

City of Tullahoma

Landscaping Standards



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Landscaping Standards/Ordinance

Article V, Section 7

C. Landscaping Standards Ordinance:

1. **Purpose.** The objective of this ordinance is to improve the appearance of certain set back and yard areas and including off-street vehicular parking and open-lot sales and service areas in the City of Tullahoma and to protect and preserve the appearance, character and value of the surrounding neighborhoods and thereby promote the general welfare by providing for installation and maintenance of landscaping for screening and aesthetic qualities, since the City of Tullahoma finds that the peculiar characteristics and qualities of the City of Tullahoma justify regulations to perpetuate its aesthetic appeal on a citywide basis. (Commercial and Industrial)
2. **Enforcement.** This ordinance shall be a minimum standard and shall be enforced by the Department of Planning and Codes.
3. **Definitions.** In constructing the provisions of this ordinance and in addition to other terms or definitions in the City of Tullahoma's Municipal and Zoning ordinances, and the following definitions shall apply:
 - a. **Landscaping:** Landscaping shall consist of any of the following or combination thereof: materials such as, but not limited to, grass, ground covers, shrubs, vines, hedges, trees, and nonliving durable material commonly used in landscaping, such as but not limited to rocks, pebbles, sand, walls or fences but excluding paving.
 - b. **Encroachment:** Encroachment is defined as any protrusion of a vehicle outside of a park space, display area or access way into a landscaped area.
 - c. **Trees:** Trees shall be defined as self-supporting woody plants of species which normally grow to an overall height of a minimum of six (6) feet in the City of Tullahoma.
 - d. **Shrubs:** Shrubs required by this Ordinance shall be self-supporting, woody, evergreen species, as normally grown in the City of Tullahoma.
 - e. **Vines:** Vines are plants which normally require support to reach mature form.
4. **Applicability:** The provisions of these landscape standards shall apply to all new construction and also the alteration, repair, use and occupancy, location, maintenance, removal and demolition of existing structures where by more than 50 percent of the total land area of the parcel affected has been altered. These provisions shall apply to all off street parking areas and uses permitted in the 0-1, C-1, C-2, C-3, I-1, I-2, and I-3 zoning districts contained in this zoning ordinance. (See Article IV, Sections 8-14)
 - a. **Installation.** All landscaping shall be installed in a sound workmanship like manner and according to accepted good planting procedures with the quality of plant materials as hereinafter described. All elements of landscaping exclusive of plant material except hedges shall be installed so as to meet all other applicable ordinances and code requirements, including Table 1 within this standard. Landscaped areas shall require protection from vehicular encroachment as herein provided in Section 4(e) and 4 (f). The Director of Planning or designee shall inspect all landscaping and no certificates of occupancy or similar authorization will be issued unless the landscaping meets the provisions contained herein.

- b. Maintenance. The owner, tenant and their agent, if any, shall be jointly and severally responsible for the maintenance of all landscaping which shall be maintained in good condition so as to present a healthy, neat, and orderly appearance and shall be kept free from refuse and debris. All landscaped areas shall be provided with a readily available water supply with at least one outlet located within 150 feet of all plant material to be maintained. When a required landscaping material dies or fails to grow, the owner of such property will be required to replace the landscaping treatment with an equal or better material (approved by the Director of Planning).
- c. Plant Material
- 1) Quality. All plant material shall be clean and reasonably free of weeds and noxious or diseases. Workmanship shall be clean, neat, and aesthetically pleasing. Workmanship must also be performed in accordance with the recommended planting standard within this ordinance.
 - 2) Trees. Shall be species having an average mature spread of crown of greater than fifteen (15) feet in the City of Tullahoma and having trunks, which can be maintained in a clean condition over five (5) feet of clear wood. Trees having an average mature spread of crown less than fifteen (15) feet may be substituted by grouping the same so as to create the equivalent of a (15) feet crown spread. Trees species shall be a minimum of six (6) feet overall height immediately after planting. Any tree that is to be planted 12 feet or less from a public sidewalk, public road or other such public improvement, must be approved by the Director of Public Works and may require that a proper root barrier be installed when the tree is planted. A list of recommended tree species shall be maintained by the Planning & Code Administration Division, and are contained within the landscaping booklet.
 - 3) Shrubs and hedges. Shrubs shall be minimum of three (3) gallon in size when measured. Hedges, where required, shall be planted and maintained so as to form a continuous, unbroken, solid, visual screen within a maximum of one (1) year after time of planting.
 - 4) Vines. Vines shall be a minimum of thirty (30) inches in height immediately after planting and may be used in conjunction with fences, screens, or walls to meet physical barrier requirements as specified.
 - 5) Ground covers. Ground covers used in lieu of grass in whole or in part shall be planted in such a manner as to present a finished appearance and reasonably completed coverage within six (6) months after planting.
 - 6) Lawn grass. Grass areas shall be planted in species normally grown as permanent lawns in the City of Tullahoma. Grass areas may be sodded, plugged, sprigged or seeded except that a solid sod shall be used in swales or other areas subject to erosion, and providing that in areas where other solid sod or grass seed is used, nurse grass seed shall be sown for immediate effect and protection until coverage is otherwise achieved.

- d. Perimeter Landscaping Relating to Abutting Properties. On the site of a building or structure or open lot, providing an off-street parking area or other vehicular use areas where such areas will not be entirely screened visually by a building or structure from abutting property, that portion of the area not screened shall be provided with a wall or hedge or other durable landscaping barrier not greater than six (6) feet in height nor less than three and one-half (3 ½) feet in height to form a continuous screen between the off-street parking area or other vehicular use area and such abutting property. Such landscape barriers shall be located between the common lot line and the off-street parking area or other vehicular use area exposed to the abutting property provided the purpose of screening the off-street parking area and other vehicular use area is accomplished. If such barrier consists all or in part of plant materials, such plant materials shall be planted in a planting strip of not less than five (5) feet in width. In addition one tree shall be provided for each twenty-five (25) lineal feet of such landscape barriers or fractional part thereof. Such trees shall be located between the common lot line and the off-street parking area or other vehicular use area. Each such tree shall be planted in at least twenty-five (25) square feet of planting area with a minimum dimension of at least five (5) feet. Each such planting area shall be landscaped with grass, ground cover or other landscape material excluding paving in addition to the required tree(s). The provisions of this subsection shall not be applicable in the following situations:

- 1) When a property line abuts a dedicated alley, or to those portions of the property that are opposite a building or other structure located on the abutting property.
- 2) Where a proposed parking area or other vehicular use area abuts an existing hedge, wall or other durable landscape barrier on an abutting property, said existing barrier may be used to satisfy the landscape barrier requirements of this subsection provided that said existing barrier meets all applicable standards of this ordinance and protection against vehicular encroachment is provided for hedges.
- 3) Where the abutting property is zoned or used for non-residential uses, only the tree provision with its planting area as prescribed in this subsection shall be required; however the number of trees may be reduced to one tree for every 100 lineal feet or fraction thereof but all perimeter requirements shall apply within the front setback area.

- e. Sight Distance for Landscaping Adjacent to Public Rights of Way and Points of Access. When an access way intersects a public right of way or when the subject property abuts the intersection of two or more public rights of way, all landscaping within the triangular areas described below shall provide unobstructed cross-visibility at a level between three (3) feet and six (6) feet, provided however, trees having limbs and foliage trimmed in such a manner that no limbs or foliage extend into the cross-visibility area shall be allowed, provided they are so located so as not to create a traffic hazard. Landscaping except required grass or ground cover shall not be located closer than three (3) feet from the edge of any access way pavement. The triangular areas above referred to are:

- 1) The areas of property on both sides of an access way formed by the intersection of each side of the access way and the public right of way line with two sides of each triangle being ten (10) feet in length from the point of intersection and the third side being a line connecting the ends of the two other sides.

- 2) The area of property located at a corner formed by the intersection of two or more public rights of way with two sides of the triangular area being thirty (30) feet in length along the abutting public right of way lines, measured from their point of intersection, and the third side being a line connecting the ends of the other two lines.

- f. Existing Plant Material. In instances where healthy plant material exists on a site prior to its development, in part or in whole, for purposes of off-street parking or other vehicular use areas, the agency charged with the issuance of building permits may adjust the application of the above-mentioned standards to allow credit for such plant material, if in its opinion, such an adjustment is in keeping with and will preserve the intent of this Ordinance.

5. Plan Approval. Prior to the issuance of any permit for a office or industrial building, a site or landscaping plan shall be submitted to and approved by the Building Official. The landscape plan shall comply with the minimum planting requirements contained in Table 1 of these provisions for each type of zoning classification. The site or landscaping plan shall be drawn to scale, including dimensions and distances, and clearly delineate the existing and proposed parking spaces, or other vehicular use areas, access aisles, driveways, sprinklers or water outlet locations, and the location, size and description of all other landscape materials, the location and size of buildings, if any to be served, and shall designate by name and location the plant material to be installed or, is existing, to be used in accordance with the requirements hereof. No permit will be issued for such building or paving unless the site plan complies with the applicable provisions of these standards, no certificate of occupancy shall be issued until the landscaping is complete. It shall be unlawful to occupy the premises unless the landscaping is installed in accordance with the approved site plans or otherwise authorized by the Building Official.

City of Tullahoma-Landscaping Standards

Table 1- Planting Requirements

Tree Sizes (Minimum)

Zoning Classification	Deciduous Trees (2 1/2" caliper)		Evergreen (6 ft. minimum)		Shrubs (3 gal. minimum)	
	1 per 100 linear ft. of lot perimeter	or	1 per 100 linear ft. of lot perimeter	or	1 per 3 linear feet of building frontage	+
Office/ Medical	1 per 100 linear ft. of lot perimeter	or	1 per 100 linear ft. of lot perimeter	or	1 per 3 linear feet of building frontage	+
Commercial	1 per 100 linear ft. of lot perimeter	or	1 per 100 linear ft. of lot perimeter	or	1 per 3 linear feet of building frontage	+
Industrial	1 per 100 linear ft. of lot perimeter	or	1 per 100 linear ft. of lot perimeter	or	1 per 3 linear feet of building frontage	+
Residential						

Notes:

- (1.) All new commercial, office, and industrial sites are to have green (landscaped) buffer zones of at least 10 feet in width around the perimeter of lots, as determined by the Director of Planning. (If not available, must obtain variance).
 - (2.) All drainage ditches are to be sodded from ridge to ridge or other alternates accepted by the City of Tullahoma (i.e. concrete, asphalt, tile, box culvert, etc.).
 - (3.) All frontage for lots to be sodded. Other sides may be seeded and strawed.
 - (4.) All buffers between zone changes must have evergreen trees (semi sheared) and grass.
- Landscaping plan shall consider all sides of property (front, back and sides).
 Distribution of landscaping required for sides will depend on specific location, neighbors and total plan.

Trees to be considered by size may include the following on pages 8-10 of the Landscaping Standards Book (These trees have been identified by landscaping professionals as indigenous to the Southern Tennessee area).

