

# Rockdale County

Atlanta MSA.

2003 Population Estimate 74,941; +6.4% change from 2000 Census.

Not a Tree City USA.

No tree board designated by ordinance.

## Ordinance No. 2006-05, ARTICLE II. EXHIBIT A.

### Tree Protection and Replacement Ordinance

First adopted 1999. Last revised 2006.

Addresses private property.

Includes landscape requirements.

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*Approved Trees for Replacements (06/05)*

*Rockdale County PS&E Comments Required on Landscape Sheet(s) (05/05)*

## EXHIBIT B

### ROCKDALE COUNTY TREE PRESERVATION AND REPLACEMENT

#### ORDINANCE ADMINISTRATIVE STANDARDS

##### SECTION I. Purpose

The purpose of these standards is to facilitate the protection and/or replacement of trees as part of the land development and building construction process within unincorporated Rockdale County and to implement the provisions of the Rockdale County Tree Preservation and Replacement Ordinance.

##### SECTION II. Authority and Applicability

These administrative standards for tree protection and replacement are promulgated pursuant to the authority of Section 6-8008 of the Rockdale County Tree Preservation and Replacement Ordinance. The terms and provisions of these Administrative Standards shall apply according to the applicable provisions of the Rockdale County Tree Preservation and Replacement Ordinance.

##### SECTION III. Definitions

1. The following definitions shall apply to these standards. All other words and phrases shall be interpreted as defined in the Rockdale County Tree Preservation and Replacement Ordinance.

Buffer - That portion of a lot set aside for open space, separation and visual screening purposes pursuant to applicable provisions of the Rockdale County Zoning Ordinance.

Buildable area - The area of a lot remaining after the minimum front, side and rear yard requirements of the zoning ordinance have been met.

Caliper - The diameter measurement of a tree in inches measured 6" above ground. When the tree caliper is greater than 6", the diameter measurement shall be made at breast height (4.5') feet and shall be called the diameter at breast height (DBH).

County Arborist - The agent of Rockdale County, having enforcement responsibilities under the Rockdale County Tree Preservation and Replacement ordinance, and charged with the responsibility, as the designee of the Director of the Department of Public Services and Engineering, of approving all landscape/tree protection plans for land development or building construction in unincorporated Rockdale County.

Crown dripline - A vertical line extending from the outer surface of a tree's branch tips down to the ground.

DBH - Diameter-at-Breast-Height is a standard measure of tree size, and is a tree trunk diameter measured in inches at a height of 4 ½ feet above the ground. If a tree splits into multiple trunks below 4 ½ feet, then the trunk is measured at its most narrow point beneath the split.

Exceptional Tree or Exceptional Stand of Trees - Any tree or grouping of trees which has been determined to be of a high value by the County Arborist because of its species, size, age, or other accepted professional criteria. Criteria for the determination of exceptional trees or stands of trees are provided in Section VI.

Land Disturbance or Building Construction Permit - A permit issued under the authority of Section 6-3026 of the Rockdale County Code of Ordinances authorizing the clearance or alteration of any lot or lots, the installation of any public or private infrastructure and/or the commencement of any construction activities.

Protected Zone - All lands that fall outside of the buildable area of a parcel, all areas of the parcel required to remain in open space according to the provisions of the Rockdale County Zoning Ordinance or the Administrative Standards established herein, and all areas required as landscaping strips according to provisions of the Rockdale County Zoning Ordinance or Administrative Standards established herein.

Remove - The unauthorized intentional or negligent killing of trees on a parcel of land. Such acts shall include but not be limited to damage inflicted upon the root system of a tree or trees by the application of toxic substances, by the operation of equipment and vehicles, by storage of materials, by the change of natural grade due to unapproved excavation or filling, or by the unauthorized alteration of natural physical conditions.

Revegetation - The replacement of trees and landscape plant materials into the minimum required landscape areas, or areas of open space as determined by the Zoning Ordinance and these Administrative Standards.

Tree - Any self supporting woody perennial plant, which has a single trunk diameter of two (2) inches or more when measured at a point six (6) inches above ground level and which normally attains height of at least fifteen (15) feet at maturity, usually with one (1) main stem or trunk and many branches.

Tree Preservation and Replacement Plan - A drawing which depicts the boundaries and dimensions of a given lot or lots for which a land disturbance permit or building permit is sought, and which includes all of the following elements: topographic information at two-foot contour intervals; the location and dimensions of all existing

and proposed structures, driveways, public areas, drainage structures, water detention areas, utilities and all areas of cut and fill; and which identifies all areas of tree preservation and methods of tree protection within any protected zone, as well as in all areas of planting, including the common and botanical names of each proposed species, the number of plants of each species, the size of all plant materials, and the proposed location of all plant materials, and any unique features of the plant materials existing or proposed.

Tree density factor - A unit of measure used to prescribe and calculate required tree coverage on a site. Unit measurements are based upon tree size. Procedures for calculating tree density factors are provided in Section VII.

#### SECTION IV. Procedures

##### 1. Land Disturbance or Building Construction Permits

1. A tree preservation and replacement plan for single-family subdivisions shall be submitted as part of the land disturbance permitting process. These plans shall include the following information:
  - (a) Limits of land disturbance, clearing, grading, trenching and underground utilities.
  - (b) Tree protection zones.
  - (c) Staging areas for material storage, burning, mulching, parking, concrete washout and debris disposal.
  - (d) Areas of revegetation and tree density calculations.
  - (e) Erosion silt fencing may serve as tree preservation fencing.
2. A tree preservation and replacement plan for all non-residential and multi-family development shall be submitted with other permit construction drawings as part of the land disturbance or building construction permit process. This plan shall include the following information (a sample plan is illustrated in Figure 1):
  - (a) The definition of spatial limits.
    - (1) Limits of land disturbance, clearing, grading, trenching, and location of underground utilities.
    - (2) Staging areas for material storage, burning, parking, concrete washout, debris burial.

- (3) Tree protection zones.
  - (4) Exceptional trees or stands of trees.
  - (5) Areas of revegetation, and tree density calculations.
- (b) Detail drawings of tree protection measures (where applicable).
- (1) Protective tree fencing.
  - (2) Erosion control fencing.
  - (3) Tree protection signs.
  - (4) Transplanting specifications.
  - (5) Tree wells, aeration systems, retaining walls.
  - (6) Staking specifications.
  - (7) Other applicable drawings.
- (c) Procedures and schedules for the implementation, installation, and maintenance of tree protection measures.
3. These plans shall be reviewed by the County Arborist for conformance with the County Tree Preservation and Replacement Ordinance, and these Administrative Standards. Approval, reasons for changes, or denial shall be annotated on the tree protection plan, or otherwise stated in writing, and conveyed to the applicant.
  4. The County Arborist shall conduct a preliminary on-site analysis of all projects prior to permitting to evaluate the proposed site design in terms of its tree protection potential in accordance with these standards.
  5. No exceptional tree or stand of trees shall be removed or damaged without the express written consent of the County Arborist. Approval of the landscape/tree protection plan indicating the removal of those exceptional trees shall constitute this written consent.
  6. Issuance of the land disturbance or building construction permit is contingent upon approval of the landscape/tree protection plan.

7. All tree protection measures shall be installed prior to any land disturbance or building construction, and the County Arborist shall be contacted for an on-site pre-construction conference prior to land disturbance.
8. The County Arborist shall conduct follow-up site inspections and final inspections for enforcement of the County Tree Preservation and Replacement Ordinance and its Administrative Standards.

2. Tree Replacement

1. The following minimum landscape areas (TABLE 1) shall be established along the peripheral property lines outside the dedicated rights of way as indicated under the following conditions:
  - (a) When there are no requirements for buffers pursuant to Section 6-3016 of the Rockdale County Zoning Ordinance;
  - (b) When clearing and or grading is to occur outside the buildable area of a lot;
  - (c) When the buildable area leaves no open space.

