

APPENDIX D

THE CITY OF PEMBROKE TREE ORDINANCE

- I. Purpose and Intent:** The City of Pembroke holds that trees are an integral part of the community's infrastructure. As such, they are a reflection of the quality of life in the community, contributing to the health, safety, and well-being of its citizens.
- A. The City deems it necessary and desirable in the interest of public health, safety and welfare to enact an ordinance for the conservation, planting and replacement of trees and to prevent the indiscriminate removal of trees in the city without denying the reasonable use and enjoyment of real property by its citizens. This article is intended to encourage the incorporation of existing significant trees and tree stands into the overall site plan and to prevent clear-cutting and the unnecessary removal of trees in association with site development.
 - B. Consistent with the expressed purpose of this article, all persons shall make reasonable efforts to preserve and retain certain existing, self-supporting trees as defined herein. It is also the intent of this article that all applicable sites within the city maintain or obtain a 50% minimum tree canopy, as defined and explained herein. (see Sec. IV – A)
 - C. Specific purposes of the chapter include: to provide parameters for the planting, maintenance, and removal of trees; to encourage and require the protection of existing trees on the streets, on public spaces, and on private grounds; to establish a standard for sound arboricultural practices within the City; to assign responsibility for a conduct of its requirements; and to establish the education, informational, and regulatory procedures for fulfilling these purposes.
 - D. Require compensation for the loss of protected trees in all stages of maturity on public and private property.
 - E. Preserve the community's character and quality of life well into the future.
- II. Establishment of City Tree Board.**
- A. **Authority:** The authority for the establishment and creation of the City Tree Board is derived from the provisions of Article IX, Section 2, Paragraph IV and Article IX, Section 2, Paragraph II of the Constitution of Georgia of 1983.
 - B. **Power:** There is hereby created and established a City Tree Board for the City of Pembroke, which shall consist of the Chairman of the Planning and Zoning Commission, the Director and six board members of Keep Pembroke Beautiful. Members of the Board shall serve without compensation; the City will reimburse however reasonable expenses incurred from the fulfillment of Board responsibilities. The City Tree Board shall be the responsible entity for all issues concerning trees.
 - C. **Terms of Office:** The Chairman of the Planning and Zoning Commission and the Director of Keep Pembroke Beautiful shall serve concurrently as a member of the City Tree Board. The six appointed board members will serve a term of three years. The Mayor and City Council shall approve the recommended board members. In the event of a vacancy, a successor shall be appointed for a full three year term.
 - D. **Duties and Responsibilities:** It shall be the responsibility of the Board to, but not limited to, the following:

- 1) Study, investigate, counsel, develop and/or update annually, and administer a written plan for the care, preservation, pruning, planting, replanting, removal, or disposition of trees and shrubs in parks, cemeteries, along streets, and in other public areas. The plan will be presented annually to the City Council and, upon their acceptance and approval, shall constitute the official comprehensive tree plan for the city.
- 2) Advise the City on all tree related issues.
- 3) Seek and apply for grant funding from public and private sources for conducting urban forestry projects.
- 4) Review the Tree Ordinance and Arboricultural Specification Manual every two years to keep it current on industry changes and provide recommendations for changes to the Mayor and City Council.
- 5) Provide tree care educational programs and information on benefits of trees and Best Management Practices to City staff and citizens.

E. Review by City Council:

The City Council shall have the right to review the decisions of the City Tree Board. Any person may appeal, except as provided for in Section VIII-C1 & VIII-C2, from any ruling or order of the City Tree Board to the City Council who may hear the matter and make the final decision.

III. Exemptions: The regulations set forth herein shall apply to all real property within the City of Pembroke, subject to the following exemptions:

- A. **Residential.** Lots equal to one (1) acre or less that are zoned for residential use shall be exempt from the provisions of this ordinance, except for designated grand trees.
- B. **Existing Residential.** Lots larger than one (1) acre with residential structures existing as of the date of this ordinance shall be exempt from the provisions of this ordinance, except for designated grand trees.
- C. **Commercial Timber Operations.** Commercial timber operations shall be exempt from the provisions of this Ordinance. The City encourages the retention of a thirty-foot (30') buffer of existing trees adjacent to all public right-of-ways.
- D. **Wetlands Mitigation.** The mitigation of wetlands pursuant to an approved plan from the US Army Corps of Engineers (COE) shall be exempt for the provisions of this Ordinance.
- E. **Commercial Tree Operation Exemption.** Trees grown specifically for sale by commercial nurseries are exempt from the provisions of this Ordinance.
- F. **Agricultural or silviculture exemption.** Any *bona fide* agricultural or silviculture use, in operation prior to the effective date of adoption of this Ordinance, shall be exempt from this Ordinance.
- G. **Emergency situations:** The removal of any tree during or following an emergency or an act of nature, when the City Council determines that permitting requirements will hamper private or public work to restore order to the city;
- H. **Safety hazard:** The removal of any tree which the city designee finds to be in such a dangerous condition or pose such an imminent hazard as to endanger the public health, welfare, or safety and therefore to require immediate removal.

IV. Applicability: The terms and provisions of this Ordinance shall apply to all real property situated in or subsequently annexed into the corporate limits of the City herein. Specifically, this code regulates:

- A. Streetscape trees along public or private streets within or near those streets.
- B. Trees on other public properties.

- C. Trees on private property which constitute a safety hazard or nuisance to the public or to public property.
- D. Trees located on private property proposed for development.
- E. Trees designated as having special significance to the public in the manner of a Regulated or Protected tree.

V. DEFINITIONS:

- A. **American National Standards Institute:** (ANSI A-300) is the industry consensus standards for tree care, planting, and removal, which are incorporated herein by reference and found in Arboricultural Specifications Manual.
- B. **Arboricultural Specifications Manual:** Is the City manual containing regulations and standards for the planting, maintenance, and removal of trees located on public property and for new developments sites.
- C. **Arboricultural Standards:** Accepted professional practices and techniques for tree installation and maintenance established to keep trees in a safe and healthy condition.
- D. **Arborist:** Means a person or firm, possessing a current State of Georgia or City of Pembroke business license, who has been trained in the business of diagnosing, treating, pruning and removing trees, including landscape architects and persons with a formal knowledge of trees, such as Cooperative Extension Service agents. Also includes foresters registered with the Georgia Secretary of State's Office.
- E. **Bona fide agricultural use:** Means a parcel zoned for agricultural use under the City's Zoning Ordinance, which has greater than fifty percent (50%) of the parcel in active agricultural production.
- F. **Canopy Coverage:** It means the area consisting of a tree's branches in all directions from its trunk, the outer edge which is the Dripline.
- G. **Certified Arborist:** A professional tree care specialist who currently retains the designation of Certified Arborist as defined and governed by the International Society of Arboriculture (ISA).
- H. **City Arborist:** Means arborist or a city designee selected by City to render decisions on issues concerning trees within the City of Pembroke.
- I. **City property:** All real property which is owned or leased by the City of Pembroke or, which is maintained by it or any part of any right-of-way as defined hereinafter.
- J. **Commercial Nursery:** Means an ongoing business for the planting, growing and sale of plants and trees. A commercial nursery does not include an ongoing silviculture operation (tree farming).
- K. **Commercial Timber Operation:** It means property that, on the effective date of this Ordinance, is being used to raise, harvest or produce trees for commercial marketing. The burden shall be upon the owner to establish this use through evidence such as prior leases or marketing agreements, the actual planting of trees for harvest, or other evidence to prove a commercial timber operation.
- L. **Designated Grand Tree:** It means a tree twenty-four (24") or greater DBH and listed in the officially adopted City of Pembroke Inventory of Grand Trees. A tree of extremely high value due to its species, size, age or other -relevant criteria.
- M. **Diameter Breast Height (DBH):** It means the total diameter, in inches, of a tree trunk or trunks (in the case of trees with multiple trunks) measured four and one-half feet (4 1/2') above existing grade.
- N. **Drip Line:** It means an imaginary line that extends downward from the outermost branches of a tree to the ground.
- O. **Fence or Wall:** It means a structural device erected to serve as an architectural element, landscape element, screen or barrier.

