

TREE PROTECTION ORDINANCE

REFERENCE GUIDE

ANY QUESTION? CONTACT THE ARBORIST DIVISION AT 404-330-6874

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This reference guide is provided to assist applicants in preparing Tree Protection Plans for Arborist review. Please read the entire document and submit Tree Protection Plans with all applicable elements described below. Relevant sections of the Tree Protection Ordinance are provided and definitions are listed in the [Glossary of Terms](#) on page 6. Please contact the Arborist Division or one of the plan reviewers listed above if you need additional information.

NO TREES IMPACTED

Plans for sites with no trees within 50 feet of proposed construction may be approved as "No Trees Impacted." For approval, submit at least two panoramic photos from different viewpoints documenting all areas at least 50 feet beyond the proposed limit of disturbance to illustrate that no trees will be impacted. The pictures should be submitted with the plans along with a signed [Tree Impact Statement](#) (located in Arborist >> Forms >> Tree Impact Statement).

PLAN CHECKLIST

Submissions of demolition, land disturbance, and construction plans on sites with trees within 50 feet of proposed activities must include all elements on the Tree Protection Plan including a site survey, a tree survey, proposed plans, and tree planting plans – Section 158-105(a). Items 1-4 must be overlaid on the same page unless additional pages are required for details to remain legible.

- Site survey and existing conditions** – Show and label: property boundaries; building setback lines; existing topography at 2-ft contour intervals; existing structures, buildings, driveways, parking areas and impervious structures; existing utilities including water, gas, electric, sewerage, etc.; stream buffers and hydrologic features; and (in subdivisions and lots greater than one acre) environmentally sensitive areas including wetlands, mature stands of trees, steep slopes, and other significant aspects of the natural environment.
- Tree survey** – Tree survey must be no more than 2 years old and must show all trees (hardwoods trees ≥6" DBH and pines ≥12" DBH) including trees on adjacent property with a root zone that crosses the property boundary. Label and accurately depict location of each tree including species and size (DBH) as well as the Critical Root Zone (CRZ) and Structural Root Plate (SRP) of each tree.

Private Tree Data Table

| Saved with a Prescription from a Certified Arborist | | | | |
|---|-----------|---------|-----------------|-----------------|
| Tree ID # | DBH | Species | % Impact to CRZ | |
| 1 | 16 | HWD | 24 | |
| 2 | 12 | PN | 22 | |
| Totals | 2 | 28 | | |
| Saved Trees | | | | |
| Tree ID # | DBH | Species | % Impact to CRZ | |
| 3 | 16 | PN | 10 | |
| 4 | 15 | PN | 15 | |
| Totals | 2 | 31 | | |
| Destroyed Trees | | | | |
| Tree ID # | DBH | Species | % Impact to CRZ | |
| 5 | 8 | HWD | 40 | |
| 6 | 32 | HWD | 100 | |
| Totals | 2 | 40 | | |
| Trees approved as DDH | | | | |
| Record # | Tree ID # | DBH | Species | % Impact to CRZ |
| BA-20230001 | 7 | 7 | HWD | N/A |
| BA-20230002 | 8 | 30 | PN | N/A |
| Totals | 2 | 37 | | |



3. **Proposed plans** – Show and label: proposed topography (cut and fill) at 2ft contour intervals; proposed buildings, structures, driveways, and parking areas; proposed drainage and water detention structures; proposed underground utilities (including water, gas, electric, sewerage, etc. must be shown from the main line to the house/structure); material staging area/dumpster; and proposed limit of disturbance.
4. **Tree protection and impact** – Site plan must show proposed impact to the CRZ of each tree (see below for how to calculate impact). To extent feasible, impact to CRZ should be limited to <20%. Mark all trees proposed to be destroyed with an X symbol. Provided the SRP is protected, trees with CRZ impact of 20% to 33% may be saved – with a arboricultural prescription, which must be approved by City Arborist and prepaid. Prescriptions must be included with the site plan. Tree protection fence must be shown at the edge of each CRZ or work limits, whichever provides greater protection (4-foot plastic tree fence is required; stronger material may be required based upon site conditions). Include preservation status of each tree as well as calculation of recompense owed on the data table.
5. **Tree planting plan and information | Section 158-103 (i) (2)** – Applicant must submit a plan depicting all trees proposed to be planted, labeled by species (from COA Recommended Tree List) and size (minimum 2.5" caliper). Plan must show at least one new proposed tree for each tree destroyed or the number of proposed trees that can reasonably be accommodated allowing mature growth of the tree.

