

GAINESVILLE

ARTICLE VIII. - PROTECTION OF RESOURCES

DIVISION 1. - GENERALLY

Sec. 30-8.1. - Purpose.

- A. *Purpose.* This article is established for the purpose of protecting the immediate and long-term public health, safety and general welfare by preserving, enhancing, conserving or restoring the natural environment and cultural resources. The intent with respect to the urban forest is to establish and maintain a sustainable tree canopy in which the healthiest and strongest existing trees are preserved during development, and new high-quality shade trees are planted. Development and other activities within the city shall be in accordance with this purpose.
- B. *Objectives.* The provisions of this article are intended:
1. To conserve energy through the cooling and shading effects of trees;
 2. To conserve water through the preservation of existing natural vegetation, the use of xeriscape techniques, and other water-conserving irrigation and landscape practices;
 3. To mitigate nuisances such as noise, glare, heat, air pollution and stormwater runoff;
 4. To preserve, enhance or restore the natural environment through the protection and establishment of native vegetation and existing natural systems for the enjoyment of present and future populations;
 5. To promote a linked open space system throughout the city and county;
 6. To preserve, enhance or restore the unique aesthetic character of the community;
 7. To mitigate, through buffering, potentially adverse impacts between land uses of differing type and intensity, and to ensure sufficient landscaping within areas designated for multiple-family uses and mixed uses;
 8. To assist in controlling vehicular and pedestrian movement to and within developed sites by:
 - a. Clearly delineating the boundaries of vehicular use areas, in such a manner that movement, noise and glare do not adversely impact activity in adjoining areas;
 - b. Establishing the points of ingress and egress so as to eliminate confusion and to control physical access to the site;
 - c. Establishing the direction of internal vehicular and pedestrian circulation;
 9. To prevent personal injury, loss of life and excessive property damage due to flooding;
 10. To prevent the installation of structures which reduce the flood channel capacity and increase flood heights, the installation of which may cause excessive property damage;
 11. To reduce public expenditures for emergency operations, evacuations and restorations;
 12. To prevent damage to industries, transportation and utility systems;
 13. To restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
 14. To require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
 15. To minimize the alteration of natural floodplains, creek channels and natural protective barriers which are involved in the accommodation of floodwaters;

16. To minimize or prohibit filling, grading, dredging and other development which increases erosion, sedimentation or flood damage;
17. To prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands;
18. To protect and enhance property values through regulation of the natural resources in the city;
19. To ensure that potential home buyers are notified that property is in a flood area;
20. To protect wetlands as areas for the natural storage of surface waters, and their function as a means to reduce pollution;
21. To protect and restore the quality of groundwater and surface water through on-site treatment of stormwater runoff;
22. To control the rate and quantity of stormwater discharging from any developed site;
23. To protect groundwater levels;
24. To prevent the breeding of mosquitoes;
25. To protect the diverse plant and animal communities found in association with creeks, lakes, uplands, floodplains, nature parks and wetlands;
26. To prevent soil erosion and sedimentation loadings to creeks, lakes and wetlands;
27. To maintain the stability of creek and lake banks;
28. To prevent adverse impacts to the water quality of creeks, lakes, wetlands, floodplains, groundwater and uplands;
29. To protect municipal drinking water quality;
30. To enhance the aesthetic and tree canopy qualities of significant entryway streets in order to convey the image of the city as "a city in a forest";
31. To protect or restore significant entryway streets in order to promote transportation safety and to discourage blight;
32. To protect the environmental, education and passive recreation functions of public parks and open spaces from nearby development, and, in some instances, to protect nearby development from such public properties;
33. To protect public park wildlife, vegetation and park uses from potential adverse impacts by nearby land uses. Such impacts can include stormwater pollution, pesticides, noise disturbances, visual unsightliness and light pollution;
34. To encourage development and preservation of a network of greenway transportation corridors throughout the city and county;
35. To provide safe, convenient, scenic, historic and nonmotorized transportation linkages between land uses;
36. To provide wildlife corridors, and other forms of environmental conservation and environmental education;
37. To provide for recreation and access to recreation;
38. To provide greenway buffering to protect environmental features and neighborhoods from nearby land uses;
39. To preserve biological diversity and viable populations of special protection species dependent on upland, transitional and wetland ecological communities;
40. To ensure adequate, safe, economic, reliable and environmentally sound water and wastewater utility services for the public;

41. To promote economic development in a manner that will enhance the quality of life;
42. To diminish the severity and frequency of southern pine beetle outbreaks in Gainesville by reducing the density of loblolly pines in urban areas;
43. To preserve high quality heritage trees, especially where they occur within 20 feet of the public right-of-way; and
44. To favor replanting with native species of high quality shade trees, including requiring such trees to be planted in locations that will reintroduce seed sources to adjacent natural communities.

Sec. 30-8.2. - General environmental performance standards.

- A. *Applicability.* All uses and activities permitted in any zoning district shall conform to the standards of performance described in this section.
- B. *Showing of probable compliance.* Uses and activities required to comply with this section shall make a showing of probable compliance with the performance standards described in this section. This showing shall be in the form of a letter submitted with a zoning compliance permit or development plan, as applicable, prepared by a professional engineer licensed by the State of Florida, certifying that the use or activity complies with all performance standards described in this section.
 1. *Fire and explosion hazards.* All activities and all storage of flammable and explosive materials or products at any place shall be provided with adequate safety devices against the hazards of fire and explosion, including adequate firefighting and fire suppression equipment, as prescribed by the fire prevention code adopted in chapter 10 of the Code of Ordinances.
 2. *Radiation.* All sources of ionizing radiation shall be registered or licensed by the Florida Department of Health. The handling of radioactive materials, the discharge of such materials into air or water, and the disposal of radioactive wastes shall be in conformance with applicable state and federal regulations.
 3. *Electromagnetic radiation.* Electromagnetic radiation generated by activities shall not adversely affect any operation or equipment other than those of the creation of the radiation. Interference with radio and television reception is prohibited. Equipment or activities generating electromagnetic radiation shall conform to the regulations of and, where appropriate, be licensed by the Federal Communications Commission.
 4. *Waste disposal.* All waste disposal including discharge of any liquid or solid waste into any public or private sewage system, the ground, or any lake, creek, or wetland shall be in accordance with state, federal, and local law and applicable regulations of state, federal and local agencies.
 5. *Vibration.* No use shall at any time create earth-born vibration which when measured at the boundary property line of the source operation exceeds the maximum allowable peak particle velocity set forth below. Ground vibration shall be measured as particle velocity using accelerometers. Particle velocity shall be recorded in three mutually perpendicular directions. The maximum allowable peak particle velocity shall apply to each of the three measurements.

Frequency (Cycles per Second)	Maximum Peak Particle Velocity (Inches Per Second)
0 to 10	0.05
10 to 19	0.50
20 to 29	1.00
30 to 39	1.50
40 and over	2.00

6. *Sound.* All uses and activities shall not exceed the sound pressure levels set forth in chapter 15 of the Code of Ordinances.
7. *Heat, cold, dampness or movement of air.* Activities on any property which produce any adverse effect on the temperature, motion or humidity of the atmosphere beyond the lot lines are not permitted.
8. *Odor.* No use shall be operated in any zoning district in such a manner that the emission of odorous matter occurs in such quantity or volume as to produce a nuisance, source of discomfort, or hazard beyond the bounding property lines of such a use. For the purpose of this performance standard, the presence of such a described odor shall be determined by observation by a person or persons designated by the city manager or designee. In any case, where the operator of an odor-emitting use may disagree with the enforcing officer where specific measurement of odor concentration is required, the method and procedures specified by the American Society for Testing and Materials (ASTM) E679 and E1432, entitled "Standard Practice for Determination of Odor and Taste Thresholds By a Forced-Choice Ascending Concentration Series Method of Limits" and "Standard Practice for Defining and Calculating Individual and Group Sensory Thresholds for Forced-Choice Data Sets of Intermediate Size," respectively. The operator and the city shall equally share the cost of conducting the more elaborate ASTM E679 Procedure.
9. *Air quality.* All development shall maintain air quality levels that comply with state and national ambient air quality standards.
10. *Air pollution emissions.* No industrial operation or use shall cause, create, or allow the emission of air contaminants which at the emission point or within the bounds of the property are in violation of the standards specified by the Florida Department of Environmental Protection, or successor agency, or any governmental entity with regulatory jurisdiction, whichever standards are more stringent.
11. *Other air pollution.* Open storage and open processing operations, including on-site transportation movements, which are the source of windblown or airborne dust or other particulate matter; or which involve dust or other particulate air contaminant generating equipment including but not limited to paint spraying, grain or seed handling, sand or gravel processing or storage or sand blasting shall be conducted such that dust and other particulate matter so generated are not transported across the boundary property line or the tract on which the use is located in concentrations exceeding standards set by the Florida Department of

Environmental Protection, or successor agency, or any governmental entity with regulatory jurisdiction, whichever standards are more stringent.