- P. **Grade:** It means the natural elevation of the ground.
- Q. **Ground Cover:** It means low growing plant material less than eighteen inches (18”) in height.
- R. **Minimum canopy requirement:** The minimum percentage (50%) of tree canopy required to be preserved are planted on any tract of land being developed.
- S. **Invasive species:** Non-native or exotic species that tend to growth rapidly and out-compete and displace native species in specific habitats; e.g. Tallow Tree.
- T. **Protective Barricade:** It means a physical structure not less than four feet (4’) in height, limiting access to protect designated grand trees. A suitable protective barrier shall be composed of wood or other durable material that insures protection of protected designated grand trees during development.
- U. **Protected tree:** It means any healthy, growing self-supporting woody perennial plant that has a trunk size of six (6) inch caliper or greater when measured at a point four and a half (4 ½) feet above ground level that is of a species which normally attains a height of at least twenty-five (25) feet at maturity.
- 1) Public hazard: Any tree, plant, shrub or vegetation which so overhangs any sidewalk or public street either dedicated or proposed to be dedicated, or, which is growing thereon (or adjacent thereto), in such a manner as to obstruct or impair the free and full use of the sidewalk or public street by the public as determined by the City designee; or
 - 2) Any tree, plant, shrub, or vegetation which obstructs a clear and reasonable view of traffic safety or other public-safety lights, signals, and signs; or
 - 3) Any tree, plant, shrub, or vegetation close to utility lines which has the potential to interfere with the provisions of reliable utility service as determined by the City designee.
- V. **Pruning:** Shall mean removing or reducing tree limbs to benefit the overall health and safety of the tree. Pruning shall be done according to the current standards established by the International Society of Arboriculture (ISA) and the American National Standards Institute (ANSI) A-300.
- W. **Screening:** It means the use of landscape planting, fences, walls or other structures to obscure vision of an unsightly or undesirable land use or structure and to minimize the intrusion of lighting on neighboring property.
- X. **Silviculture:** It means the cultivation of a forest for the purpose of harvesting timber.
- Y. **Site Plan:** A plan provided that reflects existing and proposed conditions on a site that is intended for construction. This may include but is not limited to topography, structures and/or additions, grading, drainage; erosion controls measures, trees to be saved or planted to comply with the requirements of this Ordinance, best management practices, parking requirements, streets and other type improvements.
- Z. **Topping:** "Tree Topping" is the removal of large branches to a stub, or smaller lateral not large enough to assume a terminal role. Tree topping is not an approved tree pruning practice for City street trees or protected trees, and is considered tree removal under this ordinance.
- AA. **Tree canopy:** The combined square footage of the aggregate of the canopy of all trees contained or preserved on a property.
- BB. **Tree establishment plan:** A map and supporting documentation which describes, for a particular site, the species and locations of trees to be planted in compliance with the requirements of this article.
- CC. **Tree Fund:** An account, maintained by the City Finance Department, established to receive funds paid in lieu of required canopy requirements, or for compensation for damage or removal of city-owned trees.
- DD. **Tree protection zone (TPZ):** The area essential to a tree's health and survival, including both above ground and below ground space, surrounding a preserved or planted tree which

is protected within the guidelines of this article (further defined in the Arboricultural Specifications Manual).

- EE. **Tree Species Selection List:** the recommended species of trees for planting within the City maintained and updated periodically by the Tree Board. Said list will also include species that are determined by the Tree Board to be discouraged for reasons to be determined by the tree board including by not limited to trees that are detrimental to the native environment or in conflict with this article. The list is a part of the Arboricultural Specifications Manual attached hereto [by reference].
- FF. **Tree Survey:** A tree survey shall include two components: (a) A land survey, completed by a registered land surveyor, as part of a site plans application. (b) A site plan on which all trees intended to be preserved to meet the density requirements of this ordinance shall be identified by species and size by a licensed forester, landscape architect or certified arborist. All drawings shall be stamped and sealed.
- GG. **Tree warranty:** Is a guarantee of tree vitality for two year from the time of planting.
- HH. **Wetland:** It means land that falls under the jurisdiction of one or more of the following agencies: the Georgia Department of Natural Resources or the United States Army Corps of Engineers (US COE).

VI. **Minimum canopy requirements.**

- A. A basic condition of the City of Pembroke Tree Management Ordinance is that all applicable sites maintain a minimum tree canopy of 50 percent. Applicable sites for this section are land upon which:
 - 1) A residential subdivision of more than five lots (including planned developments) is being developed;
 - 2) A commercial subdivision of more than five lots (including planned development) is being developed;
 - 3) Any activity requiring issuance of a land disturbance permit is carried out;
 - 4) Public land.The canopy requirement must be met whether or not a site had trees prior to development or disturbance of the applicable site. The canopy may be achieved by preserving existing trees, by planting new trees according to the minimum standards in this article or by a combination of the two. Minimum tree canopy shall be calculated and established pursuant to the formula and analysis set forth in Attachment A–Step 1 to this article. Any existing tree of not less than six inches DBH left in good growing condition on the property is eligible to be counted toward the minimum required canopy and has to be protected. The property owner shall be subject to the minimum tree canopy requirement set forth in this section. The property owner shall base the canopy calculation on the gross site area.
- B. Trees replanted to achieve canopy requirements are to be selected species from the City of Pembroke Tree Species Selection List set forth in Attachments D - G, (which list values of canopy coverage in square feet for various groups of trees and minimum area for planting), on file with the city. In addition, replanting shall be at the ratio of not less than one overstory tree for every three understory trees. Canopy credit may be met by planting all overstory trees, but not by planting only understory trees. No more than 40 percent of any one genus may be included in any replanting plan. All replacement trees will be maintained properly to ensure their survivability.

VII. Trees removal permits.

A. Exempt tree.

- 1) No permit required for trees listed in the ordinance as designated “Not Recommended for Planting.”
- 2) Any tree with a DBH of less than six inches, as long as the tree was planted as a replacement tree.

- B. Trees requiring tree removal permits.** It shall be unlawful to cut down, destroy, improperly prune, remove, top, or move any protected or replacement tree, or to authorize the cutting down, destruction of, removal of, topping of, moving of, or damage to, any protected or replacement tree within the city, without prior issuance by the city of a tree removal permit approving the act or acts, or a removal authorization by the city, as further described in this division; provided, however, that these requirements do not apply to trees specifically designated as exempt from this article. Exception: The emergency removal of protected trees that fall or the removal of limbs protected trees which have fallen due to acts of nature such as storms, fire or natural decay shall not require a tree removal permit.

