

Janice Hamilton Haldeman Arboretum at Erskine Tree Care Plan
(Approved 02.20.2025 by the Arboretum Committee)

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Purpose

The specific objective of the Erskine College Tree Plan will be:

- To become accredited as a Level I Arboretum under the ArbNet Arboretum Accreditation Program, developed by the Morton Arboretum.
- To become a certified Bee Campus USA.
- To establish a Campus Tree Advisory Committee.
- To establish tree selection and planting guidelines.
- To protect and maintain the existing campus urban forest during construction and renovation projects.
- To promote tree health and safety by following the International Society of Arboriculture and the ANSI Standards guidelines when maintaining campus trees.

Campus Tree Advisory Committee

An Arboretum Committee shall be established to assist the Landscaping & Grounds Supervisor in providing guidance for managing the campus's natural assets, future planning of the campus arboretum, educating the campus community on the benefits of the campus urban forest, annually reviewing the Tree Care Plan, and finding and setting up ways to bring in community members to enjoy and learn about the college arboretum.

Committee members shall consist of the Vice President for Facilities and Strategic Planning, who shall be the convenor, Operations Manager, Facilities & Grounds Manager, Landscaping & Grounds Supervisor, Marketing & Communications Director, a student representative, faculty representative, and a development officer.

- Other than the Vice President for Facilities and Strategic Planning or his/her successor, committee members shall each serve for a one-year term with the option for renewal.
- The committee shall meet quarterly.
- Responsibility for the enforcement of the plan shall reside with the Vice President of Operations and Strategic Planning, the Aramark Facility & Grounds Supervisor, and the Grounds Department.
- Initial Committee members are:
 - Mr. Bobby Clarke, VP For Facilities and Strategic Planning
 - Mr. Randy Moore, Director of Operations
 - Dr. Jan H. Haldeman, Professor Emerita of Biology
 - Mr. Michael Lewis, Aramark Facilities & Grounds Supervisor
 - Mr. Sloan Bradley, Student
 - Ms. Brianne Holmes, Director of Marketing & Communications
 - Mrs. Beth Boyd, Senior Gifts Officer
- Planned campus tree advisory committee meeting dates:
 - September 2024

- December 2024
- February 2025
- May 2025

Tree Care Plan

Plant selection

The selection of plants to be installed on the campus shall be approved by the Campus Arboretum Advisory Committee prior to installation. Diversity, site conditions, pest susceptibility, form, mature height, and longevity will be the factors that determine species selection. When utilizing a contractor, the landscape plan shall be approved by the Campus Arboretum Advisory Committee in regard to plant selection. The Facilities & Grounds Supervisor may make suggestions and/or request that substitute plant species be considered by the Campus Arboretum Advisory Committee.

Recommended plant species

As an arboretum, Erskine strives for diversity among the collection of plants on campus. The attached list contains the more common plants that are recommended for use in Erskine's landscape. In seeking diversification on campus, Erskine is not bound exclusively to the plants on this list. If a plant is recommended that is not on this list it must have the approval of the Grounds Supervisor before it is installed. There may be different cultivars of the plants that are listed that may be installed with the approval of the Landscaping & Grounds Supervisor as well. This list will be prepared and attached hereto upon approval of the Arboretum Committee.

Planting

Depending on the size of the project the plantings shall be completed by Aramark Facilities & Grounds or an approved outside contractor.

The following guidelines shall be followed when planting at the campus:

- When using an outside contractor, the Landscaping & Grounds Supervisor or a Grounds Department employee shall be on site at the time of the plant delivery. Erskine College reserves the right to refuse any plant that is damaged, has signs of disease or insects, appears to be in poor health, has poor form, poor structure, or does not meet the plant selection specifications.
- Erskine College also reserves the right to refuse a planting due to improper planting techniques at the time of installation if the Erskine College planting guidelines are not followed.
- All plants must be set with the root flare or bud union clearly visible above the soil grade. If the root flare or bud union is not exposed soil shall be carefully removed from the top of the root ball until it is exposed.