12. *Toxics.* No industrial operation or use shall emit toxic or noxious matter at a concentration exceeding ambient air quality standards for the State of Florida across the property line of the parcel on which the operation or use is located. Where toxic materials are not listed in the ambient air quality standards of the state, concentrations shall not exceed one percent of the threshold limit values (TLVs) adopted by the American Conference of Governmental Industrial Hygienists (ACGIH). If a toxic substance is not listed by the ACGIH, verification of safe levels of the proposed toxic material for public health, plant and animal life will be required.
- C. *Utility service.* All utility services, including but not limited to those of franchised utilities, electric power and light, telephone, cable services, water, sewer and gas, shall be installed beneath the surface of the ground, unless the city manager or designee determines that the soil, topography and other compelling condition makes it unreasonable or impractical. The subsurface mounting of incidental appurtenances, including but not limited to transformer boxes or pedestal-mounted boxes for the provision of utilities, electric meters, back flow preventers and fire hydrants, is not required.

DIVISION 2. - TREES AND LANDSCAPE

Sec. 30-8.3. - Elements of compliance.

All property within the city shall be subject to the following regulations, except as exempted by subsection B. below. No parcel within the city may be cleared, grubbed, filled or excavated, nor shall any building be demolished, altered or reconstructed in a manner that negatively impacts regulated trees, changes the site plan, site use or increases the impervious surface area except in compliance with this article. Requirements of these sections do not exempt property owners from compliance with any other section of this chapter.

- A. *Minimum requirements for landscaped areas.* All areas designed to meet the requirements of these sections shall comply with the following:
 1. Street trees shall be provided a minimum rootzone volume of 700 cubic feet, except street trees that share a rootzone volume shall require a minimum of 550 cubic feet. All other required shade trees shall be provided a minimum of 420 cubic feet of rootzone volume. Where existing conditions preclude the provision of the minimum rootzone volume, the reviewing board or city manager or designee may approve a lesser volume that meets the arboriculture needs of the tree within the existing conditions. Underground utility lines shall not be located within the rootzone volume, except for those lines that are four-inch diameter or less, and then only where the utility separation requirements in subsection 2. below are met. Prior to planting, any limerock or construction debris found in this area shall be removed, and rootzone media soil shall be provided to a depth of at least three feet. Shade trees shall be located a minimum of ten feet from a building face or from major architectural features of the building (including but not limited to balconies, awnings, bay windows or porches).
 2. A minimum separation requirement of seven and one-half feet is required between new trees and existing or proposed water, wastewater force main, reclaimed water, gas, electric and telecommunications main and service utility lines, to protect against root incursion. A minimum separation requirement of ten feet is required between new trees and existing or proposed wastewater gravity collection mains and laterals. Where feasible, separations should be marginally increased in order to account for inaccuracies in surveying, engineering or construction. Reduced separation distances to three and one-half feet may be allowed at the discretion of the utility company. In these instances the utility company may require one of the following measures to protect the utility lines, in accordance with the standards established by the utility company:
 - a. Compaction of the soil immediately adjacent to the underground lines to 98 percent proctor density from the utility line to within 12 inches of ground surface;

- b. Encasing the utility line with excavatable flowable fill, steel casing, or other acceptable methods;
- c. Wrapping the utility line with an herbicide-impregnated geo-textile bio-barrier cloth;
- d. Protecting the utility line with structural barriers of cast-in-place or pre-cast concrete panels, steel or high-density plastic sheet-pile barriers; or
- e. Steel casing, installed in accordance with standards established by the utility company.

Where an existing tree is to be preserved, trenchless installation shall be required for the installation of underground utilities, using directional boring or jacking-and-boring of a casing pipe throughout the tree root plate.

- 3. An irrigation system, or a readily available water supply within a distance of 100 feet, shall be supplied for all landscaped areas. An automatic irrigation system shall be provided for development if the total area of impervious surfaces devoted to vehicular use areas exceeds 10,000 square feet. Such irrigation shall promote water conservation by such methods as drip irrigation and/or efficient sprinkler zoning, as well as reducing the amount of irrigation as plants become established. Each required tree shall be served by a drip ring or bubblers or other appropriate means necessary to ensure that the entire rootball is irrigated. The irrigation system shall be designed and located to minimize the watering of impervious surfaces. Successful establishment of trees should occur within one year. After that time, use of the automatic irrigation system may be discontinued. If the required trees die within three years of planting, they shall be replaced in accordance with this article, and replanted trees will require irrigation throughout the next establishment phase.
- 4. Landscape areas that are not planted shall be grassed or mulched with organic materials. Grassed areas shall be planted with sod that has been certified free of noxious weeds by the Florida Department of Agriculture and Consumer Services, Division of Plant Industry.
- 5. When a landscaped area is adjacent to or within a vehicular use area, curbing shall be used to protect landscaped areas from encroachment. Parking spaces shall be designed to provide pervious surface for the vehicle overhang area. Shrubs and trees shall be placed away from the wheel stop, so that they will not be encroached upon by vehicles. In lieu of curbing, the alternative means of preventing encroachment shall be shown on the site plan.
- 6. All required trees shall be selected from the Gainesville tree list. Tree species not appearing on the Gainesville tree list may be planted only with prior approval of the city manager or designee or appropriate reviewing board. Developments which require 16 or more shade trees shall have at least four different high quality shade tree genera. Street tree diversity is to be attained city-wide in order to reduce the effect of loss of street tree species due to insect or disease outbreaks, even though street tree diversity may not be attained on an individual street. The applicant or landscape contractor shall schedule an on-site meeting with the city manager or designee prior to the installation of any trees or shrubs to ensure compatibility with infrastructure and compliance with landscape code requirements.
- 7. Any landscaped area adjacent to an intersection or driveway shall conform to the requirements for the vision triangle contained in the City of Gainesville Engineering Design and Construction Manual.
- 8. Trees located near the street shall be planted in locations that meet the clear zone requirements of the city public works department or the maintaining agency.

B. *Exemptions to landscaping requirements.*

- 1. Lots designed or designated for single-family residential dwellings and the developed portion of any lot over two acres in actual single-family residential use are exempt from the requirements of this section, except as provided in section 30-8.7.
- 2. Development within the approach and clear zone areas as specified on the Gainesville Regional Airport master plan as of 1999, on file with the director of aviation, Gainesville Regional Airport,

shall be exempt from the provision of required shade trees in areas where federal regulations prohibit shade trees or where shade tree growth can be expected to penetrate airport zone surfaces regulated under Federal Aviation Regulations 14 CFR, Part 77. If permitted, understory trees shall be substituted. Trees may be removed from such areas upon filing a tree removal permit accompanied by submission of written authorization from the Gainesville/Alachua County Regional Airport Authority or FDOT to the city manager's designee. Reforestation is not required in areas where federal regulations prohibit trees or where shade tree growth can be expected to penetrate airport zone surfaces regulated under Federal Aviation Regulations 14 CFR, Part 77. Mitigation will not be required except for high-quality heritage trees, which shall be mitigated in accordance with section 30-8.7.

3. Where required shade trees are expected to conflict with planned solar energy generation, developments may compensate for the required trees by relocating them to a designated area or preserving an equal number of existing high-quality shade trees elsewhere on the site. At least 140 square feet shall be provided for each new shade tree to be planted, and existing trees shall be preserved in accordance with section 30-8.8. These trees shall be located so that they can grow to maturity without obstructing the generation of solar energy, and the area where they are planted or preserved shall be delineated and noted as a "designated tree area" on the development plans.

