

JEKYLL ISLAND TREE PROTECTION ORDINANCE

01-13-10

1: AUTHORITY AND PURPOSE

A) Pursuant to authority conferred by the Georgia Code of laws, the citizens of Jekyll Island, having recognized the importance of preserving the natural landscape through the protection of existing trees, and to promote the public health, safety and general welfare, to lessen air pollution, to increase dust filtration, to reduce noise, heat, and glare, to prevent soil erosion, to improve surface drainage and minimize flooding, to insure that noise, glare and other distractions of movement in one area do not adversely affect activity within other adjacent areas, to beautify and enhance improved and undeveloped land, to preserve and protect both the natural and historic amenities on Jekyll Island, to insure that excessive tree cutting does not reduce property values, and to minimize the cost of construction and maintenance of drainage systems necessitated by the increased flow and diversion of surface waters, the Jekyll Island Authority does hereby ordain and enact into law the following ordinance:

- 1) Regulating and restricting the removal of trees from all undeveloped real property, and from the required yard areas on developed or leased property.
- 2) Regulating and restricting the trimming of trees from all undeveloped real property, and from the required yard areas on developed, leased and non-leased property.
- 3) Providing for replacement or relocation of trees:
- 4) Establishing standards for tree protection during land clearing and construction;
- 5) Providing certain exceptions and exemptions;
- 6) Establishing and defining duties and powers of the Tree Inspector with respect to these regulations;
- 7) Providing appeal procedures and remedies;
- 8) Providing penalties for violations of this chapter;
- 9) Defining certain terms used herein; and
- 10) For other purposes.

B) The intent of this chapter is to encourage the protection and replacement of trees consistent with the economic and healthful enjoyment of leased property. The intent is not punitive, or to cause hardship to any individual, private firm, or public agency who uses every care and diligence to protect trees within the limits of Jekyll Island State Park.

2: DEFINITIONS

For the purpose of this chapter, the following words and phrases shall have the meanings respectively ascribed to them.

- A) Words used in the present tense include the future tense.
- B) Words used in the singular number include the plural and words in the plural include the singular.
- C) The word "shall" is mandatory and not merely discretionary. "Buildable area" that portion of a site, exclusive of the minimum required yard (setback) areas and the building site, on which a structure or building may be erected.

“BRANCH COLLAR” The swelling where a branch joins the trunk of a tree. The callus that forms the collar is an area of tissue that contains a chemically protective zone which helps the tree heal after pruning.

“BUILDING” Any structure built for the support shelter or enclosure of persons, animals, chattel, or property of any kind.

“BUILDABLE AREA” The portion of a parcel of land where a building may be located and which shall contain enough square footage to meet the minimum required by the zoning district. That portion which is not located in the minimum setbacks, utility corridors, driveways, slopes to build streets, tree save areas, landscape strips, specimen tree areas, wetlands, storm water and sanitary sewer easements.

“BUILDING SITE” That portion of a lot which is occupied by a building or that portion of a site which is proposed to be occupied by a building and for which a building permit has been issued.

“CALIPER” The standard for trunk measurements of nursery stocks. Caliper of the trunk shall be taken at breast height (four and one-half feet) above the ground.

“CRITICAL ROOT ZONE” The area of tree roots within the crown dripline. The zone is generally defined as a circle with a radius extending from a tree’s trunk to a point no less than the furthest crown drip line. Disturbances within this zone will directly affect a tree’s chance for survival.

“CROWN DRIP LINE” A vertical line extending down to the ground from the end of a tree’s longest branches.

“DAMAGE OR ABUSE” Means any action, which does not follow good arboricultural practices. Abuse also includes excessive pruning, which significantly alters the aesthetic appearance or endangers survivability of the tree, damage inflicted upon roots by machinery, changing the natural grade above the root system or around the trunk, and changing drainage patterns.

“Density Factor for the Site (DFS)” A unit of measure used to prescribe and calculate required tree coverage on a site. Unit measurements are based upon tree size at DBH.

“DIAMETER AT BREAST HEIGHT” (DBH) is the diameter of a tree, measured at breast height (four and one-half feet) above the ground. If a tree splits into multiple trunks below 4 ½ feet, the diameter of each trunk shall be measured individually and added together.

“DRIP LINE” Means an imaginary vertical line that extends downward from the outermost branches of a tree to the ground.

“HISTORIC TREE” Any tree species which has a diameter, breast height (DBH) of 24 inches or larger. Typically any tree species of this diameter is at least 50 years of age or older, however this can vary greatly depending upon the type of tree species and microclimate which it is growing in.

“LAND DISTURBING ACTIVITY” Any activity which may result in soil erosion from water or wind and movement of sediments into State water or onto lands with the State, including, but not limited to, clearing, dredging, grading, excavating, transporting, and filling of land.

“LIVE OAK TREE” Any live oak *Quercus virginiana* that has a diameter, breast height (DBH) of two inches or larger.

“LOT” A plot or parcel of leased land considered a unit, devoted to a certain use or occupied by a building or group of buildings permitted in the State Park’s zoning ordinance and having its principal frontage upon a street or access in accordance with municipal regulations, and the customary accessories and open spaces belonging to the same.

“PROTECTIVE BARRICADE” Means a physical structure not less than four feet (4’) in height, limiting access to protected and significant trees. A suitable protective barrier shall be composed of wood or other durable material, which insures protection of significant and protected trees during development and/or construction improvements (See figure 1).

“PROTECTED TREES” Any living, self –supporting woody perennial plant which has a diameter breast height (DBH) of four inches or larger is defined as a tree. Also, any live oak *Quercus virginiana* that has a diameter at breast height (DBH) of two inches or larger.

“REMOVAL OF TREES” Any intentional or negligent act which will cause a tree to decline and die, including, but not limited to, such damage inflicted upon the root system of a tree by application of toxic substances, the operation or filling above the root system or around the trunk of a tree, pruning, and damages from injury or fire inflicted on trees which result in or permit pest infestation.