For all properties, any protected tree, excluding those exempted in Section III, shall require a permit prior to removal.

Removal of any protected tree that is determined to be dead, beyond recovery or hazardous by the city shall require a tree removal permit except as provided herein. In case of an emergency a tree may be removed as authorized by the city.

VIII. Tree removal permits procedure.

- A. When no construction or demolition is involved.** Applications for tree removal permits shall include:

- 1) A tree removal permit fee of an amount established by the city council; and
- 2) An accurate site plan drawn (hand-drawn site plan may be acceptable) to scale indicating which protected tree(s) are proposed to be removed, depicting the location, common or scientific names, and size.
- 3) All protected trees petitioned for removal are to be marked on site in a harmless way and noted accordingly on the site plan.
- 4) Application forms may also request information regarding reasons for tree removal and other specifics as determined by the city.

- B. When construction or demolition involving other permitting is involved.**

- 1) In addition to the requirements of XIII - B 1), applications arising out of new building construction, demolition permits or renovations requiring construction permits shall include an accurate site plan drawn to scale indicating the square footage of the site, the square footage of the proposed building area, the square footage of the existing tree canopy and the square footage of the tree canopy requested for removal. The site plan shall depict any proposed grade changes and a plan view of actual protected tree(s) and protected tree canopies on site including:

- a) The property lines and footprint of existing structures; and

- b) The existing and proposed grades;
 - c) Proposed additions to existing buildings, proposed new buildings, structures, and other impervious surfaces, such as but not limited to sidewalks, pool decks, driveways parking areas, storm water retention areas, overhead, and underground utilities, and other physical improvements.
 - d) A photographic survey and record of all protected trees on the site taken at ground level (from multiple angles) with the trees proposed to be removed, clearly marked and indicated on the photographs, depicting existing conditions.
- 2) Incomplete or incorrect applications that require additional site visits shall require an additional fee equal to the original permit fee for each subsequent visit

C. *Removal voids appeals process.*

- 1) Removal of protected trees requested on the tree removal permit application is regarded as the applicant's acceptance of the conditions for removal as stated on the application and voids any appeals.
- 2) Except in the event of an emergency, removal of a protected tree without a permit shall make void any appeals as provided in this division.

D. *Appeals.*

- 1) Upon denial of an application, or conditions placed thereon for a tree removal permit, the grounds for such action shall be given to the applicant in writing. Applicants may appeal the denial decision or specific conditions placed on the approval unless C.1 or C.2 applies.
- 2) Following the receipt of a written request to appeal a denial of a tree removal permit or a request to appeal conditions placed on the approval of a tree removal permit the tree board shall consider the appeal within 30 calendar days or as soon as possible thereafter and make a final decision. The final decision of the tree board shall be sent to the applicant by certified and regular mail within ten days.
- 3) The applicant may appeal the decision of the tree board to the city council if a further appeal is filed within 15 days of the date of the decision by the tree board. The council may reverse, modify or uphold the decision of the tree board at its next available regular scheduled meeting or at a later regular meeting if requested by the applicant or the city.
- 4) If the City Council upholds the decision of the tree board to deny granting a tree removal permit, then the applicant may ultimately remove the subject tree(s) after a 60-day period and after notification of the intent to remove the subject tree(s) at the end of the 60-day waiting period in writing. Replacement compensation shall be provided in accordance with the replacement compensation required in subsection (2). Removal of subject tree(s) prior to the end of the 60-day period shall require the same compensation as an unpermitted tree removal.

E. *Time for processing tree removal permit applications.*

- 1) Notice of incomplete or inaccurate applications shall be given to the applicant within fifteen (15) working days of the receipt of the application.
- 2) Each application shall be approved, approved with conditions, denied, or returned to the applicant, requesting further action on the application within thirty (30) working days of the receipt of a complete application.

F. ***Duration of tree removal permit.*** Each tree removal permit shall remain in effect for one year from the date of issuance. If the action approved in the permit is not completed within the permit's effective date, a new tree removal permit must be obtained and the existing tree removal permit is void.

All conditions for removal, except financial compensation which is required at the time a permit is approved in accordance with this article, are to be met within 30 days of the tree removal date unless an extension is documented on an approved permit. Extensions of no longer than one year from date of removal may be considered on a case by case basis. Extension requests not included on an approved permit must be submitted to the city in writing to include an explanation of the reason for the extension. Compliance with conditions for removal must be confirmed by contacting the city for an inspection.

G. ***Posting of approved permit.*** Approved tree removal permits are to be posted on site, legible and visible from the street prior to commencement and throughout completion of work.

IX. Canopy recovery for development plans.

- A. Development plans shall include a canopy recovery plan for replacement of trees and vegetation approved for removal. A canopy recovery plan shall include the following:
 - 1) Areas to be cleared and areas preserved;
 - 2) The number of trees required for replacement, to achieve 50 percent canopy.
- B. In order to promote diversity, no more than 15 percent of the replacement trees shall be of the same species, unless prior approval is given by the tree board.
- C. Where the tree board determines that a site cannot sustainably support the required replacement, due to the size and shape and/or structures and/or other viable site constraints, a fee shall be paid to the City of Pembroke Tree Fund. This fee shall be the actual and verified cost of the required tree replacement and shall be submitted prior to the issuance of a land disturbance permit or building permit; and
- D. If a property owner has preserved extensive overstory trees and clusters of native trees and vegetation, in such a manner as to provide extensive shading within the built environment, value shall be 100 percent of the drip line area of groupings. An exhibit depicting the aforementioned shall be submitted that calculates the canopy spread based on DBH and species of a tree. (See Attachment A illustration).

X. Alternative compliance to canopy density requirement.

- A. The intent of this article is to ensure that a minimum canopy density of trees is maintained on all applicable sites, as defined in this article. If this intent cannot be met because a site will not bear the required density of trees, as determined by the City Designee and the City of Pembroke Tree Board, alternative methods of compliance may be approved:
- 1) *Planting at a location remote from the project site.* If trees are to be planted at another location, a tree replacement plan, meeting all applicable standards, must be reviewed and approved. The following note must be shown on the approved plan: "A tree replacement plan addendum for this project shall be submitted to the City Arborist or designated city staff for the City of Pembroke in conjunction with the construction plans for the proposed activity. This plan shall include the species, size and location of trees to be planted off-site to meet the tree density deficit shown. Final acceptance of this project is subject to approval of this plan, as well as verification of the installation of the trees".
 - 2) *Contributing to the City of City of Pembroke Tree Bank.*
 - a) The City will accept donations to the City of Pembroke Tree Bank. These donations will be used for the purpose of planting and maintaining trees on public property within the City of Pembroke. For calculating contributions to the City of Pembroke Tree Bank, see Attachment A.
 - b) The City Tree Bank will be administered by the City of Pembroke Tree Board, or designated city staff. An annual report shall be submitted to the Mayor showing amounts collected, amounts spent, and the type and location of trees planted.
 - c) The city arborist or designated city staff must review and approve all requests for alternative compliance. In no instance shall more than 80 percent of the required site canopy be met through alternative compliance.
 - d) As many trees as can reasonably be expected to survive must be planted on the site in question.
- B. No development approval (as defined by this article), land disturbance permit, or building permit shall be issued until the city arborist or designated city staff has approved the request and received the necessary documentation and/or funds for the compliance method.