- C. *Expansions, 50,000 square feet or more.* Expansions of existing developments that contain 50,000 square feet or more shall comply with the following regulations:

Proposed Development	Mandatory Compliance
1. Any expansion which increases the gross floor area of a development by 10% or less.	The expansion area, all areas adjacent to the public right-of-way, as practicable, and all parking spaces directly related to the expansion area.
2. Any expansion which increases the gross floor area of a development by more than 10% but less than 20%.	The expansion area, all areas adjacent to the public right-of-way, and all property within 25 feet, where practicable, plus 25% of the remainder of the development. Removal of asphalt to create street buffers and parking lot islands will be considered practicable.
3. Any expansion which increases the gross floor area of a development by 20% or more but less than 35%.	The expansion area, all areas adjacent to the public right-of-way, and all property within 25 feet, where practicable, plus 50% of the remainder of the development. Removal of asphalt to create street buffers and parking lot islands will be considered practicable.
4. Expansion which increases the gross floor area of a development by 35% or more.	The entire development.

5. For purposes of this subsection, repeated expansions of property, including the construction or erection of separate buildings or accessory structures, which meet the threshold in the table shall comply with the provisions of this article as provided above.
6. The determination of the exact location of the remainder area which shall be brought into landscape compliance shall be made by the appropriate reviewing board. In determining the exact location of such remainder area, the following factors shall be considered:
 - a. Buffering incompatible land uses;

- b. Improvement to areas of visual or environmental impact;
 - c. The economic and technical feasibility of landscaping particular areas; and
 - d. The visibility of landscaping areas from public roads or sidewalks.
- D. *Expansions, less than 50,000 square feet.* Expansions of existing developments that contain less than 50,000 square feet shall comply with the following regulations:
 1. Expansions of vehicular use area shall meet the requirements of section 30-8.4 for the expanded area and shall also meet requirements for street and use buffers adjacent to the expanded area.
 2. Whenever expansion of a developed area, independently or cumulatively, totals 4,000 square feet or more than 35 percent of the gross square footage of the developed area, whichever is less, the entire site shall be brought into compliance with this article. For the purposes of this subsection, repeated expansions or alterations of the property, including the construction or erection of separate buildings or accessory structures, constructed within a period of 36 months, which meet the above threshold, shall comply with the provisions of this article.
 3. Any new use of property which alters the use of existing structures from a residential use to a nonresidential use shall be required to meet all applicable landscaping requirements. The city manager or designee shall determine the applicable requirements based on the character and orientation of the proposed mixed use development.
 4. The use of property, including outdoor activities and parking, which expands the lot area of any use, when such property adjoins property in actual use as a single-family residence or shown in any single-family zoning district, shall be required to conform with all buffer requirements.
 5. Expansions of outdoor storage shall require screening in accordance with the requirements in section 30-5.19.
- E. *Minimum submittal criteria.* All landscape plans shall be drawn to scale and have a north arrow, and accurately depict all buildings, pavement, on-site facilities, utilities and lighting systems. The landscape drawing or accompanying development plan shall give the permitted use of adjacent parcels and the total square footage of all pavement on-site. Stormwater basins shall be designated as either wet or dry. A plant schedule shall be provided showing the botanical name, size, spacing and number of all required plant materials. Architectural symbols depicting trees to be installed shall not exceed the scale equivalent of five feet in diameter with a solid line; a hatched line around the solid line shall show the expected canopy dimension after 20 years as identified in the Gainesville tree list. Any native tree or shrub may be substituted for the identified plant with city staff approval, provided that the tree or shrub is adaptable to the amount of sun/shade, wet/dry and size conditions where it will be planted, and insofar as the provisions for diversity, shading and/or screening described in the article are met. Changing tree species shall not diminish the total number of high quality shade trees in their required locations. Plant material shown in addition to the required elements of the landscape plan may be labeled as optional and shall not be subject to inspection.
- F. *Design principles and standards.* All landscaped areas required by this article shall conform to the following general guidelines:
 1. The preservation of structurally sound native trees of high quality shade tree species and shrubs is strongly encouraged to maintain healthy, varied and energy-efficient vegetation throughout the city, and to maintain habitat for native wildlife species. Developments should be designed to preserve existing high quality heritage trees, especially those located within 20 feet of the public right-of-way.
 2. The landscaping plan should integrate the elements of the proposed development with existing topography, hydrology and soils in order to prevent adverse impacts such as sedimentation of surface waters, erosion and dust.
 3. The functional elements of the development plan, particularly the drainage systems and internal circulation systems for vehicles and pedestrians, should be integrated into the landscape plan.

The landscaped areas should be integrated, especially to promote the continuity of on-site and off-site open space and greenway systems, and to enhance environmental features, particularly those features regulated by the environmental overlay districts (article VIII).

4. The selection and placement of landscaping materials should maximize the conservation of energy through shading of buildings, streets, pedestrian ways, bikeways and parking areas. Where possible, shade trees should be planted along internal sidewalks that connect buildings to the street sidewalk and to other buildings on the site.
5. Landscaping design should consider the aesthetic and functional aspects of vegetation, both when initially installed and when the vegetation has reached maturity. Newly installed plants should be placed at intervals appropriate to their expected function as short-term or long-term elements. The natural and visual environment should be enhanced through the use of materials which achieve a variety with respect to seasonal changes, species of living material selected, textures, colors and size at maturity.
6. The placement of trees around buildings should permit access to the building by emergency vehicles.
7. The installation of the following invasive nonnative species is prohibited, as is installation of any species labeled as "Prohibited" in the most recently published version of the Institute of Food and Agricultural Science (IFAS) Invasive Species Assessment:

INVASIVE, NONNATIVE PLANT SPECIES

Common Name	Scientific Name
Air potato	Dioscorea bulbifera
Arrow bamboo	Pseudosasa japonica
Brazilian pepper	Schinus terebenthifolius
Catclaw vine	Macfadyena unguis- cati
Chinaberry	Melia azedarach
Chinese privet	Ligustrum sinense
Chinese tallow tree	Sapium sebiferum
Chinese wisteria	Wisteria sinensis
Climbing fern	Lygodium japonicum and Lvgodium microphyllum
Cogon grass	Imperata cylindrica

Coral berry	Ardisia crenata
Coral ardesia	Ardisia iaponica
Elephant's ears	Xanthosoma sagittifolium
Glossy privet	Ligustrum lucidum
Golden raintree	Koelreuteria paniculata and Koelreuteria bipinnata
Golden bamboo	Phyllostachys aurea
Henon bamboo	P. nigra cv. "Henon"
Hydrilla	Hydrilla verticillata
Hygrophia	Hygrophia polysperma
Japanese ardisia	Ardisia iaponica
Japanese honeysuckle	Lonicera japonica
Japanese paper mulberry	Broussonetia papyrifera
Kudzu	Pueraria lobata
Mimosa	Albizia julibrissin
Miramar weed	Hygrophila polysperma
Oyster plant	Tradescantia spathacea
Palm leaf bamboo	Sasa palmate (Arundinaria palmata)
Skunk vine	Paederia foetida
Tropical soda apple	Solanum viarum
Wandering spiderwort	

Water hyacinth	Eichornia crassipes
White-flowered small-leaved spiderwort	Tradescantia fluminensis
Wild taro	Colocasia esculenta

8. For all new development, or redevelopment of existing property, the applicant shall remove invasive nonnative plant species listed on the Florida Prohibited Aquatic Plants List or the Florida Noxious Weed List from the property in accordance with the management plan prior to issuance of the certificate of occupancy. On property with invasive nonnative plant species, a plan shall be submitted with the development application that includes a timeline, success criteria, treatment recommendations, and identifies methods that will have minimal impact on non-target species. All herbicide applications to control invasive, nonnative plants in wetland or upland set-aside areas (including buffers) shall be applied by a contractor licensed by the Florida Department of Agriculture and Consumer Services, Division of Agricultural Environmental Services, with a current certification in Natural Areas Weed Management. The city manager or designee should inspect such sites for a minimum of three years after completion to verify effectiveness of control efforts. The plan shall state the entity responsible for additional treatments during the three-year follow-up if the populations of invasive nonnative plants rebound and cover more than ten percent of any previously infested area within the wetland or upland set-aside areas.
9. Loblolly and slash pines should be at least 25 feet apart post-development to reduce southern pine beetle infestation outbreaks.

Sec. 30-8.4. - Vehicular use areas.