“REPLACEMENT TREE” Any tree that is planted in order to replace an existing tree which must be removed. Replacement trees must have a minimum diameter at breast height (DBH) of 2-1/2 to 3 inches in caliper. Multi-trunk trees must have a minimum size of 10-12 feet. The Tree Inspector may require a larger size based on the size and value of the tree to be replaced.

“ROOT COLLAR” The point of attachment of major woody roots to the tree trunk, usually at or near the ground line and associated with a marked swelling of the tree trunk.

“ROOT RESPIRATION” An active process occurring throughout the feeder root system of trees and involving the consumption of oxygen and sugars with the release of energy and carbon dioxide. Root respiration facilitates the uptake and transport of minerals and nutrients essential for tree survival.

“SITE” Any plot, lot, parcel or tract of land within the jurisdiction of this chapter.

“SOIL COMPACTION” A change in soil physical properties which includes an increase in soil weight per unit volume and a decrease in soil pore space. Soil compaction is caused by repeated vibrations, frequent traffic and weight. As related to tree roots, compacted soil can cause physical root damage, a decrease in soil oxygen levels with an increase in toxic gasses, and can be impervious to new root development.

“SPECIMEN TREE” A tree which is designated upon approval by the Tree Inspector, a certified arborist, or authorized agent(s) to be of notable historical value or interest because of its age, size, historic association or unique aesthetic value. The tree must be in good or fair condition (See Appendix C) in order to merit this designation. All specimen trees permitted to be removed will require a 3:1 caliper inch replacement.

“TOPPING” A practice of cutting back the entire crown of mature trees to stubs. It is a destructive pruning practice that is stressful to mature trees, and may result in reduced vigor, decline or even death of a tree. In addition, new branches that form below the cuts are only weakly attached to the tree, and are in danger of splitting out.

“TREE INSPECTOR” The Tree Inspector for the Jekyll Island Authority, or his designee. The individual or entity having the primary responsibility to administer and enforce the standards set forth in this ordinance. The Landscape Superintendent or Code Enforcement Officer shall serve as the Tree Inspector, or his/her assigned designee during his/her absence.

“TREE MITIGATION FUND” In lieu of planting mitigation trees on the leased site, payment may be made as fair compensation for replacement of trees. Revenue collected in this fund will be used to support tree planting and tree maintenance throughout Jekyll Island.

“TREE REPLACEMENT SCHEDULE” A plan showing the location, species and sizes of all replacement trees.

“TREE SAVE AREA” All areas designated for the purpose of meeting tree density requirements, saving specimen trees, and/or preserving natural buffers.

“YARD AREA” That portion of any site covered by the front, side and rear yard areas as established by the minimum setback requirements in the Jekyll Island Zoning Ordinance for respective zoning district classification.

3: JURISDICTION

The regulations set forth herein shall apply to all real property within The Jekyll Island State Park limits now and in the future subject to the following exemptions:

- A) Wetlands Mitigation. The mitigation of wetlands pursuant to a permit or approved plan from, and the requirements of, the Georgia Department of Natural Resources or Army Corps of Engineers shall be exempt from the provisions of this ordinance.

4: TREE PROTECTION

- A) No person, firm, organization (including the Jekyll Island Authority), society, association or corporation, or any agent or representative thereof, shall directly or indirectly destroy or remove any 4”dbh native shade tree or larger, or 2” dbh live oak, without approval of the Tree Inspector, or any unless otherwise authorized under provisions of this chapter.
- B) All utility companies, electric suppliers and governmental agencies constructing or maintaining easements for television transmission or right-of-ways will not be exempt from the provisions of this ordinance.

5: TREE TRIMMING/PRUNING

- A) No person, firm, organization, (including the Jekyll Island Authority), society, association or corporation, or agent or representative thereof, shall directly or indirectly prune or remove any branch larger than 2” in diameter on any shade tree without approval of the Tree Inspector. Prior to engaging in such pruning activity, approval must be granted by the Tree Inspector in the form of a tree permit. This can be obtained by contacting the tree inspector by telephone or in writing. Please allow 10 working days for the Inspector to issue a permit. Trimming native and exotic palm trees, foundation plantings and branches less than 2” in diameter will not require the approval or notification of the Tree Inspector and is exempt from the tree permit process.
- B) All pruning must be performed to the pruning specifications as provided by the National Arborist Association (N.A.A.) in “Pruning Standards for Shade Trees” shall apply.
- C) All branches that are removed need to have their finished cuts made immediately beyond the bark ridges, preserving the branch collar. Stub cuts cannot be made more than 1” or

more beyond the branch collar. Flush cuts must be made adjacent and not through the branch collar in order for the resulting tree wounds to heal properly.

- D) Significant pruning cuts that result in drastic reduction of a tree's canopy, negatively impact the tree's overall aesthetics or flush cuts that exceed 1/3 of the size of the diameter of the tree trunk or branch at the point in which the flush cut is made will require mitigation. For every caliper inch in width of the branch at the location of the final flush cut, each caliper inch will have to be mitigated at a 1:2 ratio. If several tree limbs are removed, each cut will be assessed as a separate mitigation requirement. However, in no circumstance will the mitigation requirement exceed more than 1/2 of the overall DBH of the tree.
- E) Creating stub cuts, random branch removal, and the topping of native shade trees are strictly prohibited. These practices defeat the primary aim of ensuring long-term tree health, create hazards, and drastically reduce the monetary value of trees.
- F) Pruning and removal of trees in utility easements or rights of way shall be the minimum necessary to protect the property of the applicable utility company. Pruning shall be performed to the pruning specifications as provided by the National Arborist Association (N.A.A.) in "Pruning Standards for Shade Trees. All branches removed must be flush cuts or pruned back to the branch collar of the adjoining main branch or trunk of the tree. Cutting into the branch collar will not be permitted as the collar helps the tree heal after pruning. The Jekyll Island Authority shall be informed by the applicable utility company of the time and approximate location of any tree pruning or removal activities in rights-of-way easements prior to conducting such activities.