Only overstory and mid-canopy trees may be approved for meeting the minimum tree density requirements per zoning district. Understory and screening trees may be approved only after meeting minimum requirements or with City Arborist approval based upon site conditions.

Minimum spacing requirements between existing trees and proposed plantings

| Overstory | Mid-Canopy | Ornamental, Understory and Screening trees |
|-----------|------------|--|
| 25ft | 20ft | 15ft |

ADDITIONAL REQUIREMENTS AND TERMS EXPLAINED

Calculating root zone impact | Section 158-105 (a)

- a. **Critical Root Zone (CRZ)** – The CRZ is a circle with a radius of one foot for each one-inch of a tree’s diameter measured at breast height (DBH).
 1. **Gross CRZ.** If the CRZ is unobstructed, the "Gross CRZ" is calculated as the area of a circle: $\pi (3.14) \times \text{radius squared}$. Measure the square footage of the circle that will be disturbed by construction and grading to calculate the percentage of impact ($\text{impacted square footage/gross CRZ} = \text{percent of impact}$).
 2. **Net CRZ.** If the CRZ overlaps with structures such as roads or building foundations that obstruct root growth, subtract that area from the total area of the CRZ for the "Net CRZ" – Note that stacked walls and structures without foundations do not obstruct root growth). Example: CRZ of a 20" oak is 1,256sf. If the CRZ overlaps a structure with a foundation by 230sf, the Net CRZ is 1,026sf. Net CRZ is then used to calculate proposed impact to the CRZ ($\text{impacted sf/net CRZ} = \text{percent of impact}$).



b. **Status of tree based on impact to CRZ** – The Tree Protection Plans should minimize impact to the CRZ of all trees to the extent feasible.

1. **Saved tree.** A tree is saved only if the impact to the CRZ is 20% or less and the Structural Root Plate is protected.
2. **Saved with prescription.** A tree with impact more than 20% but not more than 33% will not be considered destroyed and will not be charged recompense **only** if:
 - i. The SRP is not disturbed;
 - ii. Tree save fencing is established and maintained to protect at least 67% of the CRZ and the SRP;
 - iii. A private arborist (certified by International Society of Arboriculture (ISA)) is retained to monitor the implementation of measures to maximize protection and survival chances for the tree and to provide a report on the effectiveness of the prescribed measures to the City arborist prior to issuance of a certificate of occupancy.
 - iv. The arboricultural prescription is approved by the City Arborist and a signed and pre-paid contract is provided to the City Arborist in advance of plan approval.
3. **Destroyed tree.** If the CRZ impact exceeds 33% or if the SRP is disturbed, the tree is destroyed and cannot be saved. Recompense calculations must be shown on the drawing. Public notice of potential tree removal must be posted for all plans that receive Preliminary Approval by the City Arborist with one or more destroyed trees. Final Arborist approval of a plan with destroyed trees may not be issued until after the posting period.

Boundary trees | Section 158-105 (b)

- a. **A boundary tree** is a tree that is wholly or in part on adjacent property with a critical root zone that crosses a property line.
- b. **Boundary trees must be protected.** All boundary trees and the percent of proposed impact to the CRZ of the trees must be shown on the site plan. Tree fencing must be placed and shown on plans in a manner that protects the structural root plate and at least 80% of the CRZ of boundary trees.
- c. **Impact to boundary trees exceeding 20%.** If a project proposes to save a boundary tree with impact exceeding 20% (but less than 33%) of the CRZ with an arboricultural prescription, the applicant must obtain consent of any owner/co-owner of the tree. The permit applicant must provide a copy of the proposed plan and proposed arboricultural prescription to the tree's owner/co-owner and obtain written consent before the City Arborist may give Preliminary Approval of the plan. A Boundary Letter Agreement is available on the City of Atlanta [website](#).

Trees located in the setback | Section 158-102 and Section 158-104

- a. **Setback tree.** A setback tree is a tree with any portion of its main trunk within the setback (as determined by zoning). The location of a tree is determined at the point where the trunk meets the ground, excluding the tree's root flare.
- b. **Setback trees to be saved.** Damage to trees located in the setback and required yard is to be minimized to the greatest degree possible.
- c. **Setback exceptions.** Trees located in the setback must be saved unless ingress and egress or for the installation of utilities cannot be accomplished in a manner allowing preservation of the tree.



