

Cherokee County

Atlanta MSA

2003 Population Estimate 166,639; +14.8% change from 2000 Census.

Not a Tree City USA.

Tree Preservation Committee with 5 members; quarterly meetings required by ordinance.

Article 25 – Tree Preservation and Replanting Standards

First adopted 1999. No revisions.

Addresses public and private property.

Includes buffer and landscape requirements.

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CHEROKEE COUNTY ENGINEERING DEPT. TREE PROTECTION & BUFFER CHECKLIST

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Article 25 – Tree Preservation and Replanting Standards

25.1 Intent

This Article shall apply to all properties or portions thereof located within the unincorporated areas of Cherokee County, Georgia, to the extent of the provisions contained herein. The Board of Commissioners of Cherokee County hereby finds that the protection and preservation of existing trees in addition to the planting of new trees as part of the land development process is a public purpose and provides for the public health and general welfare.

25.2 Purpose

The purpose of this Article is to provide standards for the protection and replacement of trees as part of the land development and building process, and to enrich the quality of life for the citizens of Cherokee County through education and preservation of its tree resources.

25.3 Title

This Article shall be known as "Tree Preservation and Replanting Standards of Cherokee County, Georgia" and may be referred to generally as the "Cherokee County Tree Ordinance".

25.4 Applicability

The terms and provisions of this Ordinance shall apply to any activity, private and/or governmental, on real property which requires the issuance of a land disturbance permit within Cherokee County, but excluding Agricultural/Forestry uses and the construction of a single and a two (2) family residential dwelling. No land disturbance permit shall be issued for development by the Development Control Division without it being determined that the proposed development is in compliance with the provisions of this Ordinance.

25.5 Definitions

In construing the provisions hereof and the meaning of each and every word, term, phrase, or part thereof, where the context will permit, the definitions of words as contained in the adopted Zoning Ordinance of Cherokee County, supplemented by the following, shall apply:

Administrator – The county official designated by the Board of Commissioners or their designee shall be responsible for administering the provisions of this ordinance.

Basal Area – The cross-sectional area expressed in square inches, of a tree trunk at diameter breast-height (DBH) expressed herein in terms of "units" per acre.

Buffer – Land area used to visibly separate one use from another through screening and distance; to shield or block noise, light, glare, or visual or other conditions; to block physical passage to non-similar areas, or to reduce air pollution, dust, dirt, and litter.

Caliper – A standard of trunk measurement for understory or replacement trees. Caliper inches are measured at the height of six inches (6") above the ground for trees up to and including four-inch (4") caliper and twelve inches (12") above the ground for trees larger than four inches (4") caliper.

Cambial dieback – The irreparable radial or vertical interruption of a tree's cambium, usually caused by mechanical damage, such as "skinning bark", or from excessive heat.

Cambium – Tissue within the woody portion of trees and shrubs which give rise to the woody water and nutrient conducting system, and the energy substrate transport system in trees. Cambium growth activity results in a tree's radial development, i.e., increase in diameter.

Conifer Tree – Any tree with needle leaves and a woody cone fruit including, but not limited to, pine, juniper and cedar species.

Critical Root Zone – The minimum area beneath a tree which must be left undisturbed in order to preserve a sufficient root mass to give a tree a reasonable chance of survival. The Critical Root Zone (CRZ) will typically be represented by the greater of the two: (1.) a concentric circle centering on the tree's trunk with a radius equal in feet to one (1) times the number of inches of the trunk diameter or (2.) the dripline of the tree canopy. Example: The CRZ radius of a twenty inch (20") diameter tree equals twenty feet (20').

Development Activity – Any alteration of the natural environment that shall require a land disturbance permit for removal of trees incidental to the development of land or to the marketing of land for development.

Development Permit – A permit issued by the County that authorizes Development Activity, and includes, but it is not limited to, soil erosion permit, clearing and grubbing permit, land disturbance permit or building permit.

Diameter Breast-Height (DBH) – The standard measure of overstory tree size (for trees existing on a site). The tree trunk is measured at a height of four and one-half feet (4 - 1/2') above the ground. If a tree splits into multiple trunks below four and one-half feet (4 - 1/2'), measure the trunk at its most narrow point beneath the split.

Density Factor – A unit of measure used to prescribe the calculated tree coverage on a site.

Feeder Roots – A complex system of annual roots growing outward and predominantly upward from the system of "transport roots". These roots branch four or more times to form fans or mats of thousand of fine, short, non-woody tips. Many of these small roots and their multiple tips are 0.2 to 1mm or less in diameter and less than 1 to 2 mm long. These roots constitute the major fraction of a tree's root system surface area, and are the primary sites of absorption of water and nutrients.

Floodplain, 100 year – Those lands subject to flooding, which have at least a one percent probability of flooding occurrence in any calendar year; and specifically, the floodplain as shown on the Flood Boundary and Floodway Map as prepared by the Federal Emergency Management Agency (FEMA).

Grading – The placement, removal, or movement of earth by use of mechanical equipment on a property.

Hardwood Tree – Any tree that is not coniferous (cone bearing). This definition is based on the colloquialism, and does not necessarily reflect any true qualities of the tree.

Lot, Building Area – The area of a lot encompassed by front, sides and rear yard setbacks or building line as required by the Cherokee County Zoning Ordinance and Development Regulations.

Major Woody Roots – First order tree roots, originating at the “root collar” and growing horizontally in the soil to a distance of between three (3’) and fifteen (15’) feet from the tree’s trunk. These roots branch and decrease in diameter to give rise to “rope roots”. The primary function of major woody roots include anchorage, structural support, the storage of food reserves, and the transport of minerals and nutrients.

Non-Development Activity – Any alteration of the natural environment, which does not require development or site plan approval, but which, would include the proposed removal or destruction of any tree(s). Any removal of trees that constitutes Development Activity as that term is herein defined shall not constitute Non-Development Activity.

Overstory Tree – Those trees that compose the top layer or canopy of vegetation and will generally reach a mature height of greater than forty feet (40’).

Pervious Surface – The pervious surface area (expressed in square footage) available for the preservation or planting of trees on a single-family subdivision lot. Plantable Area shall not include that portion of the lot that is covered by buildings and structures permitted pursuant to the maximum lot coverage standards of the Cherokee County Development Regulations.

Replacement Planting – The planting of trees on a site that before development had more trees, and after development shall have fewer trees per acre.

Root Collar – The point of attachment of major woody roots to the tree trunk, usually at or near the groundline and associated with a marked swelling of the tree trunk.

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

Rope Roots – An extensive network of woody second order roots arising from major woody roots, occurring within the surface twelve (12”) to eighteen (18”) inches of local soils, and with an average size ranging from .25 to one (1”) inch in diameter. The primary function of rope roots is the transport of water and nutrients, and the storage of food reserves.

Softwood Tree – Any coniferous (cone bearing) tree. This definition is based on the colloquialism, and does not necessarily reflect any true qualities of the tree.

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

Specimen Tree – Any tree that qualifies for special consideration for preservation due to its size, type, conditions, location or historical significance (Refer to Appendix A).

Transport Roots – The system or framework of tree roots comprised of major woody roots and rope roots.

Tree - Any self-supporting woody perennial plant, usually having a main stem or trunk and many branches, and at maturity normally attaining a trunk diameter greater than 3 inches at any point and a height of over 10 feet.

Tree Diameter - The widest cross-sectional dimension of a tree trunk measured at diameter breast height (dbh) or at a point below dbh for new trees or multi-trunked species, but in no case less than 6 inches from the ground.

Tree Farming – The planting, cultivation and harvesting of trees in a continuous cycle as a regular practice on a tract of land, not including the removal of trees for purposes of development.

Tree Planting List – The recommended species of trees listed in Appendix A.

Tree Protection Area – An area encompassing the Critical Root Zone of a tree.

Tree Removal or Removal of Trees – any act which causes a tree to die within two (2) years after commission of the act, including but not limited to damage inflicted upon the root system or trunk as the result of:

- The improper use of machinery on the trees;
- The storage of materials in or around the trees;
- Soil compaction;
- Altering the natural grade to expose the roots or to cover the tree's root system with more than four inches (4") of soil;
- Causing the infection or infestation of the tree by pests, fungus or harmful bacteria;
- Pruning judged to be excessive by the Administrator or not in accordance with the standard set forth by the International Society of Arboriculture (ISA);
- Paving with concrete, asphalt or other impervious surface within such proximity as to be harmful to the tree or its root system; and
- Application of herbicides or defoliant to any tree without first obtaining permit.

Tree Save Area – An area designated for the purpose of meeting tree density requirements, saving natural trees, and/or preserving natural buffers.

25.6 Tree Commission

25.6-1 Appointment

The representing body shall be comprised of five (5) members appointed by the Cherokee County Board of Commissioners that shall meet quarterly. The Chairperson and members of the Board of Commissioners shall appoint one (1) individual from the two (2) existing appointments serving on the Tree Ordinance Committee to initiate the Commission. In the event that the first appointment declines to serve, then the Board shall appoint the second of the two (2) existing appointments. In the event that the second appointment declines, then the Board shall appointment an individual from those members of the Tree Ordinance Committee who were not appointed by his/her Commissioner. The Chairperson and members of the Board of Commissioners shall also appoint one (1) individual to serve a two (2) year term as a representative for each Commission appointment. These appointments shall attend meetings in the absence of the Commission members and shall provide continuity by rotation whereby the individuals would replace the Commission members in the event of early withdrawal/dismissal or at the end of the Commission member(s) term of service. Candidates selected and appointed shall be familiar with Tree Preservation standards and practices as addressed herein.

25.6-2 Responsibility

It is the responsibility of the Tree Commission to provide stewardship in the preservation of this natural resource and shall provide recommendations to the Cherokee County Board of Commissioners pertaining to all necessary amendments to the Tree Ordinance regulations. Commission shall review summary of variance applications received by the Planning and Zoning Department pertaining to the Tree Ordinance at each quarterly meeting.

25.7 Technology Ridge Tree Buffer Zone

The I-575 Technology Ridge Buffer Zone is herein recognized as all parcels lying within seventy-five (75') to one hundred and twenty (120') feet in a horizontal linear distance measured perpendicular from each side of the I-575 right-of-way. It is the intent that the buffer zone will not only provide a visual aesthetic value, but also serve in a capacity to improve the quality of life by filtering noise, light, and air borne pollutants. All new development activity shall incorporate the following two criteria prior to issuance of land disturbance permit. Any new additions can utilize another option under each option as long as the option incorporates elements from existing plan and provides continuity among parcels.

I. Corridor

The corridor for the I-575 Technology Ridge Tree Buffer Zone shall be recognized as those areas lying parallel on each side of I-575 connected by the Interstate Zones.

Properties wholly contained within each of the buffers shall be allowed to be disturbed and replanted utilizing berms and underplantings of indigenous landscape species. County staff will conduct inspections to determine the required screening requirement. New development shall incorporate one (1) of three (3) tree protection buffers herein that create a sliding scale.

- a. Seventy-five (75') foot minimum tree buffer requiring underplantings to block 90% visibility of all buildings during all seasons.

Architectural Bonus: Reduction of underplanting to block 45% visibility of all buildings during all seasons if building facades have architectural treatments equal to the Comprehensive Interchange Design and Landscape Plan of the nearest Interchange Zone.

Tree Bonus: No % decrease in tree density units

- b. One hundred (100') foot minimum tree buffer requiring underplantings to block 75% visibility of all buildings during all seasons.

Architectural Bonus: Reduction of underplanting to block 45% visibility of all buildings during all seasons if building facades have architectural treatments equal to the Comprehensive Interchange Design and Landscape Plan of the nearest Interchange Zone.

Square Footage Bonus: 33% of total approved commercial, office and/or industrial square footage shall be permitted for residential uses.

Zoning Bonus:

If zoned Industrial, the following commercial uses are permitted:

1. Farmer's Market
2. Appliance Sales & Repair
3. Bakery
4. Books, Cards & Stationary Store
5. Florist Shop
6. Hardware, Paint & Wallpaper Store
7. Shoe Repair
8. Vocational School

If zoned Commercial, the following industrial uses are permitted:

1. Laundry, Dry Cleaning Plant
2. Storage Warehouse, no outside storage
3. Bottling Plant

Tree Bonus: 25% decrease in total overall site tree density units

- c. One hundred and twenty (120') foot minimum tree buffer requiring underplantings to block 60% visibility of all buildings during all seasons.

Architectural Bonus: Reduction of underplanting to block 45% visibility of all buildings during all seasons if building facades have architectural treatments equal to the Comprehensive Interchange Design and Landscape Plan of the nearest Interchange Zone.