- The planting hole shall be no deeper than the height of the root ball when measured from the bottom of the root ball to the bottom of the root flare. The planting hole shall be 2 to 3 times the diameter of the root ball. Upon placing the plant in the hole, all burlap, twine, ropes, wire baskets shall be removed from the top one third of the root ball. When possible, the entire wire basket, twine, and burlap shall be removed. All containers shall be completely removed on containerized plant material.
- The planting hole shall be backfilled with the existing soil. If the existing soil is of poor quality, soil amendments shall be incorporated into the soil. After the completion of the backfill, the root flare or bud union shall be visible and exposed.
- All new plantings shall be mulched with a shredded hardwood bark mulch or wood chips to a depth of 2-4". The mulch shall not touch the trunk of the tree or cover up the root flare or bud union of the plant.
- Newly planted trees shall be watered right after installation and must continue to receive adequate watering weekly during the first growing season up until the ground freezes
- Staking of trees at planting will only be done if the tree is unstable and shall be completed according to the most recent ANSI standard.
- All new plantings shall not receive any fertilization during their first year of growth. Broken branches and stubs shall be pruned at the time of planting. Structural pruning shall not take place until the plant has been in the ground for one growing season.
- When contracting out the tree planting, contractors shall provide a one-year warranty on all plant material against defective plant material and workmanship.
- All plant material shall be replaced if it is dead or growing poorly at no cost to the college. Replacement plant material shall be of a similar size and shall come with a new one-year warranty beginning at the time the replacement plant goes into the ground.

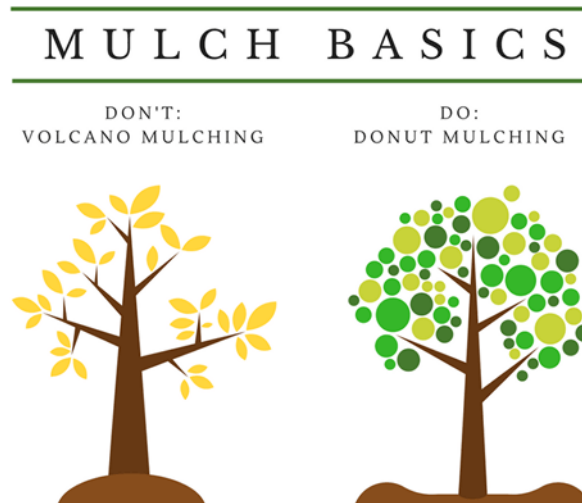
Maintenance

Maintenance of the plant material will begin the day it is put into the ground and continue until the plant is no longer viable or safe. Maintenance will be performed to provide a safe, functional, and visually appealing environment for the campus and surrounding communities.

- All trees shall be inspected visually on an annual basis.
- All maintenance procedures shall be performed by the Grounds Department staff when possible.
- If the Grounds Department staff is unable to safely perform or does not have the necessary tools to perform the maintenance tasks, an ISA-certified Arborist approved by the Landscaping & Grounds Supervisor shall be contracted to perform the tasks.

Mulching

Mulch provides numerous benefits, including helping to retain moisture in the soil areas where roots grow; controlling weed and grass growth around the tree, which reduces competition for water and nutrients; insulating the soil, protecting the tree from extreme temperatures; adding nutrients to the soil as the mulch decomposes; reducing the likelihood of damage from a lawn-mower or a trimmer; and giving planting beds a well-cared for, uniform look. Properly applied mulch will look somewhat like a flattened donut, with plenty of space in the middle for the flare and root ball to breathe.



- Immediately after planting a tree, take care to mulch the planting area with 2 to 4 inches of an organic mulch, such as composted wood chips.
- If you are applying mulch to an existing tree, carefully create a shallow edge within the drip line of the canopy, taking care to avoid damaging the roots before you lay mulch down.
- There shall be no volcano mulching. Do not mulch up to or against the trunk; start the mulch 6 inches away from the tree trunk. You should be able to see the “flare” at the base of the trunk where the first roots start to branch out.
- Trees and shrubs shall be mulched to a depth of 2-4 inches with shredded hardwood mulch or wood chips.
- As the canopy of the tree expands so shall the mulch ring where it is possible and within reason to expand.
- Additional mulch shall be added on an as-needed basis.

Pruning

All pruning shall be done according to the current ANSI standards and the International Society of Arboriculture (ISA) guidelines. Preventative maintenance pruning will be done on an as-needed basis as determined by the Grounds Supervisor. Trees will be inspected annually to determine their pruning needs. Trees will be pruned for safety first, then for tree health, and then for aesthetics. Trees shall be left low-branched and natural in appearance when possible.

Cabling and bracing

All cabling and bracing shall be performed according to the current ANSI cabling and bracing standards.

Fertilization

Newly installed plant material shall not receive fertilization the first year. A soil test shall be performed prior to fertilizing to determine the specific soil needs and to choose the correct fertilizer for the site. Fertilizers shall be chosen and applied with the protection of the environment first in mind. Fertilizers shall be applied by the Grounds Crew with supervision from the Landscaping & Grounds Supervisor or by an approved tree care company.