Recommendations

for

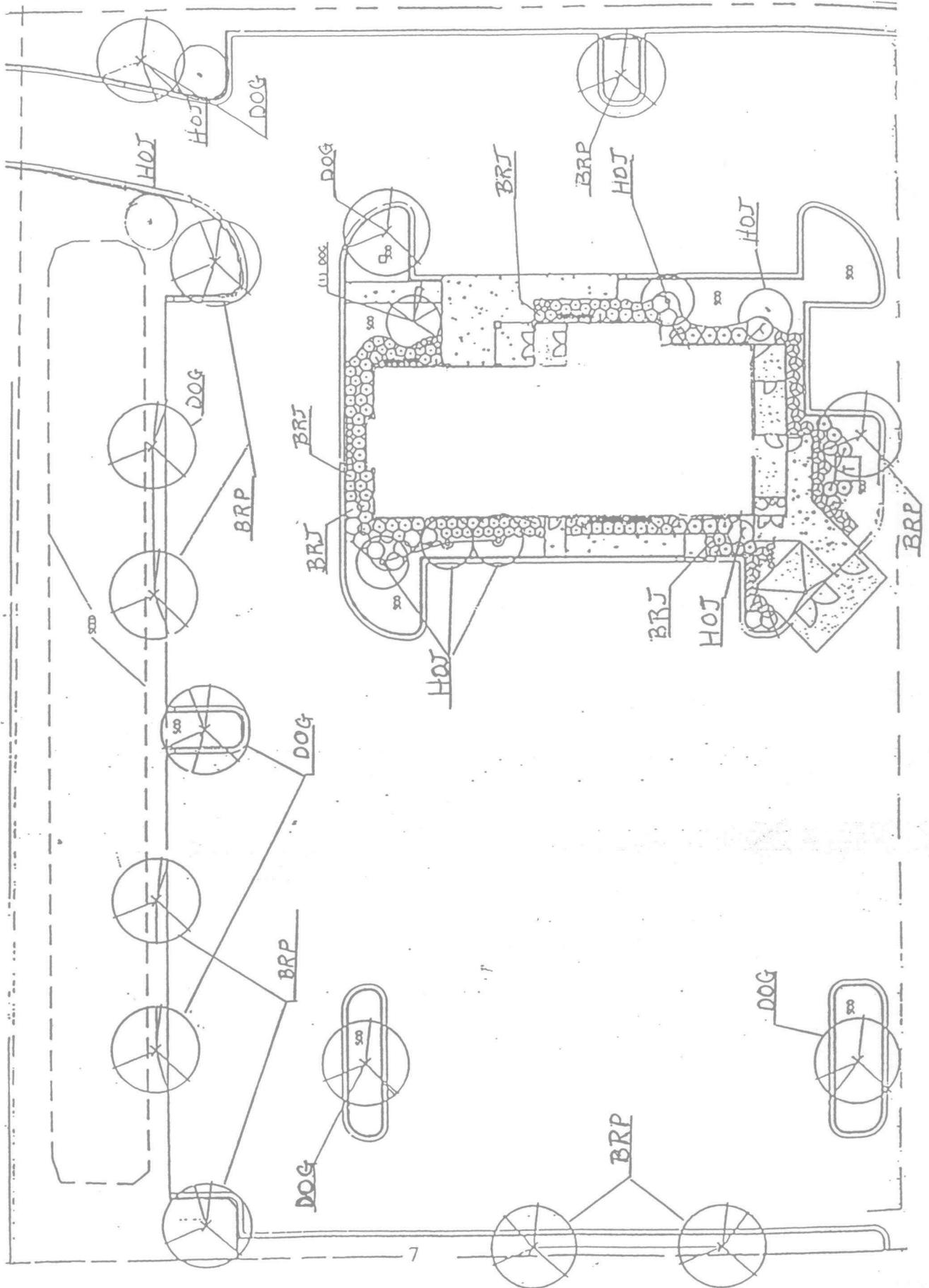
Landscaping

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2. *Familiar Trees of America*. William C. Grimm. 1967. Harper & Row Publishers, New York, New York.
3. *North American Trees*. Barbara Burn. 1984. Gramercy Books, Avenel, New Jersey.
4. *The International Book of Trees*. Hugh Johnson. 1980. Mitchell Beazley Publisher, Ltd., London.
5. *Tree City USA Bulletin*. National Arbor Day Foundation, Nebraska City, Nebraska.
6. *Tree Growing Guide for Austin*. 1994. Tree Folks and the City of Austin Electric Utility Dept., Austin, Texas.
7. *Trees*. Allen J. Coombes. 1992. Dorling Kindersley, Inc., New York, New York.
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SITE AND LANDSCAPING PLAN

EXAMPLE



Recommended Tree List for Tullahoma

American Arborvitae

Evergreen; 20 feet at maturity; prefers limestone, rock, and heavy clay soil; known as White Cedar; leaves in fan-like sprays, dark green on top and pale underneath, useful in poorly drained soil; subject to bagworms.

American Elm

Deciduous, 60-80 feet at maturity; prefers full sun and tolerates most soils; fast growing, oval leaf hardy tree, tolerates exposure, subject to Dutch Elm Disease, but new varieties resistant to disease have also been developed.

American Sycamore

Deciduous, 100 feet at maturity; sun-loving and prefers rich, moist soil; spreading tall trunk and rounded head, young plants subject to spring frost, can be affected by pollution in cities.

Bald Cypress

Black Walnut

Deciduous, 100 feet at maturity; tolerates any soil; slow grower, now rare in East due to tree's enormous value for wood and nuts, leaves are two-feet long with 11-23 leaflets.

Bradford Pear

Deciduous, 40 feet at maturity; beautiful white flowering bloom in spring; hardy tree.

Crab Apple Hybrids

Deciduous, less than 20 feet at maturity; good in all fertile soils, sun-loving; fragrant leaves if crushed, profuse, fragrant flower in a wide range of colors, susceptible to insects and disease.

Eastern Redbud

Deciduous, less than 20 feet at maturity; best in moist soil, but can tolerate dry soil; bright green leaves, pale rose flowers in spring, planted as ornamental, but produces many seedlings.

English Oak

Deciduous, 60-80 feet at maturity, prefers woods; known as Common Oak, broad, open head, short trunk, oblong dark green leaves with six lobes on each side.

Flowering Dogwood

Deciduous, less than 20 feet at maturity; acid soil in woods, and dislikes poor, shallow chalky soils; small flowers in a variety of colors, blooms in late spring, exceptional as ornamental due to hardiness, also valued for its wood.

Foster's American Holly

Evergreen, 30 feet at maturity; sandy soil or moist woods; stiff spines on leaves, fruits red or orange, can grow eight feet in 20 years, dislikes chalky soil.

Gingko

60 feet at maturity.

Golden Rain Tree

Deciduous, 30-40 feet at maturity; sun-loving, tolerant of dry soils; susceptible to fungus, has oval, coarsely-toothed leaves, small yellow flowers that bloom in May-June.

Japanese Black Pine

Evergreen, 50 feet at maturity; prefers sandy soil; needle-like rigid leaves 4-inches long, in winter is easily distinguished by white, hairy leaf buds, can lean at maturity.

Japanese Flowering Cherry (Kwanzan, etc.)

Deciduous, 25-30 feet at maturity; good in most soils; glossy, red-brown bark with glassy sheen, leaves taper to slender point at tip.

Japanese Maple

Deciduous, 25-30 feet at maturity; tolerant of most soil types; lobed leaves with brilliant autumn colors, usually pest free, red flower in drooping clusters in spring.

Pecan

Deciduous, 100 feet at maturity; likes deep, loamy soil; tallest of the hickories, long-lived, produces nuts for 200 years which have important commercial value.

Pin Oak

Deciduous, 80 feet at maturity; not lime tolerant, likes moist soil; drooping branches, glossy green, deeply lobes leaves, saucer-like acorns.

Red Maple

Deciduous, 80 feet at maturity; tolerates moist to dry soil; often used as ornamental, showy flowers and fruit in spring, beautiful foliage in fall.

Saucer Magnolia

Deciduous, 20 feet at maturity; likes neutral to acid soil; fast growing, hybrid magnolia, saucer-shaped flowers with a white-to-pink or purple-pink tepal, tolerates pollution and poor soil.

Serviceberry

Deciduous, 40 feet at maturity; prefers lime-free soils; often narrow, snow-white flowers in drooping clusters, bark is gray and smooth when young and becomes rigid and scaly with age; fruit is sweet and edible.

Red Oak (Southern, Northern, Scarlet, etc.)

Deciduous, 100 feet at maturity; likes sandy soil, not lime tolerant; medium-length, deeply-lobed leaves in glossy green, 1-inch acorn, hardy tree.

Hickory

Deciduous, 100 feet at maturity; likes rich, moist soil; produces larger amounts of pollen, distinctively peeling bark, produces sweet, edible nut, resists transplanting.

Southern Magnolia

Evergreen, 60 feet at maturity, likes neutral to acid soil; traditional southern tree, creamy-white fragrant flower that bloom in late spring and summer; shiny green leaves all year.

Sugar Maple

Deciduous, 80 feet at maturity; moist soil, strong wood, fast growing, beautiful fall foliage.

Tulip Poplar/Yellow Poplar

Deciduous, 100 feet at maturity; moist to dry soil; shade tree with beautiful fall foliage, state tree, important tree for wild life, grows well with other species.

White or Green Ash

Deciduous, 80 feet at maturity; moist, rich soil; sun tolerant, thick foliage, seeds used by birds and animals.

White Oak

Deciduous, 115 feet at maturity; lime-tolerant, but not in shallow, chalky soil; soft-green lobed leaves that turn crimson in autumn; acorns 3/4-inch long, hardy tree.

White Pine

Evergreen, 160 feet at maturity; sun-loving, narrowly conical in shape, leaves are medium-length, dark blue-green, fast growing and is easily shaped by pruning.

Willow Oak

Deciduous, 100 feet at maturity; moist, swampy soil; shade tree with bright green pointed leaves, often planted along streets, public buildings and parks.

The Tree Growing Guide for Middle Tennessee was created by the Tree Board of the City of Tullahoma to encourage responsible tree planting and maintenance by the citizens of Tullahoma and the surrounding area.

This guide offers tips on the planting and caring of trees, why we need trees, and how to select the proper trees for your area.

The tree illustration fold-out features a list of trees suitable for planting in Middle Tennessee.

Please recycle this brochure or pass it on to a neighbor or friend.

Why Plant Trees?

Energy Conservation

Shade provides for more pleasant summer living and saves on summer-time electric bills. Three well-placed trees can cut air conditioning costs up to 15 percent.

Urban Renewal

In some cities, as many as four trees die or are removed for each new one planted. Research shows that trees help reduce stress in the work place, and public officials believe that trees and landscaping can instill a sense of community pride that has been lost in our cities.

Air Pollution Reduction

Trees help clean the air by removing poisonous gases and particulars such as dust and pollen. Surveys indicate that about 66 to 100 million spaces exist along our city streets where trees could be planted. This translates to the potential to absorb 33 million more tons of CO₂ every year and at the same time save consumers \$4 billion in energy costs.

Wildlife Habitat

Trees provide food, nesting sites and shelter for a wide variety of birds and animals.

Property Value

Trees help to stabilize a neighborhood and can add 15 percent to the value of a typical home. Trees add beauty and grace to any setting. They make life more enjoyable and offer a rich heritage for future generations.

How to Plant the Right Tree in the Right Place

Minimum Temperature

The "hardiness map" has zoned the country based on average annual minimum temperatures. The lowest temperature of the zone limits the range of many trees. Sudden low temperatures can freeze and kill the living cells in trees. In Middle Tennessee, the lowest temperature in the zone limit is ??????????????????

Light

Shade tolerant is the term foresters use to rate the light requirements of each species. Some species, like white birch and most pines, require full sunlight. The are shade intolerant. Shade tolerant species include maples, hemlocks and yews. Others, like white oak, are somewhere in between. Don't plant a tree that is mismatched with its need for light.

Site Selection

Consult the tree chart to determine mature height and spread of your selected trees. Make sure you give your tree adequate room to grow. Trees and shrubs should not be planted where they block access to utility installations or where they will interfere with utility lines or equipment. At least eight feet of clearance is required in front of electrical transformers on ground level.

Try to envision your trees in five, 10 or even 50 years. Know what a tree will look like at maturity and consider height, crown spread and root space when planting.

Large deciduous trees on the south and west side of your house will shade the roof and walls in the summer and help conserve energy. In the winter, they will allow the warming sunlight through. Evergreen trees planted on the north side of your home can help block cold, north winter winds.

Things To Avoid

- ◆ Planting large trees under utility lines.
- ◆ Blocking traffic signs or views at corners.
- ◆ Planting trees or shrubs too close to underground transformers.
- ◆ Blocking windows or desirable views
- ◆ Planting where roots will damage pavement.
- ◆ Spacing trees too closely or shading gardens.
- ◆ Encroaching on your neighbors.

How to Prune Your Trees

1. Prune early in life of the tree so pruning wounds are small and so growth goes where you want it.
2. Begin your visual inspection at the top of the tree and work downward.
3. Identify the best leader and lateral branches (scaffold limbs) before you begin pruning and remove defective parts before pruning for form.
4. Don't worry about protecting pruning cuts. For aesthetics, you may feel better painting larger wounds with a neutral-color tree paint, but the evidence is that it does not prevent or reduce decay.
5. Keep your tools sharp. One-hand pruning shears with curved blades work best on young trees.
6. When you prune back to the trunk or a larger limb, branches too small to have formed a collar (swollen area at base) should be cut close. Otherwise, follow the rules of good pruning of larger limbs by cutting just outside the branch ridge and collar and at a slight down-and-outward angle so as not to injure the collar. Do not leave a protruding stub.
7. When simply shortening a small branch, make the cut at a lateral bud or another lateral branch. Favor a bud that will produce a branch that will grow in a desired direction (usually outward). The cut should be sharp and clean, and made at a slight angle about 1/4-inch beyond the bud.

Don't Top Trees!

Topping adds unnecessary stress to the tree's health. Topping can result in the tree's starvation, shock, insects and disease, weak limbs, rapid new growth, ugliness, added cost and tree death. Instead, plant trees that fit the available space upon maturity and begin proper pruning early in the tree's life.

Simple Steps to Planting a Tree

*Encouraging Middle Tennesseans to plant trees
is a worthwhile goal,
but it is only half the story.*

*Whether planting two trees in the front yard
or one million in a city, the effort will
come to naught unless the trees are selected
and planted correctly. True success is a
tree in its new home that is vigorous
from the start and lives a
long, productive life.*

Select the right tree for the right place

Think clearly about the purpose of your new tree. Write down the limitations of the site where you will be planting. Select the species or cultivar to plant that best matches the conditions you have identified. And finally, buy only from reputable nurseries.

Look for certain physical characteristics

- ◆ For balled and burlapped trees, is the root ball firm to the touch, especially near the trunk? Is the root ball adequate for the tree's size?
- ◆ Is the tree symmetrical? Is there a single, well-developed leader?
- ◆ Are buds plump and healthy?
- ◆ Is the trunk reasonable straight? Does the trunk taper nicely? Is the bark free of cuts and scrapes? Are pruning wounds healed over and is it free of frost cracks, sunscald, swollen areas and evidence of disease or insect injury?

Mark out a planting area

The area should be 2-5 times wider than the rootball diameter. Loosen this area to about an 8" depth. This will enable your tree to extend a dense mat of tiny roots well out into the soil in the first one to 10 weeks in the ground. Often early root growth is limited by the width of the hole and loosened soil perimeter.