XI. Grand or Specimen Trees:

- A. Trees designated as grand or specimen trees by the Mayor and City Council are hereby declared to be protected trees within the City of Pembroke. No person, public utility or department shall prune, excavate below the dripline, remove or otherwise disturb such trees without approval of the Tree Board (see exception under Section XII-D. Grand or specimen trees situated upon private property may be designated as such by the Tree Board only after written permission has been obtained from the property owner. Nothing in this ordinance shall authorize the Tree Board; its members or its agents to enter upon private property for the purpose of examination of any tree without first obtaining permission from the property owner.
- B. It is the intent of this ordinance that the designation of "grand" or "specimen" trees by the Tree Board be extremely limited to only those trees which are, in fact, truly historic to the City of

Pembroke, or are of such size, species, age or other relevant criteria as to qualify the tree as having extremely high value.

XII. Tree Removal Restrictions.

- A. **Protection of Designated Grand Trees.** The City of Pembroke shall establish an inventory list of Designated Grand Trees (see attachment “H”) to be included as part of this ordinance. The removal, relocation, destruction or abuse in any manner of any Designated Grand Tree without prior approval of the City Tree Board is prohibited on any parcel of non-exempt land (see above). For new subdivisions, the division of property so that a lot would place a grand tree at or near the center of a lot in a location that would require the removal of the grand tree for construction of a dwelling unit, shall be discouraged.
- B. **Protected Trees Prior to Development.** Where a building permit or subdivision approval has not been issued, the removal, relocation, destruction or abuse in any manner of more than twenty-five (25%) of the large trees (6” or greater DBH) on anyone (1) parcel of non-exempt land within any five (5) year period shall be prohibited.
- C. **Protected Trees During Development.** For parcels of land proposed for development, large trees (6” or greater DBH) on the entire parcel shall be saved wherever possible, with a goal of preserving most of the large trees on the property. Designated Grand Trees shall be preserved unless specifically condemned by the City Tree Board.
- D. **This Ordinance** shall not restrict the ability of the City of Pembroke, public utilities, electric suppliers from maintaining safe clearance around utility lines.

XIII. Development Requirements:

A. Tree Survey Requirements.

- 1) Application for subdivision approval. Application for subdivision approval where Designated Grand Trees are to be impacted shall require the following information in addition to the site plan or plat information required by the City of Pembroke Subdivision Regulations.
- 2) A tree survey overlay on the plat that locates all Designated Grand Trees identified by species. All tree surveys for subdivisions involving the construction of road or drainage easements shall be performed by an approved arborist and shall have an accuracy of plus or minus three feet (+-3’) and will indicate the limits of areas proposed to be clear-cut for proposed structures, improvements, right-of ways and easements. Clear cutting beyond the limits as shown on the plat or site plan shall not be permitted.
- 3) A tree protection plan showing how Designated Grand Trees located in the development areas are to be protected during development in accordance with the standards set forth in Section ~~X~~ XII of this ordinance.

B. Submittal Requirements.

- 1) A tree survey shall be submitted along with the initial development application for the site of any intended development. The tree survey shall have been completed no more than two (2) years prior to the date of submission. An appropriate sampling method, when approved by the Planning Department, may be used on a site where trees are numerous and especially where such trees are to be left undisturbed by development.
- 2) Tree surveys and tree management plans shall be prepared by a certified arborist or registered landscape architect. The Planning Department may waive this requirement for development sites that are less than five (5) acres in area and that have a limited number of protected trees or a limited diversity of tree species.

- 3) Prior to the removal of any protected tree, a tree management plan must be submitted to and approved by the Director of Planning. The tree management plan, after approval, shall be included with the other construction drawings submitted to the City for the development. A tree management plan shall include a site plan of the intended development and the following information:
 - 4) The location, caliper inch, and species of existing protected trees on the site.
 - 5) The location and an itemized list of trees per size and species proposed for removal indicating the total aggregate value in caliper inches.
 - 6) The location and an itemized list of the trees per size and species to be preserved indicating the total aggregate value in caliper inches.
 - 7) The existing and proposed grades at the base of the trees to be preserved.
 - 8) The protective measures and barriers to be used during construction to preserve those protected trees that are to remain.
 - 9) A mitigation plan that shows the proposed location, size, and species of required replacement trees.
- (10) Phantom lines that depict streets, rights-of-way, easements, and other improvements in order to clearly indicate how the proposed development relates to the existing trees.

XIV. Tree Protection Requirements.

For all new constructions in a Development Site, protective barricades shall be placed around all Trees located in development areas prior to the start of development activities, 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 debris, vehicles and development activities. Barricades shall be erected at a minimum distance from the base of protected trees and grand trees according to the following standards: Designated Grand Trees shall have a protective barricade shall provide a diameter of protection to the tree equal in feet to the diameter breast height of the tree (i.e., a 24" diameter tree would require a 24-foot diameter protective barricade).

- A. Construction within the protective barricade. Proposed changes in grade or construction of impervious surface or utilities within the required protected barricade may be permitted providing that the City Tree Board, prior to beginning construction, approves all changes in grade or construction within protected zones. Plans must be submitted, which illustrate in detail protective measures necessary to protect the trees.
- B. All pruning of Designated Grand Trees shall be done by a licensed tree service during development according to the ANSI A-300, Pruning Standards for Shade Trees.
- C. Trees that are proposed for removal shall be flagged or otherwise identified in order to differentiate those trees from protected trees prior to commencement of development activity.

XV. Parking Lot Landscaping Requirements.

All-new parking lots greater than one-quarter acre in size shall require the installation and maintenance of landscaping pursuant to this ordinance. Proposed improvements to properties developed prior to (effective date of this ordinance) shall only require landscaping for the section(s) of the lot being improved, unless the cost of the proposed building additions and site improvements exceeds fifty percent (50%) of the current value of the existing land and

improvements thereon, in which case, the entire lot shall be brought into compliance with landscaping requirements of this ordinance.

- A. Plan review and approval requirements. Whenever any property is affected by this article (one quarter acre or larger parking lot), the property owner or developer shall submit a landscaping plan for review and approval by the City Tree Board. The contents of the plan shall include the following:
 - 1) Layout of all off-street parking and loading areas, including the location of entry and exit points, the internal vehicular circulation pattern and the location and dimension of required parking and loading spaces;
 - 2) Location and dimensions of existing and proposed streets and highways;
 - 3) Location, name (botanical and common), size and spacing of all plant materials to be retained and proposed plantings and screenings;
 - 4) Locations of walls, fences and railings and an indication of their height and construction materials;
 - 5) Details illustrating landscaping installation.
- B. No building permit or subdivision plat approval shall be issued until the required parking lot landscaping plan has been submitted and approved.