Disease and pest management

Trees and shrubs shall be monitored by the grounds crew, a professional plant health care technician, or a Certified Arborist on a regular basis to scout for insect and disease problems. An infected plant shall be monitored to determine when the plant has reached the injury level where a biological or chemical treatment is needed. When possible a biological control shall be used over a chemical treatment in order to preserve and lessen the damaging impact on the environment and beneficial insects that may be present.

Tree removal

Trees will only be removed when they are determined to be unsafe, dead, in poor health, or detract from the quality of the landscape. Before a tree is removed, a thorough investigation will be performed by the Landscaping & Grounds Supervisor or a Certified Arborist and a decision will be made whether or not to remove the tree. The tree shall then be marked with spray paint by the Landscaping & Grounds Supervisor indicating that it is to be removed. This is done so that the wrong tree is not removed. If the tree removal is too large or technical for the Grounds Department to handle, it will be contracted out to an approved tree care company. Where possible, the remaining stumps will be ground out below the soil level. The stump grindings will be raked back into the hole once the stump has been ground.

Catastrophic events

In the event of severe weather conditions that may cause harm to the campus landscape the following procedures shall be followed:

- The Aramark Facilities & Grounds Supervisor shall assess the damage and, in consultation with the VP of Facilities & Strategic Planning, shall determine the resources that are needed to address the damage and safety concerns. If needed, a professional tree care company shall be called in for assistance.
- Roadways shall be opened and cleared first.
- Emergency exits and entrances to buildings shall be cleared next.

- All other areas shall then be cleared in order of importance.
- All removed plant material shall be documented for replacement purposes.
- In the case of a catastrophic event pertaining to an invasive pest, the college shall follow the guidelines that have been set forth by the USDA, the South Carolina Department of Agriculture, or other government agency that is overseeing the situation.

Protection and preservation policies and procedures

All construction projects that will have an impact on the campus landscape shall involve the Aramark Facilities & Grounds Supervisor from the beginning of the project to the completion of the project. The protection and preservation of the plant material needs to begin with the design phase and continues through and after the construction is completed. The Aramark Facilities & Grounds Supervisor shall be responsible for policing the site and making sure that the Tree Protection and Preservation Policies and Procedures are being followed.

A site survey map shall be completed at the beginning of the project, prior to any construction equipment arriving on site, that identifies all plants whose root systems may be impacted by construction (Critical Root Zone Area), showing cut and fill areas, utilities, walks, roadways, foundations, and staging areas. After the site survey map is completed it shall be determined which trees will require protection, which trees can be relocated, which trees will require pruning to prevent broken limbs, which trees will require root pruning, and which trees will require removal. All tree protection work, relocating of trees, pruning of remaining trees, root pruning, and removal of trees shall take place before any construction equipment arrives on site.

All trees remaining in the construction area must be protected with tree protection fencing following the guidelines stated below before any construction equipment arrives on the jobsite. Tree protection fencing shall be chain link or bright orange snow fencing. The orange snow fencing shall have a post at every 4 feet along the span of the fence. Tree protection fencing shall be a minimum of four feet in height. The tree protection fencing shall extend a distance from the trunk of 1.25 feet per each inch of trunk diameter at breast height or 6 feet, whichever is greater. The area within the tree protection fencing shall be mulched with wood chips to a depth of 4 inches. The Aramark Facilities & Grounds Supervisor shall approve the installation of the tree protection area before any equipment is brought on site. The fencing shall remain for the completion of the project and not be removed for any circumstances. The fence shall not be removed until all equipment has left the site and the College has deemed the job complete. No equipment, vehicles, materials shall be inside the tree protection fencing at any time. No substances shall be poured or disposed of within the tree protection fencing. The contractor will be held liable and be required to pay tree replacement and/or soil compaction remediation costs determined by an outside

Certified Consulting Arborist if the contractor is found to have been within the tree protection fencing.

Root pruning shall be performed by a Certified Arborist only. All tree pruning shall be completed under the supervision of Dr. Haldeman or a certified arborist.

Tree damage assessment

Any damage to a campus tree, shrub or vine shall be reported to the Grounds Supervisor. The Aramark Facilities & Grounds Supervisor will then assess the damage and the action that needs to be taken. If needed, an outside Certified Consulting Arborist may be brought in to provide an assessment of the damages. The assessment shall determine whether the plant should be removed, pruned, or treated. A cost shall be associated with the action that is taken and charged to the person or persons responsible for the damage. A copy of the assessment and of the cost that is to be charged to those found responsible shall be submitted to the VP of Facilities and Strategic Planning and Campus Security.

Prohibited Practices

- No work shall be performed, or any plant disturbed on campus without the consent of the Vice President of Facilities and Strategic Planning.
- No plants shall be planted on the campus without the approval of the Vice President of Facilities and Strategic Planning.
- No signage shall be affixed to a tree in any manner not approved by the Arboretum Committee
- No bicycles or mopeds shall be locked to a tree at any time. A violation will result in a citation from Campus Security.
- No topping or heading cuts shall be made to any campus trees.