Square Footage Bonus: 60% of total approved commercial, office and/or industrial shall be permitted for residential uses.

Zoning Bonus:

If zoned Industrial, the following commercial uses are permitted:

1. Farmer's Market

2. Appliance Sales & Repair
3. Bakery
4. Books, Cards & Stationary Sote
5. Convenience Store with/without fuel pumps
6. Drug Stores, Pharmacies
7. Fast Food Restaurant, Drive In
8. Florist Shop
9. Furniture, Home Furnishing Store
10. Garden, Landscaping Supplies
11. Gasoline Service Station
12. Hardware, Paint.& Wallpaper Store
13. Shoe Repair
14. Vocational School
15. Theater
16. Recreation Facilities, Indoor or Outdoor

If zoned Commercial, the following industrial uses are permitted:

1. Laundry, Dry Cleaning Plant
2. Storage Warehouse, no outside storage
3. Bottling Plant
4. Laboratory Research Facilities
5. Bottled Gas, Storage & Distribution
6. Builder Supplies & Storage, no outside storage
7. Equipment Supplies (Medical, Dental, Art, etc.)
8. Ice Manufacturing

Tree Bonus: 50% decrease in total overall site tree density units.

II. Interchange Zones

The area within a distance of 1000' linear feet of the crossings of a right-of-way of an Interchange shall be recognized as an Interstate Zone. Properties wholly contained within each of the buffer areas shall be allowed to be disturbed and replanted utilizing berms and underplantings of indigenous landscape species. County staff will conduct inspections to determine the required screening elements. New developments shall incorporate one (1) of three (3) tree protection buffers herein that create a sliding scale.

- a. Seventy-five (75') foot minimum tree buffer requiring underplantings to block 90% visibility of all buildings during all seasons.

Architectural Bonus: Reduction of underplanting to block 45% visibility of all buildings during all seasons if building facades have architectural treatments equal to the Comprehensive Interchange Design and Landscape Plan of the nearest Interchange Zone.

Tree Bonus: No % decrease in tree density units

- b. One hundred (100') foot minimum tree buffer requiring underplantings to block 75% visibility of all buildings during all seasons.

Architectural Bonus: Reduction of underplanting to block 45% visibility of all buildings during all seasons if building facades have architectural treatments equal to the Comprehensive Interchange Design and Landscape Plan of the nearest Interchange Zone.

Square Footage Bonus: 33% of total approved commercial, office and/or industrial square footage shall be permitted for residential uses.

Zoning Bonus:

If zoned Industrial, the following commercial uses are permitted:

1. Farmer's Market
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1. Laundry, Dry Cleaning Plant
2. Storage Warehouse, no outside storage
3. Bottling Plant

Tree Bonus: 25% decrease in total overall site tree density units.

- c. One hundred and twenty (120') foot minimum tree buffer requiring underplantings to block 60% visibility of all buildings during all seasons.

Architectural Bonus: Reduction of underplanting to block 45% visibility of all buildings during all seasons if building facades have architectural treatments equal to the Comprehensive Interchange Design and Landscape Plan of the nearest Interchange Zone.

Square Footage Bonus: 60% of total approved commercial, office and/or industrial shall be permitted for residential uses.

Zoning Bonus:

If zoned Industrial, the following commercial uses are permitted:

1. Farmer's Market
2. Appliance Sales & Repair
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4. Books, Cards & Stationary Store
5. Convenience Store with/without fuel pumps
6. Drug Stores, Pharmacies
7. Fast Food Restaurant, Drive In
8. Florist Shop
9. Furniture, Home Furnishing Store
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4. Laboratory Research Facilities
5. Bottled Gas, Storage & Distribution
6. Builder Supplies & Storage, no outside storage
7. Equipment Supplies (Medical, Dental, Art, etc.)
8. Ice Manufacturing

Tree Bonus: 50% decrease in total overall site tree density units.

25.8 Tree Preservation

It shall be the responsibility of every applicable property owner or occupant(s) of said property to provide normal care for all trees located on delineated area recognized as such property. Individuals shall not:

- 25.8-1 Attach any sign, notice or other object to any tree or fasten any wires, cables, nails or screws to any tree in a manner that is detrimental to the health of the tree(s), except as necessary in conjunction with activities in the public interest;
- 25.8-2 Pour any material on any tree or on nearby ground that is detrimental to the health of the tree;
- 25.8-3 Create or encourage any unnecessary fire or burning near or around any tree;
- 25.8-4 Construct a concrete, asphalt, brick or gravel sidewalk; significantly compact the soil; place fill material; or create other impervious or semi-impervious surfaces around any tree that is detrimental to the health of the tree's root system.

It shall be a violation for any individual to willfully injure or disfigure any tree within the unincorporated area recognized as Cherokee County.

25.9 Exemptions

- 25.9-1 Listed herein are the exemptions pertaining to the provisions of this Ordinance that shall be allowed (Refer to Table TO-1):
 - 25.9-1(a) Existing single family and a two (2) family residential dwelling;
 - 25.9-1(b) Removal of trees on parcels zoned or used for agricultural related purposes. Exemption of this type shall not be inclusive of timber harvesting which shall comply with the Georgia Forestry Commission buffer requirements.
 - 25.9-1(c) Removal of trees being grown for relocation and continued growth from horticultural properties (i.e. farms, nurseries, or orchards) in the ordinary course of business, or for some public purpose.;
 - 25.9-1(d) Removal of tree(s) by a utility company within a dedicated utility easement that would affect the health, safety and welfare of the citizens and/or utilities that provide service to said parties.

- 25.9-1(e) Removal of tree(s) within public right-of-ways pursuant to lawful function by a federal; state; county; municipal or other recognized governmental agency whereby action is conducted by, on behalf of, or is an activity pursuant to work that is to be dedicated to any of the entities stated herein for the purpose of constructing or providing improvement to said public right-of-way;
- 25.9-1(f) Removal of trees from golf courses and lakes (natural or man-made) that threatens to affect the health; safety, and welfare of individuals and/or a specific property;
- 25.9-1(g) Removal of trees from hydrology management areas (i.e. detention ponds, drainage ponds, etc.) that threatens to affect the health; safety, and welfare of individuals and/or a specific property;
- 25.9-1(h) Removal of a tree which threatens to affect the health; safety, and welfare of the citizens and/or a specific property (i.e. site with structure of historical significance) of Cherokee County.
- 25.9-2 This Ordinance shall not deem to authorize, directly or indirectly, the removal of any tree(s) within in the I-575 High Technology Corridor Buffer Zone or any buffer as defined in Article 10 with the exception of exemptions noted herein. Credit will be allocated for trees that are protected and/or preserved within defined buffers.

Table TO-1: Exemption Applicability

Project Type	Description of Construction Activity	Exemption Applicability
A one (1) and a two (2) Family Residential Dwelling	Building Permit	Exempt 25.9-1a
Agricultural Operations	Removal of trees through clearing for agricultural related purposes. It is not inclusive of timber harvesting which shall comply with the Georgia Forestry Commission buffer requirements.	Exempt 25.9-1b
Horticultural Operations	Removal of trees that are part of the ordinary course of business.	Exempt 25.9-1c
Utility Easements	Removal of trees within a dedicated utility easement that threaten the health, safety and welfare of the citizens and/or utilities that provide service to paid parties.	Exempt 25.9-1d
Public Right-of-ways	Removal of tree(s) within public right-of-ways for the purpose of constructing or providing improvement to public right-of-way	Exempt 25.9-1e
Golf Courses	Removal of trees approved by Administrator that threaten the area encompassing the ground area of the Golf course.	Exempt 25.9-1f
Lakes (natural or man-made)	Removal of trees approved by Administrator that threaten the area encompassing the lake basin.	Exempt 25.9-1g
Hydrology Management	Removal of trees from hydrology management areas (i.e. detention ponds, drainage ponds, etc.) that threatens to affect the health; safety, and welfare of individuals and/or a specific property;	Exempt 25.9-1g
Diseased or Infested Trees	Removal of trees per consultation and written findings by Administrator or County Arborist.	Exempt 25.9-1h

25.10 Minimum Tree Density Requirements

It is the intent of this Ordinance that a minimum tree density be established and maintained on all applicable parcels within Cherokee County with the exceptions of the exemptions listed in Section 25.4 herein. The minimum density requirement shall be adhered to without regards to the existence of tree vegetation prior to development. It may be achieved through allocations for preservation of existing trees, planting of new trees that meet the criteria herein, and/or a design that includes both elements.

25.10-1 Unit calculation shall be twenty (20) units per acre. A "unit" represents the basal area as defined herein and is not to be referred to as singular unit (i.e. tree).

25.10-2 All applicants shall use the formula specified in Appendix B (page 2 of 3) to calculate and establish minimum tree density requirements for said parcel(s). The applicant shall determine the density calculations from the site area. Parcels that lie within the I-575 High Technology Corridor Tree Buffer Zone shall be allowed to transfer minimum tree density units required for said parcel(s) to delineated zone and receive full credit for units.

25.10-3 In the event that the minimum tree density cannot be met on a parcel then two (2) alternates, at the discretion of the Administrator, are available for compensation and issuance of approval. An allocation for alternate compliance shall not equal one hundred percent (100%) of the tree density for a specific plan.

25.10-3a Tree Bank

It shall be at the discretion of the Administrator to designate site(s) other than said parcel for tree bank planting in order to achieve minimum density requirements.

25.10-3b Tree Replacement Fund Contribution

It shall be at the discretion of the Administrator to allow contributions of Cherokee County Tree Replacement Fund for planting at designated site(s) within unincorporated areas of Cherokee County. Contributions shall be calculated as to reflect the current replacement cost (including labor) of the total number of trees that are required but are not planted.

25.11 Tree Preservation Standards

Applicants shall abide by the identification procedures for Tree Preservation Standards prior to tree removal or development on a parcel within the unincorporated areas of Cherokee County.

25.11-1 Location

All tree protection devices are to be located and depicted on plan in accordance with the Tree Survey Plan (Refer to Section 25.17) for verification prior to the issuance of a land disturbance permit for clearing and grading. Any changes to established protection zones that have been approved will warrant review by the Administrator or his/her designee.

25.11-2 Installation and Removal

Installation of tree protection devices are to be placed as shown on plan and/or encompassing the periphery of the critical root zone of trees identified for preservation. Issuance of a Tree Removal Permit shall be subject to an inspection by the Development

Control Division of the installation of tree protection and erosion/sedimentation control devices. Tree protection devices shall be maintained for proper function and shall not be removed until the Certificate of Occupancy is issued by the Building Department.

25.11-3 Types

Identification of whether the tree protection is active or passive and the materials used shall be required. The type of tree protection warranted will be determined by the parcel proximity to development parcels.

25.11-3a Active Protection

1. Location of Installation

Active protective tree protection shall be installed along the periphery of the critical root zones of all trees identified as specimen trees, or the delineated tree protection zone, prior to issuance of land disturbance permit (LDP).

2. Materials

The primary type of fencing shall be orange laminated plastic safety netting. Alternate types that shall be allowed are; wooden post and rail fencing; chain link or other restraining material that provides adequate barrier protection.

3. Height

Fencing for tree protection zones shall be a minimum four (4') feet high supported by two (2") inch by four (4") inch wood or metal posts. A two (2") inch by four (4") post and double one (1") inch x four (4") inch rail shall be required for a post and rail configuration.

4. Marker Identification

All trees to be saved in the active tree protection zone shall be identified with blue colored water-based paint at the base and DBH.

25.11-3b Passive Protection

1. Location of Installation

This type is required where Tree Save Areas are located in remote areas away from construction activity and in all protected zones not designated as Tree Save Areas.

2. Materials

Type that shall be allowed is a continuous strip of plastic flagging (heavy mil) that is a minimum of four inches (4") wide and includes text stating " Tree Protection Area – Do Not Enter" in dark letters on a bright background. It shall be at the discretion of the Administrator to allow alternate equivalent signage on similar restraint material.

3. Height

Recommended at DBH

4. Marker Identification

No marker required within select area.

25.11-4 Signage

Signage at site entrances are recommended to include information about compliance policies on development site for notification by all individuals visiting development site.

25.11-5 Development Site

Areas delineated for tree protection and/or any specimen tree shall be protected from Sedimentation of erosion material and other forms of encroachments that threaten the longevity of survivability.

25.11-5a Sedimentation and Erosion Control

25.11-5a(1) Silt screening shall be placed along the outer uphill edge of the tree protection zone at the land disturbance interface;

25.11-5a(2) Silt screening shall be backed by twelve (12) gauge two (2") x four (4") inch wire mesh fencing in areas with 2(H); 1(V);

25.11-5a(3) Sedimentation and erosion controls shall comply with the Cherokee County Planning and Zoning Department – Development Control Division Standards.