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**TABLE 1**  
**MINIMUM LANDSCAPE AREAS (feet)**

ZONING DISTRICT	FRONT (or double front)	INTERIOR SIDE	REAR
R-3	30	0	10
O-I	25	0	15
C-1/C-2	25	0	15
M-1/M-2	20	0	10

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2. All surface parking lots shall be planted with shade trees in accordance with the following standards. Parking lot trees are counted towards the overall required tree density.
  - (a) A minimum of one (1) shade tree shall be planted for every three (3) parking spaces.
  - (b) A minimum planting area of 40 square feet shall be provided for every shade tree. These planting areas shall be no less than five (5) feet wide.

- (c) Parking lot shade trees shall be planted no closer than 15 feet on center (no closer than 15 feet apart).
  - (d) Parking lot shade trees can be located at the end of parking bays, between parking bays, and along the perimeters of parking lots.
  - (e) Linear planting strips between parking bays are recommended.
  - (f) Vehicle overhang into planting strips is allowable with a minimum vehicle/tree separation of two (2) feet. Wheel stops will be used where curbing does not provide the minimum vehicle/tree separation.
  - (g) Combination drainage swale/planting strips are allowable provided:
    - 1. Adequate drainage is provided for the chosen species.
    - 2. Bottomland hardwood species are used in areas of poor drainage.
- 
3. The replacement of trees shall occur in the minimum required buffers, open space and landscape areas, as determined by the Zoning Ordinances and these Administrative Standards:
- (a) To establish the minimum tree density requirements for the site.
  - (b) Where grading occurs outside the buildable area of the lot.
  - (c) If the lot's buildable area leaves no protected zone.
  - (d) If no trees are present within an existing protected zone.
  - (e) Where exceptional trees or stands of trees within the buildable portion of the lot are to be removed.
  - (f) Where exceptional trees or stands of trees, and trees within otherwise designated tree protective zones have been irreparably damaged or removed through land disturbance or construction activities.
4. In all zoning districts the volume of replacement of trees on a site must be sufficient so as to produce a total site-tree density factor of no less than 15 units per acre. The use of flowering ornamentals may not be used in the replacement tree density calculation. The terms unit and tree are not interchangeable. Procedures for determining the site density and tree replacement requirements are provided in SECTION VII. A sample density calculation is provided in TABLE 2.

5. Landscape strips must contain a minimum of one (1) shade tree per 40 linear feet for strips up to 25 feet wide, and one (1) shade tree for every 30 linear feet for strips greater than 25 feet wide. Clumping is permitted.
6. Required buffer strips must be planted where sparsely vegetated or disturbed so as to provide an effective visual barrier within two years of planting. Plants shall consist of one evergreen row of plant material for every 10 feet of buffer width, and spaced at 10 foot centers in staggered rows. Disturbances to buffer strips and buffer plant materials are subject to County Arborist approval.
7. The spacing of replacement trees shall be compatible with site spatial limitations and shall take into consideration species size and growth patterns.
8. Where the County Arborist has determined that site spatial constraints result in an absolute inability to provide tree density, as many trees as possible shall be planted on site. The remaining balance of required trees shall be provided for by either (1) planting on public properties at locations designated by the County Arborist, or (2) by the establishment of an escrow account representing the value of the remaining required trees. The amount to be deposited into the escrow account shall be determined by the County Arborist based on standards established by the Council of Tree and Landscape Appraisers and said funds shall be used to mitigate the effects caused by the loss of the required tree plantings.
9. Species selected for replacement must be ecologically compatible with the specifically intended growing site.
10. When removal has been authorized, exceptional trees and stands of trees shall be replaced by species with potentials for comparable size and quality. Tree replacement in addition to the minimum site tree density may be required in recompense for the removal of specimen trees.
11. Species selection and replacement densities are subject to County Arborist approval.
12. When required by the County Arborist, the owner/developer of a project shall be required to furnish a bond or other financial security to insure the installation of required plant materials or survival of protected trees until the issuance of a certificate of occupancy or, in the case of single-family or duplex development only, the recording of a final plat. The bond amount shall be equal to or greater than 115 percent of the total required tree planting budget, including materials and labor.

## SECTION V. Methods of Tree Protection

- A. Planning considerations. Tree space is the most critical factor in tree protection throughout the development process. The root system of trees can easily extend beyond the dripline of the tree canopy (Figure 2). The root system within the dripline region is generally considered to be the critical root zone. Disturbance within this zone can directly affect a tree's chances for survival. To protect these critical root zones the following standards shall apply:
1. The use of tree save islands and stands is encouraged rather than the protection of individual (non-specimen) trees scattered throughout a site. This will facilitate ease in overall site organization as related to tree protection.
  2. The protective zone of exceptional trees or stands of trees or otherwise designated tree save areas shall include no less than the total area beneath the tree(s) canopy as defined by the farthest canopy dripline of the tree(s). When necessary to protect the health of the tree, the County Arborist may require a protective zone in excess of the area defined by the tree's dripline.
  3. Layout of the project site utility and grading plans shall accommodate the required tree protective zones. Utilities shall be placed along corridors between tree protective zones.
  4. Construction site activities such as parking, material storage, concrete washout, burnhole placement, and other activities shall be arranged so as to prevent disturbances within tree protective zones.
  5. No disturbance shall occur within the protective zone of exceptional trees or stands of trees without prior approval by the County Arborist.
- B. Protective barriers.
1. Active protective tree fencing shall be installed along the outer edge of and completely surrounding the critical root zones of all exceptional trees or stands of trees, or otherwise designated tree protective zones, prior to any land disturbance.
  2. Tree fencing shall be a minimum four (4) feet high, constructed in a post and rail configuration. A 2 inch x 4 inch post and a double 1 inch x 4 inch rail painted orange is recommended. Four foot orange polyethelene laminar safety fencing is also acceptable (Figure 3).

3. Where approved, passive forms of tree protection may be utilized to delineate tree save areas which are remote from areas of land disturbance. These areas must be completely surrounded with continuous rope or flagging (heavy mil., minimum 4" wide). All passive tree protection must be accompanied by "Keep Out" or "Tree Save" signage (Figure 4).
4. All tree protection zones shall be designated as such with "tree save area" signs posted visibly on all sides of the fenced in area. These signs are intended to inform subcontractors of the tree protection process. Signs requesting subcontractor cooperation and compliance with tree protection standards are recommended for site entrances. Sign design shall be established by Rockdale County to insure uniformity.
5. All exceptional trees or stands of trees or otherwise designated tree protective zones shall be protected from the sedimentation of erosion material.
  - (a) Silt screening must be placed along the outer uphill edge of tree protective zones at the land disturbance interface.
  - (b) Silt screening should be backed by 12 gauge 2 inch x 4 inch wire mesh fencing in areas of steep slope.
6. All tree fencing and erosion control barriers shall be installed prior to and maintained throughout land disturbance process and building construction, and shall not be removed until landscaping is installed.

C. Encroachment.

Most trees can tolerate only a small percentage of critical root zone loss. If encroachment is anticipated within the critical root zones of exceptional trees, stands of trees, or otherwise designated tree protective zones, the following preventive measures shall be employed:

1. Clearing activities: Roots often fuse and tangle amongst trees. The removal of trees adjacent to tree save areas can cause inadvertent damage to the protected trees. Wherever possible, it is advisable to cut minimum 2 foot trenches (e.g. with a "ditch witch") along the limits of land disturbance, so as to cut rather than tear, roots. Trenching may be required for the protection of exceptional specimen trees.
2. Soil compaction: No parking, material storage or traffic shall be permitted within the designated tree protective zones.
3. Utility Installation: The installation of utilities through a protective zone should occur by way of tunneling rather than trenching (Figures 5 and 6).

4. Grade changes: A decrease in grade is best accomplished with the use of retaining walls or through terracing (Figure 7).
5. Where the County Arborist has determined that irreparable damage has occurred to trees within tree protective zones, the trees shall be removed and replaced.