6: NEW CONSTRUCTION TREE PROTECTION REQUIREMENTS:

- A) Application and Scope
 - 1) The destruction of any tree without a written permit is prohibited on any parcel of leased land. For new building construction, a tree survey must first be conducted to identify all healthy and structurally weak trees on the site in order to facilitate the overall design of the site. Having this information readily available in the initial design phase will allow the property owner to identify which trees are worth saving in order minimize mitigation requirements as well as minimize construction impacts to the trees that will remain.
 - 2) For a property owner wanting to make an addition to a structural unit, it must be a minimum of ten feet from the trunk of Historic Trees and all live oaks *Quercus virginiana* or follow the 3:1 rule as described within Section 6, sub section 3, encroachment.
 - 3) Encroachment of an addition shall not be permitted within the base of a protected, historic or specimen tree, unless special construction methods, including but not limited to beam foundations, are used and certified as acceptable by the Jekyll Island Authority's Tree Inspector. The owner will bear full responsibility to any future damage the tree may cause such as cracking or foundation upheaval if it occurs.
- B) During Development
 - 1) Protective Barricades Required. Protective barricades shall be placed around all protected trees and significant trees located in a development area prior to the commencement of any work, and shall remain in place until development activities are complete or construction in accordance with standards set forth in this Section commences. The area within the protective barricade shall remain free of all building materials, dirt or other construction materials, debris, vehicles and development activities.

Barricades shall be erected at a minimum distance from the base of protected trees and significant trees according to the following standards:

For Protected Trees Eight Inches (8") DBH, protective barricades shall be placed a minimum distance of ten feet (10') from the base of each protected tree or to drip line. Protected Trees Greater Than Ten Inches (10") DBH, protective barricades shall be placed at a minimum distance of one foot (1') for each inch (1") DBH or to drip line (See Figure 1). Protective barricades will only be permitted to be placed closer to a tree upon approval by the Tree Inspector.

- 2) Passive forms of tree protection may be utilized to delineate tree save areas, which are remote from areas of land disturbance. These areas must be completely surrounded with continuous rope or flagging. All passive tree protection must be accompanied by "Keep Out" or "Tree Protection Area" signage. The area so fenced off shall not be used as a storage area or altered or disturbed except as may be permitted in this subsection.
- 3) Encroachment
 - A) Construction within the Protective Barricade. The area so fenced off shall not be used as a storage area in connection with the development. Changes in grade or construction of impervious surfaces or utilities within the required protective barricade shall be permitted or prohibited subject to the following guidelines:
 1. In all circumstances, the minimum distance from the tree radius which cannot be encroached upon by soil disruption, trenching and general excavation will follow the 3:1 rule. For every 3" of DBH, a minimum of 1' of distance from the tree radius cannot be encroached upon, as measured from the outermost perimeter edge of tree's trunk.

For example: a 9" DBH tree must have a minimum distance of 3' from the tree radius, which cannot be encroached upon.
 2. Compaction of the soil within the protective barricade shall be avoided. No heavy equipment can be operated or parked within the protective barricade.
 3. All brush; earth and other debris shall be removed in a manner, which prevents injury to the protected tree. Oil, gas, chemicals or other substances that may be harmful to trees shall not be stored or dumped within the protective barricade of any protected tree.
 4. Construction of impervious surfaces shall not be permitted within the base of a protected, historic or specimen tree, unless special construction methods, including but not limited to tree feeders, porous paving materials and shell walks, are used and certified as acceptable by the Jekyll Island Authority's Tree Inspector.
- 4) All roots outside of the protective barricade to be removed during the development shall be severed clean and a two-inch (2") layer of mulch shall be applied over the surface or exposed roots during development if feasible.
- 5) Trenching: The installation of utilities through a protective zone should occur by way of tunneling rather than trenching. If roots must be cut, proper root-pruning procedures

must be employed. Wherever feasible, trenching should occur in a radial direction to or from a tree in order to minimize damage to tree roots. In no circumstances will trenching be allowed within the critical root zone as defined by the 3:1 rule as explained above in A.5 Section D. Tunneling and selective excavation within this area is subject to approval by the Tree Inspector.

- 6) Grade Changes: Moderate fill, no greater than six inches (6") can be tolerated within a tree's critical root zone without the prior installation of an aeration system. Commercially available aeration systems are subject to approval by the Tree Inspector.
- 7) Where the Tree Inspector has determined that irreparable damage has occurred to trees within tree protective zones, the trees must be removed and replaced.
- 8) Remedial Procedures. Remedial site reclamation and tree care procedures shall be implemented when encroachment within protective zones has caused damage to either the tree or the tree's growing site, and that damage is repairable. If encroachment is anticipated or has happened, these cultural practices should be employed as pre-emptive measures to improve survival. The following practices shall be applied where appropriate.
- 9) Pruning. The pruning of a tree in anticipation of construction damage may provide compensation for potential root loss and produce an invigorating response. A tree that has suffered root damage becomes stressed, as that root system no longer provides sufficient water and nutrients for the existing crown. This stress becomes evident with the appearance of "staghorns" or deadwood within the tree crown. Once a tree has been construction damaged, it is advisable to delay pruning until deadwood becomes evident (one to three years). Pruning for deadwood removal is then recommended. The removal of live plant tissue from a construction-damaged tree can accelerate the tree decline. Pruning of root-severed trees may reduce the possibility of wind throw. Trees that have not been affected by construction activities can be pruned for maintenance of the tree's health, appearance, and safety, utilizing acceptable arboricultural practices.

Pruning specifications as provided by the National Arborist Association (N.A.A.) in "Pruning Standards for Shade Trees" shall apply. The pruning of all trees is subject to Tree Inspector approval. No tree limb greater than 2" in diameter shall be removed without written approval. Prior to engaging in such pruning activity, approval must be granted by the Tree Inspector in the form of a tree permit. This can be obtained by contacting the tree inspector by telephone or in writing. Please allow 10 working days for the Inspector to issue a permit.

- 10) Fertilizer applications will enhance the vigor of trees stressed by site disturbances, thereby promoting root development. Information regarding appropriate fertilizers and application rates may be obtained from the Georgia Agricultural Extension Office.
- 11) A tree's ability for adequate root development, and ultimately its chances for survival, is improved with reclamation of the growing site.