25.11-5b Encroachment

Encroachments can threaten the longevity and expected survivability since a majority of trees can only sustain a minimal percentage of loss to the critical root zone. Preventive measures defined herein shall be employed where encroachment is anticipated by the Administrator or his/her designee that will threaten the critical root zones or specimen trees, stands of trees or delineated tree protection zones. Irreparable damage to any tree(s) shall warrant removal and replacement in accordance with Section 25.21.

25.11b(1) Trenching for Clearing Activities

A minimum two (2') foot trench shall be cut along the limits of land disturbance for clearing in order to cut, not tear, roots that would otherwise be subject to damage by removal of adjacent trees.

25.11b(2) Mulching for Soil Compaction

A minimum four (4") inch layer of processed pine bark or wood chips and/or a six (6") inch layer of pine straw shall be used to mulch the tree protection zone in order to deter any soil compaction that might occur from traffic or material storage.

25.11b(3) Tunneling of Utilities

Tunneling shall be required for installation of utilities through a tree protection zone (Refer to Figures 4 and 5).

25.11b(4) Aeration Systems for Grade Changes

Aeration systems shall be required for tree protection areas and/or Specimen trees that are located on moderate/steep slopes and whereby fill dirt will threaten the longevity of the expected survivability of said trees (Refer to Figures 6 and 7). The Administrator or his/her designee shall have discretion to approve any commercial aeration system. It shall also be recommended that use of retaining walls or terracing be implemented where there is a decrease in grade on development sites.

25.12 Application Requirements

25.12-1 Standard Application

All applicants shall submit an application for tree removal permit when applying for a Development permit and it shall include the information stated herein (Refer to Flowchart TP-1):

25.12-1a Tree Survey Plan and Inventory (Refer to Section 25.17);

25.12-1b An integrated site plan identifying the following:

- Specimen, Save and Removal Trees
- Replanting Elements and pertinent landscaping
- Utilities (Existing and proposed)
- Grading
- Location of all structures, access points, and approved curb cuts

25.12-1c A detailed plan indicating the measures for protection and preservation of trees prior to, during and for an interim period of two (2) years after completion of construction. The plan shall address and include the items listed herein if not part of the normal application requirements for submittals:

- Review criteria items indicated on the Erosion and Sedimentation Control submittal checklist issued by Development Control Division;
- Total site area (inclusive of roads, utility lines, detention ponds, etc.);
- Location and identification of existing and proposed structures; paving; ingress/egress points; cut and fill areas; hydrology detention areas;
- Identification of phase boundaries for phased development or limits of development construction;
- Delineation of protected zones with actual dimensions that are within boundaries of site area;
- Graphic or written text indicating calculations that comply with minimum tree density requirements. Calculations shall indicate the number of existing trees, replacement trees, and/or use of alternate methods of compensation for the tree density factor (refer to Appendix B);
- Location and identification of all existing and proposed overhead utility lines, boring sites for underground utilities and/or easements for said utility;
- Location and identification all Specimen trees with indication of removal or preservation ;
- Location of all tree protection devices and identification of materials with details to be used at each location;
- Delineation of tree save areas that are part of inventory in the calculation of density calculation;
- Location and identification of all permanent tree protection measures tree wells, aeration systems, pervious surfaces; retaining walls, bollards, etc.) warranted due to site attributes and/or constraints;
- Location and identification of any pertinent information warranted by the discretion of Administrator or his/her designee pertaining to the provisions herein.

25.13 Off-Street Parking

Off-street parking lots that are required by Cherokee County to contain more than five (5) parking spaces shall include within the design the following standards herein:

- 25.13-1 One (1) tree for every five (5) spaces around the periphery of the parking area.
- 25.13-2 One (1) tree for every ten (10) spaces interior to the parking area defined in 25-13-1.
- 25.13-3 Each tree planted shall be a minimum 0.6 density units (3" caliper) at planting and be indigenous to the specific location of development or a suitable species for the region (See Appendix A).
- 25.13-4 The minimum planting area for each tree shall be 400sq ft for Upper story and 100 sq ft for Lower story trees shall be planted in areas along the periphery of the parking area and/or shall be planted in areas within the interior in island formations. Planting

designs may plant and space trees individually or in groups as long as they are in accordance with 25.13-4.

25.13-5 The area underneath at ground level and encompassing the planting areas shall be sodded, seeded or hydroseeded with grass and/or planted with a specific groundcover/mulch suitable to the region and/or combination thereof.

25.14 Approval Letter (Non-Development)

No non-development activity as defined in Section 25.5 shall be permitted without the issuance of an Approval Letter. Waivers will be granted for routine or seasonal pruning or transplanting of trees. All applications shall be subject to the review process stated herein:

25.14-1 Applicants shall submit to the Administrator a complete request in the form of a written proposal limited to one (1) page including the items herein:

- Reason for the proposed work,
- Site sketch or photography of the tree(s) proposed to be impacted and/or removed
- Identification of tree(s) by size and species

25.14-2 Administrator shall review the written proposal according to the provisions herein and shall return comments to the applicant(s) within five (5) working days of receipt of the complete proposal. Comments will address whether the proposal is approved and/or replanting is warranted, incomplete or denied. In the event that the proposal is incomplete or denied, the Administrator shall provide applicant(s) with reasons for decision in writing.

25.15 Tree Removal Permit

No individual(s) shall initiate any development activity nor shall any development permit be issued before a Tree Removal Permit is issued from the Administrator.

25.16 Approval Letter fee: Permit fee

Fees for a request for Approval Letter and an application for Tree Removal Permit may be subject to amendment by the Cherokee County Board of Commissioners or delegated to the Administrator upon authorization by the Board of Commissioners. The fees for review by the Administrator or his/her designee until otherwise amended shall be as stated herein:

25.16-1 A review fee of \$ shall be required for review of a request for an approval letter.

25.16-2 A review fee of \$ to \$ (maximum) shall be required for review of an application for tree removal permit that pertains to development activity only.

25.17 Tree Survey Plan and Inventory

25.17-1.1 Tree Survey Plan

25.17-1a A tree survey as required in Section 25.12 shall include the items listed herein in a map form (grid system) or on a site plan:

- Graphic scale with text indicating scale measurement;
- Seal with signature by a certified landscape architect or architect; forester; horticulturist, or arborist;
- Location of all trees (defined in 25.12-1b) within the area to be disturbed and altered from the original, natural state and within the shorter boundaries of the two: (1.) a twenty-five (25') foot radius of delineated area or (2.) property line.

25.17-1b Specimen trees and any tree(s) that are identified and are to be counted in the calculation for minimum density requirements shall be required to be shown on the survey and shall be inventoried by designated thresholds (i.e. caliper or DBH, and species).

25.17-1.2 Inventory

An inventory assessment shall include the items listed herein:

25.17-2a Location of all specimen trees with identification noting that said tree(s) shall be retained or removed;

25.17-2b Delineation of all Tree Protection zones and Tree Save areas. Tree Save areas shall be inclusive of all buffers with existing tree vegetation.

25.18 Tree Survey Inspection

An inspection shall be scheduled and conducted by the Development Control Division after notification by Administrator of the receipt of a completed tree removal application. The Development Control Division shall notify applicant and/or his/her designee of inspection date in order to allow said individuals to be in attendance. Inspection findings shall be returned to Administrator after inspection is conducted. The Administrator shall advise, in accordance with the provisions of this Ordinance, applicant(s) of recommended changes to proposed tree removal, protection and/or replanting plan by said party.

25.19 Tree Removal Compliance Inspection

The Administrator shall require the Development Control Division to inspect a development site after issuance of a Tree Removal Permit on a periodic basis for the purpose of certifying that the site is maintaining compliance with the requirements of the Tree Removal Permit (Section 25.15).

- 25.19-1a The Administrator or his/her designee shall have authority to revoke or amend the Tree Removal Permit with stipulations, and withhold or revoke any other permit pertaining to said development site. Certificate of Occupancy shall be held until development site is brought into compliance with provisions of Ordinance stated herein.
- 25.19-1b The Administrator, on behalf of Cherokee County, shall have the authority to use the cash or bond proceeds of said development site to insure that any tree removal conditions not met within the specified time interval are brought to completion Administrator has granted a written extension then the extension shall have precedence.
- 25.19-1c The Administrator shall require the Development Control Division to conduct random inspections of a development site after completion of phase(s) and/or build-out to insure that the required tree protection and preservation measures are maintained. In the event that an identified tree dies, is removed or is destroyed by malice or by development activity within two (2) years after completion of phase(s) and/or build-out then replacement shall be warranted or a bond/letter of credit shall be posted within thirty (30) days of notice by the Administrator or his/her designee.

25.20 Tree Damage Assessment

An assessment shall be conducted for any tree(s) that are damaged during construction, or as result of malice that have been identified for saving on development site. Treatment, in accordance with the National Arborists Association Standards, shall be rendered for minor damage to tree surface. Replacement shall be warranted for damage that affects the longevity of life for said tree(s).

25.20-1a A replacement tree shall be equal to the unit value of the tree removed.

25.20-1b A replacement tree shall be two (2) times the unit value of a Specimen tree removed or a tree damaged due to malice.

25.21 Tree Replanting Standards

Prior to issuance of a Tree Removal Permit for a development site, the Administrator shall require the replacement or relocation of any tree(s) identified for removal on said site with tree species indicated on Tree Survey Plan. All trees selected for replanting shall be a species identified in Appendix A and shall be free of injury; pests; disease; nutritional disorders or root defects in order to provide longevity in the expectation of survivability. A minimum of one (1) tree, in accordance with the provisions herein, shall be replanted to replace each tree that is removed. Revegetation plans that consist of more than ten (10) new trees shall incorporate at least three (3) separate tree species whereby no single tree species accounts for more than fifty (50%) percent of all newly planted trees. Cherokee County shall require that standards for transplanting be in accordance with the guidelines established and published by the International Society of Arboriculture that are entitled Tree and Shrub Transplanting Manual, similar publication with ecological emphasis on tree species site requirements and/or the graphic illustrations provided herein (Figures 9-15).

25.21-1.1 Standards for planting replacement trees within the boundaries of unincorporated Cherokee County are as defined herein:

25.21-1a Each tree selected for replanting shall require one tree for every five hundred (500 sqft) square feet of total site area designated for tree protection and/or preservation;

25.21-1b Each tree shall have quality Grade number 1 or equivalent by the State Department of Agriculture Nursery;

25.21-1c Specimen trees shall be replaced by species with potentials for comparable size and quality;

25.21-1d Be required to provide at least equal shade potential at maturity of tree removed;

25.21-1e Each tree selected for replanting that dies within two (2) years of final inspection by the Development Control Division shall be replaced by individual(s) identified in record file of Tree Survey Plan.

25.21-1.2 The Administrator or his/her designee, on behalf of Cherokee County, shall require two (2) bonds as listed herein:

25.21-2a A performance bond, in the amount of one hundred and fifty percent (150%) of LDP fee shall be posted at the issuance of permit approval of the Tree Survey Plan permit;

25.21-2b A maintenance bond, in the amount of one hundred and fifty percent (150%) of LDP fee shall be posted after the final inspection by the Development Control Division.

25.21-2 Credit for existing trees shall be subject to the discretion of the Administrator or his/her designee. Existing trees identified on Tree Survey Plan for credit shall have a minimum five (5") inch diameter at the DBH and shall be free of injury; pests; disease; nutritional disorders or root defects in order to provide longevity in the expectation of survivability. The Administrator or his/her designee shall have the authority to allow approval of off-site replanting in a tree bank as defined in Section 25.10-3a upon receipt of site plan indicating site constraints and/or other physical characteristics that prevent the replanting of said trees at time of delivery for installation. Approval by Administrator or his/her designee for off-site replanting shall not exceed fifty (50%) percent of total trees required for replanting.

25.21-3 The Administrator or his/her designee shall have the authority to allow individual(s) of development site to make contributions to the Cherokee County Tree Replacement Fund in lieu of the replanting replaced tree off-site as defined in Section 25.10-3b. Contribution shall be calculated by the Administrator or his/her designee and shall be paid prior to the issuance of the Tree Removal Permit and permit approval of Tree Survey Plan.

25.22 Penalties

25.22-1 Individual(s) who are found to have violated the provisions herein of this Ordinance shall be subject to criminal prosecution and punishment in accordance with other violations of ordinances pertaining to Cherokee County (Refer to Flowchart TP-2).

25.22-1.1 Failure of individual(s) to comply with the provisions herein of this Ordinance shall also be subject to each individual to penalties defined herein and in flowchart (Refer to Flowchart TP-2).