## SECTION VI. General Criteria for the Determination of Exceptional Trees or Tree Stands.

### A. Exceptional tree.

1. Any tree in fair or better condition, in accordance with the standards established by the Council of Tree and Landscape Appraisers, which equals or exceeds the following diameter sizes.
  - (a) Large hardwoods, e.g. oaks, hickories, yellow poplars, sweetgums, etc., 24" dbh.
  - (b) Large softwoods, e.g. pines, deodar cedars, etc., 30" dbh.
  - (c) Ornamentals, e.g. dogwoods, redbuds, sourwoods, crape myrtles, etc., 8" dbh.
2. A tree in fair or better condition, in accordance with the standards established by the Council of Tree and Landscape Appraisers, must meet the following minimum standards.
  - (a) A life expectancy of greater than 15 years.
  - (b) A relatively sound and solid trunk with no extensive decay or hollow, and less than 20 percent radial trunk dieback.
  - (c) No more than one major and several minor dead limbs (hardwoods only).
  - (d) No major insect or pathological problem.
3. A lesser size tree can be considered exceptional if it is a rare or unusual species, of exceptional quality, or of historical significance.
4. A lesser size tree can be considered an exceptional specimen if it is specifically used by a builder, developer, or design professional as a focal point in a project of landscape.

B. Exceptional tree stands.

A contiguous grouping of trees which has been determined by the County Arborist to be of high value. This determination shall be based upon the following criteria:

1. A mature even aged stand;
2. A stand with purity of species composition of a rare or unusual nature;
3. A stand of documented local, state or national historic significance; or
4. A stand exhibiting exceptional aesthetic quality based upon a rare or unusual combination of species, size, age, or significance.

SECTION VII.

Procedure for calculating the required tree replacement density factor. A sample density calculation follows in TABLE 2.

Step 1. Calculate the required density factor for the site (DFS) by multiplying the number of site acres by 15.

EXAMPLE: A 2.2 acre site has a DFS of  $2.2 \times 15 = 33$

Step 2. Calculate the existing density factor (EDF) of trees which will remain on site to be protected during construction. EDF is determined by converting the DBH of individual existing trees to density factor units, using TABLE 3. These units are then totaled to determine the EDF for the site.

EXAMPLE: A total of 15 trees will remain on the 2.2 acre site in Step 1. These trees include:

- 7 - 12" pines
- 3 - 14" pines
- 3 - 18" oaks
- 1 - 20" hickory
- 1 - 30" oak

When converted to density factor using TABLE 3, we arrive at the following values:

<u>DBH</u>	<u>UNITS</u>	<u>#TREES</u>		
12"	.8	X 7	=	5.6
14"	1.1	X 3	=	3.3
18"	1.8	X 3	=	5.4
20"	2.2	X 1	=	2.2
30"	4.9	X 1	=	<u>4.9</u>
				21.4

The sum total of units, 21.4, is the EDF.

Step 3. Calculate the required replacement density (RDF) by subtracting the EDF (Step 2) from the DFS (Step 1).

$$RDF = DFS - EDF$$

Example:  $RDF = 33 - 21.4$   
 $RDF = 11.6$

Step 4. The RDF can be converted back to caliper inches using TABLE 4. Any number or combination of transplantable size trees can be used so long as their total density factor units will equal or exceed the RDF.

EXAMPLE: On the 2.2 acre site the following number and size of trees will be planted to meet the RDF:

<u>NUMBER</u>	<u>SIZE</u>	<u>SPECIES</u>	<u>DENSITY FACTOR</u>
12	2"	RED MAPLES	(12 X .5) = 6.0
6	6"	OAKS	(6 X 1.0) = <u>6.0</u>
			12.0

12.0 is greater than the RDF of 11.6 thus the minimum requirements have been satisfied.

**TABLE 2.**  
**SAMPLE TREE DENSITY CALCULATION**

Required DFS

3.5 acres x 15 units/acre = 52.5 units required.

EDF (Existing Density Factor)

<u>Size</u>	<u>Units</u>	<u>Number</u>	<u>Total Units</u>
24"	3.1	2	6.2
18"	1.8	10	18.0
10"	0.6	8	4.8
Total EDF			29.0

RDF (Replacement Density Factor)

<u>Size</u>	<u>Units</u>	<u>Number</u>	<u>Total Units</u>
3"	0.6	10	6.0
2"	0.5	80	40.0
Total RDF			46.0

EDF + RDF = X which equals or exceeds DFS

29 + 46.0 = 75.0 which equals or exceeds 52.5; therefore, DENSITY FACTOR IS SATISFIED.

**TABLE 3.**  
**EXISTING TREES TO REMAIN.**

Conversion from DBH to density factor units for trees remaining on site.

DBH	UNITS	DBH	UNITS	DBH	UNITS
1-9"	.5	23"	2.9	37"	7.5
10"	.6	24"	3.1	38"	7.9
11"	.7	25"	3.4	39"	8.3
12"	.8	26"	3.7	40"	8.7
13"	.9	27"	4.0	41"	9.2
14"	1.1	28"	4.3	42"	9.6
15"	1.2	29"	4.6	43"	10.1
16"	1.4	30"	4.9	44"	10.6
17"	1.6	31"	5.2	45"	11.0
18"	1.8	32"	5.6	46"	11.5
19"	2.0	33"	5.9	47"	12.0
20"	2.2	34"	6.3	48"	12.6
21"	2.4	35"	6.7	49"	13.1
22"	2.6	36"	7.1	50"	13.6

**TABLE 4.**  
**REPLACEMENT TREES.**

Conversion from caliper to density factor units for replacement trees.

CALIPER	UNITS	CALIPER	UNITS
1"	Not Accepted	8"	1.3
2"	.5	9"	1.5
3"	.6	10"	1.7
4"	.7	11"	1.9
5"	.9	12"	2.1
6"	1.0	13"	2.3
7"	1.2	14"	2.5

1. Container grown pine trees are given replacement credit as follows:

<u>SIZE</u>	<u>UNITS</u>
7 GALLON	.4
*3 GALLON	.2

\*The use of 3-gallon pines is permitted only with prior approval of the County Arborist.

2. Tree relocation: Replacement units will be granted to trees relocated on site. Tree relocation is subject to County Arborist approval.

## SECTION VIII. CHECK LIST FOR TREE PROTECTION LANDSCAPE PLAN REVIEW.

### A. Tree Protection

A tree preservation and replacement plan shall be submitted as a separate drawing to include the following:

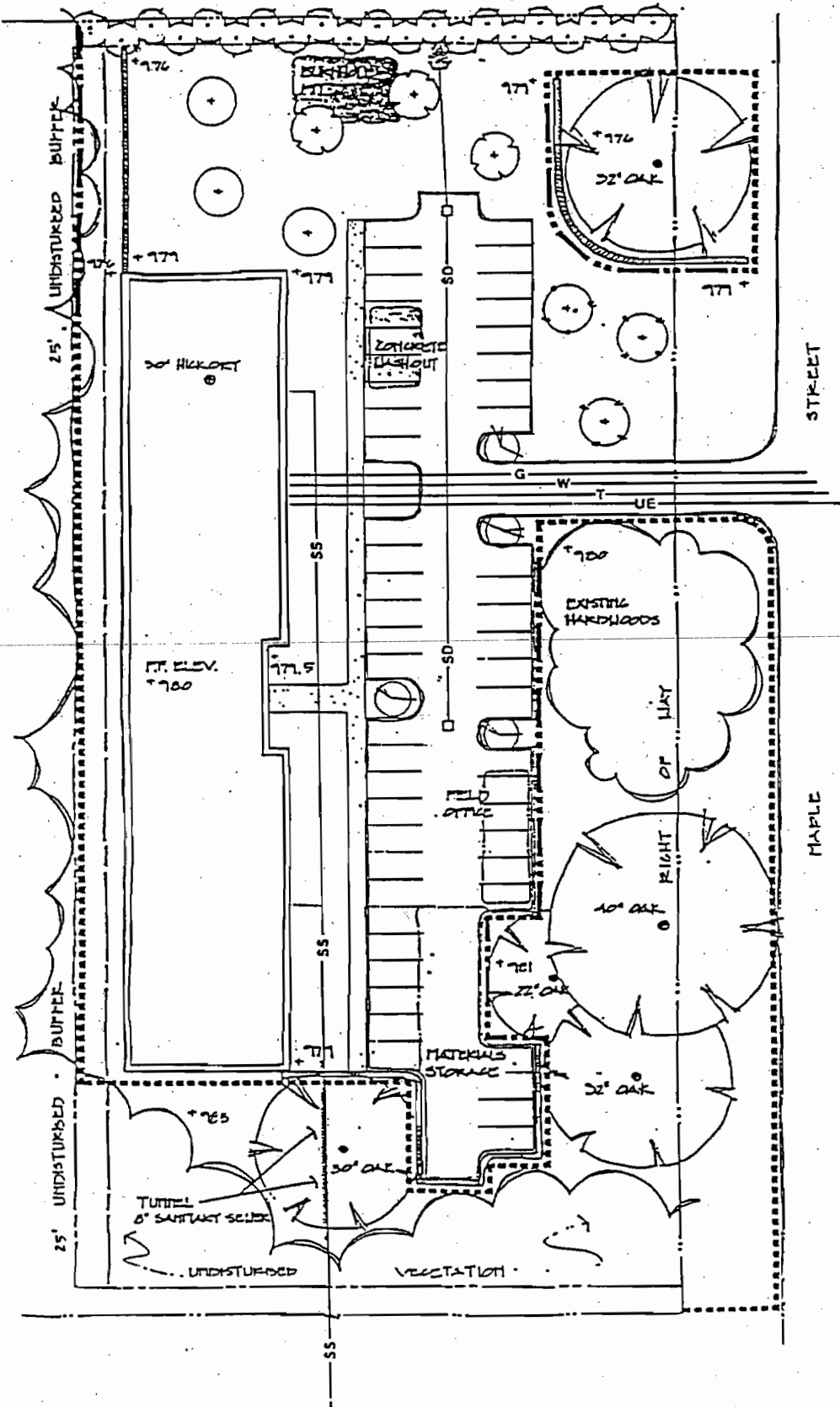
1. All tree protection zones and areas of revegetation.
2. All natural buffers, required landscape areas, and landscape parking islands.
3. Exact location of all exceptional trees or stands of trees.
4. Exact location of all exceptional trees when their preservation is questionable or might result in a change of the site design.
5. Indicate those exceptional trees to be removed. Removal of exceptional trees is subject to County Arborist approval.
6. Limits of clearing and land disturbance such as grading, trenching, etc., where these disturbances may affect tree protection zones.
7. Proposed location of underground utilities.
8. Methods of tree protection shall be indicated for all tree protection zones, including tree fencing, erosion control, retaining walls, tunneling for utilities, aeration systems, transplanting, staking, signage, etc.
9. Indicate staging areas for parking, material storage, concrete washout, and debris burn and burial holes where these areas might affect tree protection.
10. The required site tree density factor must be satisfied. Compliance shall be demonstrated on the tree protection plan. Existing trees or stands of trees used in the density calculation must be indicated on the drawing.
11. The use of flowering ornamental replacement trees may not be used in density calculation.
12. Replacement trees used in density calculations must be ecologically compatible with the intended growing site. Existing hardwood trees must be replaced with acceptable hardwood species.
13. An accurate tree survey performed by a Registered Land Surveyor will be required if existing trees are to be counted toward RDF. With the approval of the County Arborist, alternative professionally recognized methods of tree assessment may be accepted.

### B. Landscaping

1. Indicate the location of all proposed trees.
2. Include planting schedules with proposed tree names (botanical and common) and any special planting notes.
3. Provide planting and staking details.

### C. Notes

1. The following notes shall be indicated on both tree protection plans and grading plans in large letters:
  - (A) CONTACT ROCKDALE COUNTY DEPARTMENT OF PUBLIC SERVICES AND ENGINEERING TO ARRANGE A PRE-CONSTRUCTION CONFERENCE WITH THE COUNTY ARBORIST PRIOR TO ANY LAND DISTURBANCE.
  - (B) ALL TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO GRADING.



### PLANT LIST

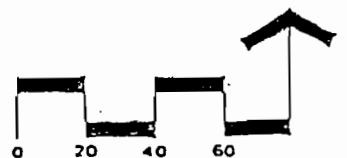
SPECIES	SIZE	QUANT.	COND.	SPACING
VIRGINIA PINE PINUS VIRGINIANA	4' HT.	21	B+B	12' OC
YELLOW OAK QUERCUS PHELLOS	6" DBH	4	SPRUC	35' OC
PIN OAK QUERCUS PALLISTRIS	8" DBH	7	SPRUC	35' OC
WHITE OAK QUERCUS ALBA	8" DBH	5	SPRUC	35' OC
SCARLET OAK QUERCUS COCAINEA	8" DBH	5	SPRUC	35' OC

### LEGEND

- TREE FENCING
- FENCE W/ DROPPH CONTROL
- RETAINING WALL
- TUNNEL
- G ----- GAS
- UE ----- UNDERGROUND ELECTRICAL
- W ----- WATER
- T ----- TELEPHONE
- SS ----- SANITARY SEWER
- SD ----- STORM DRAINAGE
- ⊗ REMOVED TREE
- ⊙ EXISTING TREE
- PROPERTY LINE
- BUILDING SETBACK LINE