A. Perimeter requirements.

1. *Perimeter landscaped area required.* All vehicular use areas shall be separated by a perimeter landscaped area, a minimum of nine feet in width, from any public or private street and from any adjacent properties.
2. *Exemptions.* This landscape area is not required:
 - a. When the paved ground surface area is completely screened from adjacent properties or streets by intervening buildings or structures; or
 - b. When an agreement to operate abutting properties as essentially one contiguous parking facility is in force, and both sites are in compliance with vehicular use area landscaping requirements. The agreement shall be executed by the owners of the abutting properties, and shall bind their successors, heirs and assigns. Prior to the issuance of any building permit for any site having such a contiguous parking facility, the agreement shall be recorded in the public records of the county;
3. *Automotive sales uses.* For automotive sales uses, the perimeter landscape area shall only be required for 300 feet along each street frontage in the area devoted to automobile display, with the remainder of the required plant materials being proposed for planting elsewhere on the site, such as around stormwater areas or the building foundation. Perimeter landscape areas shall be required for all storage, accessory service and customer parking areas at any auto sales facility.
4. *Modifications.* The appropriate reviewing authority may determine that:

- a. Screening is better achieved by relocation of the landscape strip;
 - b. There is an unresolvable conflict between other elements of the development plan and the location, width or height of the perimeter landscape area, and that the public interest is therefore best served by relocation of the landscape area, lowering the height of required material or the substitution of a solid fence or wall in conjunction with a reduction in width provided that the number of shade trees that would have otherwise been required are planted elsewhere on the development site; or
 - c. On redevelopment sites where the conflict between existing utility line separation distances and the shade trees required within the perimeter landscaped area cannot be resolved through the practices listed in section 30-8.3.A.2., then the area shall be planted with shrubs and understory trees acceptable to the utility company. On projects where new utility lines are planned, sufficient space shall be allocated to meet both the utility separation requirements and the minimum tree-planting requirement.
5. *Required plant material.* The perimeter landscape area shall contain:
- a. Shrubs, arranged to provide a visual screen of 75 percent opacity and achieve a height of at least three feet within three years; and
 - b. High quality shade trees at a minimum average of three trees for every 100 feet of the linear distance of the perimeter landscape area, excluding the width of driveways that cross the landscape area. The distance between such trees shall not exceed 55 feet nor shall they be planted closer than 25 feet apart.
 - c. The development review board or city plan board during development plan review, or staff during administrative review, may determine that natural vegetation is sufficient to screen adjacent properties and rights-of-way. In such instance the existing vegetation, including understory plants and bushes, is protected from pruning and removal except that diseased plant material and invasive nonnative species shall be replaced in accordance with this section. Where the property is adjacent to a railroad right-of-way or utility easement, these areas shall not be substituted for the perimeter landscape area or the required landscaping. Where encroachments are made for utility connections, replacement plants appropriate to the ecosystem shall be required.
- B. *Interior landscaped areas.* The interior of any vehicular use area shall also be landscaped in compliance with the following:
- 1. Landscape islands, equal to the size of one parking space, shall be located at an average of every ten parking spaces. At no time shall a row of parking have landscape islands greater than 126 feet apart or closer than 36 feet apart. Additionally, terminal landscape islands containing a tree shall enclose each row of parking spaces.
 - 2. Each required landscape island shall contain at least one high quality shade tree listed on the Gainesville tree list as a species appropriate for "lot" planting. Such tree(s) shall be located within the landscaped area to maximize the shading of the pavement.
 - 3. All parking lots with two or more rows of interior parking shall contain eight-foot-wide landscape strips between the rows allowing for two-foot vehicle overhangs on each side. Shade trees shall be planted every 50 feet on average within these landscaped areas, but outside of the two-foot vehicle overhangs. As an alternative, every other row of head-to-head parking may provide a 16-foot-wide curbed landscape strip with shade trees every 35 feet on average. As needed, these wider landscape strips may contain sidewalks.
 - 4. The development review board or city plan board through development plan review, or staff when only staff review is required, may allow the relocation of interior landscaped areas to preserve existing trees, or where it is determined, upon review and recommendation of the city manager or designee, that the relocation is necessary for the safe maneuvering of vehicles or pedestrians.

5. In those vehicular use areas including but not limited to auto dealerships, storage of service or delivery vehicles, or attendant parking where interior landscaping would interfere with the customary storage or display of vehicles, the development review board or city plan board through development plan review, or staff when only staff review is required, may allow some or all of the required interior landscaping to be located near the perimeters of the paved area, including such perimeters which may be adjacent to a building on the site. Such landscaped area would be in addition to required perimeter landscaping in the amount of one square foot of landscaped area for each 60 square feet of paved area. For each 140 square feet of relocated landscaped area, a high quality shade tree shall be provided.

Sec. 30-8.5. - Compatibility buffers.

This section is intended to provide the minimum requirements for separation of land uses of differing type and intensity. The need for a buffer strip between land uses shall not impede the development of appropriate pedestrian and bicycle accessways between these uses. Where such accessways are installed, they shall be landscaped in a manner to clearly delineate such trails and bikeways and also to provide shade trees as appropriate. Where certain uses or combinations of uses are difficult to categorize, as in planned developments or public service facilities, it is the intent of this section that buffering shall be provided which mitigates the impacts of such uses.

- A. *Required buffer strip areas.* Buffer strips between properties are intended to provide visual screening and sound attenuation of more intense land uses from abutting less intense land uses. The required buffer type, shown in Chart A below, depends on the land use designation of the subject property which is being developed and the land use designations of the abutting properties. The required width of the each buffer type and the required amount of shade trees, understory trees, and shrubs are shown in Chart B below:

CHART A. LAND USE BUFFER TYPES

FUTURE LAND USE DESIGNATION							
Abutting property → Subject property ↓	Single Family Res. Low	Res. Medium Res. High MU Office/Res Office	MU Low MU Medium Urban Core UMU UMU High	Commercial Business Ind.	Industrial	Education Recreation Public Facilities	Agriculture Conservation
Single-Family Residential Low	-	-	-	-	-	-	A
Res. Medium Res. High MU Office/Residential Office	A	-	-	-	-	A	A

MU Low MU Medium Urban Core UMU UMU High	B	A	-	-	-	A	B
Commercial Business Ind.	C	B	A	-	-	B	C
Industrial	C	C	C	B	-	C	C
Education Recreation Public Facilities	A	A	-	-	-	-	A
Agriculture Conservation	-	-	-	-	-	-	-

CHART B. REQUIRED WIDTH AND PLANTINGS FOR BUFFER TYPES

BUFFER TYPE	MIN. WIDTH	SHADE TREES (per 100 linear feet)	UNDERSTORY TREES (per 100 linear feet)	SHRUBS (per 100 linear feet)
A	9'	2	2	20
B	9'	3	2	20
C	15'	3	3	25

- B. *Buffer widths.* The appropriate reviewing board, or the city manager or designee, may require the expansion of the minimum width of the buffer strip to ensure that trees will meet separation requirements from utility lines, buildings, or paved areas, or to allow for the inclusion of an existing high-quality shade tree in the buffer strip.
- C. *Driveways and sidewalks.* The widths of driveways and pedestrian or bicycle facilities that cross through a required buffer shall be subtracted from the linear feet of buffer length for the purposes of calculating the number of required plantings in Chart B above.
- D. *Existing trees and natural vegetation in buffers.* Any regulated, high quality shade trees existing within the minimum required buffer width shall be protected in accordance with section 30-8.8. Credit for preserving existing trees shall be applied in accordance with this article. High quality heritage

trees within buffer areas should be preserved with the area underneath the canopy dripline protected. Sidewalks and bicycle access infrastructure may be permitted within the protection zones of a high quality heritage tree but not within the root plate. Natural vegetation, if it achieves a continuous 75 percent opacity for 10 months of the year, may be substituted for the required shrubs. If a buffer that preserved existing vegetation is subsequently cleared by the property owner or when permits for tree removal are granted post-development, then the required shrubs and trees in accordance with this section shall be required.