Goals and Targets

1. The first goal is to complete a GIS campus tree inventory. The first part of this goal was completed on October 1, 2024. All trees identified as an arboretum specimen on campus are now inventoried, although additional specimens may be added from time to time at the sole discretion of the Arboretum Committee. The second part of this goal is to rebuild the Erskine College Arboretum website utilizing the GIS data to create an interactive website for visitors and donors. The Tree Care Plan shall be posted as a link on the Facilities Management page as well as the Arboretum page of the Erskine College website. The groundwork is currently underway for this project.

2. Our second goal is to increase public awareness and draw more visitors to the arboretum and campus. This will be an ongoing goal for us.
 - We will develop a logo for the arboretum to utilize on documents, signage, etc.
 - Trees will have appropriate signage as specified in the Arboretum Plan.
 - We are currently in the process of developing signs to place on campus advertising the Erskine College Arboretum.
 - A Facebook page will be launched by May 2025 to promote awareness of Erskine as an accredited arboretum and a certified Bee Campus USA (when certification is received).
3. Our third goal is to incorporate the arboretum into Erskine's annual Flower & Garden Show providing education and engagement to the public on our campus. Our first Flower & Garden Show was held May 20, 2023, with the second held on May 18, 2024. The 3rd annual Flower & Garden Show is scheduled for May 17, 2025.
4. Another goal is to increase student participation in the arboretum and other activities supporting trees. Dr. Haldeman works with summer research students annually and teaches medical botany and other courses on our campus annually to continue work on accomplishing this goal.
5. Erskine has received Level I-accredited arboretum in the ArbNet Arboretum Accreditation Program, developed by the Morton Arboretum.
6. Our final goal is to develop a self-guided interactive tour of the arboretum that people can access via a printed map or their digital device.

Definitions

ANSI: American National Standards Institute.

Beneficial Insect: Insects that are predators or parasites of insects that cause harm to plant material.

Biological control: The control or suppression of pests by the action of one or more organisms through natural means or by manipulation of the pest, organism, or environment.

Bud union: The junction on a stem, usually swollen, where a graft bud has joined the stock following the process of budding. Usually found at or near soil level.

Canopy: Above ground portion of the tree formed by the crown.

Certified Arborist: Certified Arborist credential identifies professional arborists who have a minimum of three years' full-time experience working in the professional tree

care industry and who have passed an extensive examination covering all facets of arboriculture from the International Society of Arboriculture.

Critical root zone: Area of a tree's root system that contains the majority of woody and fine roots. The area is determined by allowing 1–1½ feet of root radius for each inch of trunk diameter at breast height.

Cultivar: A cultivated variety of a plant. A named plant selection from which identical or near identical plants can be produced, usually by vegetative reproduction or cloning.

DBH: Diameter at breast height. Trunk diameter measured at 4 and half feet above ground level.

GIS: Geographic Information System.

ISA: International Society of Arboriculture.

Root ball: The containment of the roots and soil of a tree.

Root flare: Transitional area connecting the stem tissues and root tissues, usually exhibiting a larger diameter as the stem approaches the root system.

Topping: A poor maintenance practice that is often used to control the size of trees. It involves the indiscriminate cutting of branches and stems at right angles leaving long stubs. Also referred to as heading back.

Tree protection zone: Area surrounding a tree that is essential to the tree's health and survival

USDA: United States Department of Agriculture.

Communication of the Tree Care Plan

- Copies of this manual shall be emailed to all who will be affected or need to be made aware of the Tree Care Plan.
- A copy of this policy shall be on file in the Aramark Facilities Office.
- Any contractor that will be involved with or working around any part of the college landscape will be provided with a copy of the Tree Care Plan and be made aware of the policies and procedures.

Service-Learning Project

Pending funding, we hope to implement a Student Employment Program in which student employees would assist part-time in caring for the Arboretum. This program benefits the students in that it helps them fulfill financial aid requirements, assists them in paying for their education, and provides students an opportunity to learn about trees and tree care. Students assist with labeling plant material so that they

can become familiar with and identify tree species. They learn how to plant, prune, mulch, and water trees correctly. This is a real hands-on approach that students enjoy.

Community Tours

Erskine engages its local community members by offering Arboretum tours on campus. The Student Employees will lead groups of community members and groups around the campus to learn about the different types of trees. This is a hands-on tour as everyone is encouraged to get up close to the tree and utilize their senses of touch, sight, smell, and taste to experience what nature has to offer.