Dig a hole

The hole should be at least twice as wide as the root ball and no deeper than the depth of the soil in the root ball. The bottom of the ball should rest on solid, undisturbed soil. When finished, you want the soil at the base of the tree to be at the same level on the tree as it was in the container. If part of the trunk gets below ground, its bark may rot. The roots also need to get the same ratio of air to water that they received when the tree was in the container or at its original site. Resting the tree on solid ground prevents excessive settling.

Check the hole

Make sure the sides of the hole are rough and uneven. In very hard soils, a rough edge to the hole may help force new roots to grow out into the surrounding soil.

Place the tree in the hole

If the tree is in a container, pull the container away from the root ball. Don't pull the tree out by its trunk. Place the root ball in the center of the hole and adjust the tree so it is straight and at the proper level.

Reshape the hole

For balled and burlapped trees, rest the root ball in the center of the hole, and reshape the hole so the tree will be straight and at the proper level. After adjusting the tree, pull the burlap and any other material away from the side and top of the root ball. Don't try to get the material out of the hole — just let it rest beneath the root ball of the tree.

Backfill with original soil

Mixing fertilizer, compost or other material with the original soil is not recommended. If the backfill soil around the root ball is improved, the tree may be slow in developing a good, widespread root system.

Fill until the hole is half full

Flood the hole with a slow hose or tamp gently with your foot to firm the soil. Repeat until the hole is full. Do not press too firmly — only firmly enough to hold the tree upright. The best soil for root growth has spaces for both air and water; however, large air pockets can cause problems. This method of backfilling with soil and water or gently tamping will remove these large pockets.

Construct a small dam or berm

The construction should be three feet in diameter around the tree. It will help hold water until it soaks into the soil, rather than letting it run off across the surface.

Cover the entire loosed area of soil

The area should be covered with 3-4 inches of mulch — shredded wood or bark, compost or dry leaves, for example. Mulch will slow water loss, reduce competition from weeds and grasses, will moderate soil temperature and will provide a small amount of nutrients.

Call before digging

Before digging, always contact the local electric utility office or Tennessee One-Call at 1-800-351-1111 to identify the location of all underground utility lines.

Take Care of Your Tree

Monitor your tree for problems such as disease, insects and broken or dead limbs. You will be amazed at how your tree will respond to your care.

Regular watering is important. New trees need about one inch of water per week for about two years when rainfall is low. Be careful not to draw the roots; they need air as well as water to grow.

Do not add fertilizer at planting! Sprinkle a balanced fertilizer (one that contains nitrogen, phosphorus, potassium and micronutrients) over your planting area the next spring, and then again two times during the growing season. Remember, a good mulch layer will provide a natural source of nutrients to the tree. Maintain a 3-4" mulch layer within the planting area.

With proper care and pruning, your tree investment will pay off many times over. Call a qualified arborist if you have questions on tree care.

Tree Spacing Guide for Landscaping

Tree Height	Minimum Spacing From Wall	Minimum Spacing From Building Corner
Up to 25'	10'	10'
25'-30'	15'	15'
50'+	20'	15'

- ◆ Check each tree's mature spread when placing trees so you do not crowd them.
- ◆ Leave half of this spread between the tree and building, utility lines or existing mature trees.
- ◆ When planting several new trees, remember to space them so all will have room for their mature spread.
- ◆ When planting near street corners, do not place trees or shrubs that would block a driver's view of the sign, signal or intersecting street.

HOW TO PLANT A TREE

OLD WAY

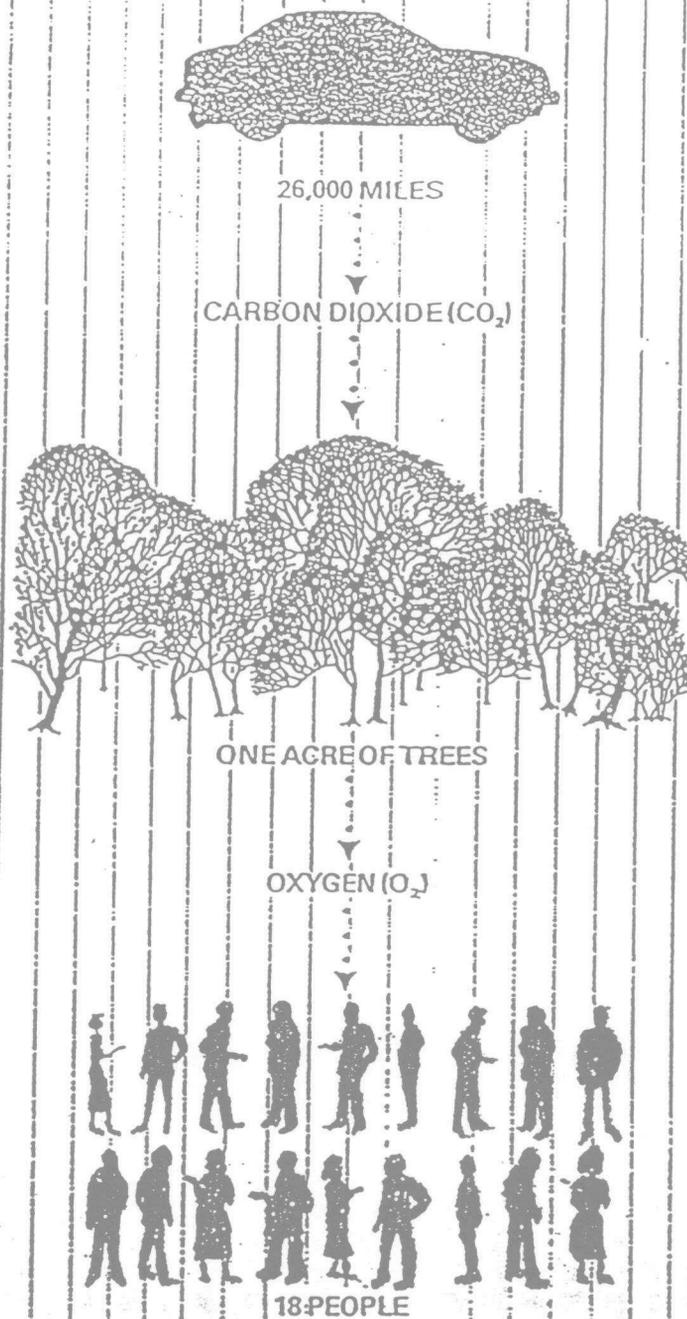


NEW WAY

TEN COMMANDMENTS OF TREE PLANTING

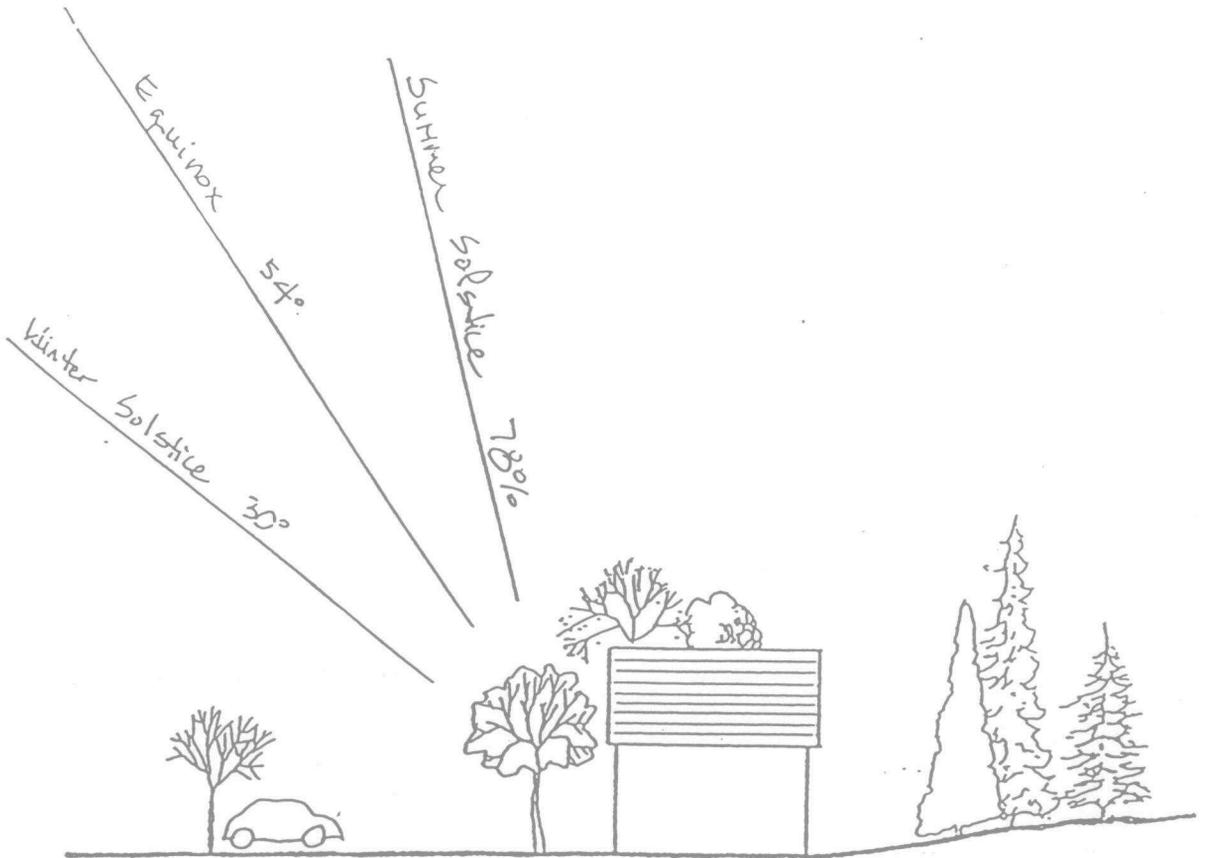
1. Dig a wide, shallow hole
2. Do not add soil amendments such as sand or peat moss to the planting hole
3. Mulch with no more than 2-3" of an organic material
4. Do not wrap the trunk
5. Stake only if the tree is top heavy; stake loosely
6. Fertilize with nitrogen after one growing season
7. Water the planting to settle the topsoil
8. Water regularly the first year
9. Choose the right tree for the location
10. Root growth is influenced by growth tips and shoots; trim as little as possible at planting.

TREES: THE LIVING AIR FILTER



Trees are fundamental to the community. Beside their natural beauty and ability to enhance even the plainest site, trees are needed for man to survive. This is because trees are an essential part of the carbon dioxide exchange with man.

In addition, trees reduce the urban heat island effect, conserve water and reduce soil erosion, save heating and cooling costs, and filter the air. Trees provide wildlife habitat and best of all, trees increase the value of real estate because of the setting they create.



PAVEMENT HEAT &
GLARE IS FILTERED
BY TREES

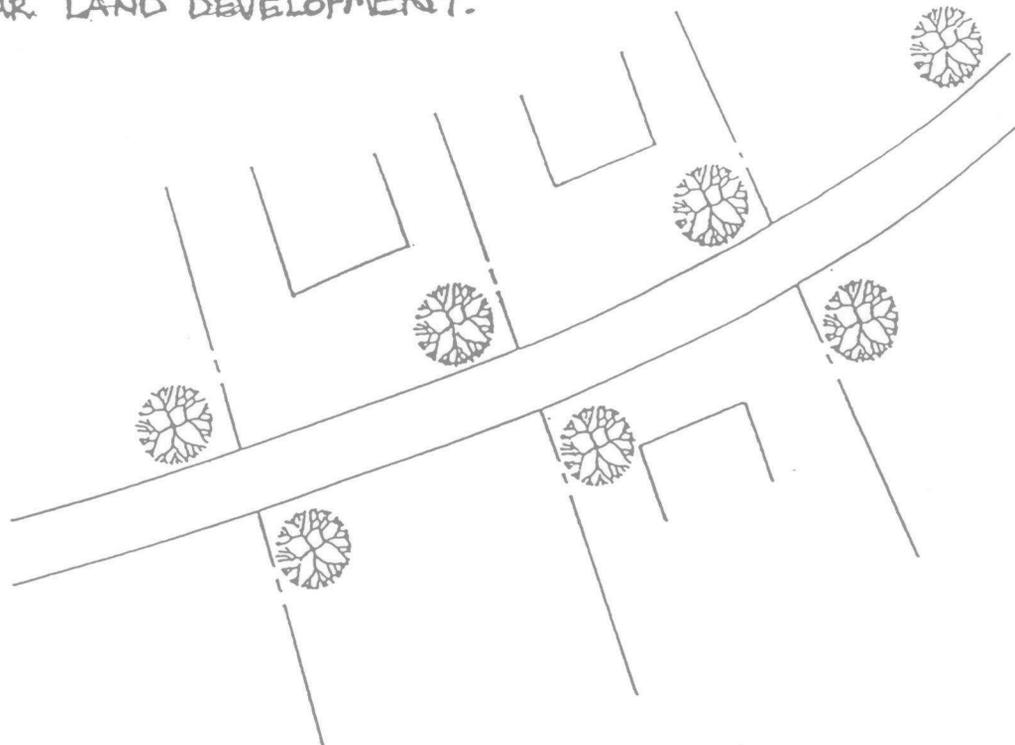
DECIDUOUS TREES
PROVIDE SUMMER SHADE,
BUT ALLOW WINTER WARMTH

PLANT EVERGREENS
ON THE NORTH SIDE
TO BLOCK WINTER
WINDS.