- E. *Invasive nonnative vegetation in buffers.* All buffers shall be maintained to remove invasive nonnative plant species and curtail natural regeneration of seedling loblolly and slash pines. The density of loblolly and slash pines in a natural buffer should be managed so the remaining pines grow no closer than 25 feet and seedling regeneration is curtailed.
- F. *Sound attenuation.* The reviewing board, or city manager or designee, may address the need for sound attenuation of certain equipment, such as refrigeration units, motors, fans, power tools, etc., or uses such as loading, vehicle repair, outdoor recreation, etc., by requiring a study, prepared by a licensed engineer or architect, to address the potential for a noise disturbance to be transmitted to adjacent properties by the proposed use, and may require the installation of a wall, fence or berm in addition to required landscape material. The wall, fence or berm may be located within the required buffer or directly around the equipment or use which requires sound attenuation.
- G. *Street trees.* Street trees shall be planted along the sides of all streets within a development and on the development side of any contiguous street. Street trees shall be planted for every 30 to 50 feet of street frontage, depending on the canopy area needed for the tree species. The widths of driveways along a street shall be subtracted from the linear feet of street frontage length for the purposes of calculating the number of required street trees. In no case shall trees be spaced closer together than 25 feet or farther apart than 60 feet. Alleys are exempt from this requirement for street trees.
 - 1. Street trees shall be high quality shade trees and shall be planted in tree lawns with a minimum width of eight feet, or within tree wells with minimum four-foot by four-foot surface openings.
 - a. On-street parking spaces may be located between street trees, as long as the required number of trees is planted along the street frontage and the minimum rootzone volume is provided for each tree.
 - b. Tree wells may be enclosed with pavers or other hardscape materials above the required rootzone volume. The city manager or designee may determine if installation of an aeration system is necessary to conduit water and oxygen to the roots of trees within tree wells.
 - 2. Where possible, street trees shall be planted between the street and the public sidewalk. Street trees may be planted between the sidewalk and adjacent buildings only where the location of existing or proposed utility lines along the street, or the clear zone requirements of the public works department or other maintaining agency, prevent the location of trees between the street and sidewalk. Where street trees are approved to be planted between the sidewalk and adjacent buildings, the trees may be located as close as five feet away from building face.
 - 3. The reviewing board, or the city manager or designee, may require the adjustment of the prescribed build-to line in order to accommodate the required street trees and ensure that the trees will meet separation requirements from utility lines, buildings, and paved areas.
 - 4. Where possible, developments shall be designed to preserve as street trees any existing champion or high quality heritage trees which are located in the right-of-way or on private property within 20 feet of the right-of-way. Where these trees are preserved, no new construction or grading shall occur within the tree root plate, and new buildings shall be designed so that no more than 25 percent of the crown of the trees is removed. The area underneath the canopy of the preserved trees shall be exempt from tree planting requirements, and the required distances between street trees may be modified.
 - 5. A minimum ten-foot separation shall be provided between street trees and street stormwater inlets, except where bioretention inlets that incorporate trees are utilized.

6. Where the required street trees would overlap with trees that are required to satisfy perimeter landscaping requirements for vehicular use areas, only the requirements for the vehicular use area shall be met.
- H. *Parking structures along a street.* Except at points of ingress and egress, and except as required in article IV for transect zones, parking structures shall provide a ten-foot-wide landscaping strip between the public sidewalk and the structure, which is designed to screen automobiles from pedestrians on the street. This strip shall be planted with evergreen shade trees at an average of four trees for every 100 feet of the linear distance of the street frontage of the structure, excluding the width of driveways. The required trees shall be supplemented with a continuous line of shrubs. This landscaping strip is required when the ground floor use is parking, but is not required where parking structures are shielded from the street by liner buildings or provide office or commercial uses along the first floor street frontage.

Sec. 30-8.6. - Stormwater management areas.

- A. All stormwater basins shall be designed and landscaped to meet the following criteria:
 1. Shade trees shall be planted at an average of one tree for every 35 linear feet of the basin perimeter. Spacing of trees may be closer when trees are planted in groups for aesthetic effect, but the minimum distance between the trees shall be ten linear feet. Trees shall be selected from the Gainesville tree list that are appropriate for use within stormwater areas, and all landscaping shall be selected according to the function as a wet or dry basin. Trees shall be located at least 20 feet away from inflow and outflow structures. Bioretention swales and exfiltration facilities are exempt from these tree planting requirements.
 2. Twenty-five percent or more of the basin perimeter or littoral zone shall be landscaped with shrubs, groundcover, native perennials, or aquatic plants.
- B. Individual stormwater basins that are greater than 5,000 square feet in total area shall be designed with curvilinear sides that mimic a natural wetland, lake, or stream. The landscaping for these basins shall be integrated with the other required site landscaping.
- C. Individual stormwater basins that are greater than 40,000 square feet in total area shall also be designed to meet at least one of the following criteria:
 1. Provide a recreational or functional pathway for pedestrians or bicyclists and an aesthetic focal point such as a water feature or pedestrian structure; or
 2. Be designed to preserve and incorporate a significant tree or tree grouping; or
 3. Be designed to maintain an existing wetland function or to preserve or establish habitat for native animal species.

Sec. 30-8.7. - Permits for tree removal; mitigation.

- A. *Removal or relocation permits.* Except as provided below, no living regulated tree may be removed or relocated without a removal permit and mitigation as provided for in this section. Only the tree advisory board may approve or deny the removal, relocation or replacement of champion trees.
- B. *Exemptions.*
 1. On property with single-family dwellings, permits shall be required only for the removal of champion or heritage trees.
 2. Removal of loblolly or slash pines less than 20 inches in diameter from a natural or naturalized landscape shall not require mitigation planting, unless the removals result in a uniform tree density on the site of less than one tree per 900 square feet of unpaved area. Where resulting tree density would be less, sufficient mitigation trees meeting the standard of section 30-8.10 shall be established to achieve the specified minimum density.

3. Removal of regulated trees in connection with ecosystem management or restoration on parcels with conservation easements, in conservation management areas or on parcels managed as nature parks or preserves, provided the following criteria are met:
 - a. A plan for the removal and revegetation of the area has been approved by the city manager or designee;
 - b. The only trees that may be removed are of the following species: Loblolly Pine, Slash Pine, Water Oak, Laurel Oak, Sweetgum, Sugarberry, and any species not native to Alachua County;
 - c. The tree removal is being done in furtherance of restoration of a natural community or communities appropriate to the site as indicated by soils, remnant vegetation, and hydrological and geological conditions;
 - d. The applicant has demonstrated that after the removals, the land will be maintained in a manner that promotes the continuation of the restored natural community; and
 - e. The plan has been approved by the nature centers commission.
 4. For the immediate protection of the health, safety, or welfare of the public, trees may be removed without obtaining a permit in advance. However, the property owner or its authorized agent shall file a permit application during the next city work day. Permit approval shall be granted, provided the trees removed are mitigated in accordance with this code.
- C. *Methods of mitigation.* Mitigation shall be allowed by two methods, mitigation trees (on an inch-for-inch basis or as otherwise specified) and mitigation payment. The amount of mitigation is as specified in subsections D. and E. below.
1. Mitigation trees shall be of high quality shade species as identified on the Gainesville tree list and sited in accordance with the requirements of section 30-8.3.A. The installation of new trees for a development as required by this chapter may count as mitigation for trees removed from the site, except where those removed trees are of a high-quality species. Increasing the diameter of trees required to be planted with a development shall not be used to meet mitigation requirements. The preference is for mitigation trees to be planted on the site, but where it is demonstrated that no space is available, mitigation trees may be planted offsite within city limits. In these instances, the required mitigation trees may be established on a different site within the city limits approved by the city manager or designee, or the city manager or designee may allow a payment in an amount to be made to the city tree mitigation fund equivalent to the cost of the trees that would have been purchased.
 2. Mitigation payment shall be based on tree appraised value, or as otherwise specified in this code. Payment shall be made prior to the approval of a final development order, or prior to issuance of a certificate of occupancy for any development requiring only building permits. Mitigation payments received by the city shall be deposited in the city tree mitigation fund. This fund may be used for new tree plantings associated with public improvement projects or for the preservation of trees through the purchase of conservation lands, but shall not be used for tree maintenance or toward the installation of new trees that would already be required for a development.
- D. *Removal and mitigation of regulated trees subject to subdivision or development plan approval.* When tree removal or relocation is contemplated in conjunction with any development requiring approval of a development plan or subdivision plat, such removal or relocation shall be considered and either approved or denied at the same time a development plan or plat is approved or denied, based upon the criteria specified in subsection F. of this section. No separate tree removal permit is required. All of the required plans, data or other information required with the application shall be included on the proposed development plan or on the supporting documents submitted with the plan or the plat. The following requirements apply:
1. Decisions on tree removal shall be based on a tree survey or a qualitative tree survey. The landscaping plan shall show all trees to be preserved, provide for protective tree barriers that

meet the requirements of section 30-8.8, and specify the details of the mitigation required in this section.