25.22-2a Individuals shall be subject to fines according to the two (2) types of violations (Step 2): (1) One dollar per square foot (\$1.00/sqft) for disturbing Tree Buffer and/or Tree Save Areas in addition to a cumulative if development site contains multiple categories; (2) Two dollars per square foot (\$2.00/sqft) for specimen trees;

25.22-2b The type of action to be implemented by Cherokee County shall be determined by an evaluation that assesses where a violation is greater or less than the set amount of five hundred (500 sqft)(Step 3).

25.22-2b(1) If the violation is found to be less than one thousand (1000 sqft) square feet then individual(s) shall be subject to corrective action by the Administrator or his/her designee based on if there have been prior offenses.

25.22-2b(1a) If it is an individual(s) first offense then the Administrator his/her designee shall waive any fines assessed. Individuals shall be subject to corrective action by the Administrator or County Arborist.

25.22-2b(1b) If it is an individual(s) second or greater offense then the administrator and his/her designee shall issue an immediate stop work order that shall be in effect until a mediation plan is submitted and approved.

25.22-2b(2) If the violation is found to be greater than five hundred (500 sqft) square feet then individual(s) shall be subject to revision of Tree Survey Plan to fit new site conditions and shall render payment of calculated fine (Section 25.22-2a) to the Administrator or his/her designee.

25.23 Variances

All petitions shall require a public hearing before the Zoning Board of Appeals and shall be subject to the provisions for variances as defined in Article 15 of the Cherokee County Zoning Ordinance and the application requirements of the Cherokee County Planning and Zoning Department.

25.24 Non-liability of County

The contents of this ordinance shall not in any way be deemed to impose any liability upon Cherokee County, the County Commissioner or County employees nor shall it relieve the owner and occupant of any private property from the duty to keep trees upon private property or under his/her control in a safe condition as not to affect the health, safety and general welfare of the public.

25.25 Severability

In the event that a section of this Ordinance is declared by a court of competent jurisdiction to be invalid, then it shall be that section only that is severed and shall not affect the validity of the Ordinance in its entirety or any part thereof that is not declared invalid.

25.26 Effective date of Ordinance; Code

The provisions of this Ordinance in its entirety shall be effective immediately upon adoption by the Cherokee County Board of Commissioners and shall become Article 25 of the Cherokee County Zoning Ordinance. All development activities that have been issued a valid, non-expired Development permit in effect or are in review for permit on the date of the adoption shall be exempt and subject to regulations in effect at the time of permit issuance. Exemption shall not include the future development of permits issued for portions or phases of multi-phased developments, for this development activity and all other permitted after the effective date shall be subject to the provisions of this Ordinance.

Flowchart TP-1

- Step 1 Application submittal – includes a Tree Protection Plan (TPP)
- Step 2 Land Disturbance Permit Drawings submittal
- Tree Protection Plan (TPP)
- Spatial Limits
- Tree Protected zones
 - Specimen trees/stands
 - Areas of revegetation
 - Limits of land disturbance
 - Clearing/grading/trenching
- Details of Tree Protection/Replacement Measures
- Density Calculation
 - Tree Fences
 - Silt Fences
 - Tree Protection signs
 - Tree Wells
 - Aeration Systems
 - Transplanting specs
- Tree Protection Measures
- Installation
 - Maintenance
- Step 3 Review Process – Site Analysis
- Step 4 Tree Protection Installation
- Step 5 Land Disturbance Permit Issuance
- Step 6 Land Disturbance
- Step 7 Follow up Inspections – Enforcement
- Step 8 Tree Replanting Standards
- Step 9 Off- Street Parking Planting Standards
- Step 10 Site Approval – C/O Release

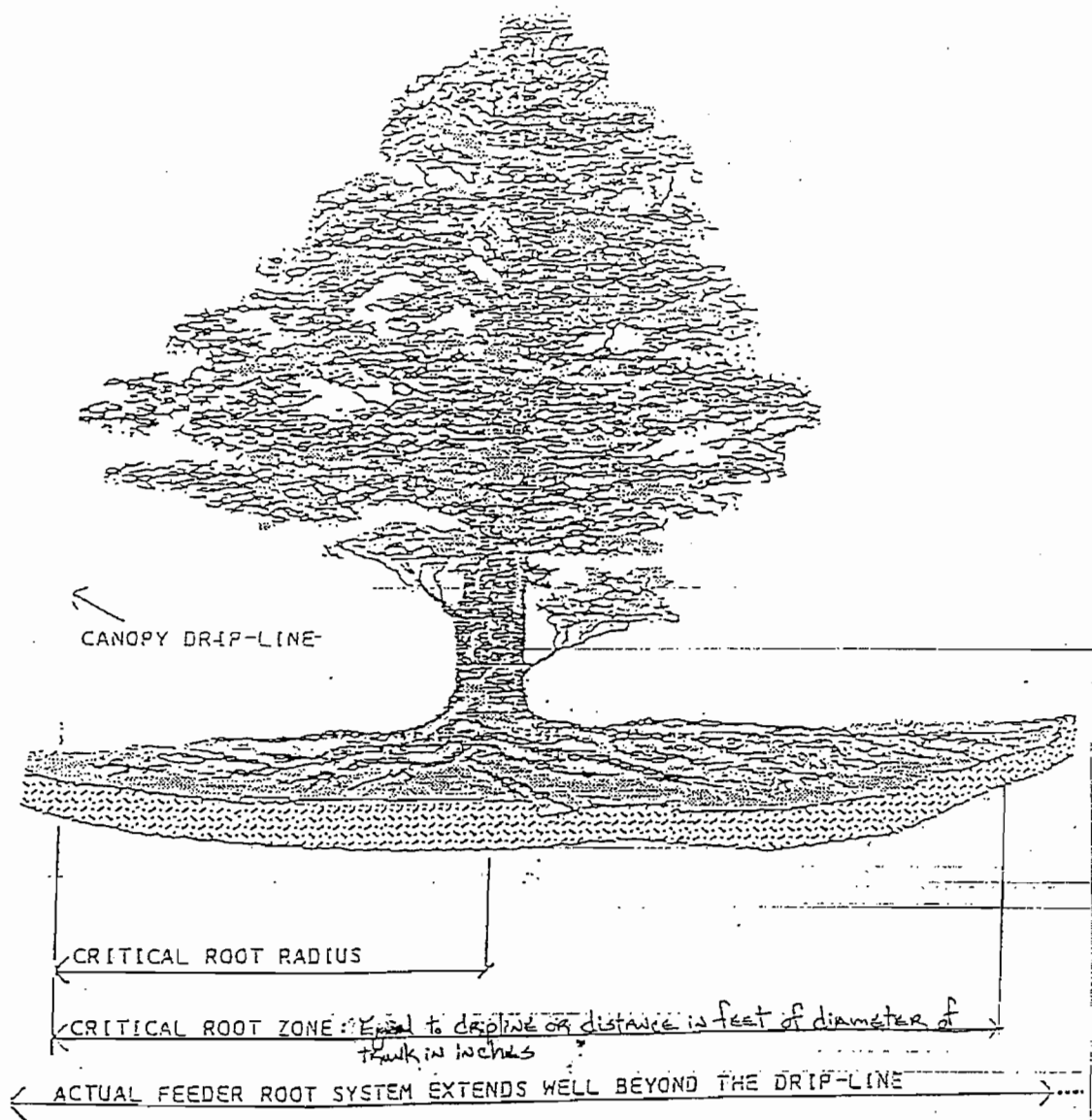


Figure 1

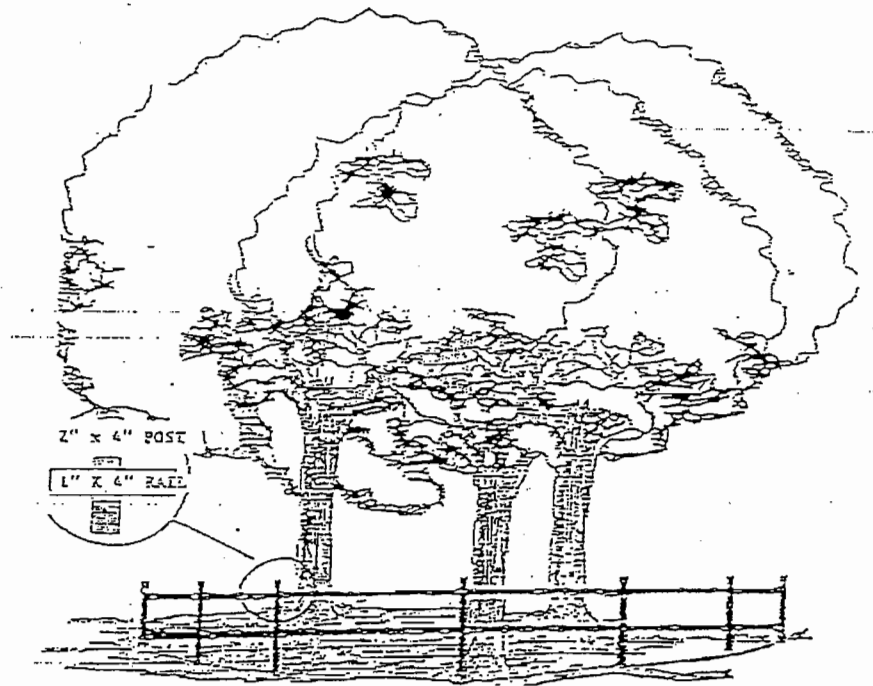
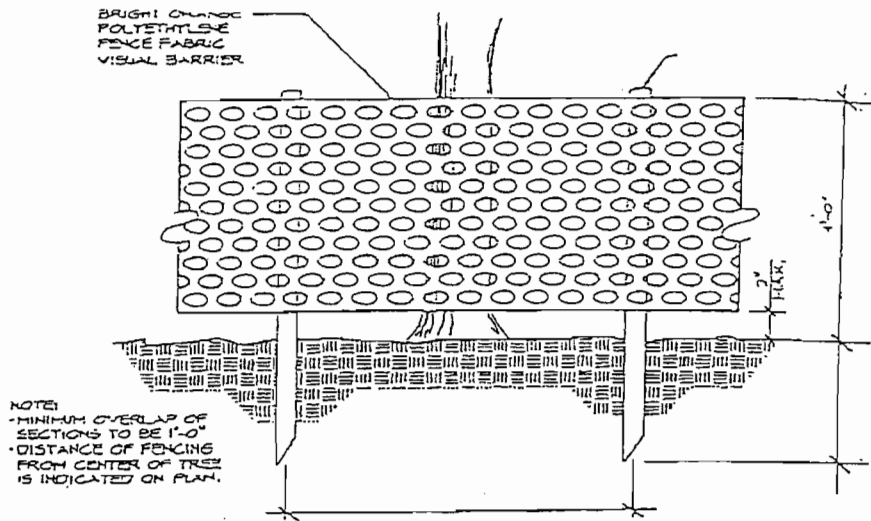
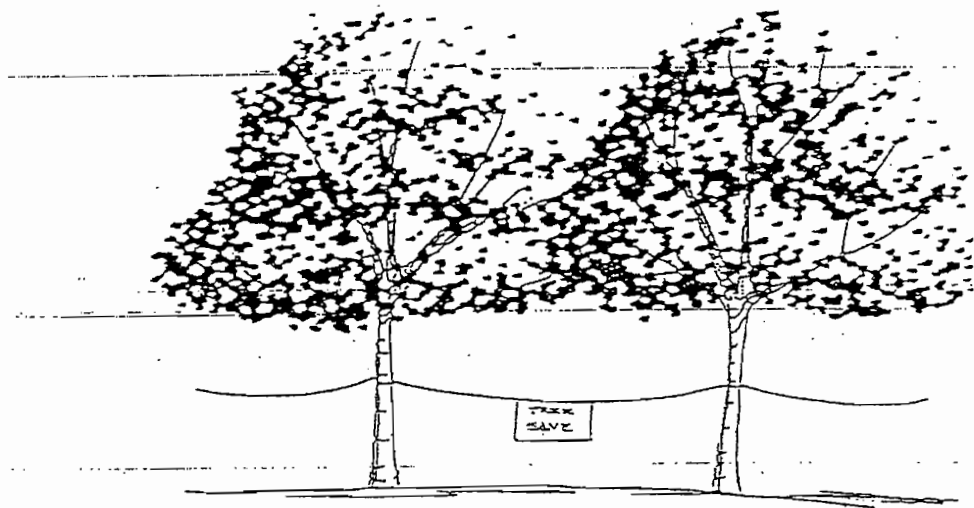