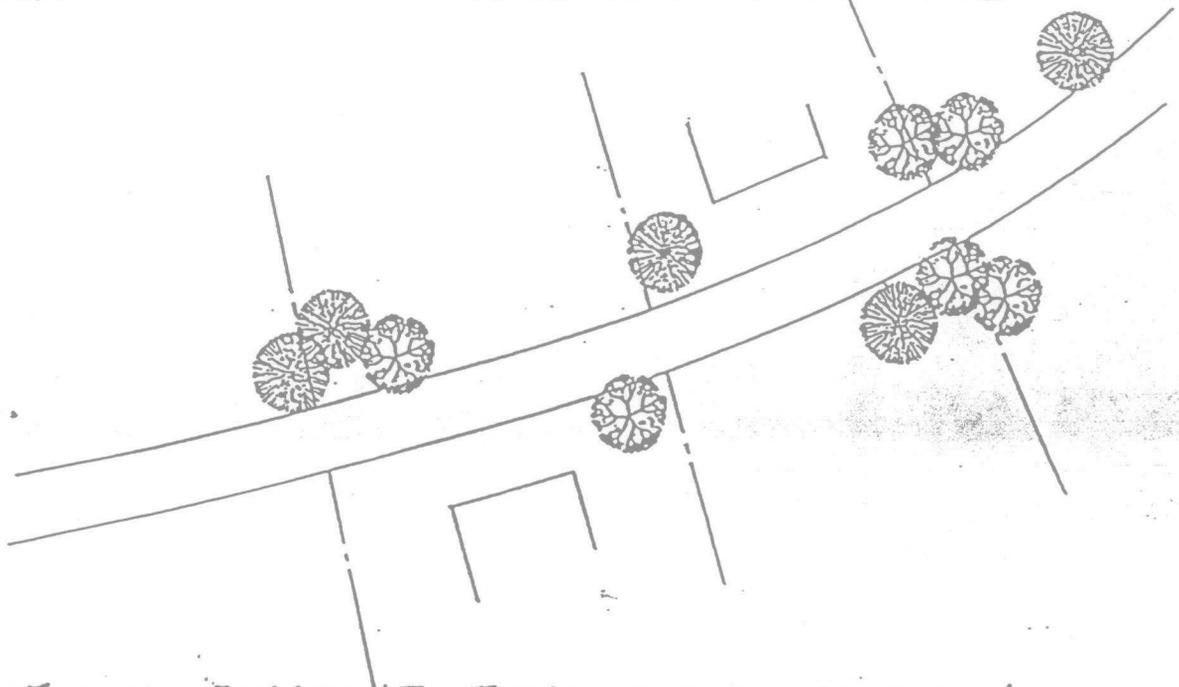
PLANT TREES TO PROVIDE SHADE
IN THE SUMMER, & REDUCE COLD
WINDS IN THE WINTER.

SINGLE FAMILY
RESIDENTIAL TREE PLACEMENT

DEVISE A PLANTING SCHEME
WHEN THERE ARE NO TREES IN
YOUR LAND DEVELOPMENT.

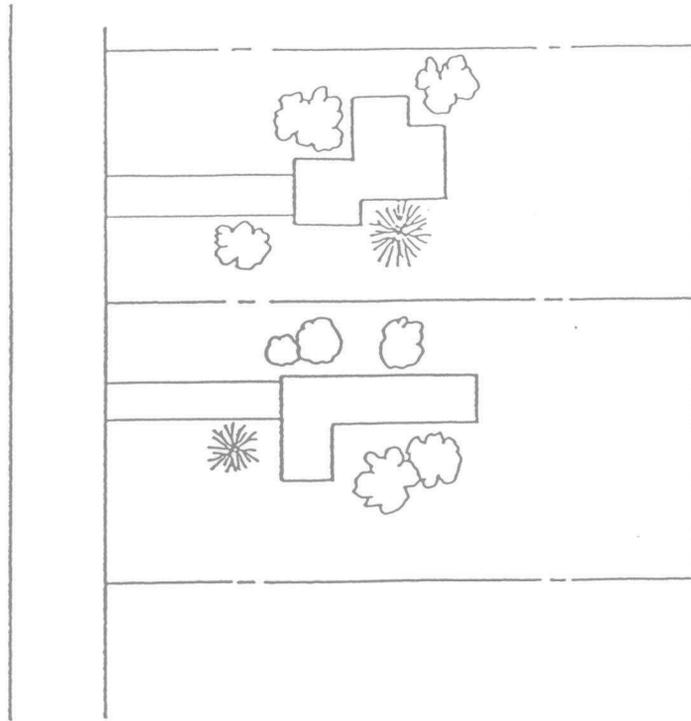


FORMAL - IDENTICAL TREES REGULARLY SPACED



INFORMAL - DIFFERENT TREES SPACED RANDOMLY

RESIDENTIAL SUBDIVISION TREE PLACEMENT

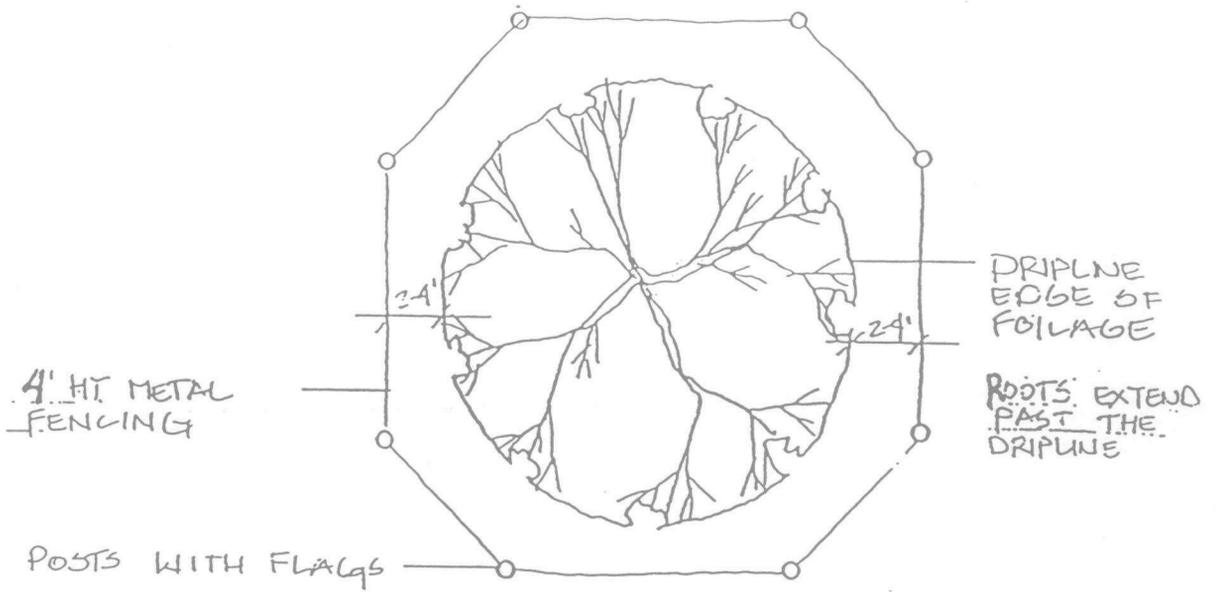


The cheapest way to develop and enhance a site is to preserve good existing trees. While surveying the site for roads and utilities, delineate significant existing trees worthy of preservation. These may be 4" or 40" in caliber. Naturally grown trees have character, so do not expect them to be perfect like those from a nursery.

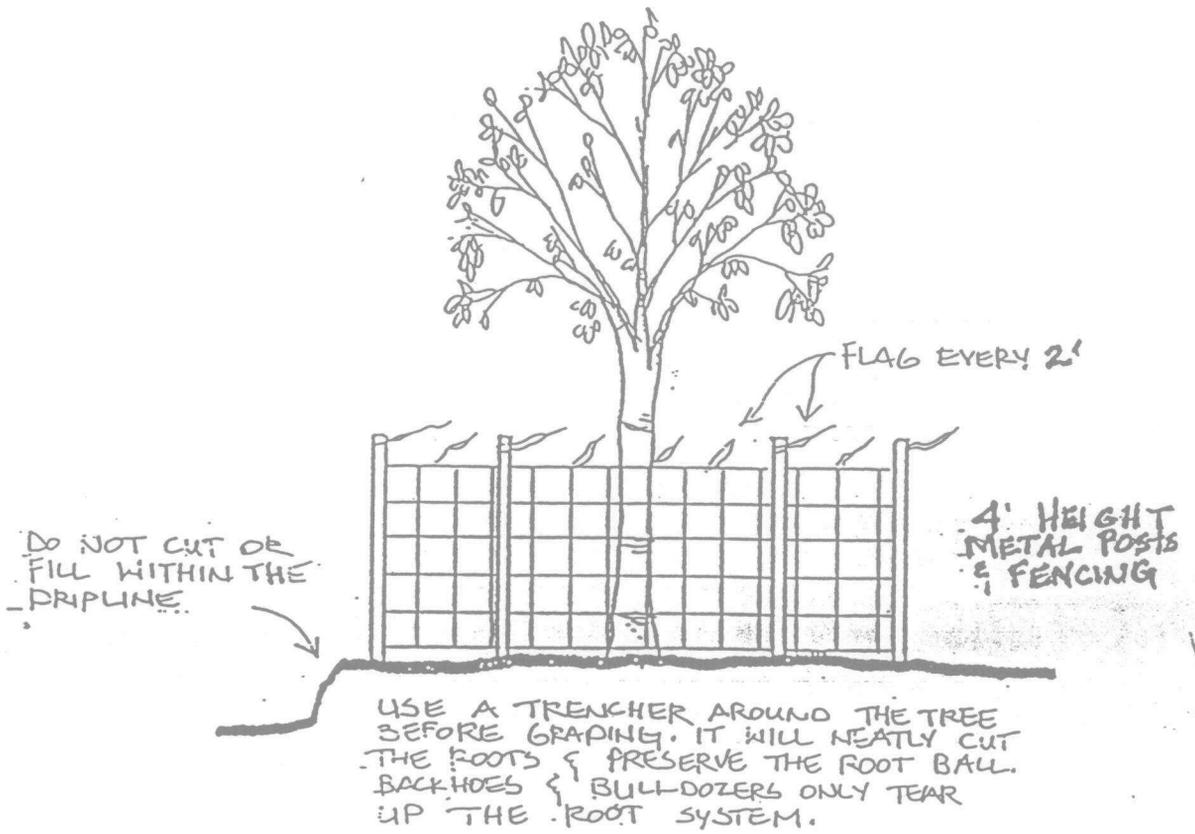
When it is time to build on a lot, choose a floor plan that will work with important existing landscape features such as trees 4" or greater in caliber. Slab and other solid foundations are impervious and eventually kill tree roots and trees. If there is a worthy tree, use pole and beam construction plus contact a landscape architect or arborist who can advise you properly.

Covering 40% or more of any existing tree's roots usually results in tree death. If this is the situation, remove the tree and plant new trees.