XVI. STANDARDS OF TREE CARE MANAGEMENT

A. Public Tree Care – General Maintenance (with the exception of Section XI)

- 1) The city shall have the right to plant, prune, maintain and remove trees, plants, shrubs and vines within the lines of streets, alleys, avenues, lanes, squares and public grounds, as may be necessary, to ensure public safety and preserve or enhance the symmetry and beauty of such public grounds.
- 2) The city shall have the right to remove, or cause or order to be removed, any tree, or part thereof, which is in an unsafe condition, or which, by reason of its nature, is injurious to sewers, electrical power lines, gas lines, water lines or other public improvements or is affected with any injurious fungus, insect or other pest, whether on public or private property.
- 3) No person shall plant, spray, fertilize, prune, remove, cut above or below ground, or otherwise disturb any tree on municipal property without first filing an application and procuring a permit from the city designee. Requirements for species, spacing, location and maintenance shall be made available to the public at the application filing place.
- 4) Stump removal – The stumps of all removed trees shall be ground to a depth of at least eight-inches (8”) below the ground level so that the top of the stump shall not project above the surface of the ground. The soil cavity shall be filled with clean topsoil and the area leveled and seeded. If the area where the tree is removed is to be paved, the stump shall be removed to a suitable depth to allow adequate paving. No tree shall be planted in the location of a tree stump unless no other space is available.

B. Pruning Standards.

- 1) Pruning Technique: All pruning shall be conducted in accordance with the most recent Arboricultural Specifications and Standards of Practice of the International Society of Arboriculture as published in the American National Standard for Tree Care Operations (ANSI 300 – Part 1) and herein referenced in this Article and the city Arboricultural Specifications Manual.
- 2) Required Electric Power Line Clearances.
 - a) When pruning is required to maintain the necessary clearance between any existing tree and an electric power line, the pruning shall be conducted in accordance with ANSI Standard A-300. Branches or leaders to be cut back shall either be pruned

to the next lateral having a diameter at least 1/3 of that being cut, or else be pruned just outside the branch-collar at the base of the branch. Topping is prohibited.

- b) Removal and replacement of street trees near electric power facilities. When in the judgment of utility company and City Designee, a tree interferes with the safe and reliable operation of the electric power system along a street right-of-way, and cannot be pruned in accordance with ANSI Standard A300 so as to provide the required clearance the utility company may offer to remove the tree and replant an acceptable specie tree for the location or in a location mutually acceptable to the city, to utility company, and to the property owner.
- 3) Topping.
- a) It shall be unlawful, as a normal practice, for any person, firm or city department to top any street tree, park tree or other tree on public property. For the purposes of this section, the term "topping" means the severe cutting back of limbs to stubs larger than three inches in diameter within the tree's crown to such a degree so as to remove the normal canopy and disfigure the tree.
 - b) Trees severely damaged by storms are other causes or certain trees under utility wires where other pruning practices are impractical, shall be exempt from this section.

C. Tree Planting Standards:

- 1) All trees planting shall be conducted in accordance with the most recent Arboricultural Specifications and Standards of Practice of the International Society of Arboriculture as published in the American National Standard for Tree Care Operations (ANSI 300 – Part 5 & 6) and herein referenced in this Article, and the city Arboricultural Specifications Manual.
- 2) All planted trees shall have a minimum tree establishment zone based upon its mature size (Table No.1). Refer to the tree species list located in the city Arboricultural Specifications Manual for information on the size and tree quality rating for a specific species. No one species shall make up over 15 percent of the total number of trees planted.

Table No. 1:

Mature Size	Canopy area in square feet
Small Canopy Trees (Less than 25')	250
Medium Canopy Trees (30'--50')	550
Large Canopy Trees (50' and larger)	1200

- 3) Minimum caliper. The minimum caliper (measured at six inches above the ground) for planted trees is two inches (2"). Multi-stemmed trees must have three to five stems and be six to eight feet tall.
- 4) To minimize traffic hazards at street intersections and avoid conflicts with city infrastructure all tree plantings shall follow listed guidelines in Table No. 2:

Table No. 2:

Mature Size	Large 50 – 70'	Medium 30 – 40'	Small 15 – 20'	Evergreen 40 – 50'
Minimum Width of Tree Space	8' +	6'	4'	8' +
Spacing between trees	50'	40'	20'	30'
Overhead utilities	DO NOT PLANT	DO NOT PLANT	Okay	DO NOT PLANT
Intersections	40'	40'	40'	40'
Stop signs, traffic signs, street lights, traffic signals	30'	30'	30'	30'
Fire hydrant, gas or water valves	10'	10'	10'	10'
Underground utilities	10'	10'	10'	10'

5) Distance from curb and sidewalk:

- a) The distance public trees may be planted from curbs or curb lines and sidewalks will be in accordance with the three species size classes in the City of Pembroke.
 - b) No trees including the recommended list of street trees may be planted closer to the curb or sidewalk than the following:
 - (1) Small trees two feet (minimum of a four foot wide treelawn)
 - (2) Medium trees three feet (minimum of a six foot wide treelawn)
 - (3) Large trees four feet (minimum of an eight foot wide treelawn) except in special plantings designed or approved by the City Tree Board and City Planning Department.
- 6) Certain trees shall be prohibited from being planted within the city limits see Attachment D. The tree board may add trees to the list as necessary. Existing trees will be grand-fathered.

D. Protection of trees on public land during construction.

- 1) Plans for any construction done by or for the city, on either public land or easement-laden land, shall include a tree management plan, developed by or in cooperation with the city arborist or city designee, for existing trees on the construction site. This plan shall:
 - a) Identify and provide protection instructions for trees whose species, condition and location justify their preservation on the construction site. Protection instructions shall include, at a minimum, measures to:
 - (1) prevent mechanical damage to the trunks and branches of trees to be preserved;
 - (2) prevent construction activities of all types in trees' root-plate area;
 - (3) evaluate planned construction (grade cuts and fills; paving; materials storage; traffic and parking; fires; attachment of signs, fences, utility boxes; improper handling and dumping of toxic materials; washing and maintenance of equipment; etc.) in the critical rooting distance of trees to be saved, and provide measures to minimize damage to the trees in such areas;

- (4) provide landscaping recommendations for interfaces between construction areas and tree-save zones;
 - (5) provide elements of an education program for work crew members and their supervisors.
 - b) Provide for the removal of trees that cannot or should not be preserved during construction.
- 2) The city designee shall consult the city arborist for individual tree problems when necessary.

XVII. PRIVATE TREES

A. Abatement

The failure of owners to comply with planting, spacing, minimum distance, utilities, trimming, and tree removal provisions of this ordinance and spacing requirements prescribed by the city shall constitute a violation of this chapter and the offender shall be liable under the penalty provisions of the ordinances of the city. The city shall have the authority to remove trees improperly located as not to conform to the provisions of this chapter and to assess the cost of removal against the owner of the property on which the same were improperly located. It shall be the duty of all owners of property encumbered or crossed by city right-of-ways, to keep trees within the city right-of-ways on the owner's property trimmed so that motor vehicle and pedestrian traffic are not obstructed at intersections, points of ingress and egress, and/or sidewalks on the public right-of-ways. Where proper trimming is not maintained, the city may, after notifying the property owner responsible for the trimming, enter upon that property and perform the work necessary to comply with code. Upon performing such work, the city will charge the property owner for the actual cost and administrative costs as determined by the schedule of fees established by the City Council. Property owners are also responsible for trimming overhanging limbs within any city right-of-ways to a minimum height of eight feet over sidewalks and for a minimum height of 13½ above any public roadway.