Figure 2

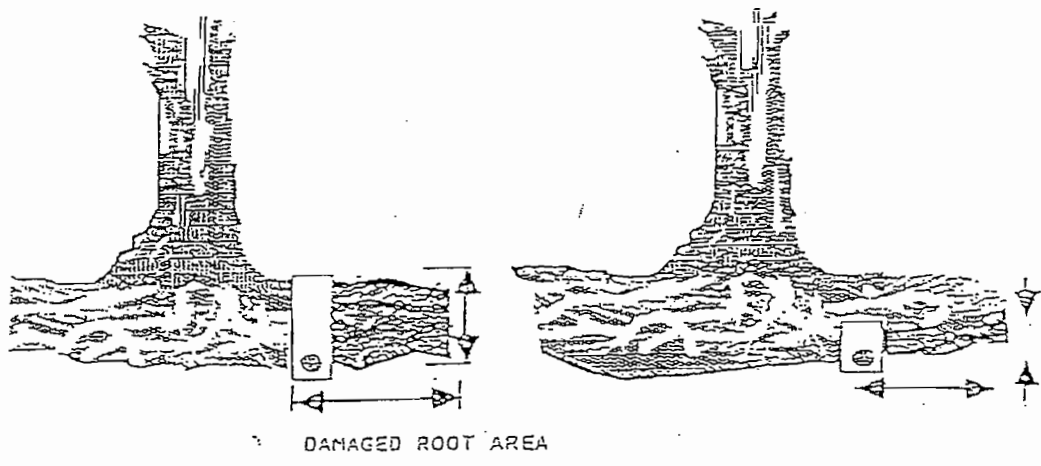
MINIMUM 4", HEAVY MILL. PLASTIC, DARK LETTERING ON BRIGHT BACKGR

TREE PROTECTION AREA
CAUTION DO NOT ENTER

← CONTINUOUS →



PASSIVE PROTECTION WITH ROPE AND SIGNAGE



TRENCHING

TUNNELING

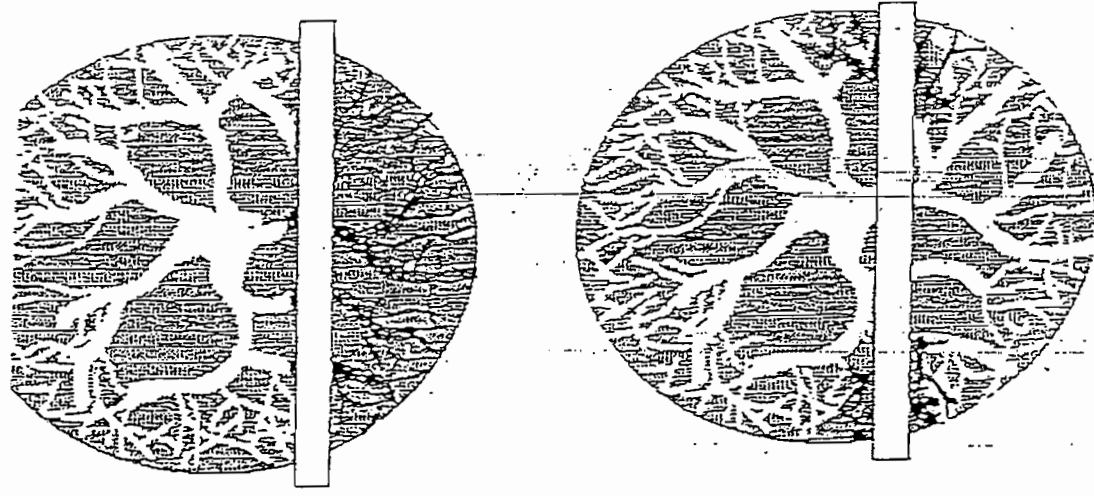


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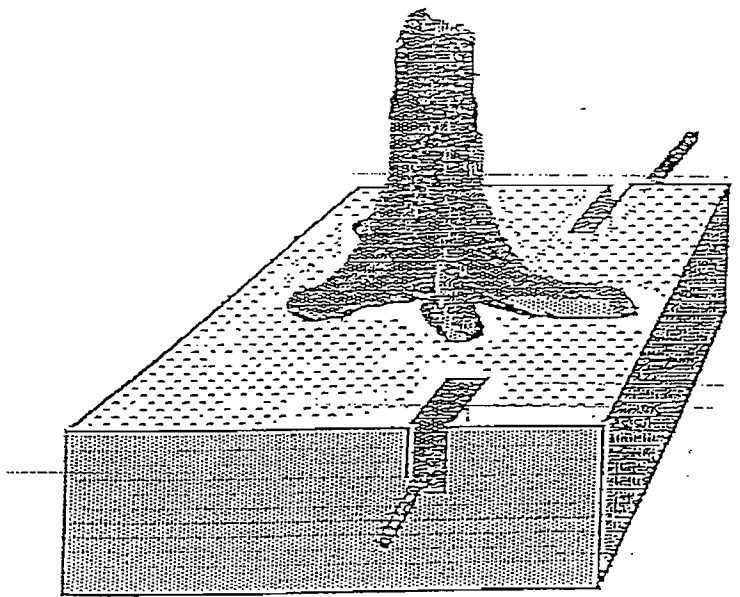


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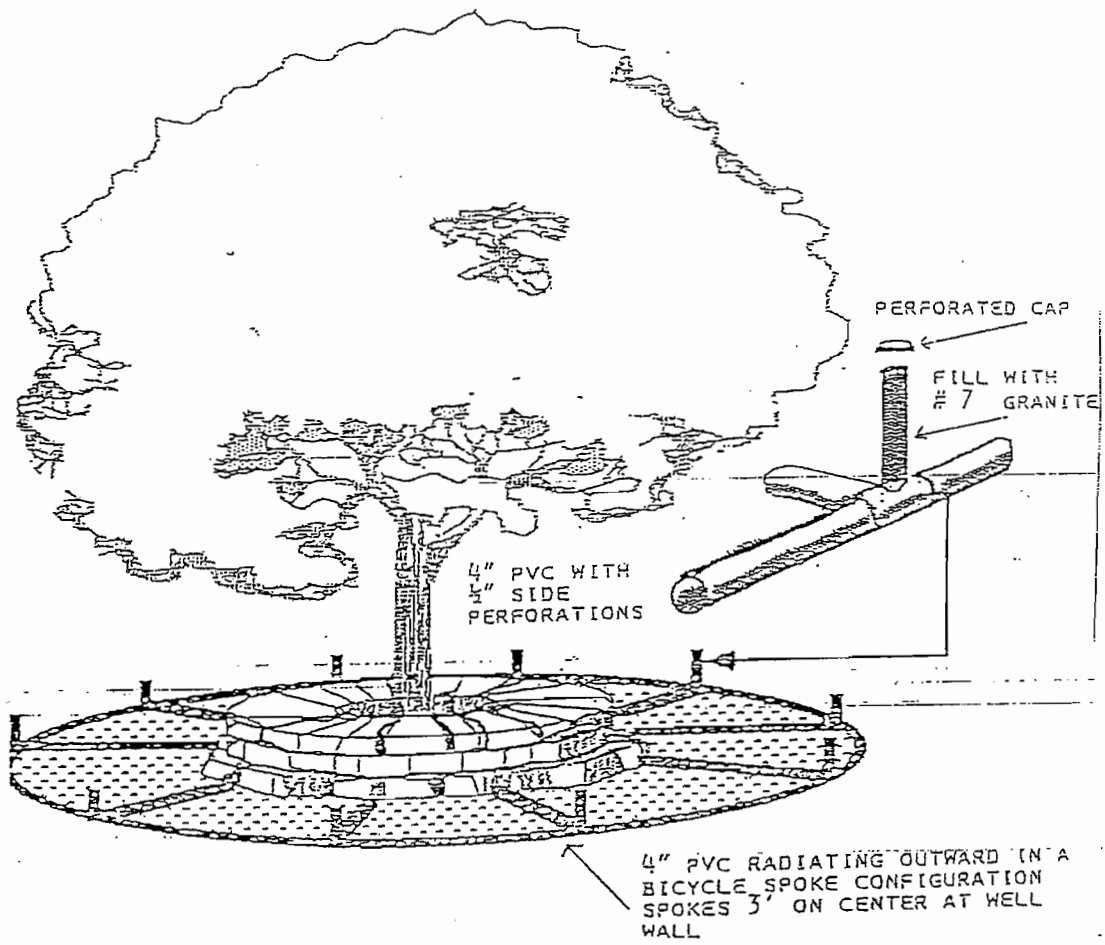


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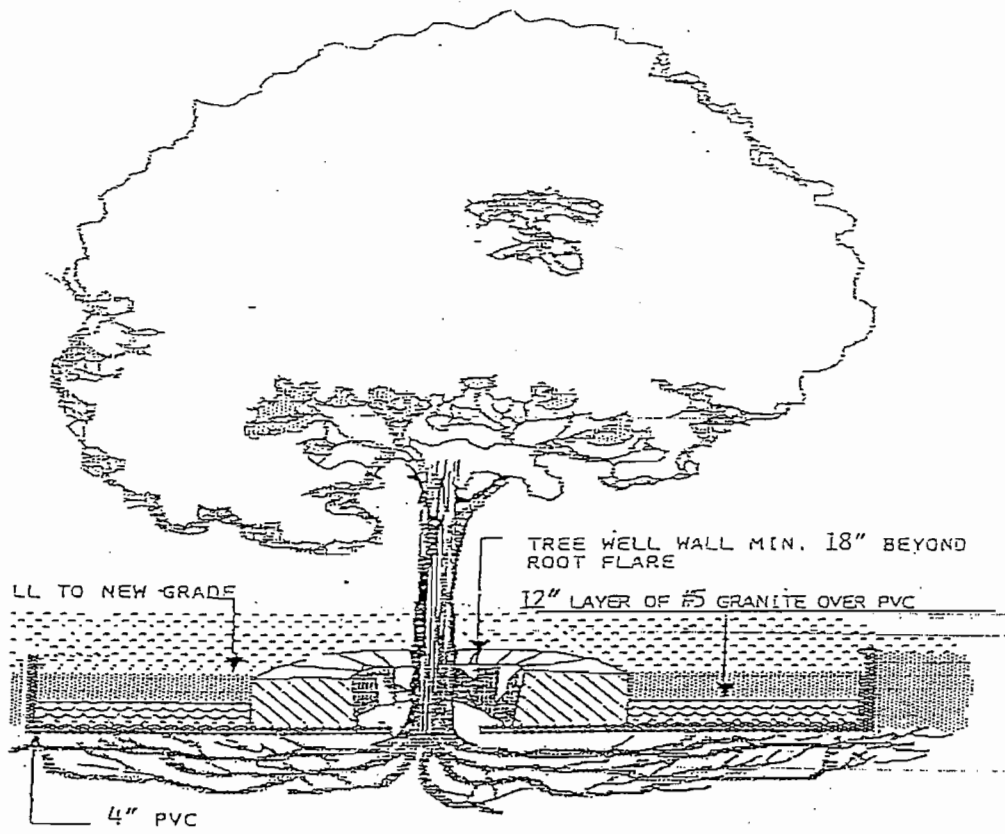