2. Construction drawings shall be submitted to the building department and application for building permits made before any trees are removed.
3. After a certificate of occupancy has been issued for a development, any additional tree removal shall require either a tree removal permit or a development plan amendment. Failure to obtain a tree removal permit before removing or relocating any existing regulated tree or any tree that was planted to comply with the approved development plan shall be subject to the measures for enforcement specified in section 30-8.43.
4. The requirements for mitigation of regulated trees approved for removal as part of development plan or subdivision plat review are as follows:

CATEGORY	MITIGATION
High quality heritage trees, in fair or better condition	Mitigation payment based on tree appraised value, limited to three trees per acre averaged over the entire site. If more than three trees per acre in this category are located on the site then the trees with the highest tree appraised value throughout the site shall be used to calculate the payment. High quality heritage trees proposed for removal in excess of the overall average of three per acre shall require mitigation trees on an inch-for-inch on a diameter basis.
Heritage trees of other than high quality species, in fair or better condition	Mitigation trees on an inch-for-inch diameter basis.
Any heritage trees in less than fair or better condition; and any other regulated tree	Mitigation trees consisting of two trees of high quality shade species established for each tree removed.

- E. *Removal and mitigation of regulated trees not part of subdivision or development plan approval.* Any person desiring to remove or relocate a regulated tree, except tree removal approved as part of subdivision or development plan approval, shall file a tree removal permit with the city manager or designee. As a condition to granting a permit, the applicant shall mitigate each tree being removed. The following requirements apply:

1. Permit applications shall include the name of the property owner, address from which tree will be removed, tree species and diameter, and reason for removal of the tree. The permit application shall be signed by the property owner and, if applicable, its authorized agent. Applications for tree removal shall also include a scaled drawing of the site showing tree size and location, and a statement of how any other regulated trees are to be protected during any approved tree removal and any associated construction or clearing, or grade changes. The city manager or designee shall attempt to verify the information contained in the application and shall either approve or deny the application as to each regulated tree proposed to be removed.

2. Where construction is associated with the tree removal, construction drawings shall be submitted to the building department and application for building permits made before any trees are removed.
3. The requirements for mitigation of regulated trees not associated with development plan or subdivision plat review are as follows:

CATEGORY	MITIGATION
Single-Family Dwellings	
High quality heritage trees, in fair or better condition, wherever they are located on the property.	Mitigation trees on an inch-for-inch diameter basis, with a minimum of two shade trees of high quality species planted on site for each tree removed.
Heritage trees of other than high quality species and high quality heritage trees in less than fair or better condition, wherever they are located between the property lines and legal setbacks.	Mitigation trees consisting of two shade trees of high quality species planted on the site for each tree removed.
All Other Uses	
High quality heritage trees, in fair or better condition.	Mitigation payment based on tree appraised value, and mitigation trees consisting of a minimum of two shade trees of high quality species planted on site for each tree removed.
Heritage trees of other than high quality species, in fair or better condition; and high quality heritage trees, in fair or better condition, which are causing structural problems to buildings or underground utilities.	Mitigation trees on an inch-for-inch diameter basis, with a minimum of two shade trees of high quality species planted on site for each tree removed.
Any heritage trees in less than fair or better condition; and any other regulated tree.	Mitigation trees consisting of two shade trees of high quality species planted on the site for each tree removed.

F. *Permit approval criteria.* Removal or relocation of a regulated tree may be approved by the reviewing board, city manager or designee based upon one of the following findings, which shall be supported by competent substantial evidence provided by the applicant:

1. The tree poses a safety hazard or has been weakened by disease, age, storm, fire or other injury;

2. The tree contains a disease or infestation that could spread to other trees;
3. The tree prevents the reasonable development of the site, including the installation of solar energy equipment or the installation or replacement of utility lines;
4. The tree is causing or is likely to cause structural damage or problems to buildings or underground facilities due to excessive root or trunk growth, or soil expansion and contraction caused by uneven water uptake; or
5. The tree should be removed for some other reason related to the public health, safety or welfare. This finding cannot serve as the sole basis for removal of high quality trees.

The city manager or designee may require the applicant to provide verification of the findings in the form of a written report signed and sealed by an appropriate licensed professional within the State of Florida. Regulated trees shall not be removed, damaged or relocated for the purpose of installing, replacing or maintaining utility lines and connections unless no reasonably practical alternative is available, as determined by the city manager or designee. Where a tree may be preserved by cutting the tree roots instead of removing a tree, that strategy shall be preferred.

- G. *Natural emergencies or disasters.* In the case of natural emergencies or disasters such as hurricanes, windstorms, floods or other disasters, issuances of permits for the removal of damaged trees may be waived by the city manager or designee. Such waiver may not be for an indefinite period and shall expire when the city manager or designee determines that emergency conditions have ended.
- H. *Commercial tree removal permits.* Commercial tree removal permits may be granted for the removal of trees associated with forestry management, tree harvest and other similar commercial purposes in accordance with the requirements of this subsection.
 1. *Applicability.* Commercial tree removal permits may be requested in lieu of other tree removal permits required by this section where no development of the property is intended. Where development of the property is planned, the petitioner shall address tree removal within the development plan review or normal tree removal processes.
 2. *Permit granting authority.* The city manager or designee or the development review board have authority to grant commercial tree removal permits as described below.
 3. *Receipt of request.* Owners of property may request the appropriate authority to grant a permit for the commercial removal of trees by filing such an application with the city, on forms supplied by the city, together with the appropriate fee. The request shall be accompanied with the following information supplied by the applicant:
 - a. Suitability of the trees for harvest.
 - b. Harvesting methods to be used.
 - c. Sedimentation and erosion control measures to be used.
 - d. Plan of property showing location of required buffers next to water bodies and property lines and tree canopy to remain as applicable.
 - e. Tree protection measures for trees to remain.
 - f. Species of trees to be used for replacement.
 4. *Notice.* Whenever a property is under consideration for a permit, except any property designated agriculture on the future land use map, all owners of property adjacent to the property shall be given notice by mail. Such notice shall be mailed at least 15 calendar days prior to the granting of the permit. For the purpose of this notification, an owner of property shall be deemed to be the person who, by his/her address, is so shown on the tax rolls of the city. If any such property is part of the common area of a condominium, notice shall be sent to all of the condominium unit owners as shown on the latest tax rolls. Additionally, the property under consideration shall also have a sign posted at least five calendar days prior to the date the

permit is to be granted. The sign shall specify that the property is under consideration for a permit allowing tree removal for commercial purposes and specify the date the permit is to be granted.

5. *Procedure for review.* If less than 20 percent of the noticed property owners file a written objection to the proposed tree removal within 15 calendar days of the mailing of the notice, the commercial tree removal permit may be issued provided all other provisions of this section and this chapter have been met.
 - a. If 20 percent or more of such noticed property owners file a written objection within 15 calendar days of the date of mailing of the notice, the development review board shall hold a public hearing in accordance with its rules. The development review board, in deciding whether to approve or disapprove the application, shall consider the factors delineated in subsections H.7. and 8. of this section.
 - b. Parcels designated agriculture on the future land use map. All applications for tree removal on such parcels shall be reviewed by the city manager or designee, who, in deciding whether to approve or deny the application, shall consider the factors delineated in subsections H.7. and 8. of this section. Appeals of the decision of the city manager or designee shall be made in accordance with provisions for appeal as provided in this chapter.
6. *Action on application.* Upon receipt of a completed application and following the notice period specified above, or after the permit has been granted after a hearing under subsection H.5., the city manager or designee will issue the commercial tree removal permit, except as may be modified below, with the following conditions:
 - a. Unless otherwise specified herein, trees will be removed according to best management practices, as specified in "A Landowner's Handbook for Controlling Erosion from Forestry Operations," published by the state department of agriculture and consumer services, division of forestry, or subsequent manuals on file with the public works department.
 - b. No regulated tree shall be removed and no logging road shall be constructed:
 - i. Within 35 feet of the break in slope at the top of the bank of any creek;
 - ii. Within 35 feet of the landward extent of a lake or wetland; or
 - iii. Within a designated conservation management area.

This requirement may be waived where crossing of the creek by a bridge is necessary to access the property where trees are to be removed. Such waiver shall be limited to the area necessary to construct the bridge. For the purposes of this subsection, creeks shall be those identified by the surface water district provisions of article VIII.
 - c. Following removal of the trees granted by the permit, the petitioner shall within 18 months provide for reforestation of the site by one of the following means:
 - i. Where forestry or other agricultural use of the property is to continue in the conservation or agriculture districts, pine seedlings or other forestry or agricultural crops, including pasture, may be planted.
 - ii. Where forestry use is to be abandoned or in districts where it is not a permitted use, replacement of trees shall be required as per this article. This requirement may be waived when an adequate number of trees of appropriate size and species remain on-site to meet this requirement and are certified by the city manager or designee to be in good health and free from damage caused by harvest operation which may result in the death of the tree.
 - d. All invasive nonnative tree species listed in section 30-8.3 may be required to be removed from the property.