Tree protection | Section 158-102

- a. **Protection of existing trees** is a primary goal of the Tree Protection Ordinance. All reasonable efforts must be made to plan construction, demolition and site access with protection of trees as a priority.
- b. **Required protections.** Prior to giving Preliminary Approval of tree removal the City Arborist must ensure:

PHASE 1 UPDATES

- i. **The design is appropriate** to the site conditions and the improvements cannot reasonably be designed or positioned to further increase tree protection.
- ii. **The plan shows** that damage to trees during grading, construction, demolition, or utility installation will be minimized by using construction methods and products proven to protect existing trees. Considerations may include: reuse of cleared, paved, or previously developed areas including but not limited to driveways, parking lots, former building footprints, and lawns.
- iii. **Techniques and best practices** are employed where appropriate to minimize impact to trees including: root bridging for sidewalks, driveways, and other hardscapes; installation of retaining walls; use pier and beam foundations to reduce tree impacts from site grading; and directional boring instead of open trenching for utility installation.
- iv. **Methods are implemented** during construction to protect CRZs including use of mulch, gravel, plywood, geotextiles, swamp/access mats, and temporary decking, alone or in combination to prevent soil compaction from vehicular traffic and material storage.
- v. **Other tree protection methods** meeting current arboricultural standards are implemented where appropriate.

Recompense calculations | Section 158-103 (b)

- a. **Show recompense calculation.** Calculations for private property must be shown on the Tree Protection Plan (show either Standard Recompense or Maximum Recompense, but not both). Show Infrastructure Recompense calculation where applicable.
- b. **Standard recompense.** Calculation of standard recompense is based on formula below:
 - \$100 (# trees destroyed – number of trees replaced) PLUS
 - \$30.00 (DBH inches destroyed – caliper inches replaced)
- c. **Maximum recompense.** To qualify for maximum recompense the property must be a vacant lot (no structure on property within past 5 years) or a new lot of record. In addition, a percentage of the existing DBH (determined by the property's zoning) must be retained on site. See worksheet for zoning district percentages and calculations in Section 158-103 (c) of the Tree Protection Ordinance.
- d. **Infrastructure recompense.** Infrastructure is limited strictly to infrastructure as described in Tree Protection Ordinance Section 158.03 (c)(6). Trees proposed to be approved outside of infrastructure limits, are charged per standard recompense calculations. Formula: Disturbed acreage X \$5,000 = Infrastructure Recompense

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- i. **If trees are planted at the end of infrastructure construction** under the LD permit, the City arborist must inspect the plantings prior to final plat approval, and replacement credit will be given to that permit applicant.
- ii. **If the trees are planted during subsequent building construction,** they must be planted according to the final approved subdivision plat. Replacement credit shall be given to the builder who plants the trees.



Environmentally sensitive areas | Section 158-101 (1)

- a. **Lots and subdivisions greater than one acre.** Plans must show and label wetlands, flood plains, streams, mature stands of trees, and other significant aspects of the natural environment.
- b. **Lots and subdivisions less than one acre.** Grading, trenching, or other land disturbance shall be limited to necessary hydrologic and erosion control measures and access corridors to streets, utility connections, or other features required by code.

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Parking lots with 16 or more spaces (existing or proposed) | Section 158-30

See [checklist](#) on CoA website

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Tree Planting Requirements

- a. **To provide diversity, planted trees must adhere to the following diversity guidelines** unless the combination of planted and preserved trees offers a comparable diversity of species and genera.
 - i. **When four to 10 trees are planted**, no more than 50% may be of a single species.
 - ii. **When 11 to 20 trees are planted**, no more than 33% may be of a single species.
 - iii. **When 21 to 50 trees are planted**, no more than 20% of trees shall be of the same species and no more than 50% shall be of the same genus.
 - iv. **51 or more trees are planted**, no more than 20% of trees may be of a single species and no more than 30% may be of the same genus with the exception of oaks (*Quercus*), which may make up 50% of the trees planted.
 - v. **75% of replacement trees** shall be native to the Piedmont region of Georgia.
 - vi. **Where appropriate site conditions exist**, overstory and mid-canopy species must be planted before planting of understory species may be approved. Understory species generally should not make up more than 25% of the required plantings.
 - vii. **The City Arborist may adjust species diversity standards** on streetscapes or highly urbanized sites.

b. **Tree replanting minimums | Section 158-103 (g)**

Tree replanting per zoning district must meet requirements below regardless of the DBH lost (total DBH plus total caliper inches). (These minimums do not relate to requirements for maximizing tree preservation).