B. Nuisance trees

The City Designee has the authority to enter onto private property whereon there is located a tree, shrub, plant or plant part that is suspected to be a public nuisance and to order its removal if necessary. Public nuisance is defined as any tree with an infectious disease or insect problem; dead or dying trees; a tree or limb(s) that obstruct street lights, traffic signs, the free passage of pedestrians, or vehicles; a tree that poses a threat to safety.

The City Designee shall cause a written notice to be personally served or sent by mail to the owner of the particular property.

In the event the nuisance is not abated by the date specified in the notice, the City Designee is authorized to cause the abatement of said nuisance. The reasonable cost of such abatement may be charged to the subject property owner. Monies which have not been recovered through the City bill collection procedures may result in a lien against the property or assessed on taxes as provided for in city or state codes. In addition, the owner of the property upon which the nuisance is located may be subject to prosecution under this Chapter for maintaining a public nuisance.

- XVIII. Enforcement:** The City arborist or other designated representative shall have the power to enforce the rules, regulations and specifications concerning protection of Designated Grand Trees, tree surveys, tree identification and installations of tree protective barriers. The review of plans for parking lots and other development plans that require tree protective measures shall be the responsibility of the City Tree Board. All tree protection plans will be submitted to the City Tree Board.
- XIX. Penalties and Appeals:** Any person who violates any provision of this ordinance or who fails to comply with any notice issued pursuant to this ordinance, upon being found guilty of violation in municipal court shall be subject to a fine not to exceed \$500.00 for each separate offense. Each day during which violation of the provisions of this ordinance shall occur or continue shall be a separate offense. An alternative to the assessment of a fine is the evaluation, and the money will be paid to the City to purchase and plant replacement trees. The value of trees shall be determined in accordance with 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. Any adjudication of a violation of the ordinance may be appealed to state court.
- XX. Amendment Procedure:** This ordinance may be amended at any time pursuant to the procedures utilized by the City when amending any ordinance.
- XXI. Adoption:** This Tree Ordinance is hereby adopted this 11th day of August 11, 2014, and becomes effective immediately because the health, safety and general welfare of the City requires such.

Attachment A

CANOPY ANALYSIS

***Step 1: Canopy analysis.**

A basic condition of the city tree protection ordinance is that all applicable sites have a potential minimum canopy of 50 percent by area. The canopy requirement must be met whether or not a site had trees prior to development. The canopy may be achieved by counting existing trees to be preserved or actual canopy of preserved trees or groupings, planting new trees, or some combination of the two. For canopy analysis, the following formula shall apply:

$$\text{CR} = \text{SA} \times 0.5$$

Where:

CR = canopy area requirement

SA = site area

• **PROCEDURE FOR CALCULATING THE REQUIRED TREE REPLACEMENT:**

Step 1: Area of total site from boundary survey.

Step 2: Divide area (in square feet) by two.

Step 3: Subtract preserved tree area from step 2.

Step 4: Select enough overstory and understory trees to equal area in step 3. (Note: Not more than three understory trees for each overstory tree. Not more than 15 percent of one species and not more than 40 percent of one genus.)

- ✓ NOTE: All replacement trees must be two inch caliper or greater. Replacement trees must have minimum area for growth. Attachments D-G (include minimum tree planting area in the tree list).

Step 5: Square footage value placed on a two-inch caliber tree for calculating replacement trees;

a) Overstory trees values:

1. Large growth trees = 1,200 sq. ft./tree planted.

2. Medium growth trees = 550 sq. ft./tree planted.

b) Understory trees value:

1. Small growth trees = 250 sq. ft./tree planted.

Example 1: Following site to be developed:

Step 1: Ten acre site = 435,600 sq. ft.

Step 2: 50 percent canopy cover figure.

435,600 ÷ 2 = 217,800 sq. ft. to meet 50 percent canopy cover.

Step 3: Preserved trees left on site = 108,900 sq. ft. (2.5 acres).

217,800 minus 108,900 = 108,900 sq. ft. of replacement trees.

Step 4: Replacement trees required to meet 50 percent CR (canopy area requirement).

CR = canopy area requirement

108,900 sq. ft. of area to be planted in trees.

- a. Overstory trees = 1,200 sq. ft./tree for large canopy trees planted.
- b. Overstory trees = 550 sq. ft./tree for medium canopy tree planted.
 1. 78 overstory (large canopy trees) x 1200 sq. ft. = 93,600 sq. ft.
 2. 20 overstory (medium canopy trees) x 550 sq. ft. = 11,000 sq. ft.
 3. Total sq. ft. 105,750 sq. ft.
- c. Understory trees = 250 sq. ft./tree planted.
 1. 18 understory (small canopy trees) x 250 sq. ft. = 4,500 sq. ft.
- d) Total square footage of trees to be planted: 109,100 sq. ft.

THE 109,100 SQ. FT. OF PLANTED TREES HAS MET 50 PERCENT CANOPY AREA REQUIREMENT.

***Step 2: City tree bank formula for determining contributions.**

Contribution calculations are based on two-inch caliper replacement trees with a value updated semi-annually, and on file with the city, representing the average size and cost of materials, labor and guarantee for trees planted in the City of Pembroke.

Example: Based on unit value of tree replacement of \$500.00 (amount subject to change).

- To determine the appropriate CR contribution, first calculate the *Implantable Square Footage (ISF)* of tree space which cannot be planted on the site.
 - ✓ Divide the ISF by 1,200 sq. ft. (the sq. ft. value of a 2-inch caliper overstory replacement tree at 10 years of age) and multiply by \$500.00.

Example 2: From Example 1 the total sq. ft. of 50% CR required is 108,900 sq. ft.

Due to space limitation and other site problems, the site only has 84,500 sq. ft. of *Plantable Area (PA)* for replacement trees.

To determine the CR trees not plantable on site use the following formula:

$$\text{ISF} = \text{CR} - \text{PA}$$

In this example:

$$\text{CR (108,900 sq. ft.)} - \text{PA (84,500 sq. ft.)} = 24,400 \text{ sq. ft. of ISF}$$

$$\text{CR} = \text{ISF} \div 1200 \text{ sq. ft.}$$

$$\text{CR} = 24,400 \div 1200 \text{ sq. ft.} = 20.33 \text{ replacement trees}$$

Example: Cost value:

- Based on unit value of tree replacement of *\$500.00* (amount subject to change)

$$20 \text{ trees to meet CR} \times \$500.00 = \$10,000 \text{ TOTAL CONTRIBUTION TO TREE BANK}$$

This means that a total of 20 trees are to be planted at a remote site as a form of alternative compliance or the developer may elect to contribute to the city tree bank the value of 20 trees.

Attachment B

TREE CANOPY MEASUREMENT EXAMPLE

Gross Lot Size 93,300 sq. ft.

