TOPPING will be permitted.**

## **REMOVAL OF TREES OR OTHER PLANT MATERIAL**

The decision to remove any plant material on City-owned property will rest with the Director of Parks and Recreation and/or City Engineer. Consideration will be given to the location, health, age, aesthetic value, uniqueness, historical significance, and wildlife habitat of the tree or plant material concerned. A completed application for a permit to remove plant material must be submitted with building permit application, if a building permit is not required, submittal must be at least ten business days before the proposed work is to begin. If the Director of Parks and Recreation and/or City Engineer approves the removal of the plant material, the following procedures must be strictly followed:

1. Whenever streets must be blocked off, Police, Fire, Ambulance, and the Street Division of Public Works must be notified of the location and length of time that the street will be blocked. These departments must also be notified when the barriers are removed or if the barriers are to remain longer than originally expected.
2. Whenever large tree sections are removed, the work area must be barricaded using street and sidewalk barriers, highway cones, or signs. These barriers must be placed to insure the safety of the general public with as little inconvenience as possible to vehicular and pedestrian traffic. Flashing signals or flares must be placed on all barriers remaining in the street after dark. At least one responsible worker must serve specifically to coordinate safe operations from the ground at all times.

3. Whenever barricades or work areas block any portion of a street, flagmen must be stationed to insure as little obstruction to the flow of traffic as possible.
4. The stumps of all removed trees must be removed to a minimum depth of six (6) inches below ground level. The area must be backfilled, the soil leveled, and vegetation restored within thirty (30) days.
5. Neither utility poles nor trees shall be used as an anchor for winch trucks.
6. Replacement of plants may be required as a condition for permit approval. Replacement plant material must meet specifications outlined in **Section II** of this manual.

### **STAKING, BRACING, AND CABLING OF ESTABLISHED TREES**

Staking, bracing, and cabling of established trees on City-owned property or public right-of-way will be used only as a last resort. Proper plant selection, maintenance, and site selection will first be used to minimize the need for such practices. If the Director of Parks and Recreation and/or City Engineer determines that these practices are necessary, all work must follow the standards established by the International Society of Arboriculture.

### **WATERING AND APPLYING PESTICIDES TO ESTABLISHED PLANT MATERIAL**

#### **Watering**

Established plant material has a developed root system. For this reason, established plant material does not need supplemental water except under drought or water stress conditions. When water stress conditions exist, plant material should be monitored and watered as outlined in Section II of this manual.

#### **Applying Pesticides**

The risks involved in pesticide applications are numerous. Therefore, preventative measures must be exhausted before applying pesticides to plant material on City-owned property or public right-of-way. Pesticide treatments deemed necessary and approved by permit must be applied for with building permit application, if a building permit is not required, submittal must be at least ten business days before the proposed work is to begin.

The following procedures must be strictly adhered to when applying pesticides on City- owned property or public right-of-way:

1. All persons applying pesticides must follow the procedures, rules, and regulations set by the Missouri Department of Agriculture, Division of Plant Industries, Bureau of Pesticide Control. They must also adhere to all applicable federal regulations. Proof of licensing by the State of Missouri will be required.
2. No plant material shall be sprayed or otherwise treated with pesticides unless specifically stated on a City issued permit.
3. All pesticides must be applied strictly according to the label
4. No pesticide shall be applied in any conditions, which would allow drift from the targeted area. These conditions include but are not exclusive to:
  - a. Winds in excess of seven (7) m.p.h.
  - b. Rain or other precipitation
  - c. Over-application of the pesticide or excessive run-off
  - d. Use of unnecessary or excessive pressure in application process
  - e. Improper use of equipment or using incorrect equipment for application
  - f. Applying pesticides across or near a body of water that is not intended to be treated
  - g. Improper filling or cleaning of spray tank causing overflow or back siphoning
5. No person other than the applicator shall be allowed in the area during pesticide treatment. All pets and other animals must be removed from the treatment area.
6. No persons or animals shall be allowed to enter the treatment area until the re-entry time stated on the label has elapsed. Appropriate signage must be placed at the location of treatment.
7. All safety equipment recommended on the pesticide label must be used during application and mixing.
8. All toys, furniture, pet dishes, and other movable objects must be removed from the treatment site or covered prior to application.
9. Any chemical spills must be handled according to label directions. All dry or granular pesticides spilled must be swept up and disposed of properly. All liquid pesticide spills must be contained with chemical absorbing products and disposed of properly. All spill areas must be cleaned thoroughly. These are the minimum procedures required by the City of Sunset Hills for those applying pesticides on City-owned property or public right-of-way. The nature of

