

**ARTICLE VI. LANDSCAPING REQUIREMENTS**

**Sec. 6-121. GENERAL PROVISIONS**

(a) The purpose of this section is to establish incentives for the preservation of existing and protected trees, replanting of trees lost due to development and to provide guidelines for minimum landscaping on site as well as within the City rights-of-way. Clear cutting of trees is prohibited within the City of Lewisville. Cutting of trees, grading and land clearing may be done, only for development purposes, in accordance with an approved final plat with construction plans and/or engineering site plan. Cutting of trees and land clearing for other than development purposes shall be considered by the City Council. The existing natural landscape character of the city shall be preserved to the extent reasonable and feasible. In an area of the street frontage containing a stand of recommended trees, the developer shall use best good faith effort to preserve such trees.

(b) Only trees from the list provided in this section will be considered to meet the requirement of this ordinance. For every recommended tree in healthy, thriving condition that is preserved, the developer/owner, the developer/owner shall be given credits as outlined below. Tree caliper shall be measured one (1) foot from the base of the tree. Multi-trunk trees shall count as 1 tree. Multi-trunk measurements shall be considered as an aggregate total of each trunks individual diameter. Credits for trees saved in the required 10-foot landscape strip will only be applicable for trees required in the landscape strip area. Credits for trees saved in parking areas will be applicable only for trees required in the parking area.

<b>SIZE OF EXISTING TREES FROM RECOMMENDED LIST</b>	<b>CREDITS</b>
5-9" Caliper	2
10-14" Caliper	3
15-24" Caliper	4
25+" Caliper	5

Points granted for trees of greater size will be considered on a case by case basis by Community Development staff.
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(c) Where conflict exists regarding existing protected trees versus required parking spaces to be provided, the following shall apply:

1. A reduction in parking spaces may be allowed on a tree-by-tree basis, up to a maximum of 10% of the total required parking spaces for protected trees saved located in a parking area.
2. Reduction in the number of parking spaces allowed for each saved protected tree location shall be determined by the requirements of that tree's survivability.

(d) The requirements of this section shall apply to all vacant undeveloped property and all property to be redeveloped, including additions and alterations.

(e) A landscape plan must be submitted as part of the engineering site plan process for all multi-family, commercial and industrial zoning districts and for non residential uses allowed in single family detached and attached residential districts. A tree survey and mitigation plan shall also accompany all final plats for single family detached and attached residential additions.

(f) Where the location of existing overhead utility lines conflict with the required landscaping strip, planting of trees that mature at a lesser height shall be required, i.e. Chinese Pistache, Japanese Black Pine and Aristocrat Pear. Where easements containing underground utilities conflict with the required landscaping strip, required tree planting shall be outside the easement on the property owners side.

(g) Required landscaping must be permanently maintained in a healthy growing condition at all times. The property owner is responsible for regular weeding, mowing of grass, irrigating, fertilizing, pruning and other permanent maintenance of all plantings, as needed.

(h) In a residential district, no fence, structure, or planting higher than three and one half feet above the established street grades, nor any tree with foliage extending below ten feet above the established street grades, shall be maintained within the required clear vision area (Figure 7). This restriction is for purposes of maintaining visibility at all times.

(i) *Approved Tree List*

(1) Approved Tree List For Required Landscaping on Public Right-Of-Way:

<b>Scientific Name</b>	<b>Common Name</b>	<b>Size at Maturity</b>
Pinus nigra	Austrian Pine	>25 ft. (30 ft.)
Pinus eldarica	Afghan Pine	>25 ft. (40 ft.)
Pyrus calleryana 'Aristocrat'	Aristocrat Pear	25 ft.
Pyrus calleryana 'Bradford'	Bradford Pear	25 ft.
Quercus macrocarpa	Bur Oak	>25 ft. (80 ft.)
Quercus virginiana	Live Oak	>25 ft. (50 ft.)
Quercus shumardii	Shumard Red Oak	>25 ft. (80 ft.)
(a.k.a. texana)	(a.k.a. Texas Red Oak)	
Quercus muhlenbergii	Chinquapin Oak	>25 ft. (80 ft.)
Ulmus crassifolia	Cedar Elm	>25 ft. (80 ft.)
Ulmus parvifolia	Lacebark Elm	>25 ft. (50 ft.)
Pistacia chinensis	Chinese Pistachio	>25 ft. (50-70 ft.)
Pinus thunbergii	Japanese Black Pine	>25 ft. (30 ft.)
Carya illinoensis	Pecan	>25 ft. (100 ft.)
Cercis canadensis	Eastern Red Bud	<25 ft. (20 ft.)
Taxodium distichum	Bald Cypress	>25 ft. (80 ft.)