Wherever possible, the soil should be brought back to its natural grade. Unnecessary fill, compaction, erosion sedimentation, concrete washout, and construction debris should be removed. When machinery is required for site improvement, it is recommended that a "Bobcat" or similar lightweight rubber tire or rubber tracked vehicle be used so as to minimize soil compaction.

Compacted soil within the critical root zones of trees should be aerated. This is best accomplished with a two-inch diameter auger or a hydraulic air spade. If using an auger, holes should be drilled to a depth of six to twelve inches, approximately two to three feet apart and radiating outward

from the trees trunk in a bicycle spoke configuration. This aeration technique is also recommended for areas affected by minor fill or the sedimentation of erosion materials.

The air exchange, nutrient, and water holding capacities of soils can be improved with soil amendments. This is best accomplished by backfilling holes with mineral amendments such as perlite, vermiculite, isolite, etc.

A two to three inch layer of mulch material, such as pine straw, pine bark or wood chips, spread within the critical root zones of trees on construction sites is extremely beneficial. These benefits include:

- a) Conservation of soil moisture
- b) Reduced rainfall runoff and erosion
- c) Reduced soil compaction from construction activities
- d) Reduced competition from grasses and weeds
- e) Increased soil fertility
- f) Improved soil structure
- g) Moderation of soil temperature, with a subsequent increase in root development activity

7: TREE REMOVAL AND REPLACEMENT

- 1) Prior to removing any existing live oak greater than 2" DBH or any shade tree 8" DBH or greater (both native and non-native species), or performing any major pruning or the removal of branches 2" in diameter or greater on such trees, a tree permit must be obtained from the Tree Inspector. This can be obtained by contacting the tree inspector by telephone or in writing. Please allow 10 working days for the Inspector to issue a permit.
- 2) Tree Replacement Required. Removal of each protected tree or significant tree or removal of branches 2" in diameter or greater without a written tree permit is a violation of this ordinance and shall require replacement in caliper inches in equal DBH removed from the site.
- 3) All other replacement shall be calculated as follows:

Live Oak *Quercus virginiana* Any size: Requires a 1:1 caliper inch replacement ratio for healthy trees in good condition, exhibiting only minor structural defects. Live oaks in extreme poor health, exhibiting significant structural defects, or posing a clear safety issue to persons or property, will require a minimum 2 ½-3" DBH replacement, regardless of the overall size of the existing tree. Live oak trees in poor-fair condition will require up to a ½:1 caliper inch ratio depending upon the overall structural integrity of the tree. All replacement trees must be live oak *Quercus virginiana* and a minimum of 2 ½-3" in DBH.

Slash Pine *Pinus elliottii* 23" DBH or smaller: No replacement required unless the overall density of trees on the lot is less than the minimum density factor for the site. In such circumstances where the total caliper inches is less than the minimum required density, every tree that is removed must be replaced with a 2 ½-3 " DBH native shade tree or slash pine.

Slash Pine *Pinus elliottii* 24" DBH or larger: Replacements are required. All trees to be removed are to be replaced with any native shade tree 2 ½-3 " DBH or larger.

Bald Cypress *Taxodium distichum* 24" DBH or larger: Replacements are required. All trees to be removed are to be replaced with any native shade tree 2 ½-3" DBH or larger.

Dahoon Holly *Ilex cassine* 8" DBH or larger: Replacements are required. All trees to be removed are to be replaced with any native shade tree 2 ½-3" DBH or larger or a multi-trunk native tree that is a minimum size of 10-12 feet.

Red bay *Persea borbonica* 8" DBH or larger: No replacements are required unless the overall density of trees on the lot is less than the minimum density factor for the site. Due to recent Ambrosia redbay beetle attacks, replacing trees with another red bay is not suggested. In such instances where the total caliper inches is less than the minimum required density, all trees removed are to be replaced with any native shade tree 2 ½-3" DBH or larger or a multi-trunk native tree that is a minimum size of 10-12 feet.

American Holly *Ilex opaca* 8" DBH or larger: Replacements are required. All trees to be removed are to be replaced with any native shade tree 2 ½-3" DBH or larger or a multi-trunk native tree that is a minimum size of 10-12 feet.

Buckthorn *Sideroxylon tenax* 8" DBH or larger: Replacements are required. All trees to be removed are to be replaced with any native shade tree 2 ½-3" DBH or larger or a multi-trunk native tree that is a minimum size of 10-12 feet.

Cabbage palm *Sabal palmetto* Any size, no replacements are required unless the overall density of trees on the lot is less than the minimum density factor for the site or if the palm is Historic. Historic cabbage palms planted within the Historic District must be replaced on a palm for palm ratio. Cabbage palms are monocots and create only fraction of the overall canopy of a mature shade tree. Cabbage palms can be used as a mitigation tree, but each cabbage palm planted will only count as 1" DBH towards mitigation.

Non Historic Trees: Misc. oaks, exotic palms, invasive exotics, non-native species, cedars and hardwoods 23" DBH or less: No replacements required unless the overall density of trees on the lot is less than the minimum density factor for the site. In such instances where the total caliper inches is less than the minimum required density, every tree that is removed must be replaced with any native shade tree 2 ½-3" DBH or larger or a multi-trunk native tree that is a minimum size of 10-12 feet.

Historic Trees: Misc. oaks, cedars and hardwoods 24" DBH or larger: Replacements are required. All trees to be removed are to be replaced with any native shade tree 2 ½-3" DBH or larger or a multi-trunk native tree that is a minimum size of 10-12 feet.

Specimen trees Typically 24" DBH or larger, but it can be smaller depending upon the specific plant species. A tree will only be designated as a specimen upon approval by the Tree Inspector, a certified arborist, or authorized agent(s). The tree must be of notable historical value or interest because of its age, size, historic association or unique aesthetic value. The tree must be in good or fair condition (See Appendix C) in order to merit this designation. The leased property owner must attempt all reasonable efforts to design around the tree in its existing location prior to being given permission for its removal. All specimen trees permitted to be removed will require a 3:1 caliper inch replacement.