### NOTES

SAMPLE LANDSCAPE/TREE PROTECTION PLAN  
FIGURE 1



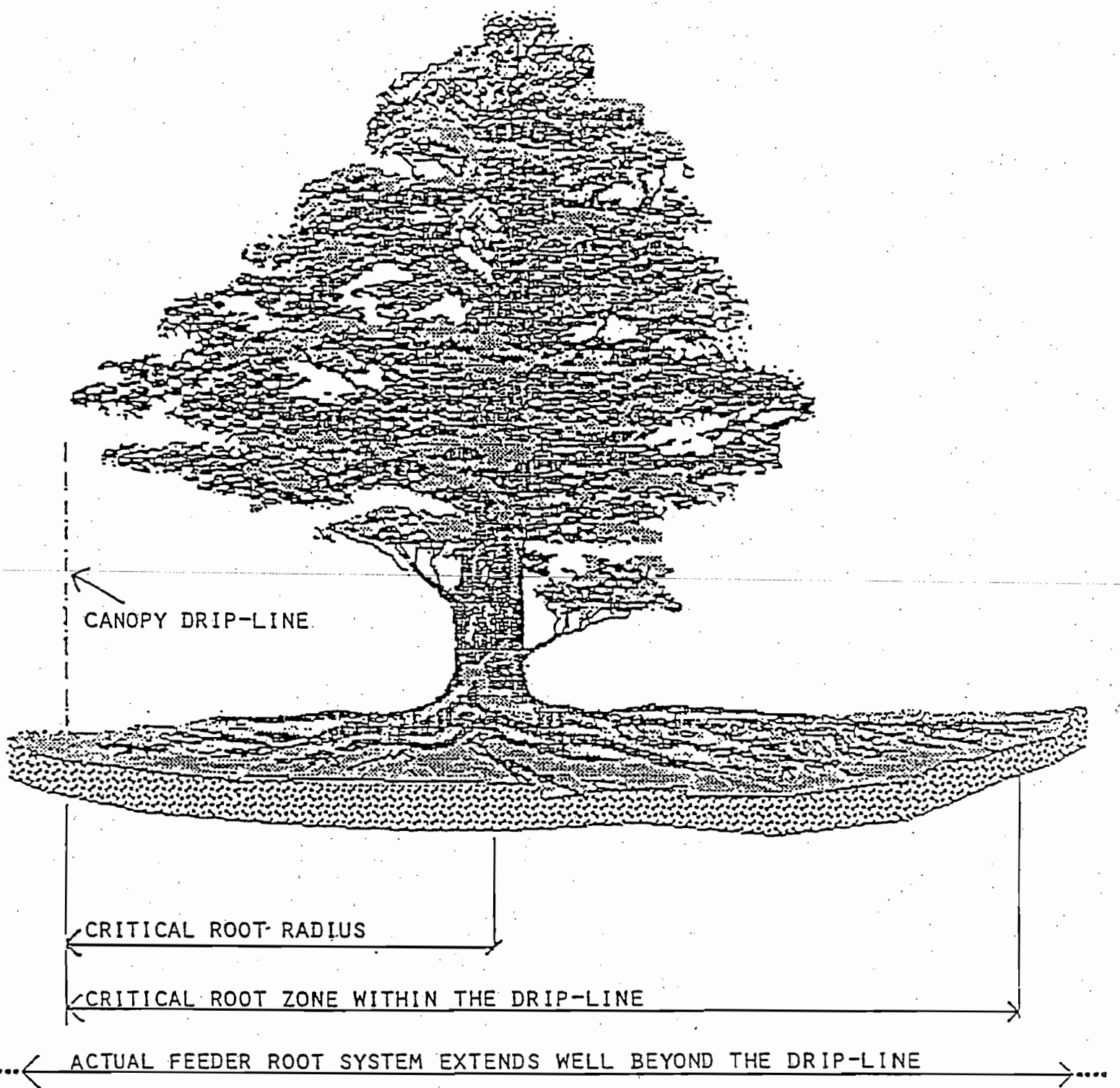


FIGURE 2 TYPICAL CRITICAL ROOT ZONE

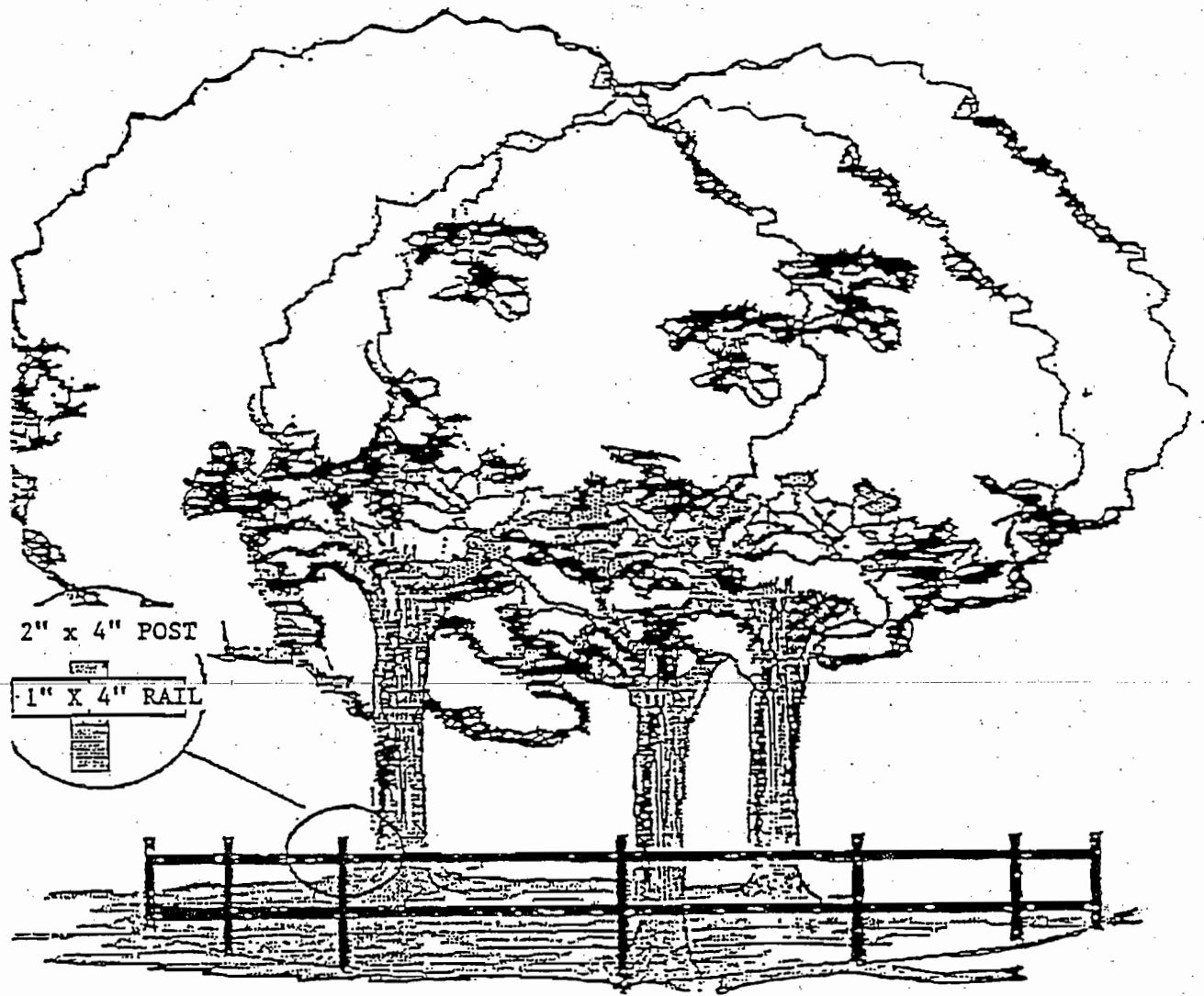
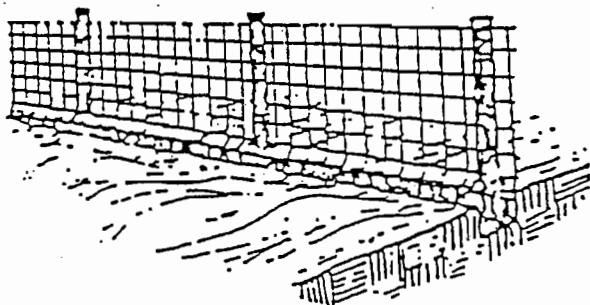


FIGURE 3 ACTIVE PROTECTIVE TREE FENCING



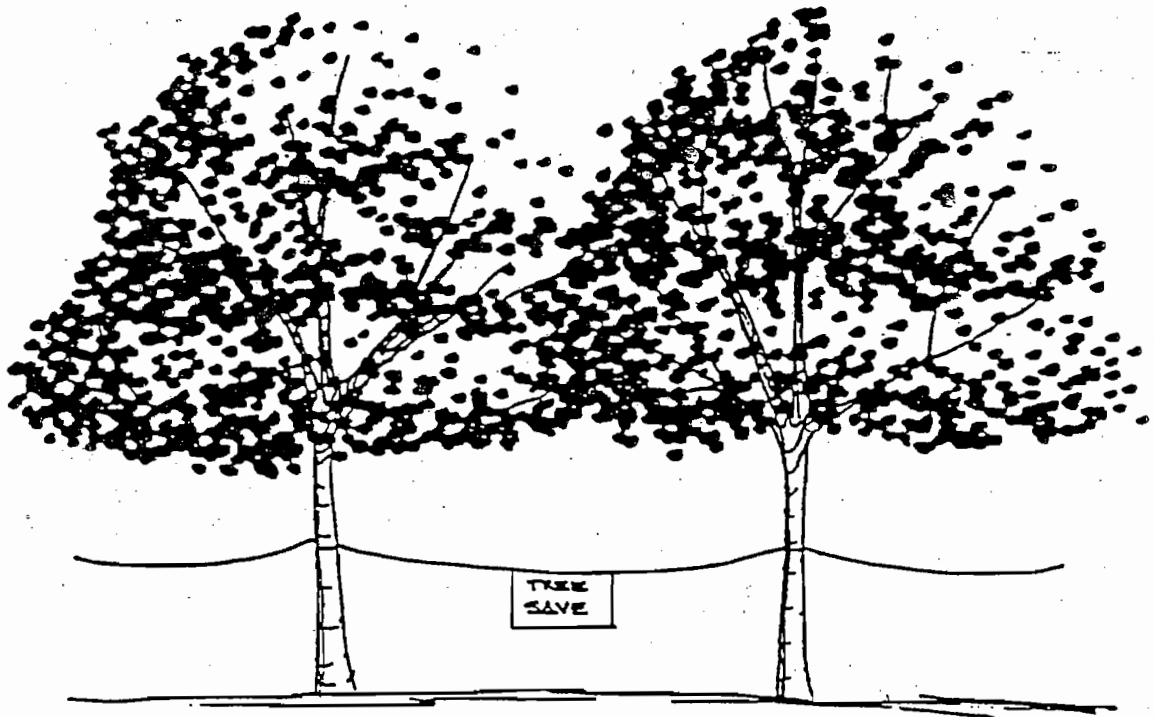
ALTERNATIVE TREE FENCING

4' HIGH, ORANGE,  
POLYETHYLENE LAMINAR  
SAFETY NETTING.