PRESERVE EXISTING TREES WHEN POSSIBLE



PLAN VIEW



ELEVATION

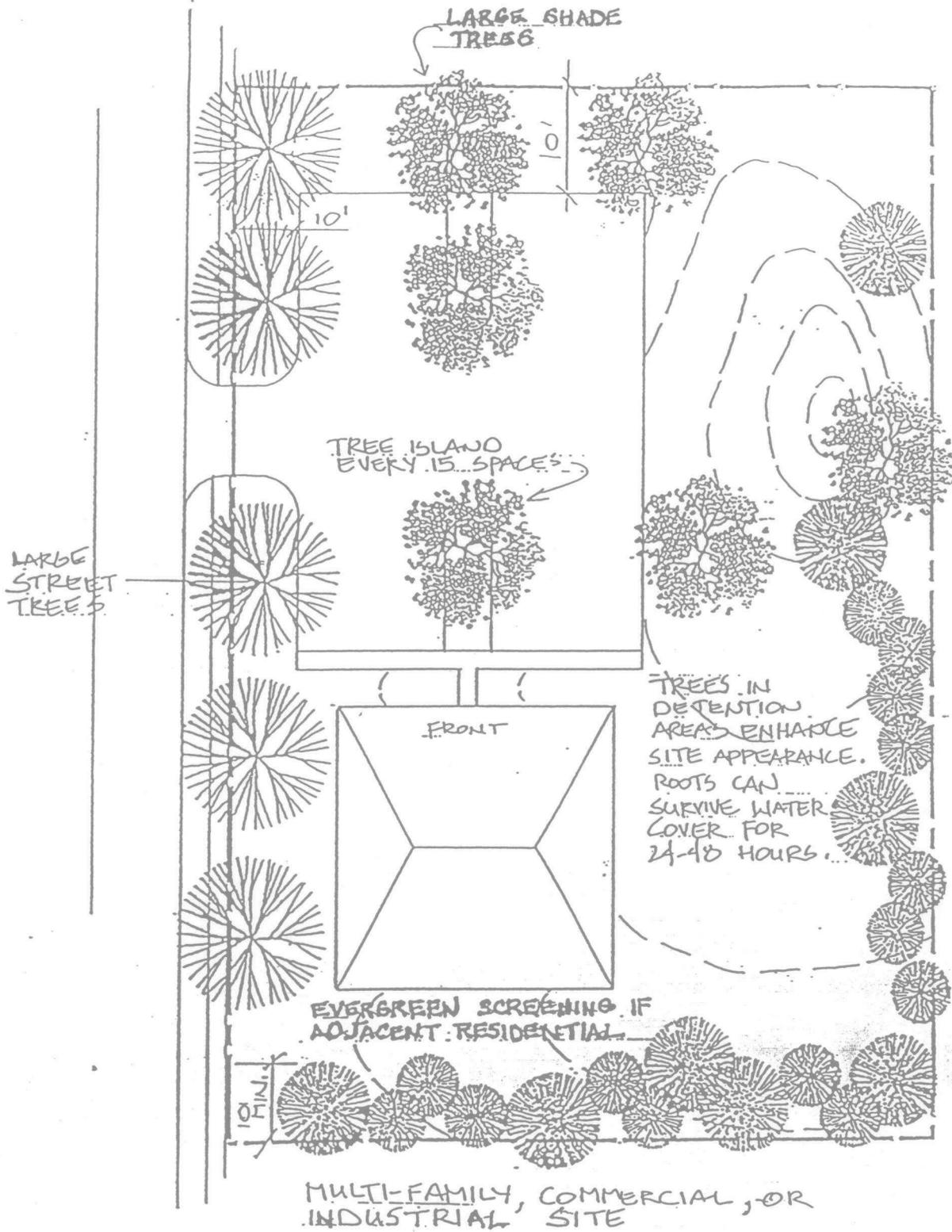
PRESERVE SIGNIFICANT TREES

MAXIMUM IMPERVIOUS LOT COVERAGE

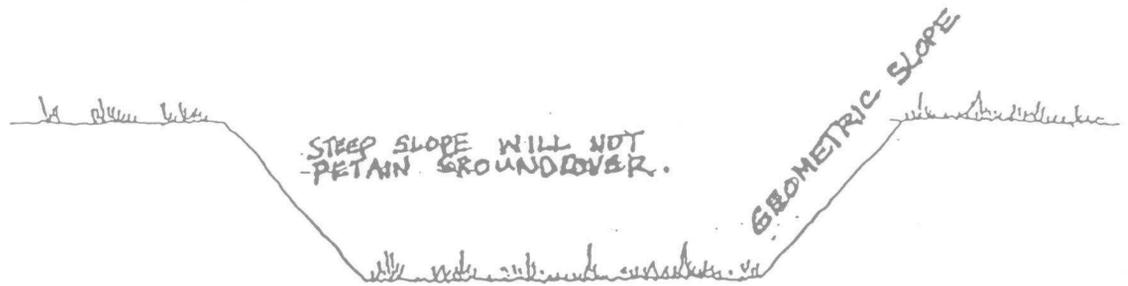
It is important in site development that land be left for absorption of rainfall and run-off as well as proper landscaping. The chart below is a recommendation for the maximum amount of a site that we recommend should be paved.

<u>Zoning</u>	<u>Maximum amount of lot to be paved</u>
R-1	40%
R-1A R-1AA	40%
R-3	55%
O-1	60%
CBD	not applicable
C-2	90%
C-3	60%
I-1	80%
I-2	80%
I-3	60%

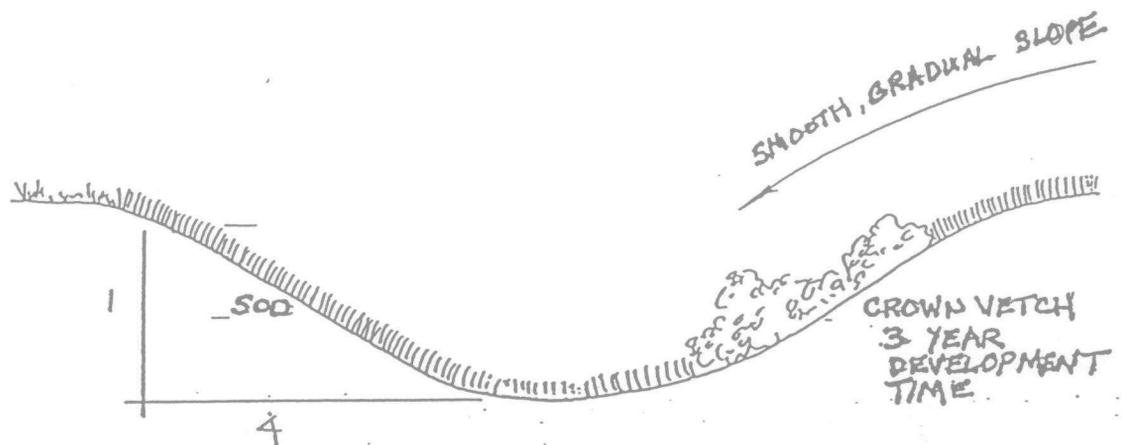
SURFACE COVERAGE



TREES & SITE PLANNING



AVOID GEOMETRIC TYPE GRADING PLANS ON PAPER & IN THE FIELD. THEY ARE DIFFICULT & EXPENSIVE TO MAINTAIN, PLUS THEY ARE UNATTRACTIVE. STEEP SLOPES ARE DANGEROUS TO CUT WHEN MOWING & ARE PRONE TO COLLAPSE & RE-CONSTRUCTION AGAIN & AGAIN.

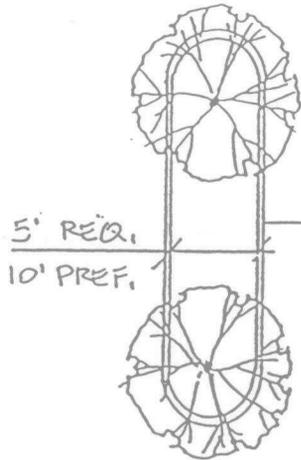


SMOOTH, GRADUAL SLOPES STABILIZE QUICKER & COST LESS TO MAINTAIN. THEY ARE EASY TO BUILD & MAINTAIN. THEIR SHAPE IS PLEASING TO THE EYE.

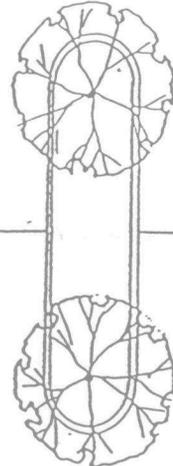
IT IS ALWAYS CHEAPER TO SOD A SLOPE THAN REPEATLY SEED. CROWN VETCH IN CONJUNCTION WITH EROSION CONTROL CLOTH IS EFFECTIVE IN AREAS TOO STEEP TO MOW.

LANDSCAPING DRAINAGE AREAS

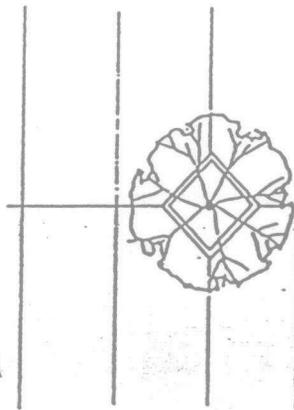
END ISLAND



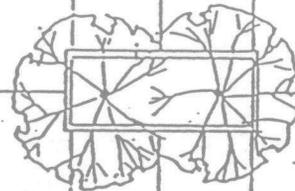
MIDDLE ISLAND
EVERY 15 SPACES REQUIRED
EVERY 10 SPACES PREFERRED



DIAMOND ISLAND
WHEEL STOP
9-5' PER SIDE

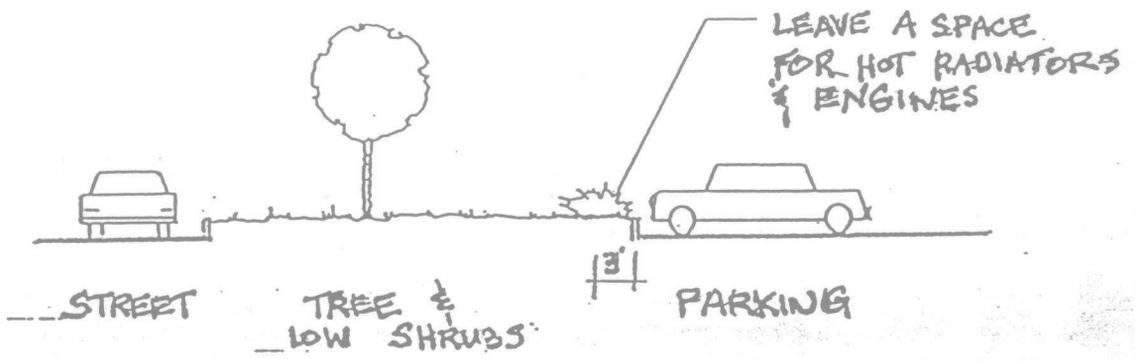
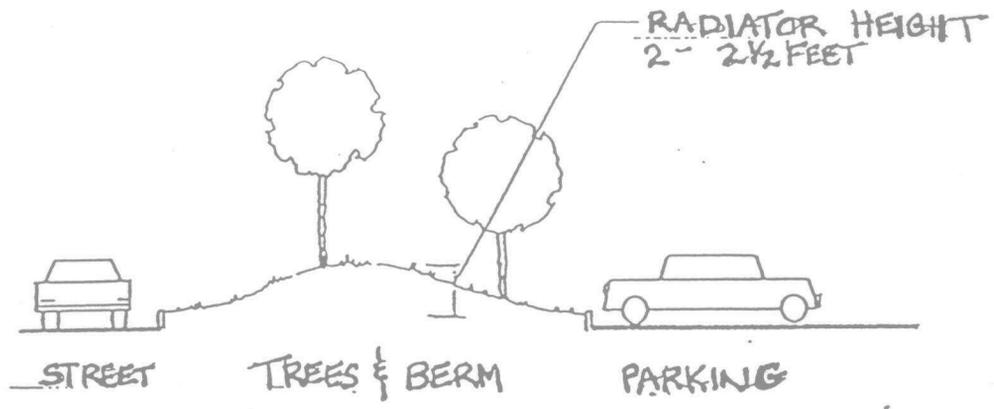


SMALL-MID-SIZE CAR SPACE
MINIMUM SIZE
6' x 12'



PLANTING ISLANDS MAKE PARKING ATTRACTIVE BY BREAKING UP THE EXPANSE OF PAVEMENT. PARKING PLACES ARE ENHANCED, NOT LOST

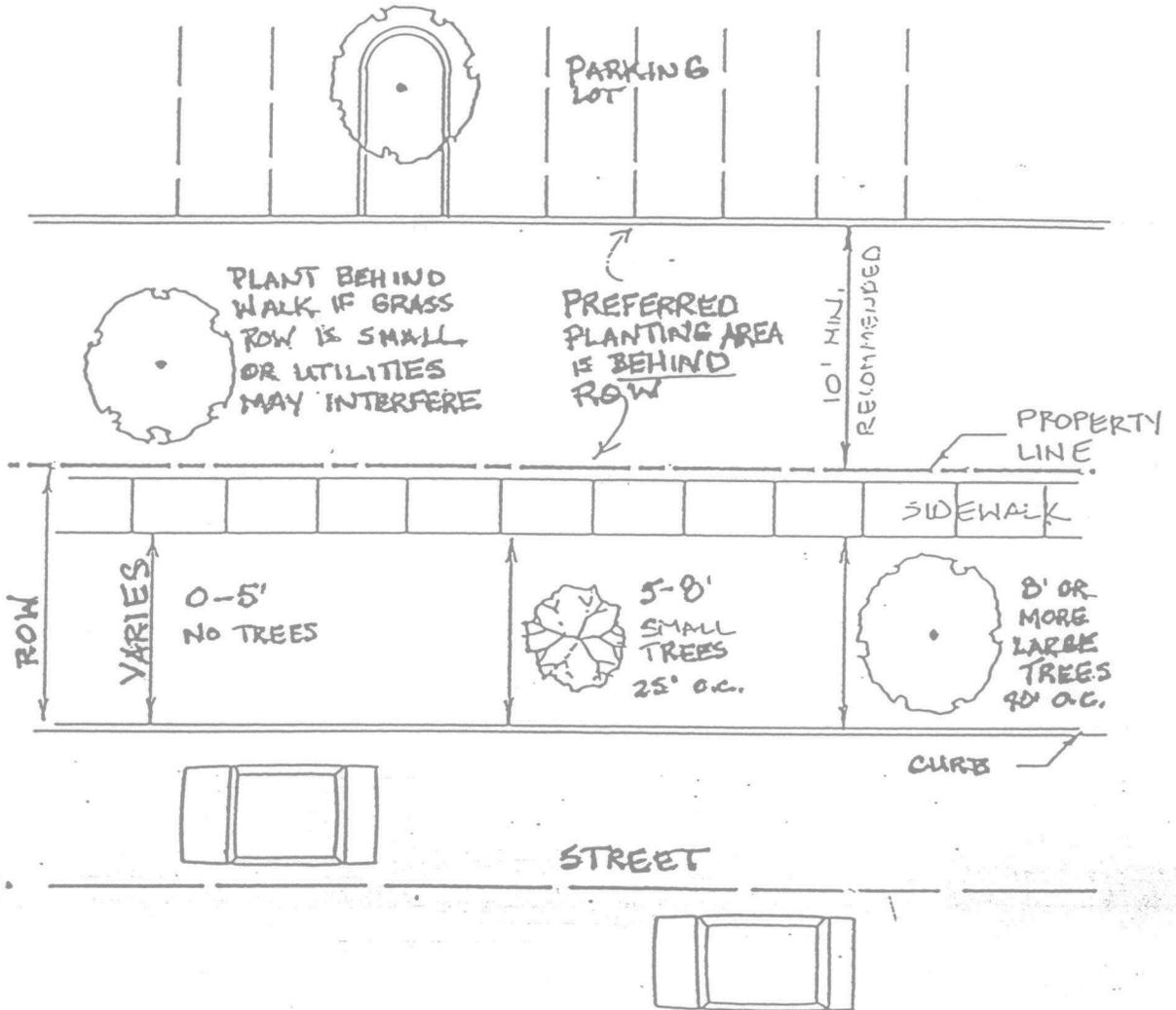
TREES IN PARKING LOTS



ENHANCE APPEARANCES FROM THE STREET.
BERMS, SHRUBS & TREES ADD TO THE
FACILITY & THE COMMUNITY.