- 4) During the planting process, the planting hole should be a minimum of twice the size of the tree's root ball and soil amenities added to the backfill material (See Figure #2). Also, every effort should be made to water the newly planted tree for the first growing year.
- 5) Replacement for Commercial and Residential Sites. Replacement tree sizes shall be measured in caliper inches according to the American Nursery Stock Standards (ANSS) and total number of inches removed from site is measured at DBH (4- 1/2') above the ground. All replacement trees must be grade "A" quality with a dominant leader and dense foliage and free from injury, pest, disease or nutritional disorders. All replacement tree(s) must survive for at least five years; otherwise, it/they must be replaced at the owner's expense.
 - A) Any healthy historic live oaks, which are to be removed, the replacements will be 100% of DBH inches removed. This is a one to one relationship.
 - B) Trees identified as a Specimen tree, which are to be removed, the replacement will be at a 3:1 caliper inch ratio.
 - C) Any non historic live oak trees which are to be removed, regardless of size, the replacements will be a minimum of 2 1/2-3" DBH on a one to one relationship.
 - D) Replanting Schedule Standards. To prevent a monoculture among plantings, the Jekyll Island Authority shall require diversity in the plantings required (See Appendix A)

Approved List of Native Shade Trees & Prohibited Invasive Exotic Tree Species: (See Appendix B)

8: RELOCATION OF MATURE TREES

- 1) The relocation of a mature tree is a labor and cost-intensive undertaking that may fail even under the best of conditions. However, mature trees may be relocated, providing the relocation meets all of the following criteria:
 - A) The leased property owner has made all reasonable efforts to design around the tree in the existing location.
 - B) The tree is in good condition for relocation, to be determined by a licensed arborist or the Tree Inspector.
 - C) There must be another suitable location for the tree on the leased property or other approved Island location.
 - D) The future location must not require excessive removal of additional existing trees in good condition and/ or healthy understory vegetation.
 - E) Trees shall only be dug and moved during the planting season, Oct 1 through June 1.
 - F) The lease holder must employ a tree moving company that is approved by the Tree Inspector
 - G) The applicant must submit a detailed tree care plan including both pre-move and post-move care specifications to be approved by the Tree Inspector.
 - H) The lease holder is aware, that should the relocated tree die, mitigation planting will be required per Section 7: Tree Removal and Replacement.

9: MINIMUM REQUIRED TREE DENSITY

- 1) For all residential and commercial properties, mitigation will be required unless a minimum tree density of 100 caliper inches measured at DBH is maintained per acre of the leased property. No trees will be permitted to be removed unless the total amount of DBH caliper inches are mitigated to the leased property's existing tree density at a 1"-1"

ratio. Mitigation will be required even if the tree is diseased, structurally compromised or dies of natural causes. For most residential lots, this will equate to approximately 36" DBH caliper inches per leased property lot. Only native shade trees will be counted in order to determine the existing tree density on a leased property. Cabbage palms will only have a density value of 1" DBH per tree.

For example: A leased property owner requests to remove an 18" DBH slash pine tree on a .38 acre parcel that has an existing tree density of 50" DBH caliper inches. The minimum required DBH caliper inches for this leased property is (.38 acres x 100"=) 38" DBH caliper inches. Removing the 18" DBH slash pine will result in an overall density of 34" DBH caliper inches. Therefore, a minimum of 6" DBH caliper inches must be mitigated for this site.

- 2) For all residential and commercial properties, mitigation will not be required if a minimum tree density of 200 caliper inches measured at DBH is maintained per acre of the leased property unless the tree is a live oak, historic or protected tree. For most residential lots, this will equate to approximately 75" DBH caliper inches per leased property lot. Only native shade trees will be counted in order to determine the existing tree density on a leased property. Cabbage palms will only have a density value of 1" DBH per tree.

- A) Tree replacement/mitigation will be mandatory for properties if the removal of any/all tree/trees results in a property that does not meet this minimum tree density range. If the overall amount of DBH caliper inches that are removed results in a property with less than 200 caliper inches but greater than 100 caliper inches, the total number of caliper inches removed will not be required to be mitigated to meet the minimum tree density required of the leased property unless a healthy live oak in good condition is removed. Trees will be mitigated at a tree-tree ratio as opposed to 1-1 caliper inch ratio. For all other native tree species, including poor condition live oaks, each tree that is removed must be replaced with a minimum 2 ½-3" DBH native shade tree or a multi-trunk native tree that is a minimum size of 10-12 feet depending upon the tree species that is removed. Mitigation will be required even if the tree is diseased, structurally compromised or dies of natural causes. All tree replacement requirements shall comply with Section 7: Tree Removal Location and Replacements.

For example: A leased property owner requests to remove an 22 DBH slash pine tree on a .38 acre parcel that has an existing tree density of 90" DBH caliper inches. The minimum required DBH caliper inches for this leased property is (.38 acres x 200"=) 76" DBH caliper inches. Removing the 18" DBH slash pine will result in an overall density of 68" DBH caliper inches. Therefore, a minimum of one 2 ½-3" DBH caliper inch tree must be mitigated for this site as opposed to mitigating the balance of 6 caliper inches as the overall density is still above the full mitigation minimum tree density of 100 caliper inches per acre or 38" DBH caliper inches for this leased property.