MINIMUM 4", HEAVY MILL, PLASTIC, DARK LETTERING ON BRIGHT BACKGROUND

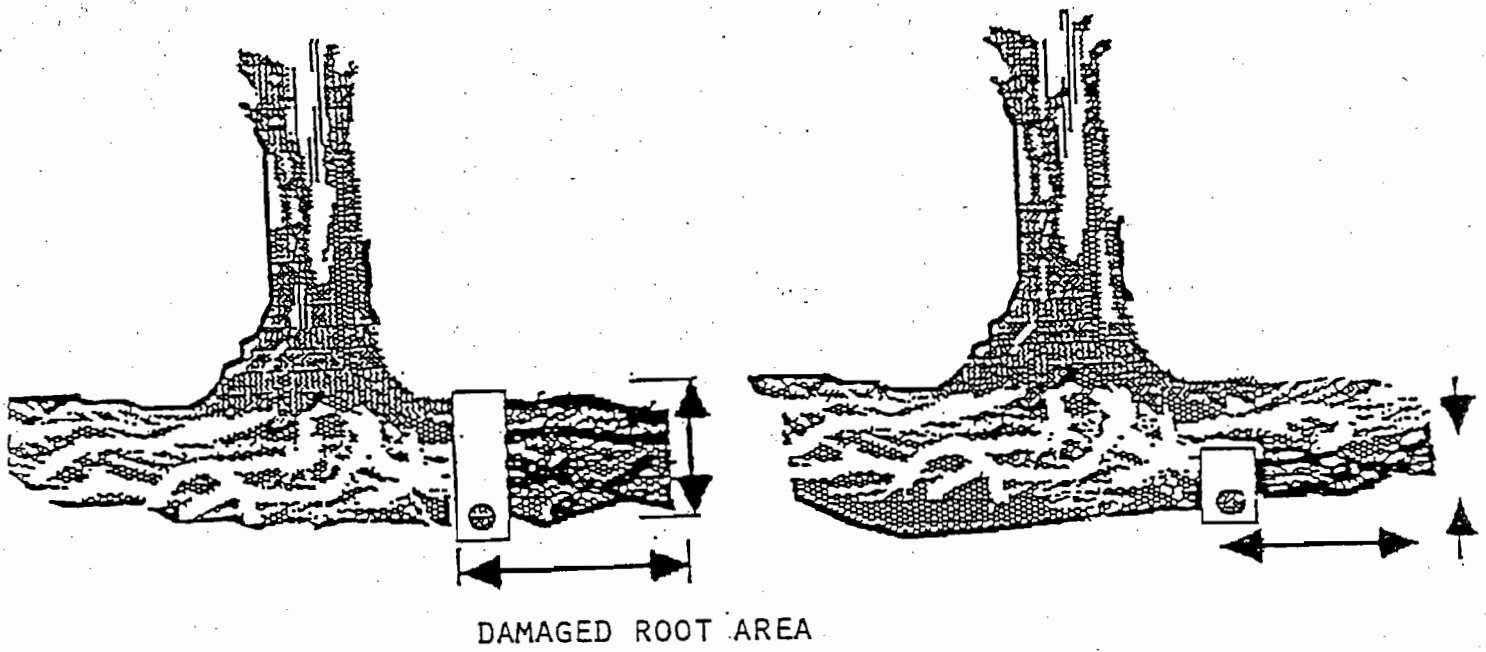
**TREE PROTECTION AREA**  
**CAUTION DO NOT ENTER**

← CONTINUOUS →



PASSIVE PROTECTION WITH ROPE AND SIGNAGE

FIGURE 4 PASSIVE PROTECTION DETAIL



TRENCHING

TUNNELING

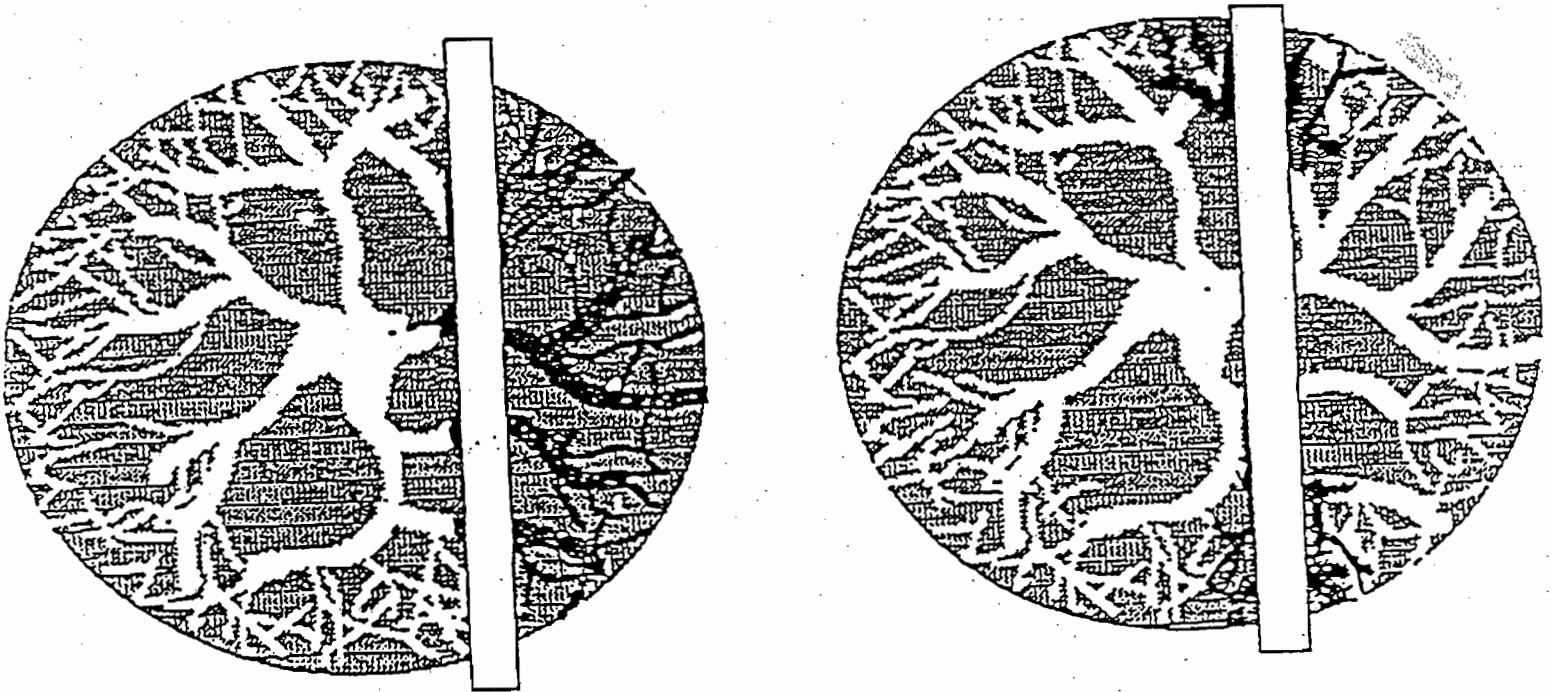


FIGURE 5 ROOT LOSS FROM TRENCHING VERSUS TUNNELING  
HEAVY SHADING DENOTES AREAS OF DAMAGED ROOTS.