this type of task and the risks involved require that extreme caution be exercised at all times. In situations, the City may impose stricter guidelines or request that more protective measures are taken.

### **TRANSPLANTING EXISTING TREES**

Transplanting trees from their existing location to a new site should be done only to avoid eliminating the tree. Alternative solutions, such as pruning to correct site line problems or protecting trees during construction, should be implemented first. Once transplanting has been approved basic guidelines must be followed. Additional restrictions may apply in certain situations.

1. All utility companies must be contacted to locate any cables, pipes, lines, wires, and any other underground structures before digging on City-owned property or public right-of-way.
2. No tree one-half inch (1/2") caliper or greater shall be transplanted bare root
3. The diameter of the root ball of all balled and burlapped trees, and trees moved with a tree spade, must measure at least twelve (12) times the caliper of the tree in inches.
4. All balled and burlapped trees and shrubs must be replanted immediately or heeled with mulch for protection. While heeled in, all trees and shrubs must be kept adequately moist.
5. All transplanted trees and shrubs must be thoroughly watered at the time of planting.
6. All standards listed in Section II of this Manual, Installation and Establishment of New Plantings, must be followed for transplanted plant material.

### **PROTECTION OF PLANT MATERIAL DURING CONSTRUCTION, TRENCHING OR EXCAVATION**

The following sections outline the protective measures that must be taken when trenching, excavating, storing materials, or performing any construction work under either of the following conditions:

- A. On City-owned property or public right-of-way and within the drip line of any tree or shrub, or
- B. On private property but within a radius of fifteen feet (15') from any plant on City- owned property or public right-of-way.

Prior to initiation of such work, a Tree Permit must be obtained from the City. Permit applications are available at the Sunset Hills City Hall. The completed application must be submitted with building permit application, if a building permit is not required, submittal must be at least ten business days before the proposed work is to begin. Examples of various measures required for tree protection during the construction process are included in the current tree manual. Upon approval from the City to perform such work, these guidelines must be followed:

1. All plant material within the activity site must be surrounded with a substantial fence not less than four feet (4') high that extends beyond the drip line of the tree or plant on all sides and shall be designated as a protection zone. The protection zone shall designate the area not to be entered with construction material, equipment, or personnel without prior approval of the Director of Parks and Recreation.

2. No fence being used to protect plant material shall be less than sixteen feet (16') square. All plant material must be centered in the protected area.

3. Absolutely no excavation, trenching, construction, driving of vehicles or equipment, storage of materials or other activity shall occur within the fenced area.

4. Under rare circumstances, the City may allow construction traffic within the drip line of plant material on City-owned property. In such situations, the area must be protected to prevent compaction of the plant material's root zone. Acceptable methods of protection are outlined below:

- a. Bridging root areas - Rail ties are laid on top of the ground, between the major roots of the plant material. Steel plates are bridged across the ties. All motorized traffic must be routed across the bridged steel plates. When construction is complete, all ties and steel plates must be removed from the area.

- b. Mulching - A six (6) to ten (10) inch layer of wood chips is temporarily spread across the traffic area within the drip line of the plant material to absorb the impact and distribute the weight of vehicles and equipment. This mulch layer must be maintained through the duration of the activity. When construction is complete, all mulch must be removed.

- c. Regardless of the method used, when the project is complete the protected area must be aerated.

5. Absolutely no trenching will be allowed within the drip line of any tree on City-owned property or public right-of-way. Underground utilities should be either rerouted to avoid the root zone area, or tunneled under the root zone area of the tree.