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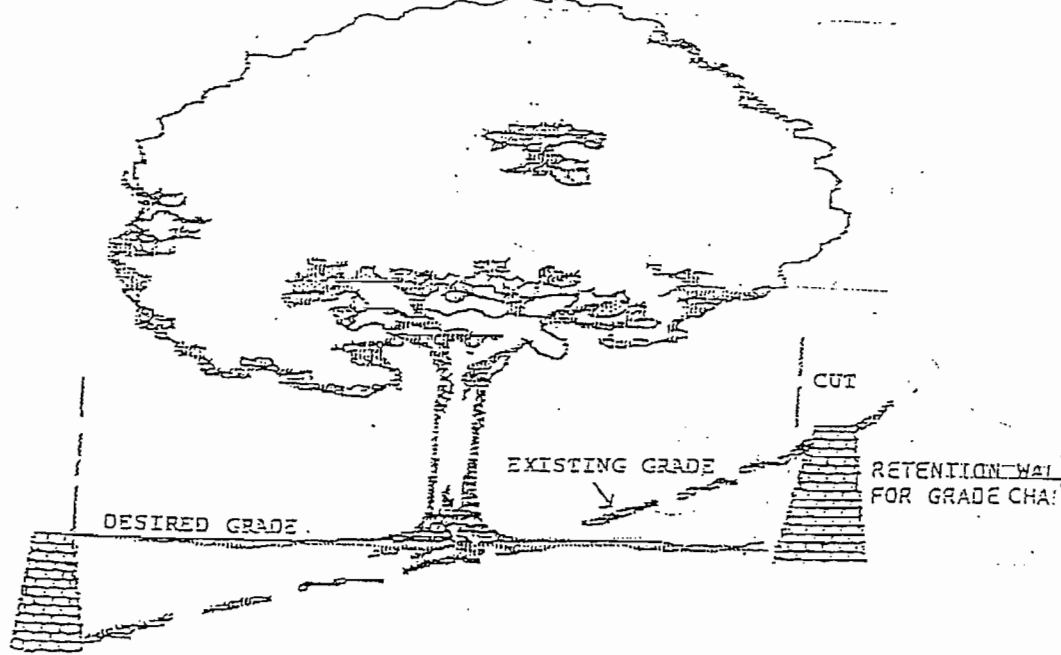
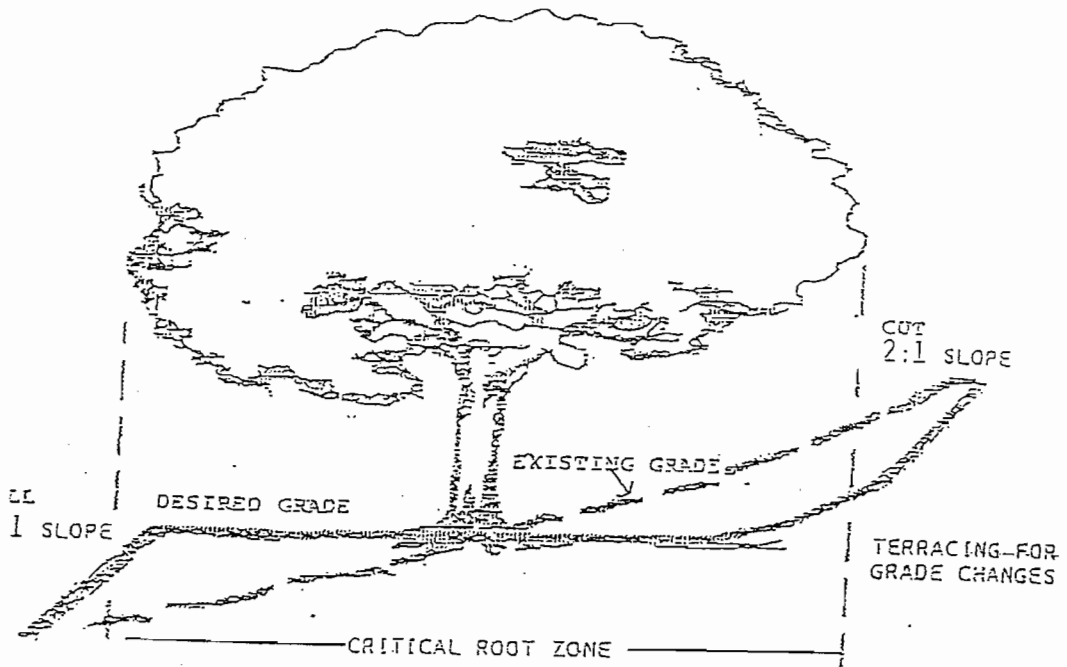
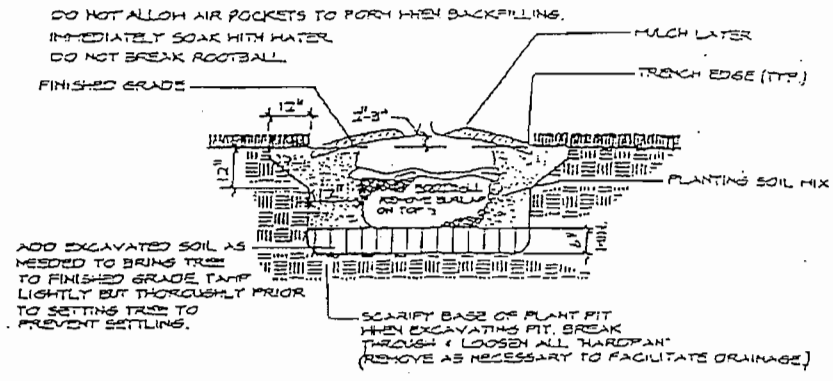


Figure 8

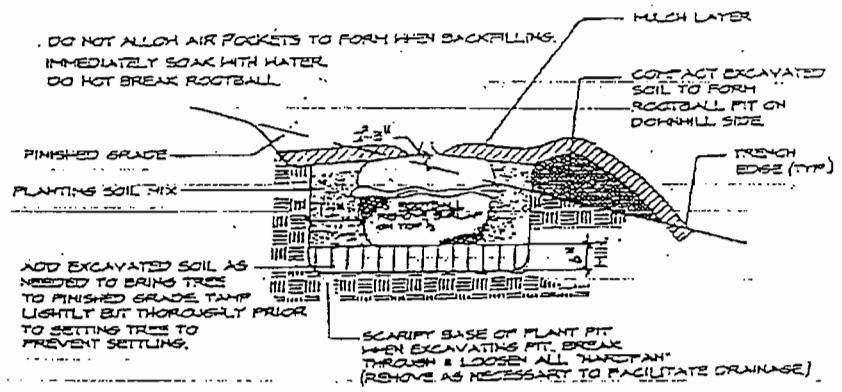


- PLANTING PROCEDURE**
1. EXCAVATE ROOTBALL PIT.
 2. ADD EXCAVATED SOIL & TAMP. SET TREE SUCH THAT TOP OF ROOTBALL IS 2-3" HIGHER THAN FINISHED GRADE.
 3. BACKFILL W/ SOIL MIX & WATER IN.
 4. COMPLETE BACKFILLING. CONSTRUCT TRENCH EDGE & ADD SPECIFIED MULCH.
 5. STAKE & CUT SECURELY.

TYPICAL TREE ROOTBALL PIT

N.T.S.

GENERAL NOTES.



- PLANTING PROCEDURE**
1. EXCAVATE ROOTBALL PIT.
 2. ADD EXCAVATED SOIL & TAMP. SET TREE SUCH THAT TOP OF ROOTBALL IS 2-3" HIGHER THAN FINISHED GRADE.
 3. BACKFILL W/ SOIL MIX & WATER IN.
 4. COMPLETE BACKFILLING. CONSTRUCT PIT ON LOWER SIDE TRENCH EDGE & ADD MULCH.
 5. STAKE & CUT SECURELY.

TREE ROOTBALL PIT (ON SLOPE)

N.T.S.