R-5 and R-4-A districts: 35" per acre

R-3, R-3-A, and R-4 districts: 40" per acre

R-2 and R-2-A Districts: 100" per acre

R-1 districts: 150" per acre

RG, PD and all other districts: 90" per acre

c. **Trees must be maintained | Section 158-108**

PHASE 1 UPDATES

All trees planted on commercial, multi-family residential, or mixed-use properties must be maintained for the duration of the project. If trees die, they must be replaced within the next planting season (October through March).



GLOSSARY OF TERMS

| | |
|--|---|
| Trees on Site Plan | <p>For the purposes of the Tree Protection Ordinance, all hardwood trees $\geq 6"$ in diameter at breast height (DBH) and all pines $\geq 12"$ DBH must be shown on the tree protection plan. Site plans must include boundary trees.</p> |
| Boundary Tree | <p>A tree that is wholly or in part on adjacent property with a critical root zone that crosses the property line.</p> |
| Caliper | <p>The diameter of new tree (nursery stock) trunk at 6" above ground level.</p> |
| Critical Root Zone (CRZ) | <p>A circle with a radius of one foot for each one inch of a tree's diameter measured at breast height (DBH). The City Arborist may adjust the CRZ if justified by documented site conditions such as root barriers formed by curbs or foundations. CRZ is unobstructed by root barriers may be referred to as "Gross CRZ". (Note that diameter is twice the radius. The area of a circle = pi (3.14) x radius squared.)</p> |
| Destroyed Tree | <p>A tree is destroyed if any portion of its structural root plate (SRP) is impacted or if the CRZ is impacted more than 20% without a arboricultural prescription.</p> <p>Destruction may occur from any intentional or negligent act or lack of protection including but not limited to:</p> <ul style="list-style-type: none"> • performing grade changes that affect more than 20 percent of the root save area; • cutting or inflicting other mechanical injury to the trunk, roots, or other vital sections of the tree; removing in excess of 20 percent of the live crown of the tree; or • or causing damage to the root zone by the operation of heavy machinery or storage of materials. In addition, topping, tipping, or any similar improper pruning practices are considered destruction of a tree. |
| Diameter at Breast Height (DBH) | <p>The width of a tree trunk measured at 4.5' above ground level. Trees with more than one trunk (measured at 4.5'), must be measured and labeled individually and added together (including the 3 largest stems). CRZ reflects total DBH and each trunk should be listed as follows on the Tree Protection Plan: 24"/22" oak or 12"/10"/10" river birch).</p> |
| Saved tree with prescription | <p>An impacted tree that suffers injury or destruction of more than 20% but not more than 33% of its CRZ, and receives a pre-paid arboricultural prescription approved by the City Arborist in advance of construction.</p> <p>A tree will not be considered destroyed and will not be charged recompense only if:</p> <ul style="list-style-type: none"> • tree save fencing is established and maintained to protect at least 67% of the CRZ • the tree's SRP is not disturbed • an ISA-certified arborist is retained to prescribe and monitor the implementation of measures to maximize protection and survival chances for the tree • a report on the effectiveness of the prescribed measures is submitted by the retained arborist to the City arborist prior to issuance of a certificate of occupancy |



| | | | | | | | | | | |
|------------------------------------|--|------|-------|--------|--------|--------|--------|-------|--------|--------|
| Net Critical Root Zone | In urban environments a tree's roots are sometimes obstructed by root barriers such as public roads and building foundations. When this occurs, the critical root zone may not form a perfect circle and is reduced in size. The reduced area is referred to as the Net Critical Root Zone (CRZ). In such cases, impact to the CRZ is calculated based upon the Net CRZ. | | | | | | | | | |
| Setback tree | A tree with any portion of its main trunk within the setback or touching the setback line. The setback is the area between the property line and the buildable area of the lot. Setbacks are defined per Code by a property's underlying zoning. The location of a tree is determined at the point where the trunk meets the ground, excluding the tree's root flare. | | | | | | | | | |
| Setback lines | Lines governing the determination of boundaries of buildable areas. | | | | | | | | | |
| Structural root plate (SRP) | Zone of rapid root taper that provides the tree stability against wind throw. The radius of the root plate is proportional to the tree's diameter (DBH). The table below provides examples of root plate radii for trees without restricted roots. The City Arborist may approve adjustments to the SRP if justified by specific documented site conditions. | | | | | | | | | |
| DBH (inches) | 6-7" | 8" | 9-11" | 12-14" | 15-19" | 20-24" | 25-31" | 32" | 33-38" | 39-48" |
| SRP distance (radius') | 5' | 5.5' | 6' | 7' | 8' | 9' | 10' | 10.5' | 11' | 12' |