Net Lot Size 79,650 sq. ft., not including active cleared easements

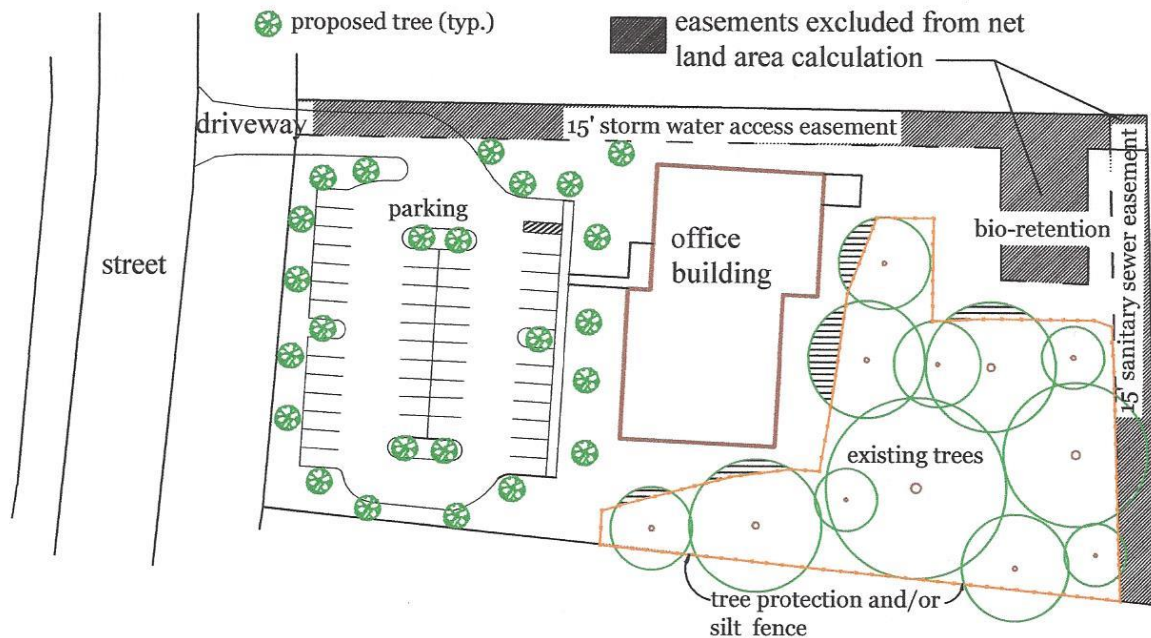
Minimum tree canopy coverage for Commercial Development = 50% (39,825 sq. ft.)

Existing tree canopy protected = 23.8% (18,975 sq. ft.)

Including drip zone overlapping protective fencing

Tree Canopy Deficit = 20,850 sq. ft.

Replacement tree required = 1 overstory tree per 1,200 sq. ft. of canopy deficit = 17.4 trees



Attachment C

TREE CANOPY MEASUREMENT EXAMPLE

For example development lot 93,300 square feet in size

Step One: Determine net lot size not including

- cleared utility and stormwater easements
- road rights-of-way and access easements
- cleared active recreation areas or
- water bodies

Net lot area = 79,650 square feet

Step Two: Calculate required canopy coverage

Net lot area x minimum canopy coverage for commercial lot

79,650 square feet X 50% = 39,825 square feet minimum

Step Three: Measure area of existing canopy to be protected

Include all wooded areas protected by tree protection fence and/or silt fence and the drip zones of protected trees that extend beyond these fences. For purposes of determining tree canopy the critical root zones of surveyed trees can be used to establish drip zone limits.

Area of Existing Canopy Protected = 18,975 square feet (23.8%)

Step Four: Determine Implantable Square Footage (ISF)

Canopy Coverage Required [Step 2]	(50%)	39,825 square feet
Minus Existing Canopy Protected [Step 3]	(23.8%)	-18,975 square feet
ISF	(26.2%)	20,850 square feet

Step Five: Calculate replacement trees

1 tree/1200 square feet ÷ 20,850 square feet = 17 replacement trees

Count all trees to be planted

- in required land use buffers
- required for parking lot shading
- other trees not in buffers or parking areas planted at least 30 feet apart

City tree bank formula for determining contributions:

Contribution calculations are based on two-inch caliper replacement trees with a value updated semi-annually, and on file with the city, representing the average size and cost of materials, labor and guarantee for trees planted in the City of Pembroke.

Example: Based on unit value of tree replacement of \$500.00 (amount subject to change).

From Step 5 a total of *17 trees were required to meet ISF of 20,850 sq. ft.*

Multiply 17 trees by \$500.00 to determine required contribution to City Tree Bank.

- $17 \times \$500 = \$8,500$ Total Contribution to City Tree Bank

CITY OF PEMBROKE, GEORGIA TREE SPECIES LISTING

Attachment D

Large Canopy Trees for Overstory: (Count for 1200 sq. ft. of area after 10 years of growth – minimum 2” caliber at planting)

Large Trees >50’ Suitable for areas with more than 400 square feet of total planting area; in a planting strip at least 16’ x 25’ or 20’ x 20’

Species Common Name	Deciduous (D) Evergreen (E)	Sun/ Shade	Growth Rate	Medians	Parking Lots or Similar 'Hardscapes'	Near Sidewalks	Under Utility Lines	Visibility Concern Areas **	Yards
Green Ash*	D	FS	F	YES	YES	YES	NO	YES	YES
Blackgum*	D	PS/FS	S	YES	NO	NO	NO	YES	YES
Bald Cypress*	D	FS/PS	F	YES	NO	NO	NO	YES	YES
Pond Cypress*	D	PS/FS	F	YES	NO	NO	NO	YES	YES
Pignut Hickory*	D	PS/FS	M	YES	YES	NO	NO	YES	NO
Southern Magnolia*	E	PS/FS	M	YES	NO	YES	NO	NO	YES
Red Maple* ^B	D	PS/FS	F	YES	YES	YES	NO	YES	YES
Laurel Oak*	SE	PS/FS	F	YES	NO	NO	NO	NO	YES
Live Oak*	E	PS/FS	M	YES	YES	NO	NO	YES	YES
Nuttall Oak*	D	FS	M	YES	YES	NO	NO	YES	YES
Shumard Oak*	D	FS	F	YES	YES	YES	NO	YES	YES
Southern Red Oak*	D	FS	M	YES	YES	YES	NO	YES	YES
Scarlet Oak*	D	FS	M	YES	YES	YES	NO	YES	YES
Swamp Chestnut Oak*	D	PS/FS	M	YES	YES	NO	NO	YES	YES
White Oak*	D	PS/FS	M	YES	YES	NO	NO	YES	YES
Willow Oak*	D	FS	F	YES	YES	YES	NO	YES	YES
Loblolly Pine*	E	FS	F	NO	NO	NO	NO	NO	YES
Longleaf Pine*	E	FS	F	NO	NO	NO	NO	NO	YES
Eastern Red cedar*	E	FS	F	YES	YES	NO	NO	NO	YES
Sweetgum*	D	PS/FS	M	YES	NO	NO	NO	YES	YES
Sycamore*	D	FS	F	YES	NO	NO	NO	YES	NO
Tulip Poplar*	D	FS	F	YES	YES	YES	NO	YES	YES
Zelkova	D	FS	M	YES	YES	YES	NO	YES	YES

Key:

* Native to South Georgia	Sun/shade exposure:	Growth rate:	Type:	Problems
** Tree placement and maintenance procedures should be respectful of sight distance	FS = Full sun	S = Slow (less than 1' per year)	D = Deciduous	A. Large fruit
	PS = Part sun	M = Medium (1-2' per year)	E = Evergreen	B. Use of hybrids recommended
	S = Shade	F = Fast (more than 2' per year)	SE = Semi Evergreen	

Medium Canopy Trees: (Count for 550 sq. ft. of area after 10 years of growth – minimum 2” caliber at planting)

Attachment E

Medium Trees 30’ - 50’ Suitable for spaces with 100 to 200 sq. ft. of total planting space; in a planting strip at least 4-7 feet wide; or place at least 4’ from pavement or wall.