10: SUBMISSION OF SITE PLANS

- A) Where application for a building permit is submitted to the county, a site plan for the development or improvement of any parcel of land shall be submitted to the Jekyll Island Authority. The site plans shall show, the following information:
- 1) The building site;
 - 2) The buildable area;
 - 3) The yard areas;
 - 4) Proposed landscaping improvements
 - 5) A registered survey of all existing trees with a DBH greater than 8", including live oaks, *Quercus virginiana*, with a DBH of 2" or greater.
 - 6) Designation of any historic trees (refer to section A.2 for a definition of a historic tree). Historic trees will be designated by the JIA Tree Inspector or a certified arborist.
 - 7) Trees to be maintained within the buildable area and yard area with location for each to be shown with reasonable accuracy. The plan must show either existing contours or an existing spot elevation at the outer edge of the root flair and proposed grading if any is going to occur as a spot elevation or proposed contours.
 - 8) Specifications for protection of trees to be maintained during development;
 - 9) A tree replacement schedule showing the location, species and size of any replacement trees to be planted;
 - 10) Specifications and/or provisions for maintenance and upkeep of trees upon completion of the project
- B) No building permit shall be issued until the site plan has been reviewed and approved by the Tree Inspector. The Inspector shall tentatively approve, approve conditionally, or disapprove the plan. If the plan is disapproved or approved conditionally, the reasons for such action shall be stated in writing and signed by the Executive Director of the Jekyll Island Authority. One copy of the reasons shall be retained by the Jekyll Island Authority, and one copy given to the applicant. On conditional approval, the Tree Inspector may require the applicant to resubmit the plan with all recommended changes before granting final approval.

11: EXCEPTIONS

- A) In the event that any tree shall be determined to be diseased, in a hazardous or dangerous condition so as to endanger the public health, safety, or welfare, and requires immediate removal without delay, written authorization shall be given by the Tree Inspector or his designee and the tree removed. If the Tree Inspector cannot be reached immediately, digital photos must be taken of the hazardous tree prior to its removal. The digital photos can be submitted to the Tree Inspector or e-mailed to the Jekyll Island Authority. If the hazardous tree is a live oak, replacement with another 2 ½-3" DBH live oak, on any agreed upon location of the leased parcel, will

still be required. Historic trees and protected trees will also require mitigation as defined in Section 7: Tree Removal and Replacement.

- B) During the period of an emergency, such as a tornado, hurricane, flood or any act of nature, the requirements of this chapter may be waived by the Executive Director or his/her assignee. In such case, the cutting and removal of felled trees shall be permitted until such time the Jekyll Island Authority deemed it necessary.

12: MITIGATION

It is the policy of the Jekyll Island Authority that lease holders who are granted a permit to remove a historic or specimen tree make every effort to mitigate for the loss of the tree by replanting replacement trees on their leased property. If the property will not reasonably sustain the number of replacement trees to satisfy the entire mitigation requirement through in-kind mitigation, a mitigation fee may be the only feasible option.

- A) Mitigation Fee: The mitigation fee to be paid shall be determined by the following formula:

\$200.00 multiplied times DBH (diameter at breast height of tree to be removed)
The mitigation fee will be available to any property owner that is unable to provide in-kind mitigation on their leased property. Specimen tree mitigation fees will be \$200.00 multiplied times DBH times 3.

- B) Funds from collected mitigation fees shall be expended only for the purposes enumerated below:

1. In support of planting live oaks or other native shade trees on public property within Jekyll Island State Park. Such expenditures may include the cost of purchasing and planting trees, planting amendments, and the cost of installing irrigation improvements.
2. In support of the care, maintenance and preservation of existing native trees on public property. This would include the cost of fertilization, aeration of tree roots, and general tree structure maintenance such as dead wooding and pruning broken and structurally weak branches.

- C) The Jekyll Island Authority shall prepare an annual report accounting for the balance in the Jekyll Island Tree Maintenance Fund and summarizing the use to which such funding was put during the preceding year.

- D) The Jekyll Island Authority may also accept donations, grants or other sources for specific tree related activities such as a tree naming program.

- E) In Kind Mitigation: The property owner may elect to satisfy some or all of the mitigation requirements by planting new trees on his or her property. If in-kind mitigation is elected, the property owner must plant 2 ½-3" DBH or larger replacement trees until the required mitigation number is reached or a reasonable number of replacement trees have been reached. Each replacement tree that is planted as in-kind mitigation will be deducted from the total mitigation fee at \$200.00 per caliper inch. Where a property owner elects to satisfy some or all of the mitigation requirement through in-kind mitigation, the property owner shall do so with the understanding that the property owner will be responsible for protecting the health of the replacement trees (including the obligation to provide irrigation), that purposeful damaging or neglect of the replacement trees will be subject to fines and additional mitigation requirements.

13: VIOLATIONS AND PENALTIES

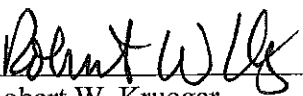
- A) If the Tree Inspector shall find that any of the provisions of this chapter are being violated, he shall in writing notify the owner of the property and the general building contractor. Written notification shall indicate the nature of the violation and/or the action necessary to correct the violation.
- B) The issuance of a building permit and the failure to substantially erect building improvements within 12 months combined with removal of trees in the buildable area and the building site shall be deemed as a violation of this chapter. Each tree removed shall be identified as a separate offense.
- C) Any person who shall violate any of the provisions of this Tree Ordinance or fail to comply therewith, shall for each such failure or violation or noncompliance shall subject to a fine not to exceed \$50.00 per day or shall be provided and stipulated by law. Each tree removed or destroyed in violation of this chapter represents a separate offense. In addition, the property owner committing the violation shall replace the tree removed by the replacement guidelines of this ordinance. This could consequentially result in land lease default.
- D) Any person, firm, organization, society, association or corporation, or any agent or representative thereof who commits, participates, or assists in such violation may each be found guilty of a separate offense and suffer the penalties herein provided.

14: APPEALS


- A) The Jekyll Island Tree Board shall hear and decide appeals when it is alleged that there is error in any order, requirement, decision or determination made by the Tree Inspector in the enforcement of this chapter, provided that such appeals must be submitted in writing on forms provided by the Jekyll Island Authority to the Tree Board within 30 days after the order, requirement, decision, or determination which is alleged to be made in error. The Jekyll Island Tree Board shall act upon the application as expeditiously as possible and shall notify the applicant within five days of the action taken.
- B) The Jekyll Island Tree Board shall be comprised of at least one Jekyll Island Authority staff member, an acting member of the Jekyll Island Garden Club, an acting member of the Jekyll Island Citizens Association, and the Glynn County Extension Agent.
- C) Appeals shall only be granted for errors of interpretation or where the unique natural features of the site are such that application of these regulations would create an undue hardship to the leaseholder.