7. *Imposition of additional conditions.* The city manager or designee or development review board, as appropriate, may impose other reasonable conditions where need is demonstrated. Such conditions may include restrictions on percentage of canopy removed or the prohibition of tree removal from certain portions of the site under consideration. The city manager or designee, or development review board, as appropriate, shall be guided by, but not restricted to, the following criteria in imposing such additional conditions:
 - a. The need to provide buffers to adjacent developed property;
 - b. The need to protect soils highly susceptible to soil erosion as identified by the soil survey of the county;
 - c. The need to protect slopes in excess of ten percent, particularly near creeks and other bodies of water;
 - d. The need to protect existing wetlands, floodplains and flood channels and other environmentally sensitive areas as shown on existing maps, photographs and other reliable and available sources; and
 - e. The need to preserve endangered, threatened or special concern animal and vegetative species, habitats and communities, rare hardwood hammocks or champion trees as identified from competent sources.
8. *Removal of trees specifically planted or managed for harvest.* Where environmental and other factors limit the removal of trees on 75 percent or more of the site under consideration, the commercial tree removal permit may be denied. However, factors identified above may not be used to unduly prohibit the harvest of trees where it is demonstrated that the trees to be harvested were specifically planted for that purpose.

Sec. 30-8.8. - Tree preservation during development and construction.

- A. *Barriers required.* Prior to clearing, demolition, or other construction activities, the city manager or designee or reviewing board shall determine which trees, if any, require protection. Protective barriers shall be constructed, as necessary, to prevent the destruction or damaging of regulated trees that are located within 50 feet of any construction activity or storage of equipment and materials. Trees identified for preservation which are destroyed or severely damaged shall be mitigated in accordance with section 30-8.7 prior to issuance of a certificate of occupancy or use. To avoid conflicts between barrier placements and demolition and construction activities, barriers shall be drawn to scale on the demolition, grading and paving sheets of the development plan.
- B. *Barrier zones.* All regulated trees in areas of demolition or construction that have not been permitted nor designated for removal by either the terms of the permit or approved development order shall be protected by barrier zones erected and inspected prior to construction of any structures, road, utility service or other improvements. Barricades shall comply with the following:
 1. Protective barriers shall be plainly visible and shall create a continuous boundary around trees or vegetation clusters in order to prevent encroachment by machinery, vehicles or stored materials. To further protect tree roots, a layer of wood chips at least eight inches thick shall cover the soil within the barricade. Barricades shall be at least three feet tall and shall be constructed of either wooden corner posts at least two by four inches buried at least one foot deep, with at least two courses of wooden side slats at least one by four inches with colored flagging or colored mesh attached, or constructed of one-inch angle iron corner posts with brightly colored mesh construction fencing attached. High quality heritage trees shall be protected by galvanized chain link fencing a minimum of 48 inches high, 11.5-gauge wire, two and three-eighths inch mesh size secured with one and seven-eighths inch line posts no further than ten feet apart secured at a depth of three feet below soil line. Corners shall be secured with two and three-eighths inch line posts secured to a depth of four feet below soil line.
 2. Barriers shall be placed at the greater of the following:

- a. At or outside the dripline for all heritage and champion trees and all regulated pine and palm trees;
 - b. At a minimum of two-thirds of the area of the dripline for all other regulated species; or
 - c. At the tree root plate.
 3. If complying with the above placement of barriers is found to unduly restrict development of the property, the city manager or designee, or the appropriate reviewing board may approve alternative barrier placements or methods of protection provided that at least 50 percent of the area under the canopy dripline remains undisturbed (no grade change or root cut) and further provided that there shall be no disturbance to the tree root plate. Protective barriers may not be removed or relocated without such approval.
 4. No trenching allowed within the protective barrier zone. Hand dig to install utility if approved by city manager or designee. Where roots greater than one inch in diameter are damaged or exposed, they shall be cut cleanly and re-covered with soil within one hour of damage or exposure.
 5. Protective barriers shall remain in place and intact until such time as landscape operations begin. If construction needs dictate a temporary removal (for less than 24 hours), the city manager or designee, may approve or deny the temporary removal of protective barriers.
 6. Landscape preparation in the protected area shall be limited to shallow discing of the area. Discing shall be limited to a depth of four inches unless specifically approved otherwise by the city manager or designee.
 7. No building materials, machinery or harmful chemicals shall be placed within protective barriers, except short-duration placements of clean fill soil that will not harm the tree. Such short-duration placements shall not exceed seven calendar days. The city manager or designee shall be notified of the dates the short duration placement will begin and end. The original soil grade that existed within the protected areas prior to the placement of such fill shall be restored.
 8. The American National Standards Institute A-300 Part V: Management of Trees and Shrubs During Site Planning, Site Development, and Site Construction or other nationally recognized arboricultural standards approved by the city manager or designee shall be used as guidelines for tree protection, planting, pruning and care during development and construction.
- C. *Preservation generally.* Trees may be preserved on development sites in locations where a new tree would be required. Credit for the preservation of such a tree will be given if the requirements listed below are met. During construction, if the requirements are not being met and/or the preserved tree is unlikely to survive in satisfactory condition, the owner shall apply for a tree removal permit in accordance with the requirements of this code.
1. Fifty percent of the area within the dripline of the tree shall be naturally preserved, both above- and below-ground. Under no circumstances shall permission be given for any construction activity within the tree root plate. The 50 percent protection zone shall include the entire tree root plate. Landscape materials are permitted within the 50 percent protection zone but not within the tree root plate. Within the 50 percent protection zone there shall be no alteration to the existing grade, no trenching or cutting of roots, and no storage of materials or fill. No heavy equipment shall be permitted within the protection zone. All work shall be done by hand. There shall be no compaction of the soil, as from heavy construction equipment, and no concrete, paint, chemicals or other foreign substances placed within this protection zone.
 2. The city manager or designee may approve paving blocks within the protection zone, provided that all work is done by hand (no machinery), and that the soil area under the pavers is not compacted beyond the bulk density limits of 1.40 g/cc in clay, 1.50 g/cc in loam, or 1.70 g/cc in sand. No lime rock or other material shall be used underneath the pavers. Pavers may not be placed within the tree root plate.
 3. There shall be no evidence of active insect infestation potentially lethal to the trees and no damage from skinning, barking or bumping.

4. The root plate of regulated trees within the public right-of-way should not be impacted by adjacent development, even where the tree root plate encroaches on the private property. The installation of new utilities or improvements to public utilities required to serve the development should not require the removal of trees on the public right-of-way, where the required separations from the utilities can be met.
 5. If any preserved tree is not alive and healthy three years after the certificate of occupancy is granted, it shall be removed and replaced with the tree or trees which originally would have been required by this code. The area that was preserved to accommodate the preserved tree shall be maintained in an unpaved condition and the replacement trees established in this area.
 6. The city shall maintain, and make available to the public, descriptions and illustrations of tree preservation and protection practices which will assist in assuring that preserved trees survive construction and land development.
- D. *Inspections.* The city manager or designee shall conduct periodic inspections of the site before work begins and/or during clearing, construction and/or post-construction phases of development in order to ensure compliance with these regulations and the intent of this section.
- E. *Denial; conditions.* The reviewing board or city manager or designee may deny a proposal for development because one or more champion or high quality heritage trees have not been preserved or adequately protected, or may require special conditions of approval that may include but are not limited to the following:
1. Requiring the trees to be protected with chain link barricades.
 2. Requiring a soil aeration system in the vicinity of tree roots as needed, particularly where fill will be added over roots of preserved trees or where compaction may reduce the availability of water and oxygen to tree roots.

Sec. 30-8.9. - Installation and maintenance of landscape materials.