6. Trenching or excavation spoils should be returned to trench and excavation site within 24 hours. If the return is not possible within that time period, the spoils

shall be stored away from tree root zones, unless authorized by the Director of Parks and Recreation and/or the City Engineer.

7. Absolutely no grade changes will be allowed within the root zone of any plant material on City-owned property or public right-of-way unless authorized by the Director of Parks and Recreation and/or the City Engineer.

8. Nothing should be stored outside the construction zone. No filling of gas tanks, cleaning of tools or repairing equipment shall occur outside of the construction zone.

9. All chemical waste should be hauled away for proper disposal.

10. Stock piled materials should be stored off turf areas.

11. If tree limbs need to be removed for overhead clearance or machinery or to provide access, the Director of Parks and Recreation and/or the City Engineer should be notified beforehand to direct the proper procedure or to perform the procedure.

## **SECTION II**

### **INSTALLATION AND ESTABLISHMENT OF NEW PLANTINGS**

Application for permit to perform any of the work in this section is available at the Sunset Hills City Hall. Copies of the applications are also included in the current tree manual. Completed applications must be submitted with building permit application, if a building permit is not required, submittal must be at least ten business days before the proposed work is to begin. The Director of Parks and Recreation and/or City Engineer must approve Plantings on City-owned property or public right-of-way. Any questions regarding these methods should be directed to either the Director of Parks and Recreation and/or City Engineer.

### **INSTALLATION OF NEW PLANT MATERIAL**

There are general rules that must be followed when installing approved plant material on City-owned property or public right-of-ways. These rules are:

1. Prior to digging, all utility companies and any such related companies must be contacted to locate any underground cables, pipes, lines, wires, or other structures.

2. No trees other than those listed in the current tree manual shall be planted under any overhead utility line on City-owned property. This does not apply to streetlight or service lines.

3. When planting street trees in the right-of-way, a general guideline should be that large maturing trees should be spaced a minimum of thirty (30') feet apart; medium maturing trees should be spaced a minimum of twenty five (25') feet apart; and small maturing trees should be spaced a minimum of twenty (20') feet apart. These minimum spacing requirements are for optimum growth and will allow the tree to develop properly. Exceptions may be necessary. (Categories of large, medium, and small maturing trees are listed in the current tree manual.)
4. No street tree planting is permitted in the green strip between the curb and sidewalk where the distance between the curb and the detached sidewalk is less than four (4') feet. On streets without a detached sidewalk, street trees will be planted three (3') feet inside (street side) of the public right-of-way limits.
5. Only the approved trees and shrubs listed in the current tree manual shall be planted.
6. All trees and shrubs planted must meet the American Standard for Nursery Stock. They must be free of disease, insects, and any other disfigurements.
7. All trees and shrubs must be planted so the top of the root ball is at the same level or slightly higher than the natural surface of the grounds. No tree or shrub shall be planted deeper than it was planted in the nursery.
8. Any planting holes that are drilled with an auger must be roughened on the sides and bottom to reduce the effect of glazed walls.
9. When backfilling planting holes, only the soil originally removed from the hole shall be used.
10. Any tree with its root ball in a wire basket must have an absolute minimum of the upper one-half of the wire basket removed before planting is complete.
11. All trees that have their root ball wrapped in burlap must have the top of the burlap pulled and removed or buried before planting is complete.
12. All ropes or twine that is encircling the trunk of any tree must be removed.
13. All trees and shrubs must be mulched with three (3") inches of an appropriate mulching material, such as shredded hardwood bark.
14. Newly planted trees will need to be secured by wires extending from three (3) equal- distant stakes. Wires from the stakes must be run through hose loops, which prevent the wires from contacting the tree. The wires should be loose enough to accommodate slight swaying of the tree. The hose loops must be

loose enough to insure that girdling cannot occur within two (2) years or normal growth.