Figure 9

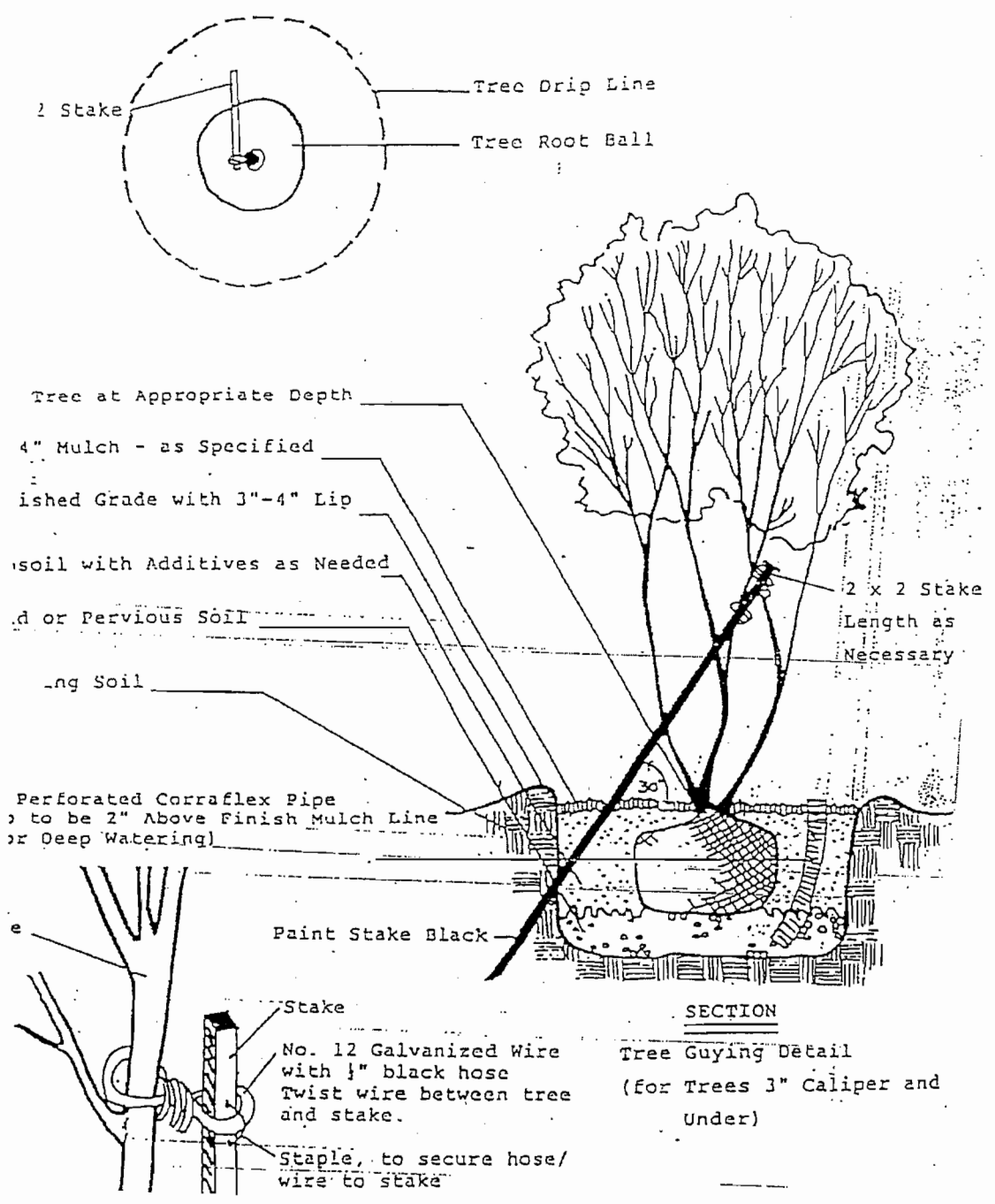


Figure 10

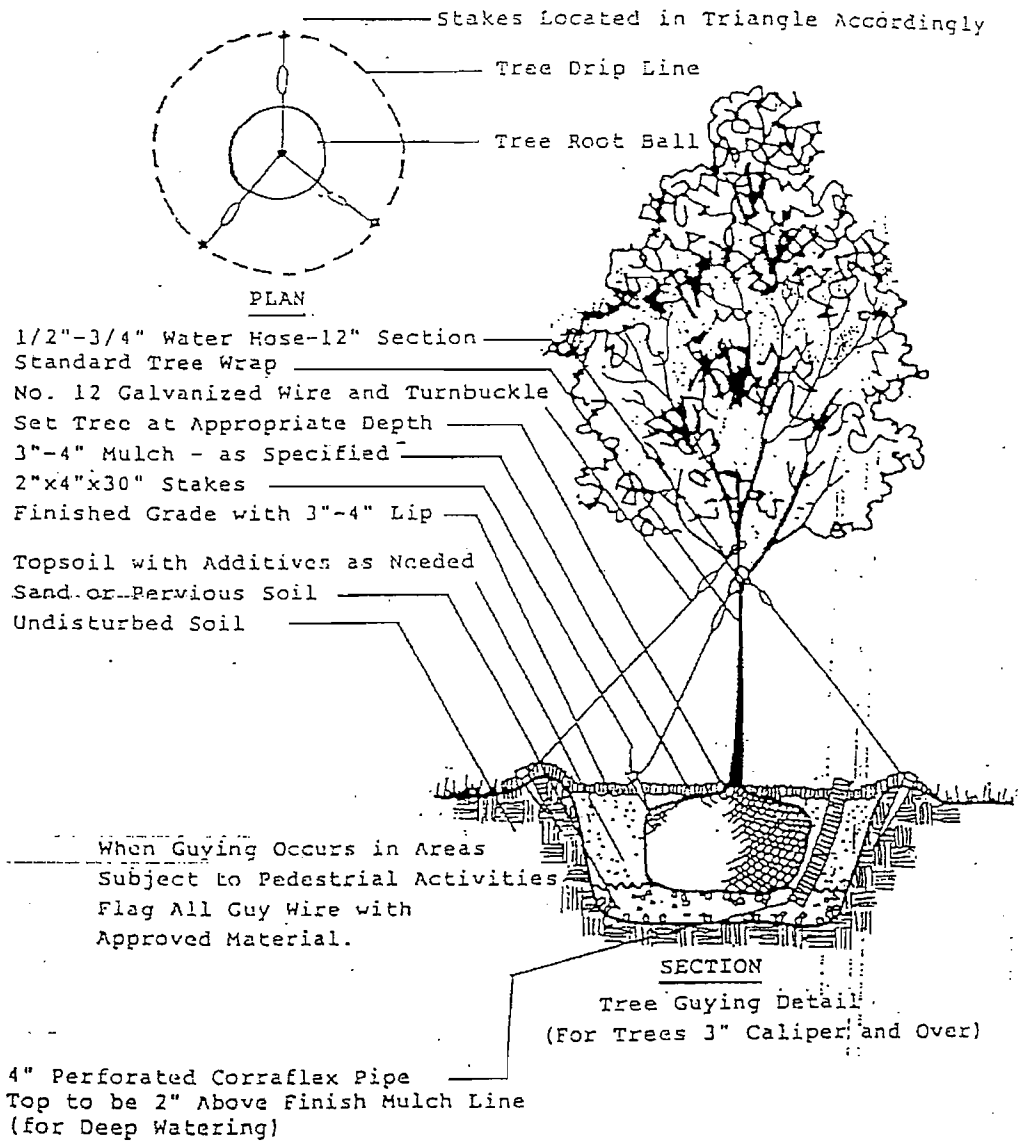
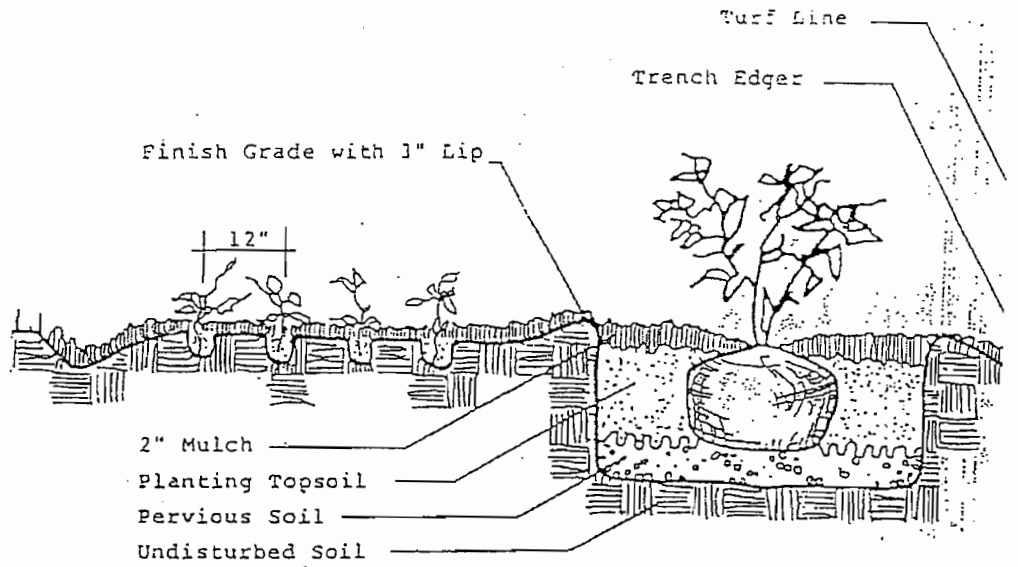


Figure 11



NOTE: PLANTING PITS SHOULD BE 6" DEEPER AND 12" WIDER THAN ROOT BALL.

PLANTING DETAILS

Shrubs and Groundcover

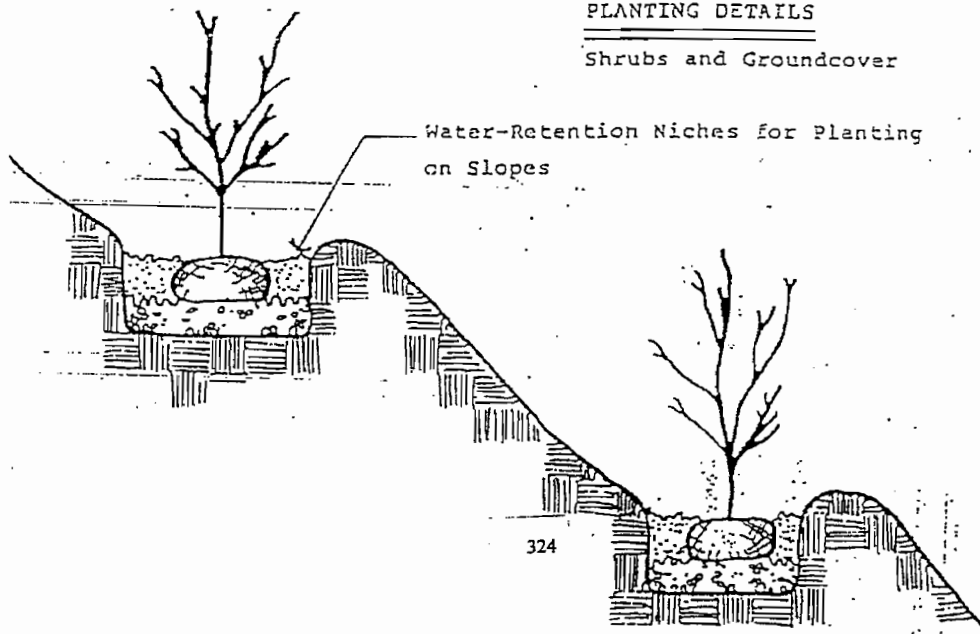
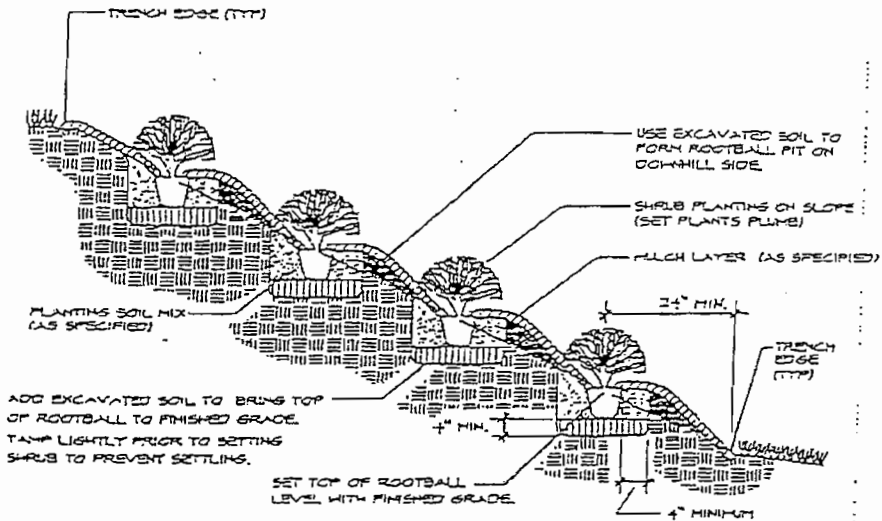


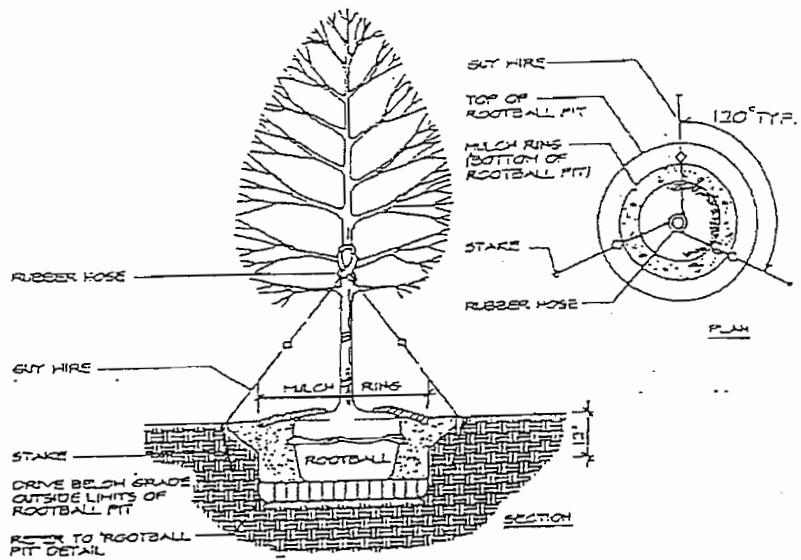
Figure 12



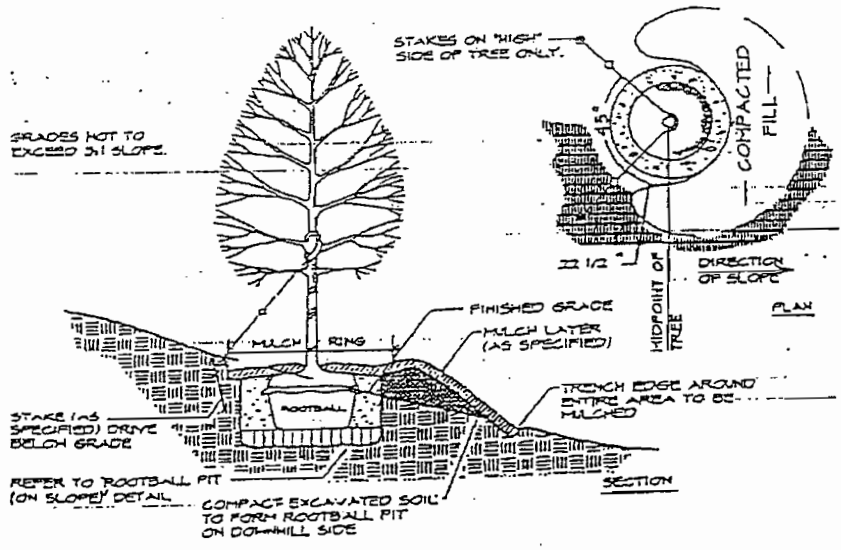
SHRUB PLANTING ON SLOPE

N.T.S.

Figure 13

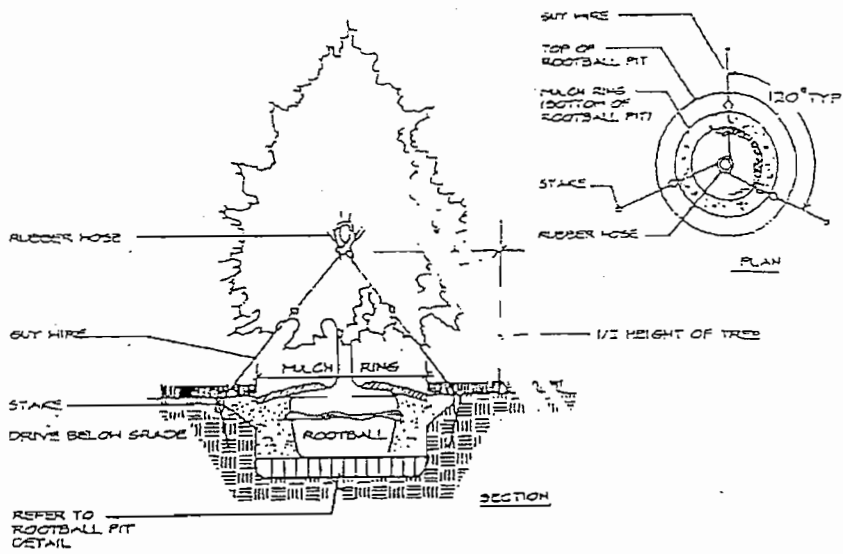


TYPICAL TREE STAKING AND GUYING
N.T.S.



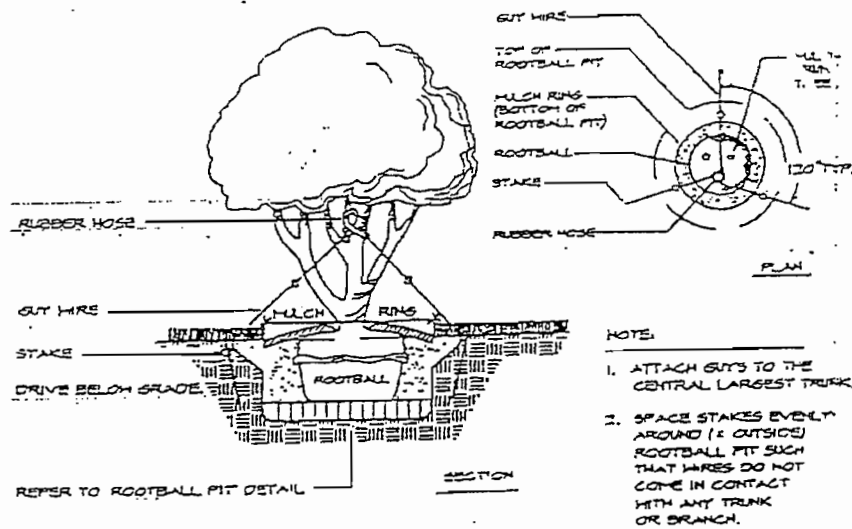
TREE ON SLOPE STAKING AND GUYING
N.T.S.