Species Common Name	Deciduous (D) Evergreen (E)	Sun/ Shade	Growth Rate	Medians	Parking Lots or Similar 'Hardscapes'	Near Sidewalks	Under Utility Lines	Visibility Concern Areas **	Yards
River Birch*	D	PS/FS	F	YES	NO	NO	NO	YES	YES
Lacebark Elm	D	FS	F	YES	YES	YES	NO	YES	YES
Golden Raintree	D	FS/PS	M	YES	YES	YES	YES	YES	YES
East Palatka Holly*	E	FS	M	YES	YES	NO	NO	YES	YES
American Holly*	E	FS	S	YES	YES	NO	NO	YES	YES
Nellie R. Stevens Holly	E	FS	M	YES	YES	NO	YES	YES	YES
Savannah Holly*	E	FS	M	YES	YES	YES	NO	YES	YES
Sweetbay Magnolia*	D	PS	M	YES	YES	YES	NO	NO	YES
Trident Maple	D	PS/FS	M	YES	YES	YES	NO	YES	YES
Overcup Oak	D	FS	M	YES	YES	YES	NO	YES	YES
Chinese Pastiche	D	FS/PS	M	YES	YES	YES	NO	YES	YES
Eastern Redbud*	D	PS	F	YES	YES	YES	YES	YES	YES
Carolina Silverbell*	D	PS/FS	M	YES	YES	YES	YES	YES	YES
Yellowwood*	D	PS/FS	M	YES	YES	YES	NO	YES	YES

Key:

* Native to South Georgia	Sun/shade exposure:	Growth rate:	Type:	Problems
** Tree placement and maintenance procedures should be respectful of sight distance	FS = Full sun	S = Slow (less than 1' per year)	D = Deciduous	A. Large fruit
	PS = Part sun	M = Medium (1-2' per year)	E = Evergreen	B. Use of hybrids recommended
	S = Shade	F = Fast (more than 2' per year)	SE = Semi Evergreen	

Small Canopy Trees – Understory: (Count for 250 sq. ft. of area after 10 years of growth: minimum 2” caliber at planting)

Small Trees < 25’ Useful under utility lines; areas with < 100 sq. ft. of total planting area; a planting strip with a width of at least 4’.

Species Common Name	Deciduous (D) Evergreen (E)	Sun/ Shade	Growth Rate	Medians	Parking Lots or Similar 'Hardscapes'	Near Sidewalks	Under Utility Lines	Visibility Concern Areas **	Yards
Chastetree	D	PS/FS	F	YES	YES	YES	YES	YES	YES
Okame Cherry	D	PS/FS	M	YES	YES	YES	YES	YES	YES
Crape Myrtle	D	FS	F/M	YES	YES	YES	YES	YES	YES
Flowering Dogwood*	D	PS	M	YES	YES	YES	YES	YES	YES
Kousa Dogwood	D	PS/FS	S	YES	YES	YES	YES	YES	YES
Fringetree	D	PS/FS	S	YES	YES	YES	YES	YES	YES
Yaupon Holly	E	PS/FS	M	YES	YES	YES	YES	YES	YES
Amur Maple	D	PS/FS	M	YES	YES	YES	YES	YES	YES
'Little Gem' Magnolia	E	PS/FS	M	YES	YES	YES	YES	YES	YES
Pindo Palm	E	PS/FS	S	YES	YES	YES	YES	YES	YES
Chinese Redbud	D	FS	F	YES	YES	YES	YES	YES	YES
'Oklahoma' Redbud	D	PS/FS	F	YES	YES	YES	YES	YES	YES
Snowbell*	D	PS/FS	M	YES	YES	YES	YES	YES	YES
Waxmyrtle*	E	PS/FS	F	YES	YES	YES	YES	YES	YES

Key:

* Native to South Georgia	Sun/shade exposure:	Growth rate:	Type:	Problems
** Tree placement and maintenance procedures should be respectful of sight distance	FS = Full sun	S = Slow (less than 1' per year)	D = Deciduous	A. Large fruit
	PS = Part sun	M = Medium (1-2' per year)	E = Evergreen	B. Use of hybrids recommended
	S = Shade	F = Fast (more than 2' per year)	SE = Semi Evergreen	

CITY OF PEMBROKE, GEORGIA – TREES NOT RECOMMENDED FOR PLANTING

Attachment G

The following species are not recommended because they are poor or marginal performers.

Common Name	Scientific Name	Problem
Box Elder	<i>Acer negundo</i>	Aggressive shallow roots, weak wood
Bradford Pear	<i>Pyrus calleryana</i> <i>'Bradford'</i>	Genetic flaw, splits apart, susceptible to breakage
Camphor	<i>Cinnamomum camphora</i>	Messy fruit, weedy tree, weak wood, subject to root rot, large diameter surface roots
Catalpa	<i>Catalpa bignonioides</i>	Weak wooded
Chinaberry	<i>Melia azadarach</i>	Weak wooded, weedy tree,
Chinese Tallowtree	<i>Sapiun sebiferum</i>	Aggressive shallow roots, susceptible to breakage
Female Ginkgo	<i>Ginkgo biloba</i>	Foul smelling fruit
Green ash	<i>Fraxinus pennsylvanica</i>	Anthracnose, Aggressive shallow roots
Hackberry	<i>Cercis spp.</i>	Large diameter surface roots, susceptible to breakage
Mimosa	<i>Albizia julibrissin.</i>	Prone to disease, weedy tree, susceptible to breakage
Mulberry	<i>Morus species</i>	Weak wooded, messy fruit, shallow roots, subject to disease and insect problems, invasive surface roots
Pecan	<i>Carya illinoensis</i>	Large diameter surface roots, diseased prone, susceptible to breakage
Princess tree	<i>Paulowina tomentosa</i>	Aggressive shallow roots, Weedy tree, messy, weak wooded
Russian olive	<i>Elaegnus angustifolia</i>	Poor form, disease
Silver Maple	<i>Acer saccharinum</i>	Aggressive shallow roots, weak wood
Sweetgum	<i>Liquidambar styraciflua</i>	Aggressive surface roots, fruit a litter nuisance
Tree-of-heaven	<i>Ailanthus altissima</i>	Aggressive shallow roots, Weedy tree, seeds, weak wood
Water Oak	<i>Quercus nigra</i>	Large diameter surface roots, susceptible to breakage