15. With exceptions, tree stakes or wires must be removed from the trees after 12 – 24 months.

16. All newly planted trees and shrubs must be thoroughly watered immediately after planting. To insure proper watering, saturate the root ball and the surrounding soil

### **ESTABLISHMENT OF NEW PLANT MATERIAL**

All newly planted trees and shrubs on City-owned property or public right-of-ways must be monitored to insure adequate soil moisture. This monitoring must continue for one (1) year. During this monitoring period, the moisture content of the soil around the trees and shrubs must be checked weekly. If the soil moisture is found to be inadequate, water must be applied in a manner, which will insure proper absorption into the root zone of the tree or shrub

Newly planted trees and shrubs have reduced root systems. There is a delicate balance between adequate moisture and a fatal dose, so special attention must be directed toward proper irrigation.

To determine if a newly planted tree or shrub needs water, check the soil. The appearance of a tree may help signal that a water problem exists, but the appearance may also be deceptive. An example of this would be wilting of a tree's foliage. Wilting is usually a sign of water stress, but it could also be a sign of chemical injury, root damage, disease, or even too much water. The only way to be sure that the tree needs water is to check the soil.

When checking the soil around the tree for moisture, pull back any mulch from the area under the tree and dig down three to four inches into the root zone. If the soil in that area feels moist, or if it stays in a sticky or firm ball when it is pressed together, the soil moisture is adequate. If the soil is crumbly and will not press together, or if it feels dry, the tree probably needs a thorough watering. This process of checking the soil is extremely important.

Watering methods, which will insure proper absorption into the root zone, are those that provide a deep, thorough watering. Preferred methods include: filling a basin/berm area around the tree with water and allowing it to soak in slowly; spiking a hollow tube into the ground and slowly supplying the water deep into the root zone; and using drip irrigation. Each of these methods allows the water to soak in deeply, with less water being wasted by "run-off". Newly planted trees require 1" of water per week.

Tree species approved for planting on public right-of-ways are included in the current tree manual.

### **SECTION III**

#### **TREE PRESERVATION REQUIREMENTS**

##### **SITES OF TWO ACRES OR MORE IN SIZE**

1. Tree Removal Associated With Construction or Development Activities – On tracts of land that are equal to or greater than two acres in size, a Tree Permit, as issued by the Director of Planning and Development, is required to remove or destroy 10,000 sq ft or more of tree canopy coverage within a five-year period (from the date the permit is issued) on each individual tract of that size. The removal of diseased, or dead trees, and trees that are a public nuisance is exempt. The property owner or developer must apply for and secure the Tree Permit before any removal or destruction commences. An application for a Tree Removal Permit shall be submitted to the office of the Director of Planning and Development and pursuant to Section III 1, above, and shall include the following:

- a. Tree Preservation Plan, Site Plan and a landscape plan prepared by a Certified Arborist, Certified Forester, Landscape Architect or other professional as approved by the City Engineer, for approval by the Planning and Zoning Commission and Tree Board.
- b. A surety or cash escrow for the benefit of the City of Sunset Hills to account for trees that die, or are damaged beyond repair, as a result of grading or construction damage within a one year period after the issuance of the final occupancy permits. The amount of the surety required shall be in the amount of \$2,500 for each acre (or fraction thereof) of the tree preservation area, or \$5,000 whichever is greater. (The escrow shall not be required for applicants building on single-family residential zoned lots.)
- c. The Director of Planning shall review all Tree Permits requesting tree removal for compliance with these regulations and either approve, approve with conditions, return for revisions, or deny within 45 days of receipt. Approval shall be based upon the reasonable efforts to preserve trees on the site as determined by the Director of Planning and Development.

2. Denial of Tree Removal Permit; Right of Appeal – In the event the Director of Planning and Development denies a Tree Permit application associated with development activities, the applicant may appeal such decision to the Planning and Zoning Commission.

3. Required Tree Protection – On tracts of land equal to or greater than two acres in size, no more than 70% of the existing tree canopy coverage may be cleared or developed. The remaining 30% shall be maintained without disturbing the roots of trees in the protected area. Any Valued Trees removed during development that exceeds the 30% canopy protection provision are subject to the replacement provisions outlined in Section III (4) below.