(2) Approved Tree List For Required Landscaping on Private Property:

<b>Scientific Name</b>	<b>Common Name</b>	<b>Size at Maturity</b>
Chilopsis linearis	Desert Willow	>25 ft. (30 ft.)
Diospyrus texana	Texas Persimmon	<25 ft. (10-30 ft.)
Fraxinus texensis	Texas Ash	>25 ft. (50 ft.)
Liquidambar styraciflua	Sweetgum	>25 ft. (70 ft.)
Pinus nigra	Austrian Pine	>25 ft. (30 ft.)
Pinus eldarica	Afghan Pine	>25 ft. (40 ft.)
Pyrus calleryana 'Bradford'	Bradford Pear	25 ft.
Pyrus calleryana 'Aristocrat'	Aristocrat Pear	25 ft.
Quercus macrocarpa	Bur Oak	>25 ft. (80 ft.)
Quercus virginiana	Live Oak	>25 ft. (50 ft.)
Quercus shumardii (a.k.a. texana)	Shumard Red Oak (a.k.a. Texas Red Oak)	>25 ft. (80 ft.)
Quercus muhlenbergii	Chinquapin Oak	>25 ft. (80 ft.)
Ulmus crassifolia	Cedar Elm	>25 ft. (80 ft.)
Ulmus parvifolia	Lacebark Elm	>25 ft. (50 ft.)
Pistacia chinensis	Chinese Pistachio	>25 ft. (50-70 ft.)
Pinus thunbergii	Japanese Black Pine	>25 ft. (30 ft.)
Carya illinoensis	Pecan	>25 ft. (100 ft.)
Magnolia grandiflora	Southern Magnolia	>25 ft. (60 ft.)
Acer saccharum "Caddo"	Caddo Maple	>25 ft. (60 ft.)
Quercus accutissima	Sawtooth Oak	>25 ft. (50 ft.)
Taxodium ascendens	Pond Cypress	>25 ft. (70 ft.)
Taxodium distichum	Bald Cypress	>25 ft. (80 ft.)

(j) *Protected Tree List*

Only trees from the list provided in this section will be considered to meet the requirement of a protected tree for this ordinance.

(1) Protected Tree List

<i>Scientific Name</i>	<i>Common Name</i>	<i>Minimum Caliper</i>
Fraxenis Texensis	Texas Ash	5"
Quercus Macrocarpa	Bur Oak	5"
Quercus Virginiana	Live Oak	5"
Quercus Shumardii (aka Texana)	Shumard Red Oak (aka Texas Red Oak)	5"
Quercus Muhlenbergii	Chinquapin Oak	5"
Carya Illinoensis	Pecan	5"
Quercus Accutissima	Sawtooth Oak	5"
Quercus Stellata	Post Oak	5"
Quercus Marilandica	Black Jack Oak	5"
Ulmus Crassifolia	Cedar Elm	5"

(k) Provisions for removal and replacement of protected trees. Protected trees, if removed, shall be replanted on a 1:1 ratio per caliper inch and shall be from the protected tree list. If protected trees are removed and not replaced, penalties for removal shall be paid according to the following chart:

Size of Caliper Removed	Cost of Removing Protected Trees*
5-9"	\$500
10-14"	\$1000
15-24"	\$1500
25"+	\$2000

\* PER TREE

Payment for tree removal shall be due prior to the approval of the applicable tree survey. Funds received for tree removal shall be designated to a general beautification fund as determined by the City.

Required tree planting for interior landscaping and the 10-foot landscape strip will not count towards replanting or the cost assessed for removing protected trees. (See Figures 34-37 as examples).

**Sec. 6-122. SINGLE FAMILY RESIDENTIAL LANDSCAPING REQUIREMENTS.**

(a) These standards shall apply to all detached and attached single family residential districts. These standards may be met by saving existing trees on the site or planting new trees from the approved list. Lot size designations shall apply to the zoning classification(s) of the subdivision rather than to each individual lot.

(b) One (1) shade tree (2.5" caliper minimum) shall be provided for all single family residential lots less than 6,000 square feet.