BEAUTIFY PARKING W/ LANDSCAPING

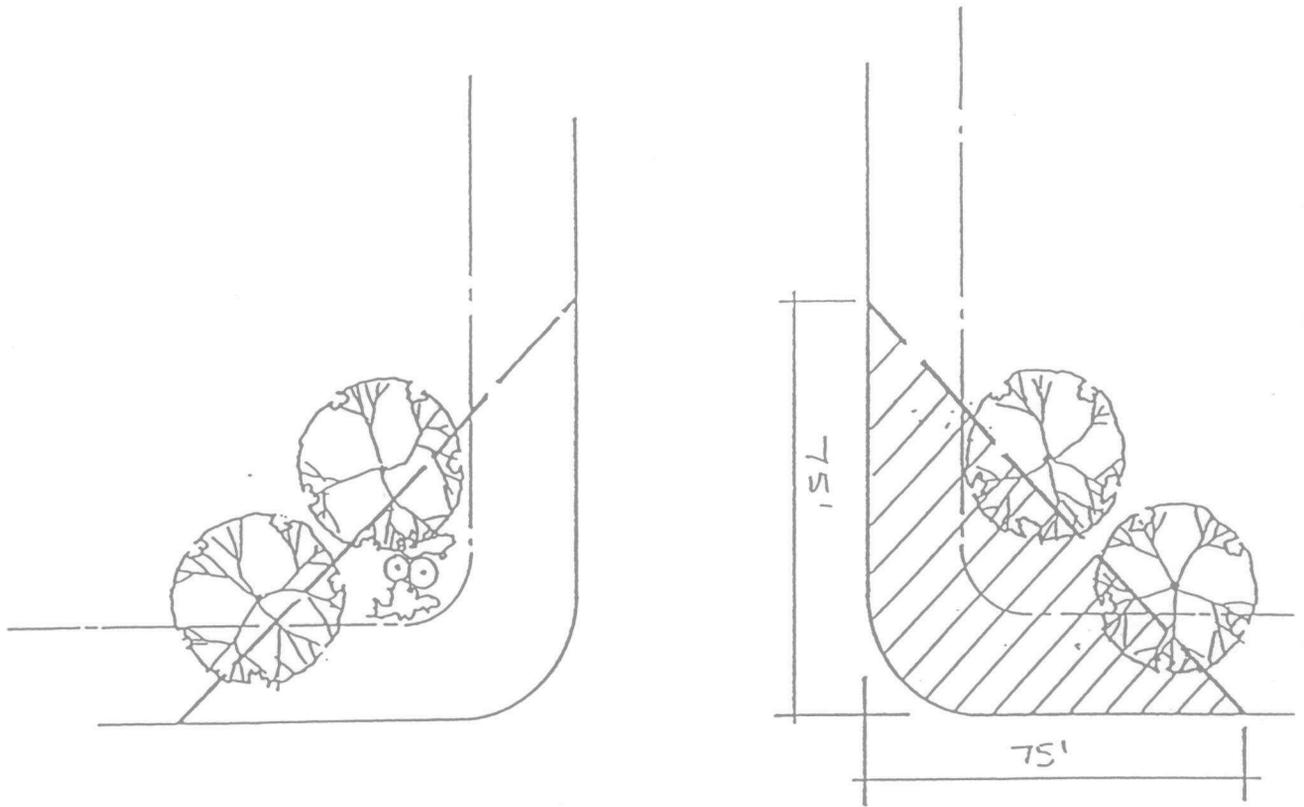
DEVELOPMENT SITE



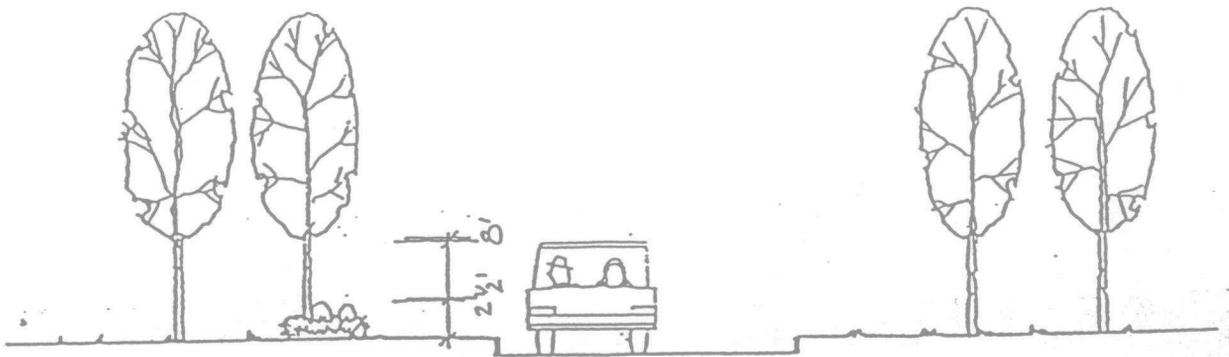
ash

Community appearance is improved by the planting of trees along roadways. A planting strip of 8-10' is suggested. Large trees such as oak, maple, are most desirable because they live longer, their size gives more of a setting at maturity, and their high branches allow visibility. Select smaller varieties if utility wires are overhead.

STREET TREE PLANTING



SIGHT DISTANCE TRIANGLE



SIGHT VISION AREA

LANDSCAPING WILL ENHANCE ANY ENTRY. AS THE PLANTING MATURIZES, MAINTAIN SIGHT VISIBILITY. CHOOSE TREES THAT ARE HIGH BRANCHED & SHRUBS THAT STAY LOW.

INTERSECTION SIGHT VISIBILITY

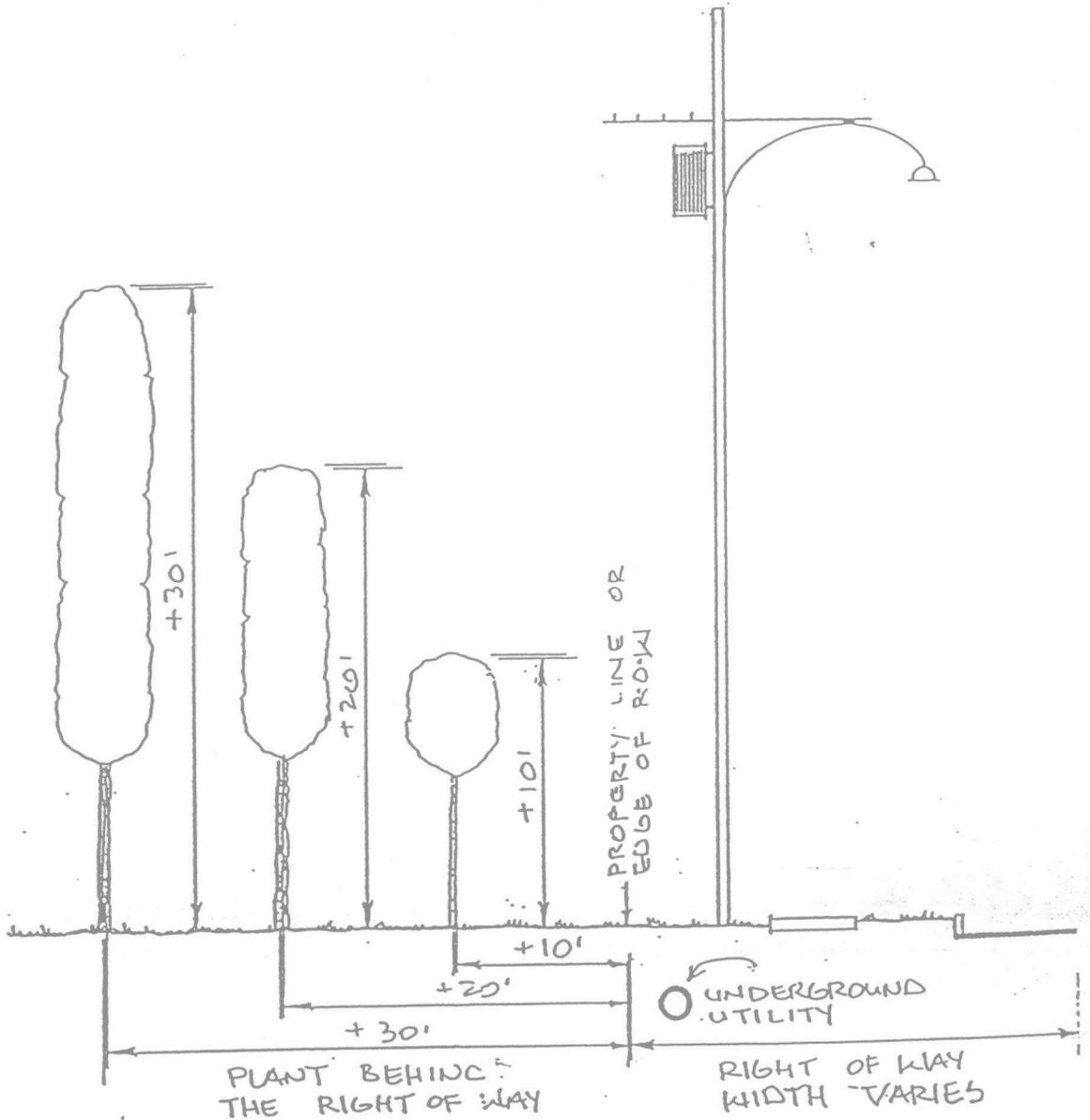


When developing a subdivision, commercial, or industrial property think of your sign as it contributes to site and community appearance. Build signs on a level where motorists will see them -- not 30 feet up in the air. Frame signs with trees overhead and behind. Use low inexpensive shrubs and flowers to dress the sign up if desired.

There is an additional benefit to building lower signs. They are much cheaper to build as well as maintain.

USE TREES TO ENHANCE SIGNAGE

MATCH MATURE TREE HEIGHT
& WIDTH WITH NEARBY UTILITIES.



WORK WITH UTILITIES IN TREE PLANTING

Trees Growing 0 - 20' in Height

Arborvitae	<i>Thuja occidentalis</i>
Amur Maple	<i>Acer ginnala</i>
Crape Myrtle	<i>Lagerstroemia indica</i>
Flowering Cherry	<i>Prunus species</i>
Flowering Crabapple	<i>Malus species</i>
Flowering Dogwood	<i>Cornus florida</i>
Foster Holly	<i>Ilex x foster</i>
Japanese Maple	<i>Acer palmatum</i>
Nellie R. Stevens Holly	<i>Ilex x "Nellie R. Stevens"</i>
Purple Leaf Plum	<i>Prunus cerasifera</i>
Pyramidal Juniper	<i>Juniperus chinensis "Keteleeri" & "Torulosa"</i>
Pyramidal Juniper	<i>Juniperus virginia "Burkii", "Canaertii", & "Silver Spreader"</i>
Saucer Magnolia	<i>Magnolia soulangeana</i>
Star Magnolia	<i>Magnolia stellata</i>
Sweetbay Magnolia	<i>Magnolia virginiana</i>
Serviceberry	<i>Amelanchier arborea</i>
Tatarian Maple	<i>Acer tataricum</i>
White Fringe Tree	<i>Chionanthus virginicus</i>

Columnar Trees with Widths 8-12'

Capital Pear	<i>Pyrus calleryana "Capital"</i>
Hornbeam	<i>Carpinus betulus "Columnaris"</i>
Maple	<i>Acer platanoides "Columnare"</i>
Maple	<i>Acer rubrum "Armstrong", or "Bowhall" or "Columnare"</i>
Oak	<i>Quercus robur "Fastigiata"</i>

Trees Growing 20-40' in Height

American Holly	<i>Ilex opaca</i>
Canadian Hemlock	<i>Tsuga canadensis</i>
Flowering Pear	<i>Pyrus calleryana "Bradford", "Redspire", & "Aristocrat"</i>
Goldenrain Tree	<i>Koeleria paniculata</i>
Hawthorn	<i>Crataegus phaenopyrum</i>
Honey Locust	<i>Gleditsia triacanthos species</i>
Japanese Black Pine	<i>Pinus thunbergi</i>
Leyland Cypress	<i>X Cupressocyparis leylandii</i>
Redbud	<i>Cercis canadensis</i>
Sawtooth Oak	<i>Quercus acutissima</i>
Spruce	<i>Picea abies</i>
Trident Maples	<i>Acer buergerianum</i>
Zelkova	<i>Zelkova serrata</i>