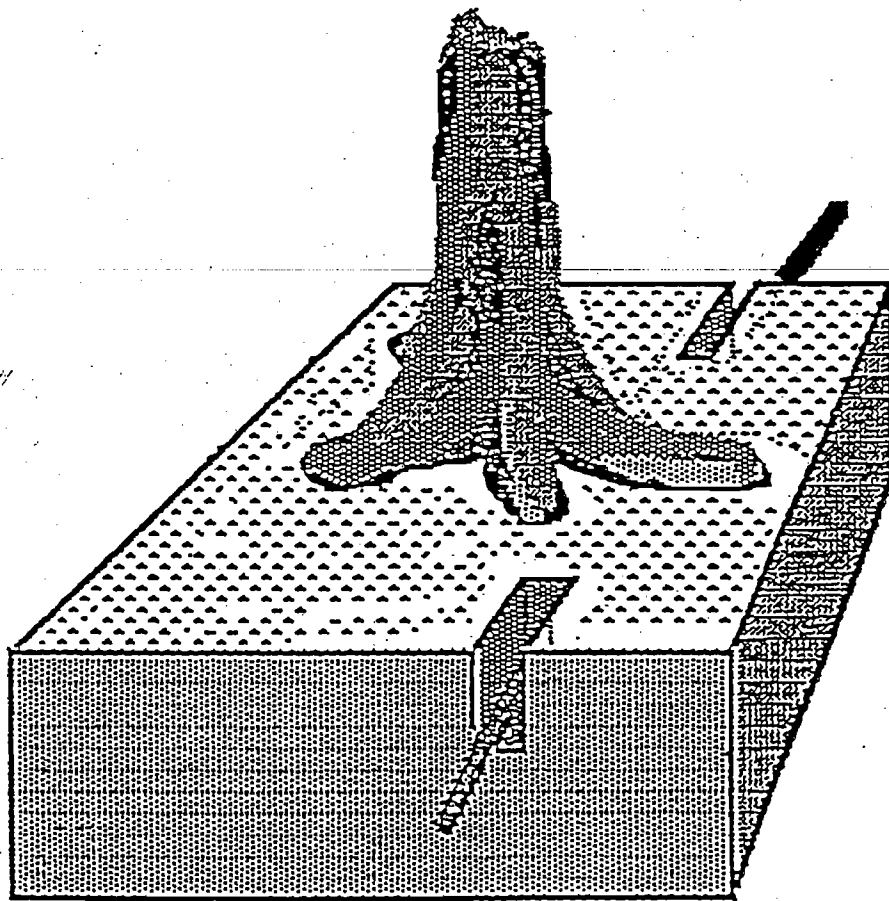


FIGURE 6 TUNNELING FOR UNDERGROUND UTILITIES

## Approved Trees for Replacements Rockdale County Ordinance #0-2001-03

The ordinance states on page 7, item 11: "Species selection and replacement densities are subject to county arborist approval". The County Arborist/Urban Forester approves the following native tree species. To encourage species diversity, no more than 25% of each genus will be allowed for the site plan. At the bottom of the listing are sampled wholesale nurseries that stock most of these species of quality and sizes acceptable to the county.

(Excellent website for tree information is <http://hort.ifas.ufl.edu/trees>. Rockdale County does not endorse any vendor, and there are many other local wholesale nurseries available. Ray Probart, Urban Forester/Arborist)

### SHADE TREES FOR PARKING LOT ISLANDS & TRAFFIC EASABOUTS:

Trees that are tolerant of intense heat loads, minimal seed litter, and shade pavement.

<u>Common name</u>	<u>Genus and species</u>	<u>Hgt</u>	<u>Width</u>	<u>Crown form</u>	<u>Vendors</u>
Am. hornbeam	<i>Carpinus caroliniana</i>	25	25**	upright	BS, SG
Shumard oak	<i>Quercus shumardii</i>	80	50	upright	LO, MO, GF, SG
Willow oak 'Hightower'	<i>Quercus phellos</i>	70	50	rounded	BS,
Overcup oak 'Highbeam'	<i>Quercus lyrata</i>	30	30	rounded	BS, MO

### SHADE TREES FOR PARKING LOT PERIMETERS:

In addition to the above species, the following species are useful in areas with more surface area for root development (at least 400 square feet). The following trees exhibit intense fall or spring color, have value for wildlife, and shade the asphalt.

<u>Common name</u>	<u>Genus and species</u>	<u>Hgt</u>	<u>Width</u>	<u>Crown form</u>	<u>Vendors</u>
Yellow poplar	<i>Liriodendron tulipifera</i>	100	40	oval	BS, GF, LO, SG
Yellowwood	<i>Cladrastis kentukea</i>	30	40	vase shape**	BS, HD
Scarlet oak	<i>Quercus coccinea</i>	65	40	rounded	MG, GF, HD
Nuttall oak	<i>Quercus nuttalli</i>	70	40	rounded	BS, LO, MO, SG
White ash 'Rosehill'	<i>Fraxinus americana</i>	60	45	rounded	MG, SG
Red maple 'October Glory'	<i>A. rubrum</i>	60	30	rounded	MG, SG
Red maple 'Summer Red'	<i>A. rubrum</i>	60	30	rounded	MO
S. Sugar maple	<i>Acer barbatum</i>	60	40	rounded	SG
Blackgum	<i>Nyssa sylvatica</i>	70	25	oval	BS, SG, HD
Georgia oak	<i>Quercus georgiana</i>	30	20	rounded	MO, SG
Eastern redbud	<i>Cercis canadensis</i>	35	20	upright**	BS, LO, MO, SG
Sourwood	<i>Oxydendrum arboreum</i>	45	25	upright**	LO, HD
Carolina silverbell	<i>Halesia carolina</i>	40	25	irregular	LO, HD
River birch 'Dura Heat'	"" 'Dura Heat'	60	50	spreading	BS, LO, MO, SG

\*\* Trees useful for islands adjacent to sidewalk and buildings.

(Note: Winged or Chinese elms, or cultivars are **not** allowed; too risky with Dutch elm disease)

## Approved Trees for Replacements (cont.) Rockdale County Ordinance #0-2001-03

### TREES FOR BUFFER STRIPS:

Evergreen species useful landscape strips. Preference is for clustering and linear use of two or more species for more efficient screening.

<u>Common name</u>	<u>Genus and species</u>	<u>Hgt</u>	<u>Width</u>	<u>Crown form</u>	<u>Vendors</u>
E. redcedar 'Brodie'	<i>Juniperus virginiana</i>	40	10	pyramidal	LO, SG
E. redcedar 'Burkii'	<i>Juniperus virginiana</i>	40	15	pyramidal, "blue" needles	
S. wax myrtle	<i>Myrica cerifera</i>	15**	10	multi-stem	LO, SG
Savannah holly	<i>Ilex x attenuata</i> 'Savannah'		10	elliptical	BO, MO, GF
American holly	<i>Ilex opaca</i>	40	20	pyramidal	LO, SG
Southern magnolia	<i>Magnolia grandiflora</i>	80	30	pyramidal	BS, MO, SG
Sweetbay magnolia	<i>Magnolia virginiana</i>	30	20	oval	BS, LO, MO, HD

Note: **Pine species or Leyland cypress are not acceptable.** The above evergreen species provide better screening, wildlife value, less risk with insects or disease, and seasonal color.

### TREES COMPATIBLE WITH OVERHEAD & UNDERGROUND UTILITY LINES:

\*\* Any tree species listed above with a mature height of **less than 20 feet** is compatible. The following species are also available.