A. *Installation.*

1. *Quality.* All plants shall be Florida Nursery Grade Number 1 or better, according to the Florida Department of Agriculture Division of Plant Industry Grades and Standards for nursery plants. They shall be healthy, disease-free and pest-free, and hardy for the North Florida region. Nursery invoices or labels shall clearly specify that Grade Number 1 or better plants were purchased for installation.
2. *Tree size.* Trees shall have a minimum height of seven feet and a minimum trunk caliper of two inches. Trees shall be in minimum 30-gallon containers or field-grown material shall have a ball diameter of at least 28 inches. Trees shall have healthy root systems that have been pruned according to the Florida Grades and Standards best practices. Trees shall be at least seven feet tall with a trunk caliper of two inches (+ or - ½ inch) and grown in a 15 gallon container. Tree species shall be selected from the Gainesville tree list with estimated size at maturity at least as large as the tree being replaced.
3. *Tree planting and mulching specifications.* Trees should be planted in holes at least twice the diameter of the rootball. The final level of the newly planted tree should place the root-trunk union between .5 and 1.5 inches above grade. Mulch should be no deeper than one inch over the top of the rootball. A tree ring to hold water in place should be constructed to overlap the meeting of the edge of the rootball and surrounding soil. This tree ring and an area one foot outside it should be covered with four inches of mulch.
4. *Utility and landscaping compatibility.* Lighting fixtures, transformer boxes, fire hydrants, power, cable television or telephone lines, sewer or water pipes, or any other existing or proposed utility facilities and associated appurtenances, shall be located and designed to provide adequate service in the presence of landscape materials when such landscape reaches maturity. Reasonable efforts shall be made to install utility service without impacting existing trees. Excavation to install utility services shall remain at least five feet outside the root plate of

any existing high quality heritage tree. Lighting fixtures shall be located a minimum of ten feet from all required shade trees. No shade tree that exceeds 40 feet in height at maturity shall be placed within 15 feet of any overhead utility. Fire hydrant connections and building fire connections shall not be obstructed by plant material, nor shall dangerous plants such as Spanish bayonet be located within 15 feet of such facilities. Small, low-growing shrubs (ten inches or less in height) may be planted to soften the visual impact of these facilities, provided that the necessary access to such facilities is maintained.

5. *Native trees.* At least 75% of trees on the required landscape plan should be native species. Cultivars of native trees are considered native species.
 6. *Environmental suitability.* The use and location of all landscaping materials shall be compatible with the soil and light needs of the proposed plant material. At the time of the required pre-purchase on-site inspection with the city manager or designee, substitution of plant species may be approved due to environmental unsuitability of the specified plant materials or due to existing infrastructure conditions on the site. If changes will occur for more than 25 percent of the trees on the site, then the changes shall be red-lined on the plans on file with the community development and building inspections departments. Tree substitutions should be for trees that reach the same maximum height at maturity.
 7. *Water conservation.* The use of grass, lawn, or turf shall be minimized to conserve water. All sod shall be inspected prior to purchase and installation and shall be certified as free of noxious weeds by the Florida Department of Agriculture and Consumer Services, Division of Plant Industry. All landscaped areas not covered with vegetation shall be covered with organic mulches. No plastic surface covers shall be used.
- B. *Replacement of dead material.* All trees planted in compliance with an approved development plan or as mitigation for the removal of regulated trees shall be maintained in good health. Within six months of a determination by the city manager or designee that a required tree or plant is dead or severely damaged or diseased, the tree or plant shall be replaced by the owner in accordance with the standards in section 30-8.9. If replacement trees die repeatedly, the city manager or designee may require that additional high quality shade trees be planted on the site.
- C. *Pruning.* All trees may be pruned to maintain shape and promote their shade-giving qualities and to remove diseased or dying portions in areas where falling limbs could be a hazard to people or property. Tree pruning shall be done in accordance with the most current version of the American National Standard for Tree Care Operations "Tree, Shrub and Other Woody Plant Maintenance" (ANSI A300) and "Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush —Safety Requirements"(ANSI Z133). No more than 25 percent of the crown should be removed at one time. On young trees, limb removal shall leave no more than 33 percent of the trunk bare of branches. So that shade trees can grow with sturdy structure, the top branch or leader shall not be removed. Hooks shall not be used to climb trees unless the tree is being taken down. Mature trees overgrowing vehicular use areas shall be pruned to allow the passage of emergency vehicles. Excessive pruning, pollarding, or pruning of trees into round balls of crown or branches, which results in an unnecessary reduction of shade and promotes weak branch attachments is prohibited. If the city manager or designee finds same additional shade trees shall be required to be planted on the site on up to an inch-for-inch basis.

Sec. 30-8.44. - Violations, enforcement and penalties.

- B. *Landscape and tree management.* As regards the provisions of the landscape and tree management sections, the enforcing official shall regularly inspect properties within the city to determine whether the areas devoted to landscape materials are in accordance with the provisions of these sections. Whenever the enforcing official finds any violation of the provisions of the landscape and tree management sections, he/she shall institute enforcement proceedings as follows:
1. *Notice.* The enforcing official shall issue a code violation to the owner of the property which shall be given either by personal delivery or by deposit in the United States mail in an envelope marked certified mail, postage prepaid, addressed to the owner as listed on the current tax assessor's tax roll. The notice of code violation shall include:
 - a. *A location of the property either by street address or legal description.*
 - b. *A statement indicating the nature of the violation and the reason or reasons why the notice of violation is issued.*
 - c. *A specification of the subsection or subsections of the landscape and tree management sections upon which the notice of violation is based.*
 - d. *If corrective action will bring the areas devoted to landscape materials into compliance with these sections, a statement of the nature and extent of such action, repairs or alterations necessary to remedy the violation in accordance with the performance standards provided in subsection B.4. of this section.*
 - e. *If corrective action is necessary for compliance, the city shall specify the time for performing such action, such time not to be less than ten nor more than 90 calendar days.*
 - f. *The name or names of persons upon whom the notice of violation is served.*
 - g. *A statement advising that the city may institute legal proceedings as provided herein.*
 - h. *A statement advising of the procedures available for review of the action of the enforcing official as set out in article III and [section 30-8.11](#).*
 2. *Appeals and variances.* An appeal to the appropriate reviewing authority of the decision of the enforcing official or a petition for variance as provided in this chapter, if applicable, shall operate to stay further proceedings by the enforcing official until final disposition.
 3. *Failure to comply.* If corrective action is not taken within the time specified in the notice of violation, or if an appeal is taken and corrective action is not taken in accordance with the decision of the appropriate reviewing authority, then the enforcing official may institute further proceedings as provided by the enforcement provisions of this chapter.
 4. *Performance standards.* Performance standards for regulated trees shall be as follows:

- a. *Purpose.* In order to assist the enforcing official, the code enforcement board and/or appropriate judicial forum in remedying a violation of the landscape and tree management sections of this article and ordering appropriate corrective action against any violation of these sections, there are adopted the following performance standards which meet the objectives of these sections.
- b. *Minimum requirements.*
 - i. A tree that was established in compliance with a development order but which has been removed from the site or has died shall be replaced with a tree that meets the requirements of this article. The species should be the same as specified on the approved landscaping plan. If a different species is desired, it shall fill the required function - for example, a small flowering tree cannot replace a high quality shade tree. Whenever required street trees are removed to allow for infrastructure improvement projects along a street, they shall be replaced by the entity responsible for the improvement project.
 - ii. High quality heritage trees shall be used as mitigation trees for any trees that were removed without a permit. Mitigation trees should be planted on site in all the locations that would be required by code to bring the landscaping into compliance with current standards have been filled. The remainder of the mitigation trees may, as determined by the city manager or designee, be established on other appropriate sites within the city limits or may be given to the city tree-planting program.
 - iii. All replacement or mitigation trees shall be nursery-grown trees. They may be balled and burlapped, tree spaded or containerized.
 - iv. Replacement or mitigation trees shall be located in approximately the same location as the regulated tree that has died or has been removed from the site, unless such location does not meet utility separation requirements or would conflict with other requirements in the chapter in which event the location shall be determined by the city manager or designee.
 - v. Replacement or mitigation trees may only be planted during the months of November through March, unless the trees are containerized or the site is served by an automatic irrigation system.
 - vi. The total sum of the caliper inches of replacement or mitigation trees shall equal, at a minimum, to the total sum of the caliper inches of the regulated trees which were removed without a permit. If a tree removed without a permit was a high-quality heritage tree, then the required mitigation shall be double what is required as in mitigation in this article. It shall be assumed that the tree removed without a permit was in fair or better condition.

5. *Reinspection.* The enforcing official shall inspect the property upon completion of all corrective action or order issued pursuant to the landscape and tree management sections of this article to determine compliance. The enforcing official shall then reinspect the property approximately one month thereafter and then at four-month intervals to ensure compliance. If at any time the enforcing official determines that the corrective action is not successful, he/she shall notify the owner and/or resident of the property as provided in subsection B.1. of this section.