4. Required Tree Replacement – Replacement of trees is required when the tree protection requirements in Section III (3) above cannot be met.

- a. Tree replacement shall occur in a sufficient quantity to create tree canopy coverage on the site equal to thirty percent of the existing tree canopy coverage. New trees to be planted shall be no less than two inches in caliper and no greater than four inches in caliper unless otherwise approved by the Director of Planning and Development. Each newly planted tree shall account for 400 square feet of tree canopy coverage towards the required replanting. If sufficient space on-site is not available for replanting the required number of trees, the owner/developer may either provide replacement trees for planting on City property where the City permits or, in lieu thereof, may make a payment to the City of Sunset Hills at a monetary value of \$100 per tree with a cap of \$2,500 per acre.

5. Replacement Standards – All replacement plantings shall be performed according to the latest standards set forth by the International Society of Arboriculture and by utilizing species found on the plant lists in the Tree and Landscape Manual unless the desired species is approved by the Director of Planning and Development after consultation with the Parks and Recreation Director. In a case where all replacement trees cannot be planted on site, the trees can be planted on other sites in the City of Sunset Hills that are approved by the Director of Planning and Development, Parks and Recreation Director, or City Engineer. Alternatively, the owner/developer may make a payment to the City of Sunset Hills equal in value to the value of the replacement trees required. The City shall use all such payments for the planting of trees on City-owned property.

6. Prior to issuing any occupancy permits – Should any preserved tree die or become damaged as a result of grading or construction, the owner/developer shall pay an assessment equal to the value of the trees that die, are damaged beyond repair, or are removed. The value of the trees shall be determined using the International Society of Arboriculture methodology of tree appraisal. (Copies of the booklet outlining the methodology are available from ISA at PO Box 3129; Champaign, IL; [www.isa-arbor.com](http://www.isa-arbor.com)). The City shall withhold any Occupancy Permits until such assessment is paid. Assessments shall be paid from any existing sureties or escrows.

7. Within a one-year period after the occupancy permit is issued – The owner/developer shall replace protected trees that die, or are damaged beyond repair, as a result of grading or construction damage as determined by a certified arborist. The number of replacement trees shall be determined by the formulas in Section III (4) above. Failure to plant successfully shall constitute a default and the City of Sunset Hills shall be entitled to proceed against the surety or escrow. Replacements shall be planted on site unless the density of the planting becomes unreasonable. In cases where all replacement trees cannot be planted on site, the trees may be planted on other sites in the City of Sunset Hills that are approved by the Director of Planning and Development, Parks and Recreation Director, or City Engineer. Alternatively, the owner/developer may make a payment to the City of Sunset Hills in an amount calculated by using the formulas in Section III (4) above. The City shall use such payments for the planting of trees on City-owned property.

### **SITES OF LESS THAN TWO ACRES IN SIZE**

1. Tree Removal Associated With Construction or Development Activities – On tracts of land less than two acres in size, a Tree Permit is required from the Director of Planning and Development for the removal or disturbance of any Valued Tree when such removal or disturbance is associated with a development that requires site plan approval or requires a building permit for the construction of a new primary structure. The property owner or developer shall make application and secure a permit before any removal or disturbance commences.

An application for a Tree Permit under Section III (1) above shall include the following:

- a. A Tree Preservation Plan (TPP - see definitions) and a Site Development Plan (if applicable) to the City Engineer.
- b. The applicant shall post a surety or cash escrow for the benefit of the City of Sunset Hills to account for trees that die, or are damaged beyond repair, as a result of grading or construction damage within a one-year period after the issuance of the final occupancy permits. The amount of the surety required shall be in the amount of \$2,000 for each acre of the tree preservation area, or \$5,000 whichever is greater. (The escrow shall not be required for applicants building on single-family residential zoned lots.)
- c. The Director of Planning shall review all Tree Permits requesting tree removal for compliance with these regulations and either approved, approved with conditions, returned for revisions, or denied within 45 days of receipt. Approval shall be based upon the reasonable efforts to preserve trees on the site as determined by the Director of Planning and Development.