15: LEGALITY OF CHAPTER AND PARTS THEREOF

Should any section, clause or provision of this chapter be declared by the courts to be invalid, the same shall not affect the validity of the chapter as a whole, or parts thereof, other than the part so declared to be invalid.



Robert W. Krueger
Chairman



Michael D. Hodges
Secretary

APPENDIX A: Approved Replanting Standards for Mitigation

Required Number of Tree Types:

- 1-10 trees- minimum one type of tree to be planted.
- 10-20 trees- minimum 2 types of trees to be planted.
- 20-100 trees- minimum 3 types of trees to be planted.
- 100+ trees- minimum 5 types of trees to be planted.

APPENDIX B Approved List of Native Shade Trees Suitable for Mitigation

<i>Acer barbatum</i>	Florida Maple
<i>Acer rubrum</i>	Red Maple
<i>Carpinus caroliniana</i>	American Hornbeam
<i>Carya glabra</i>	Pignut Hickory
<i>Celtis laevigata</i>	Sugarberry
<i>Chionanthus virginicus</i>	Fringe Tree
<i>Gordonia lasianthus</i>	Loblolly Bay
<i>Ilex cassine</i>	Dahoon Holly
<i>Ilex opaca</i>	American Holly
<i>Juniperus silicicola</i>	Southern Red Cedar
<i>Juniperus virginiana</i>	Eastern Red Cedar
<i>Liquidambar styraciflua</i>	Sweet Gum
<i>Liriodendron tulipifera</i>	Tulip Poplar
<i>Magnolia grandiflora</i>	Southern Magnolia
<i>Magnolia virginiana</i>	Sweet Bay
<i>Morella cerifera</i>	Red Mulberry
<i>Nyssa biflora</i>	Swamp Tupelo
<i>Nyssa sylvatica</i>	Black Gum
<i>Pinus elliotii</i>	Slash Pine
<i>Pinus taeda</i>	Loblolly Pine
<i>Pinus palustris</i>	Longleaf Pine
<i>Pinus serotina</i>	Pond Pine
<i>Platanus occidentalis</i>	American Sycamore
<i>Prunus Caroliniana</i>	Cherry Laurel
<i>Prunus serotina</i>	Black Cherry
<i>Quercus geminata</i>	Sand Live Oak
<i>Quercus hemisphaerica</i>	Laurel Oak
<i>Quercus laurifolia</i>	Darlington Oak
<i>Quercus michauxii</i>	Swamp Chestnut Oak
<i>Quercus nigra</i>	Water Oak
<i>Quercus virginiana</i>	Live Oak
<i>Salix caroliniana</i>	Coastal Plain Willow
* <i>Sabal palmetto</i>	Cabbage Palm
<i>Sideroxylon tenax</i>	Buckthorn
<i>Taxodium distichum</i>	Bald Cypress
<i>Ulmus americana</i>	American Elm
<i>Zanthoxylum clava-herculis</i>	Toothache Tree

Approved List of Native Shade Trees Suitable for Mitigation, Continued:

** <i>Persea borbonia</i>	Red Bay
** <i>Persea palustris</i>	Swamp Bay

*: *Cabbage palms are a monocot and create only fraction of the overall canopy of a mature shade tree. They can be used as a mitigation tree, but each cabbage palm planted will count as 1" DBH towards mitigation.*

***: This tree not recommended as a suitable native shade tree replacement due to Ambrosia Red Bay Beetle infestation.*

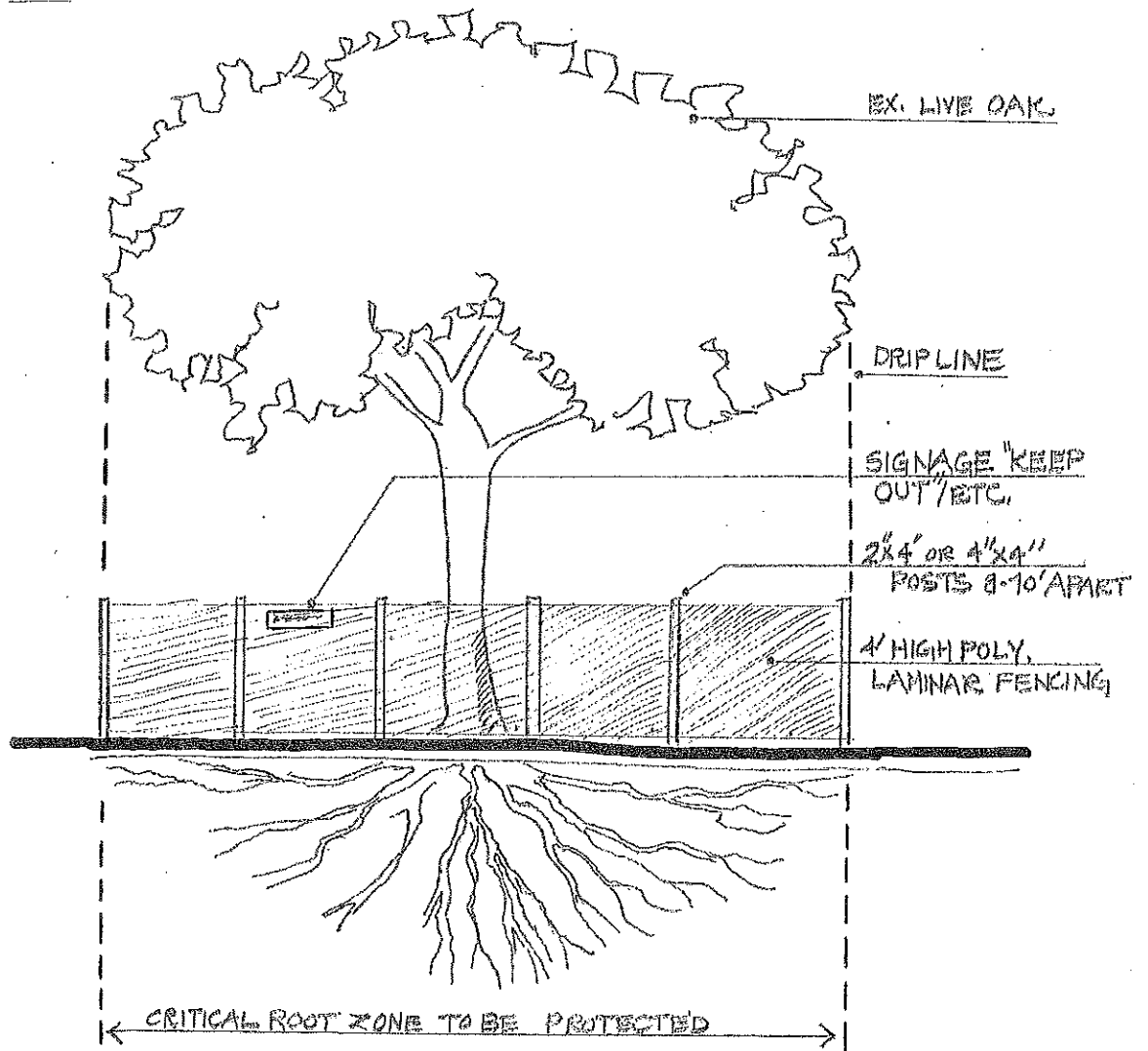
Prohibited Invasive Exotic Tree Species:

Tree of Heaven	<i>Ailanthus altissima</i>
Camphor Tree	<i>Cinnamomum camphora</i>
Chinaberry Tree	<i>Melina azedarach</i>
Chinese Tallow Tree	<i>Triadica sebifera</i>
French Tamarisk	<i>Tamarix gallica</i>
Tung-oil Tree	<i>Vernicia fordii</i>

APPENDIX C: Fair or Good Condition Trees

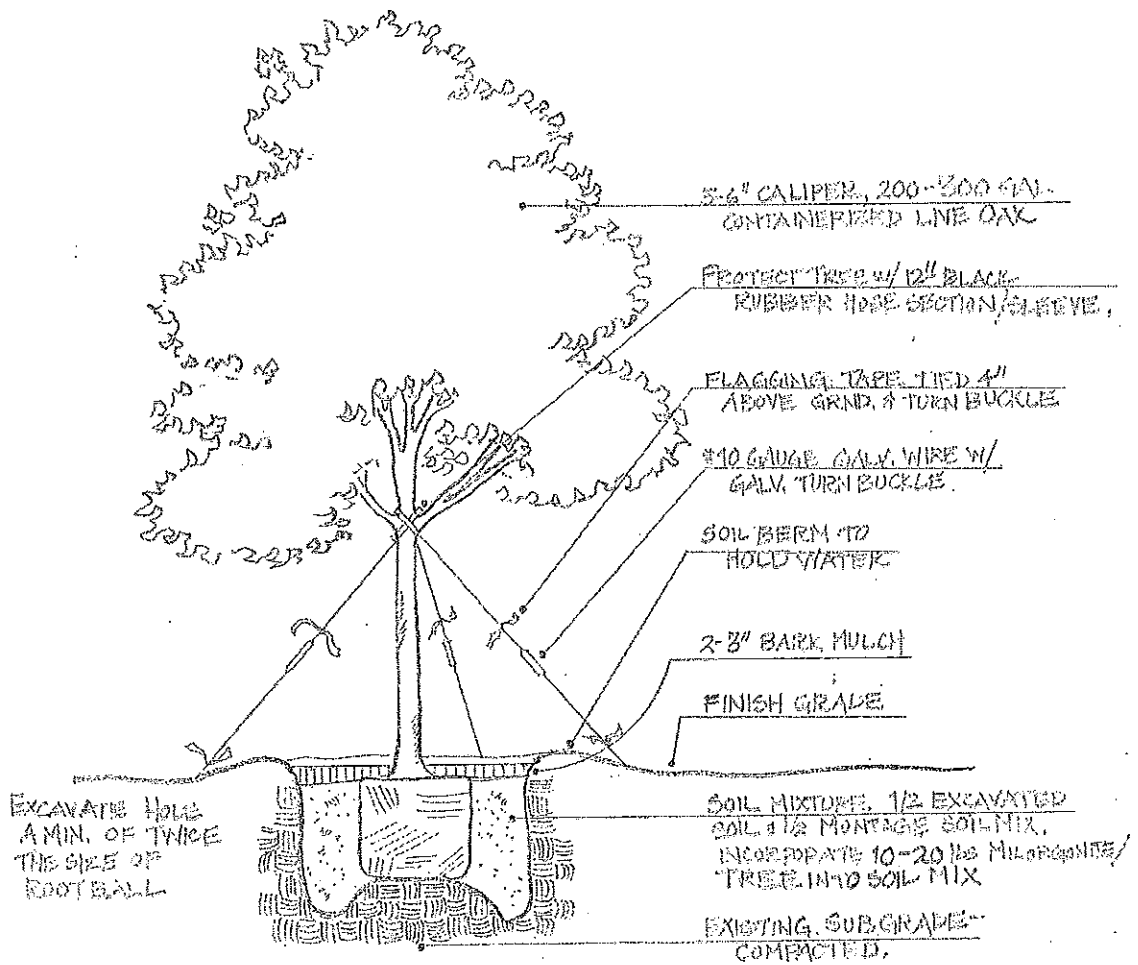
A tree in fair or good condition must meet the following minimum standards:

- a. An estimated life expectancy of greater than 10 years.
- b. A relatively sound and solid trunk with only minor decay and small cavities that comprise an area of depth of less than 33% of the adjacent diameter of the tree.
- c. No more than 25% of the base of the trunk or primary structural roots should exhibit dieback.
- d. No major insect or pathological problem.
- e. No more than 33% of the tree's canopy can be missing limbs or be comprised of major dead limbs.



TREE BARRIER DETAIL "NOT TO SCALE"

Figure #1



LIVE OAK PLANTING DETAIL

NOT TO SCALE

Figure #2