Figure 14



EVERGREEN (CONIFER) TREE STAKING AND GUYING

N.T.S.



- NOTE:
1. ATTACH GUY'S TO THE CENTRAL LARGEST TRUNK.
 2. SPACE STAKES EVENLY AROUND (i.e. OUTSIDE) ROOTBALL PIT SUCH THAT WIRES DO NOT COME IN CONTACT WITH ANY TRUNK OR BRANCH.

MULTI-TRUNK TREE STAKING AND GUYING

N.T.S.

Figure 15

APPENDIX A (C)
(Page One of Two)

RECOMMENDED SPECIES LIST OF OVERSTORY TREES

Scientific Name – Common Name

Acer barbatum – Florida Maple, Southern Sugar Maple
Acer floridanum – Florida Maple, Southern Sugar Maple
Acer leucodarme – Chalk Maple
Acer rubrum – Red Maple
Acer saccharum – Sugar Maple
Betula nigra – River Birch
Carya illinoensis – Pecan
Carya ovata – Shagbark Hickory
Castanea mollissima – Chinese Chestnut
Cunninghamia lanceolata – Chinafir
Fagus grandifolia – American Beech
Fraxinas pennsylvanica – Green Ash
Ginko biloba – Ginko, grafted
Halesia carolinia – Silverbell
Ilex opaca – American Holly
Juniperus virginiana – Eastern Red Cedar
Liquidambar styraciflua – Sweetgum
Liriodendron tulipifera – Yellow Poplar
Magnolia grandiflora – Southern Magnolia
Magnolia Virginiana – Sweetbay Magnolia
Metasequoia glytostroboides – Dawn Redwood
Nyssa aquatica – Swamp Tupelo
Nussa sylvatica – Black Gum
Oxydendrum aboreum – Sourwood
Pinus stobus – White Pine
Pinus taeda – Loblolly Pine
Pinus virginiana – Virginia Pine
Platanus occidentalis – American Sycamore
Quercus accutissima – Sawtooth Oak
Quercus alba – White Oak
Quercus coccinea – Scarlet Oak
Quercus falcata – Southern Red Oak
Quercus nigra – Water Oak
Quercus phellos – Willow Oak
Quercus palustris – Pin Oak
Quercus prinus – Chestnut Oak
Quercus shumardi – Shumard Oak
Robinia psuedoacacia – Black Locust
Sassafrass albidum – Sassafrass
Sophora japonica – Japanese Pagodatree
Taxodium disticum – Bald Cypress
Ulmus parvifloria – True Chinese Elm
Zelkova serrata – Japanese Zelkova

APPENDIX A cont.
(Page Two of Two)

RECOMMENDED SPECIES LIST OF UNDERSTORY TREES

Scientific Name – Common Name

Acer buergerianum – Trident Maple
Amelanchier arborea – Serviceberry
Carpinus caroliniana – American Hornbeam
Cercus canadensis – Eastern Redbud
Chionanthus virginicus – Fringe tree, Grancy Graybeard
Continus coggygria – Common Smoketree
Cornus alternifolia – Alternate Leaf Dogwood
Cornus florida – Flowering Dogwood
Cornus kousa – Chinese Dogwood
Cotinus obovatus – American Smoketree
Crataegus phaenopyrum – Washington Hawthorne
Cupressocyparis leylandii – Leyland Cypress
Eriobotrya japonica – Loquat
Hamamelis virginiana – Witch-hazel
Ilex x attenuata – Savannah Holly
Ilex decidua – Decidious Holly
Ilex latifolia – Lusterleaf Holly
Ilex x Nellie R. Stevens – Nellie R. Stevens Holly
Ilex opaca – American Holly
Ilex verticellata – Winterberry
Ilex vomitoria – Yaupon Holly
Illicium floridanum – Florida Anise-tree
Koelreuteria bipinnata – Golden Rain Tree
Koelreuteria paniculata – Goldenraintree
Lagerstroemia species – Crape Myrtle species
Maclura pomifera – Osage-orange
Magnolia x soulangiana – Saucer Magnolia
Magnolia stellata – Star Magnolia
Malus species – Flowering Crab
Myrica cerifera – Waxmyrtle
Ostrya virginia - Ironwood
Pitachia chinensis – Chinese Pistache
Prunus serrulata – Japanese Flowering Cherry
Prunus x yedoensis – Yoshino Cherry
Pyrus Calleryana Aristocrat - Aristocrat Pear
Rhus species – Sumac
Vitex agnus-castus – Chastetree

APPENDIX B
(Page One of Three)

A basic requirement of the Tree Preservation and Replacement Ordinance is that all applicable sites maintain a minimum tree density of 20 units per acre. The term “unit” is an expression of basal area (a standard forest inventory measurement), and is not synonymous with “tree”.

This density requirement must be met whether or not a site had trees prior to development. The density may be achieved by counting existing trees to be preserved, planting new trees, or some combination of the two as represented by the formula.

SDF – EDF – RDF

Where:

SDF (Site Density Factor) – The minimum tree density required to be maintained on a development site (units per acre)

EDF (Existing Density Factor) – Density of existing trees to be preserved on a site

RDF (Replacement Density Factor) – Density of new trees to be planted on a site

The SDF is calculated by multiplying the number of site acres by

EXAMPLE: A 2.2 acre site has a SDF of $2.2 \times 20 = 44$

The EDF is calculated by converting the diameter of individual trees to density factor units. This is done by using Table A below.

EXAMPLE: A total of 15 trees will remain on the 2.2 acre site.

The tree inventory is as follows:

- 7 – 12” diameter pines**
- 3 – 14” diameter pines**
- 3 – 18” diameter oaks**
- 1 – 21” diameter hickory**
- 1 – 30” diameter oak**

APPENDIX B
(Page Two of Three)

Converting diameters (DBH) to density units, the EDF is determined as follows:

DBH	Units	No. Of Trees	Totals
12"	0.6 x	7 =	4.2
14"	1.2 x	3 =	3.6
18"	1.9 x	3 =	5.7
21"	2.8 x	1 =	2.8
30"	5.1 x	1 =	5.1
			21.4

TABLE A

Conversion of Tree Diameters (DBH) to Density Factor Units

Size Class	Diameters	Unit Value
1	1 - 4"	0.1
2	5 - 8"	0.3
3	9 - 12"	0.6
4	13 - 16"	1.2
5	17 - 20"	1.9
6	21 - 24"	2.8 *
7	25 - 28"	3.8 *
8	29 - 32"	5.1 *
9	33 - 36"	6.5 *
10	37 - 40"	8.1 *

(The unit value of any individual tree may be determined by using the formula:
(Diameter)² x .7854 ÷ 144)

*Density Factor Unit calculations for specimen, hardwood, over-story tree 24" and larger shall be derived by multiplying by 1.5.

Replacement Density Factor – Calculate the RDF by subtracting the EDF from the SDF.

EXAMPLE: $RDF = 33 - 21.4 = 11.6$

The density factor credit for each caliper size of replacement (new) trees is shown in TABLE B.

APPENDIX B
(Page Three of Three)

TABLE B

Conversion of Replacement Tree Caliper to Density Factor Units

<u>Caliper Size</u>	<u>Density Factor Units</u>
1"	.4
2"	.5
3"	.6
4"	.7
5"	.9
6"	1.0
7"	1.2
8"	1.3
9"	1.5
10"	1.7
11"	1.9
12"	2.1
13"	2.3
14"	2.5
15"	2.8

APPENDIX C
SPECIMEN TREES

Some trees on a site warrant special consideration and encouragement for preservation. These trees are referred to as specimen trees.

The following criteria are used by the Administrator to identify specimen trees. Both the size and condition criteria must be met for a tree to qualify.

Size Criteria

Overstory Trees: 24" diameter or larger

Understory Trees: 12" diameter or larger

Condition Criteria

Life expectancy of greater than fifteen (15) years.

Relatively sound and solid trunk with no extensive decay.

No more than one major and several minor dead limbs (hardwoods only)

No major insect or pathological problem

In order to encourage the preservation of specimen trees and the incorporation of these trees into the design of projects, additional density credit will be given for specimen trees which are successfully saved by a design feature specifically designated for such purpose. Credit for any specimen tree thus saved would be 1.5 times the assigned unit value shown in Appendix B.

If a specimen tree is to be removed, a plan or written documentation indicating the reason for the removal must be submitted to the administrator.

Specimen trees must be replaced by species with potentials for comparable size and quality.

Any specimen tree which is removed without the appropriate review and approval of the Administrator must be replaced by trees with a total density equal to the unit value of the tree removed. Size alone will determine whether a tree was of specimen quality if the tree is removed without approval and there is no evidence of its condition.

APPENDIX C

PINE SPECIES

Some trees on a site warrant special consideration and encouragement for preservation. These trees are referred to as Pine Species.

The following criteria are used by the Administrator to identify Pine Species. Both the size and condition criteria must be met for a tree to qualify.

Size Criteria

Overstory Trees: 36" diameter or larger
Understory Trees: 12" diameter or larger

Condition Criteria

Life expectancy of greater than fifteen (15) years.

Relatively sound and solid trunk with no extensive decay.

No more than one major and several minor dead limbs (hardwoods only).

No major insect or pathological problem.

In order to encourage the preservation of Pine Species trees and the incorporation of these trees into the design of projects, additional density credit will be given for Pine Species trees which are successfully saved by a design feature specifically designated for such purpose. Credit for any Pine Species thus saved would be the assigned unit value shown in Appendix B.

If a Pine Species tree is to be removed, a plan or written documentation indicating the reason for the removal must be submitted to the Administrator.

Any Pine Species tree which is removed without the appropriate review and approval of the Administrator must be replaced by trees with a total density equal to the unit value of the tree removed. Size alone will determine whether a tree was of quality if the tree is removed without approval and there is no evidence of its condition.



CHEROKEE COUNTY ENGINEERING DEPT. TREE PROTECTION & BUFFER CHECKLIST

APPROVED: _____ DENIED: _____
 PROJECT NAME: _____
 ENGINEER: _____
 PHONE: _____ CONTACT: _____
 DISTRICT: _____ LAND LOT(S): _____
 MAP # _____ PARCEL # _____
 ZONING: _____ ACRES: _____
 SDF: _____ ACRES X 20 UNITS/ACRE : _____

FOR ANY NON-RESIDENTIAL PROJECT, THERE WILL BE A HOLD PLACED ON THE C.O. OF THE PROJECT PENDING A FINAL INSPECTION OF ALL TREE PROTECTION, LANDSCAPING AND BUFFER REQUIREMENTS.

- _____ Zoning classification of subject property labeled on plans.
- _____ If property has been rezoned, copy of resolution shown as a detail on cover sheet of plans.
- _____ If there has been a variance obtained, copy of resolution shown as detail on cover sheet of plans.
- _____ Zoning classification of adjacent properties illustrated on parcels.
- _____ Total acreage of subject property labeled on plans.
- _____ Required site density factor met.
- _____ Required replacement factor of _____ units met.
- _____ Indicate all required zoning buffers per Article 10 (Table 10.1) of the Zoning Ordinance. Label all buffers as "undisturbed" (10.6-2(a)).
- _____ Indicate all 25' Undisturbed State Water Buffers and 50' Undisturbed County Stream Bank Buffers (10.6-7) or note "There are no State Waters on or within 50' of property."
- _____ Clearly illustrate limits of clearing/disturbance on plans.
- _____ Illustrate all tree save areas and fencing required on both the tree save plan and erosion & sediment control plan.
- _____ Provide a detail of tree save fencing to be utilized.
- _____ Ground run location of all specimen trees. Indicate all specimen trees to be removed with recompense shown (Section 25.17-1b and Appendix C – Article 25). Trees shall be illustrated on plans.
- _____ Note on plans: "ALL TREE PROTECTION MEASURES MUST BE INSTALLED PRIOR TO CLEARING."
- _____ Note on plans: "UNDISTURBED BUFFERS SHALL BE PLANTED TO BUFFER STANDARDS WHERE SPARSELY VEGETATED IN ACCORDANCE WITH ARTICLE 10 OF CHEROKEE COUNTY ZONING ORDINANCE. ALL REPLANTINGS MUST BE PRE-APPROVED BY BOTH THE COUNTY ARBORIST AND THE PLANNING & ZONING DEPARTMENT." (Section 10.6-3).