2. Denial of Tree Removal Permit; Right of Appeal – In the event the Director of Planning and Development denies a Tree Permit application associated with

development activities, the applicant may appeal such decision to the Planning and Zoning Commission.

3. Required Tree Protection – Each Valued Tree shall be protected during development. Each Valued Tree removed during development is subject to the replacement provisions outlined below.

4. Required Tree Replacement – Replacement of Valued Trees is required when the tree protection requirements in Section III above cannot be met. Tree replacement shall occur in such amounts so that the total caliper measurement of all replacement trees must equal one-half the total adjusted diameter measurement of removed Valued Trees. If sufficient space on-site is not available for replanting the required number of trees, the owner/developer may provide replacement trees for planting on City property where the City permits or, in lieu thereof, may make a payment to the City of Sunset Hills at a monetary value of:

- a. For non-residential property -- \$100 per replacement caliper inch with the total required payment not to exceed \$2,500 per acre.
- b. For single-family residential property -- \$100 per replacement caliper inch with the total required payment not to exceed \$1,000 per lot.

5. Replacement Standards – All replacement plantings shall be performed according to the latest standards set forth by the International Society of Arboriculture and by utilizing species found on the plant lists in the Tree and Landscape Manual unless the desired species is approved by the Director of Planning and Development after consultation with the Parks and Recreation Director. In a case where all replacement trees cannot be planted on site, the trees may be planted on other sites in the City of Sunset Hills that are approved by the Director of Planning and Development, Parks and Recreation Director, or City Engineer. Alternatively, the owner/developer may make a payment to the City of Sunset Hills equal in value to the value of the replacement trees required. The City shall use all such payments for the planting of trees on City-owned property.

6. Prior to issuing any occupancy permits – Should any Valued Tree die or become damaged as a result of grading or construction, the owner/developer shall pay an assessment equal to the value of the trees that die, are damaged beyond repair, or are removed. The value of the trees shall be determined using the International Society of Arboriculture methodology of tree appraisal (Copies of the booklet outlining the methodology are available from ISA at PO Box 3129; Champaign, IL; [www.isa-arbor.com](http://www.isa-arbor.com)), but in no event more than \$800 per lot for residentially zoned lots. The City shall withhold any Occupancy Permits until such assessment is paid. Assessments shall be paid from any existing sureties or escrows.

7. Within a one-year period after the occupancy permit is issued – The owner/developer shall replace Valued Trees that die, or are damaged beyond repair, as a result of grading or construction damage as determined by a certified arborist. The number of replacement trees is determined by the formulas in Section III (4). Failure to plant successfully shall constitute a default and the City of Sunset Hills shall be entitled to proceed against the surety or escrow. Replacements shall be planted on site unless the density of the planting becomes unreasonable. In a case where all replacement trees cannot be planted on site, The trees may be planted on other sites in the City of Sunset Hills that are approved by the Director of Planning and Development, Parks and Recreation Director, or City Engineer. Alternatively, the owner/developer may make a payment to the City in an amount equal to the value of the trees, as determined above. The City of Sunset Hills shall use such payments for the planting of trees on City-owned property.

8. Single family lots of less than two acres that have been subdivided for more than two years are NOT required to submit any of the items listed above.

#### **VIOLATION AND PENALTY**

Any person who violates any provision of this Ordinance or who fails to comply with any notice issued pursuant to the provisions of this Ordinance, upon being found guilty of violation, shall be subject to a fine not to exceed Two Hundred Fifty Dollars (\$250.00) for each separate offense. Each day during which any violation of this provision of this Ordinance shall occur or continue shall be a separate offense. If, as the result of the violation of any provision of this Ordinance, the injury, mutilation, or death of a tree, shrub, or other plant located on City-owned property is caused, the cost of repair or replacement of such tree, shrub, or other plant shall be borne by the party in violation. The replacement value of trees and shrubs shall be determined by City staff using the latest revision of A Guide to the Professional Evaluation of Landscape Trees, Specimen Shrubs and Evergreens, as published by the International Society of Arboriculture.