Trees Growing 40' or More in Height

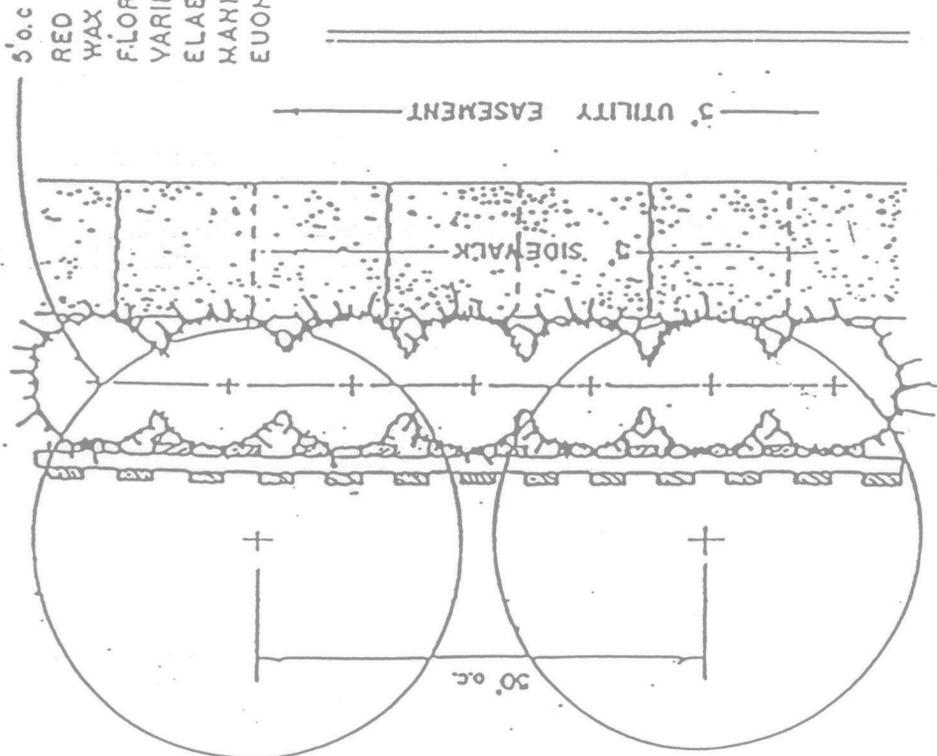
Ash	Green - Fraxinus pennsylvanica
Ash	White - Fraxinus americana
Bald Cypress	Taxodium distichum
Beech	Fagus grandifolia
Birch	Betula nigra
Ginkgo	Ginkgo biloba
Linden	American - Tilia americana
Linden	Littleleaf - Tilia cordata
Maple	Norway - Acer platanoides
Maple	Red - Acer rubrum
Maple	Silver - Acer saccharinum
Maple	Sugar - Acer saccharum
Oak	Laurel - Quercus imbricaria
Oak	Pin - Quercus palustris
Oak	Red - Quercus rubra
Oak	Scarlet - Quercus coccinea
Oak	Southern Red - Quercus falcata
Oak	Water - Quercus nigra
Oak	White - Quercus alba
Pine	E. White - Pinus strobus
Pine	Virginia - Pinus virginiana
Southern Magnolia	Magnolia grandiflora
Sweetgum	Liquidambar styraciflua
Sycamore	Liriodendron tulipifera

A special thanks to the following contributors:

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Prince George's County, Maryland, "Local Landscape Ordinance"

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Agriculture, Division of Forestry
America the Beautiful Grant
Summer 1993,
Bruce Webster, Program Director

REMEMBER, 40 IS NOT 000 FOR A TREE.

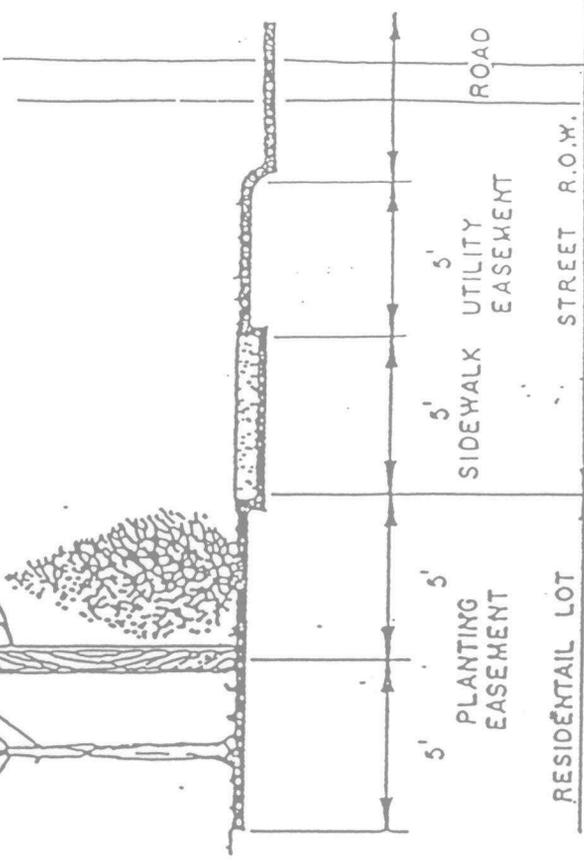


RED LEAF PHOTINA,
 WAX LEAF LIGUSTRUM,
 FLORIDA JASMINE,
 VARIEGATED PRIVET,
 ELAEAGHUS, OR
 MANHATTAN
 EUONYMUS

50' o.c. — WILLOW OAK,
 RED OAK,
 PIN OAK,
 RED MAPLE,
 SYCAMORE,
 GINKGO, OR
 HONEY LOCUST.

6' HIGH WOOD FENCE
 (SHADOW BOX STYLE)

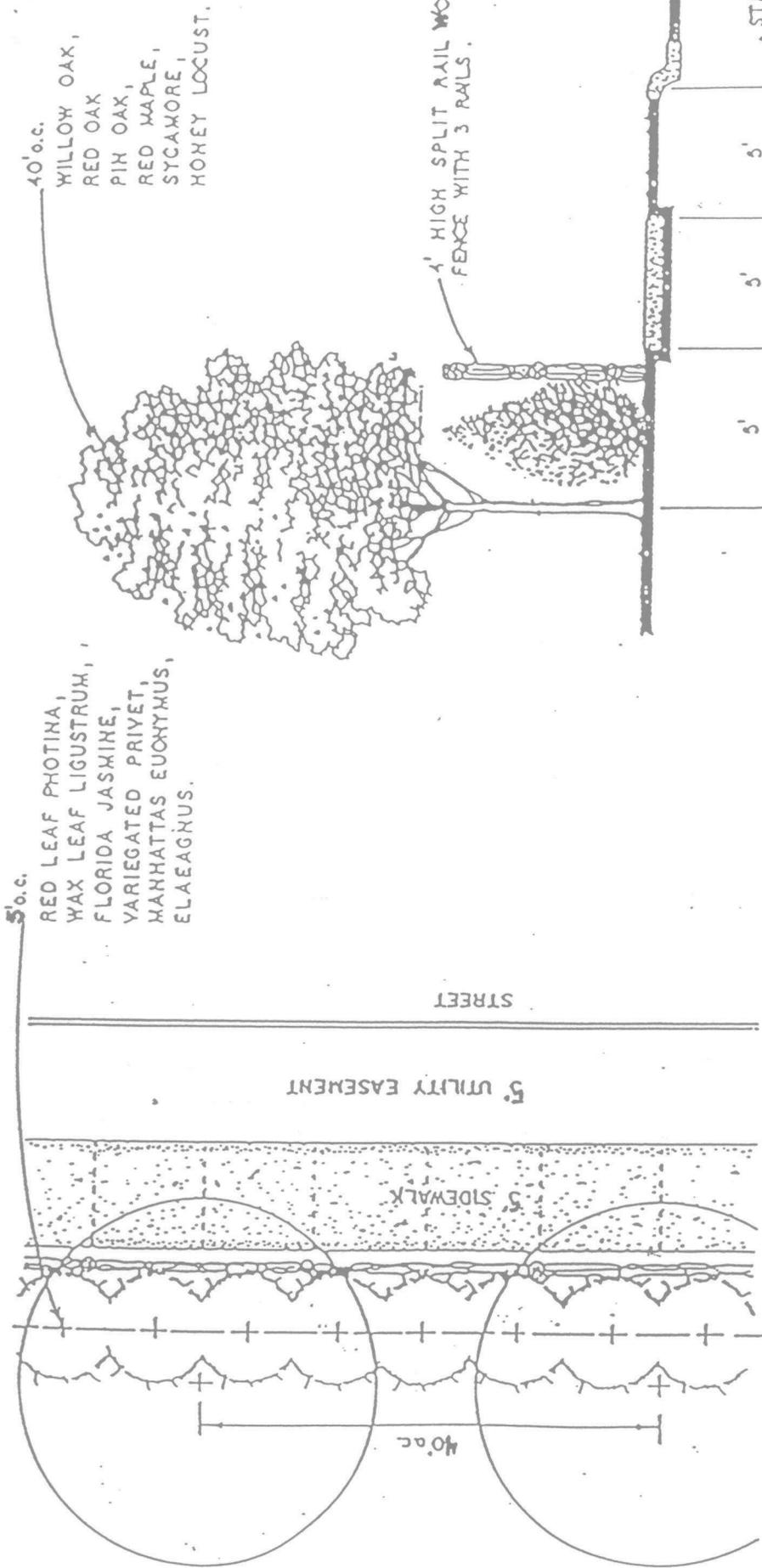
NOTE:
 TREES SHALL BE 10 FEET TO
 12 FEET HIGH, AND SHRUBS
 SHALL BE 3' TO 4' HIGH WHEN
 PLANTED.



PLAN

SECTION

PLANTING SCREEN FOR DOUBLE FRONTAGE RESIDENTIAL LOTS
PLANTING SCREEN No. 1

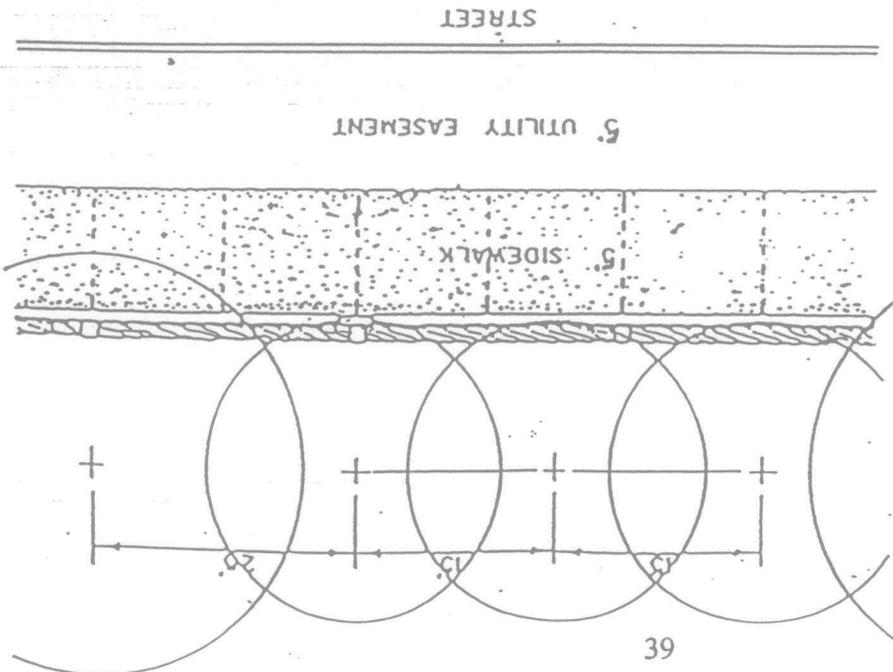


NOTE:
TREES SHALL BE 10 TO 12 FEET HIGH
SHRUBS SHALL BE 3 TO 4 FEET
HIGH WHEN PLANTED.

PLAN

SECTION

PLANTING SCREEN FOR DOUBLE FRONTAGE RESIDENTIAL LOTS
PLANTING SCREEN No. 2



NOTE: TREES SHALL BE PLANTED IN THE FOLLOWING SEQUENCE; ONE DECIDUOUS TREE, THREE PINE TREES, ONE DECIDUOUS TREE, ETC.

80' o.c.
WILLOW OAK,
RED OAK,
PIN OAK,
RED MAPLE,
SYCAMORE.