<u>Common name</u>	<u>Genus and species</u>	<u>Hgt</u>	<u>Width</u>	<u>Crown form</u>	<u>Vendors</u>
Winterberry	<i>Ilex verticillata</i>	10	10	multi-stem	BS, LO, SG
Fringetree	<i>Chionanthus virginicus</i>	15	8	oval	BS, SG
Yaupon holly	<i>Ilex vomitoria</i>	12	8	irregular	BS, LO, SG
River birch, dwarf	<i>B. nigra</i> , 'Little King'	10	10	multi-stem	GF
Southern magnolia	<i>M. grandiflora</i> 'Little Gem'	15	10	pyramidal	LO, SG, GF
American smoketree	<i>Cotinus obovatus</i>	15	15	round	
Witchhazel	<i>Hammamelis virginiana</i>	15	10	vase shape	HD

### SAMPLED GEORGIA WHOLESALE NURSERIES

<b>AJ:</b>	Arthur Jones	Mathews	(706) 547-3342	<a href="mailto:aajones@jeffersonenergy.com">aajones@jeffersonenergy.com</a>
<b>BS:</b>	Bold Springs	Monroe	(770) 267-9196	
<b>LO:</b>	Lone Oak	Grantville	(706) 637-6240	
<b>MO:</b>	Moon's	Loganville	(770) 554-6849	<a href="mailto:moonstreefarm@mindspring.com">moonstreefarm@mindspring.com</a>
<b>GF:</b>	Gralan Farms	Madison	(706) 557-8733	
<b>HD:</b>	Hanging Dog Valley	Murphy, NC	(828) 837-7921	

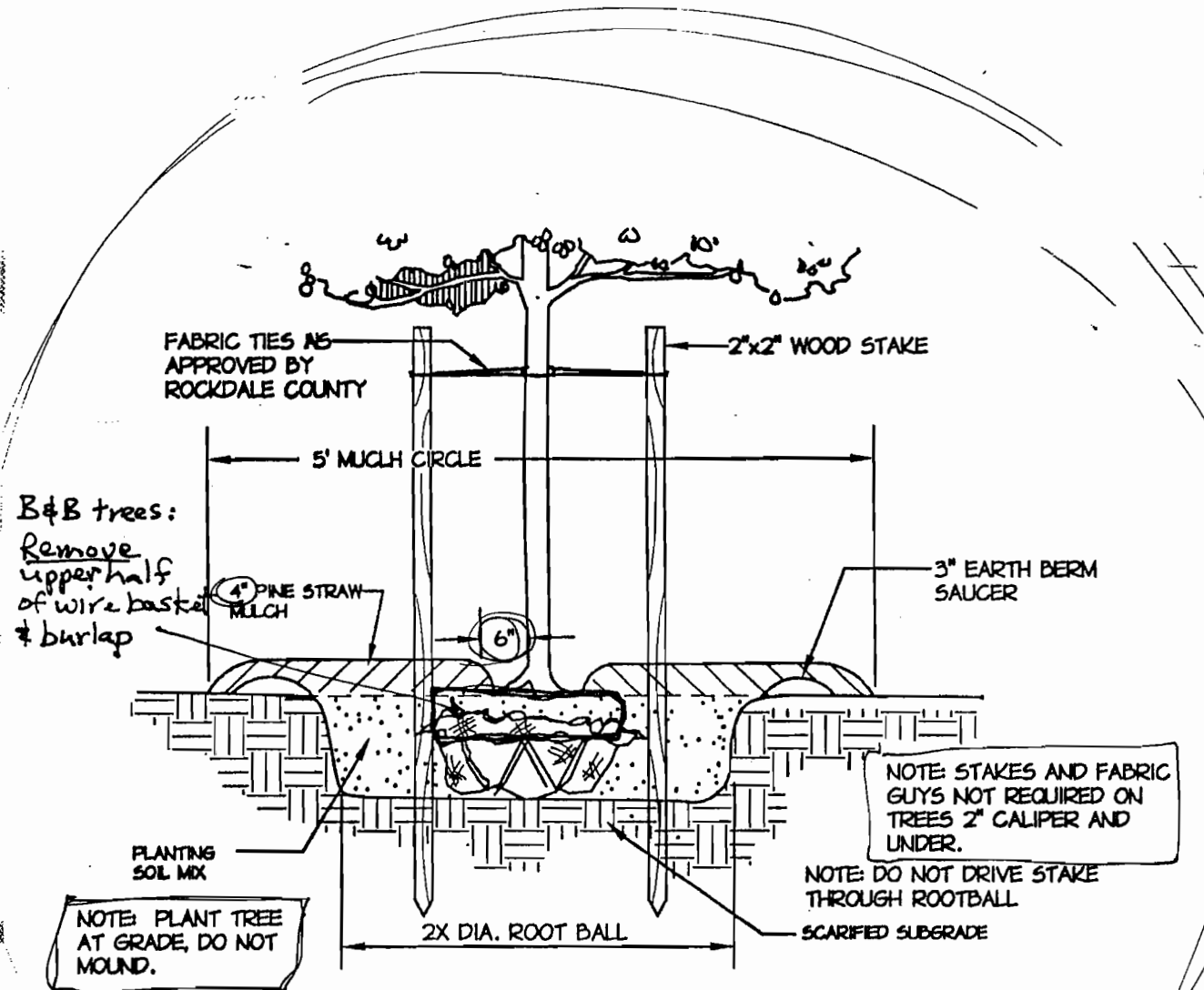
**Rockdale County PS&E**  
**Comments Required on Landscape Sheet(s)**  
Ray Probart, County Urban Forester, 5/05

**Tree protection specifications**, to be added to the Landscape Sheet:

- Locations of tree crown drip lines for all Exceptional trees to be protected will be shown on the landscape sheet, grading sheet, and erosion control sheet.
- Tree protection fence location shall also be noted on the erosion control sheet and the grading sheet. Such fence shall be downhill from silt fence or mulch.
- Detailed example drawings of tree protection will be shown on landscape plan.
- Active tree protection fencing (48" orange mesh) is required on all commercial developments. Support will be with 6 ft metal posts.
- Tree protection fencing shall always be located at the outside line of the tree crown (drip line).
- New subdivisions with Streamside Management Zones will have these zones protected with the active tree fencing. No dirt or silt is allowed to enter this zone.
- **Homebuilders** in new subdivisions shall protect all required stream buffers and Streamside Management Zones by installing **active** tree protection fencing.
- The only tree species allowed for planting in traffic easements or within new subdivisions are those trees listed on the "Approved Trees for Replacements".

**Tree planting specifications:** (These notes must appear on landscape sheet, along with tree planting detail drawings)

- No construction debris (aggregate, concrete, wood, etc) is allowed in parking lot tree islands or medians. Contractor will back fill with clean topsoil in such areas.
- Developer or builder will follow Rockdale County's "Approved Trees for Replacements". Only tree species native to the Piedmont Region are allowed.
- Contractor shall verify location of all underground and overhead utilities prior to planting. **No trees within 15 feet of any utility lines or septic systems.**
- There shall be **no** substitutions, deletions, or revisions to these landscape plans without prior written approval of the County Urban Forester.
- For balled & burlap trees, the upper ½ of the wire basket and burlap will be removed prior to the backfilling of soil. Backfilled soil will not have air pockets.
- All trees shall be straight trunked, full headed, without trunk damage or wounds, and shall meet the #1 quality standards.
- All trees will be planted at grade. No mounding of trees is allowed.
- Approved mulch will be at least 3" deep, and in a five (5) foot minimum diameter around each tree. No mulch or fill dirt will be within 4" of the tree trunk.
- No tree guys will be used on trees with trunk caliper of 2" or less. If larger trees are used, two stakes at opposite sides of each tree will support them. Approved fabric ties will be used instead of wire and rubber hoses.
- All tree ties and stakes will be removed 8 months after planting.
- All commercial developments shall include an irrigation system for supplying water to all trees at least twice per week for two months, then once per week.
- Contractor and owner will be responsible for the proper watering and maintenance of all planted trees during the one year of replacement guarantee.
- Any tree that dies during the **two years** after planting will be replaced by the property owner with tree of the original size and specifications.



B&B trees:  
 Remove  
 upper half  
 of wire basket  
 & burlap

NOTE: PLANT TREE  
 AT GRADE, DO NOT  
 MOUND.

NOTE: STAKES AND FABRIC  
 GUYS NOT REQUIRED ON  
 TREES 2" CALIPER AND  
 UNDER.

NOTE: DO NOT DRIVE STAKE  
 THROUGH ROOTBALL  
 SCARIFIED SUBGRADE

**TREE PLANTING SECTION**

PER REQUIREMENTS OF ROCKDALE COUNTY URBAN FORESTER  
 NOT TO SCALE