15' o.c.
SLASH PINE

6' HIGH SOLID WOOD FENCE

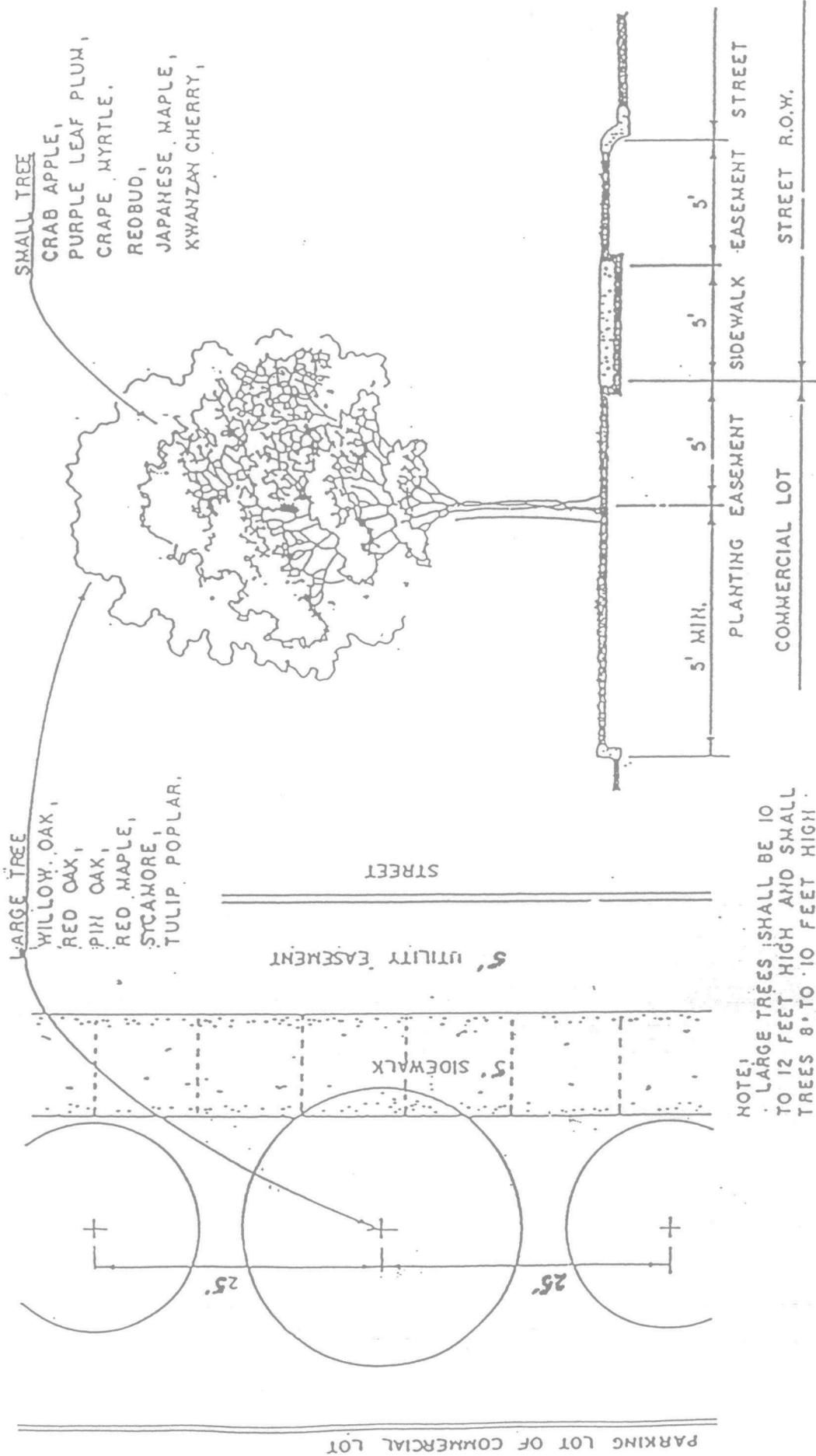
NOTE! DECIDUOUS TREES SHALL BE 10 TO 12 FEET HIGH AND PINE TREES SHALL BE 8 TO 10 FEET HIGH WHEN PLANTED.

PLAN



SECTION

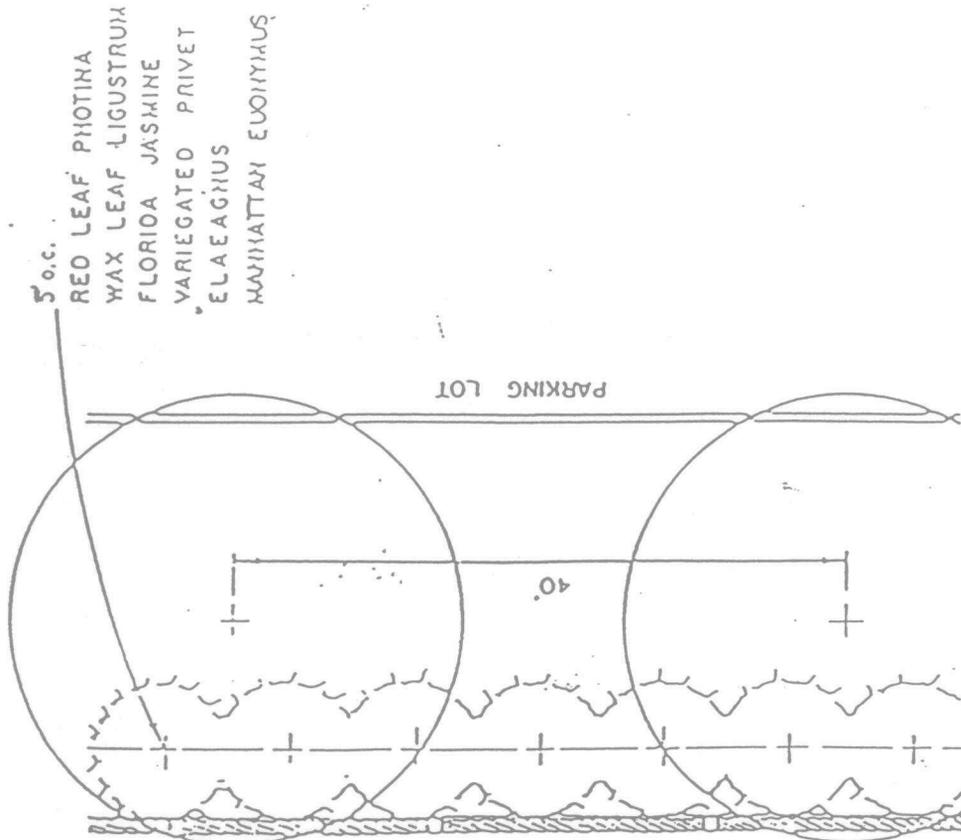
PLANTING SCREEN FOR DOUBLE FRONTAGE RESIDENTIAL LOTS
PLANTING SCREEN No. 3



PLAN

SECTION

PLANTING SCREEN FOR COMM. & IND. FRONTAGE LOTS
 PLANTING SCREEN No. 4



5' o.c.

- RED LEAF PHOTINA
- WAX LEAF LIGUSTRUM
- FLORIDA JASMINE
- VARIEGATED PRIVET
- ELAEAGNUS
- MAHONIA EUONYMUS

PARKING LOT

40'

40' o.c.

- WILLOW OAK
- RED OAK
- PIN OAK
- RED MAPLE
- SYCAMORE
- TULIP POPLAR

SOLID WOOD FENCE

PARKING

10'

15' MIN.

RESIDENTIAL

COMMERCIAL LOT

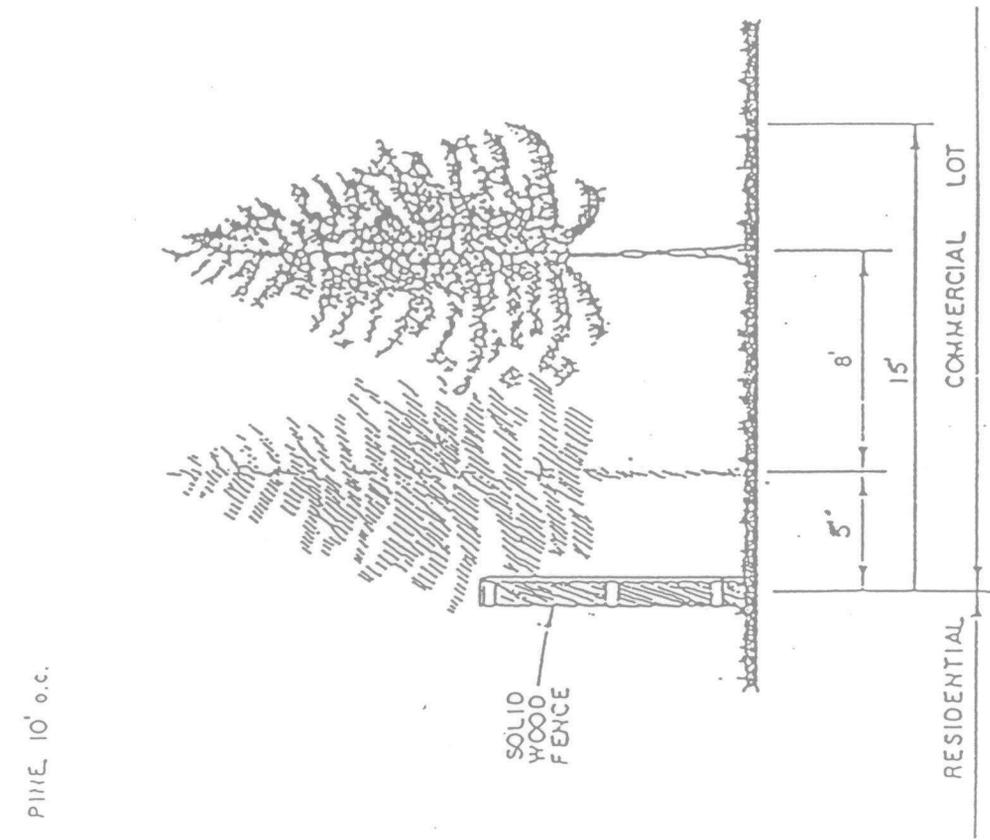
NOTE:

TREES SHALL BE 10 TO 12 FEET HIGH AND SHRUBS SHALL BE 3 TO 5 FEET HIGH WHEN PLANTED.

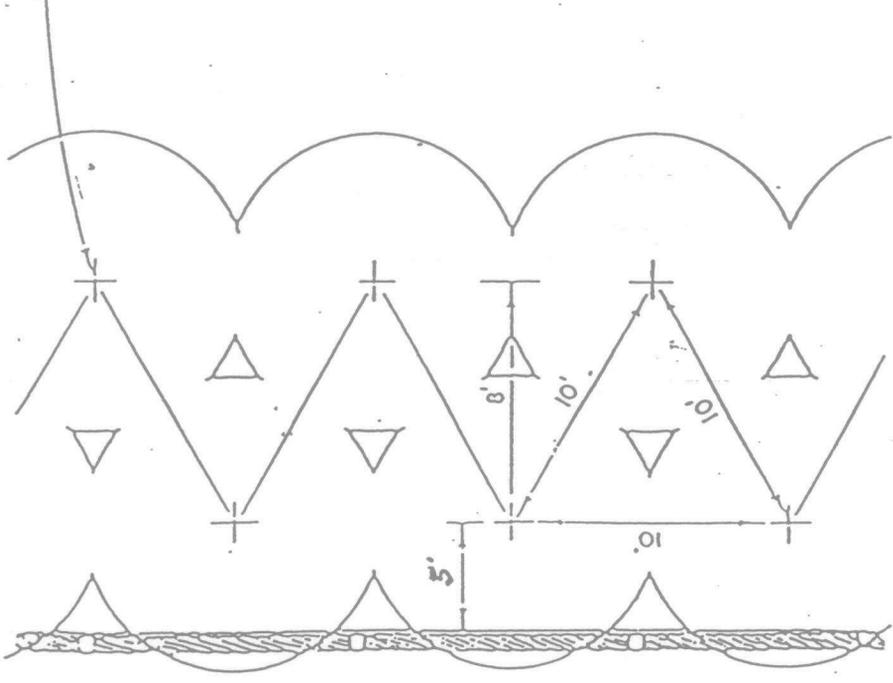
PLAN

SECTION

PLANTING SCREEN BETWEEN RES., COMM. & IND. LOTS
PLANTING SCREEN No. 5



SECTION



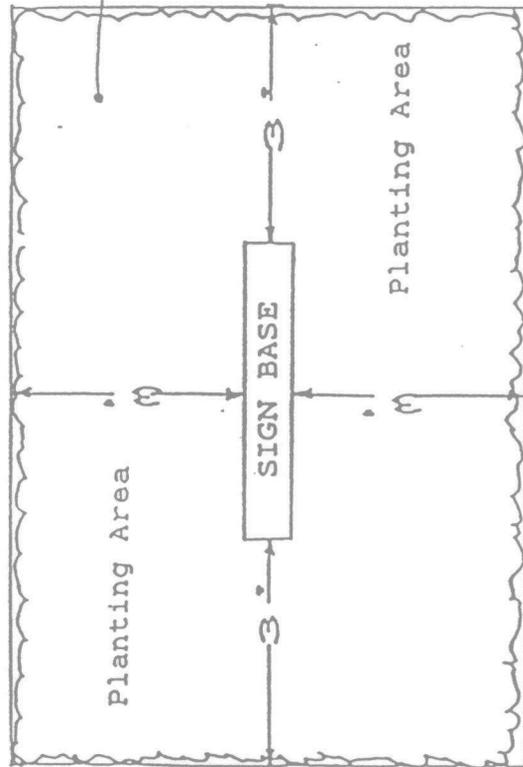
NOTE:
TREES SHALL BE 8 TO 10
FEET HIGH WHEN PLANTED.

PLAN

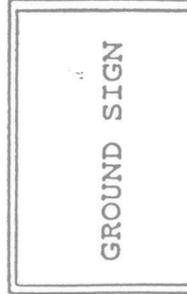
PLANTING SCREEN BETWEEN RES., COMM. & IND. LOTS

PLANTING SCREEN No. 6

Grass Area



TYPICAL: Low Shrubs



Base solid to ground.

Planting Area

PLANTING SCREEN FOR GROUND SIGNS