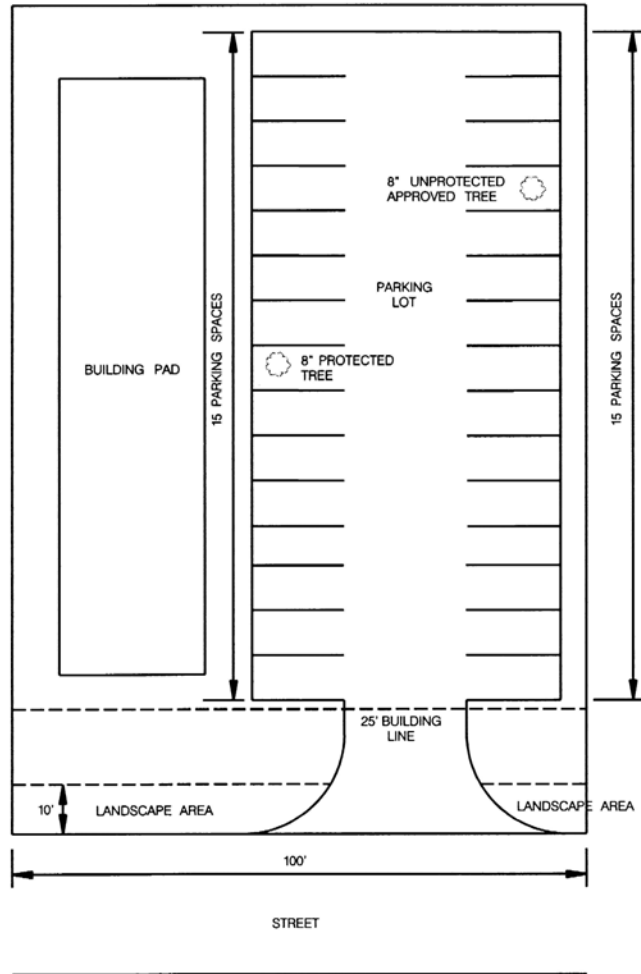
(c) Two (2) shade trees (2.5" caliper minimum) shall be provided for all single family residential lots of 6,000 square feet to less than 9,000 square feet.

(d) Three (3) shade trees (2.5" caliper minimum) shall be provided for all single family residential lots of 9,000 square feet or more.

(e) All required trees must be planted prior to request for final building inspection of dwelling units.

## SCENARIO 1 ALL TREES REMOVED

GIVEN: ILLUSTRATES PARKING LOT REQUIREMENTS ONLY	
NEW TREE PLANTING REQUIREMENTS	NUMBER OF TREES TO BE PLANTED
PARKING LOT AREA (1 TREE PER 15 SPACES)	2 TREES



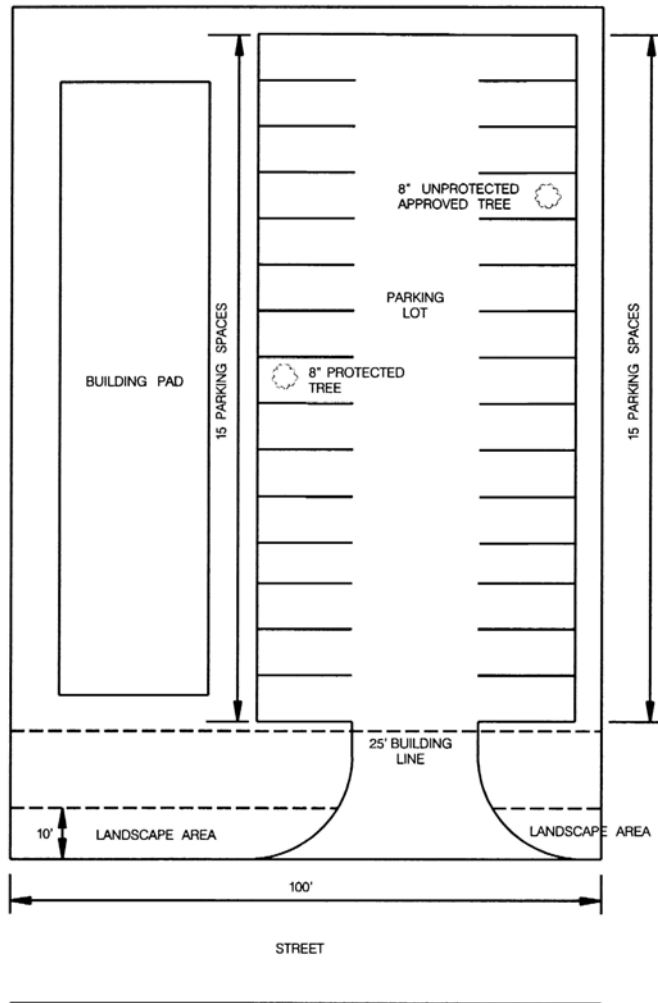
TREE REMOVAL	PENALTY	RESULTS	OTHER PLANTING REQUIREMENTS	TOTAL TREES IN PARKING LOT
(1) - 8" PROTECTED TREE	REPLANT 1:1 RATIO OR PAY	* (4) - 2 1/2" TREES OR \$500.00	2	6
(1) - 8" UNPROTECTED APPROVED TREE	NO PENALTY	TREE REMOVED NO PENALTY	0	

\* REPLANTING OF PROTECTED TREES SHALL NOT COUNT TOWARD TREE PLANTING REQUIREMENTS AS OTHERWISE REQUIRED.

**Figure 42**

## SCENARIO 2 ALL TREES SAVED

GIVEN: ILLUSTRATES PARKING LOT REQUIREMENTS ONLY	
NEW TREE PLANTING REQUIREMENTS	NUMBER OF TREES TO BE PLANTED
PARKING LOT AREA (1 TREE PER 15 SPACES)	2 TREES

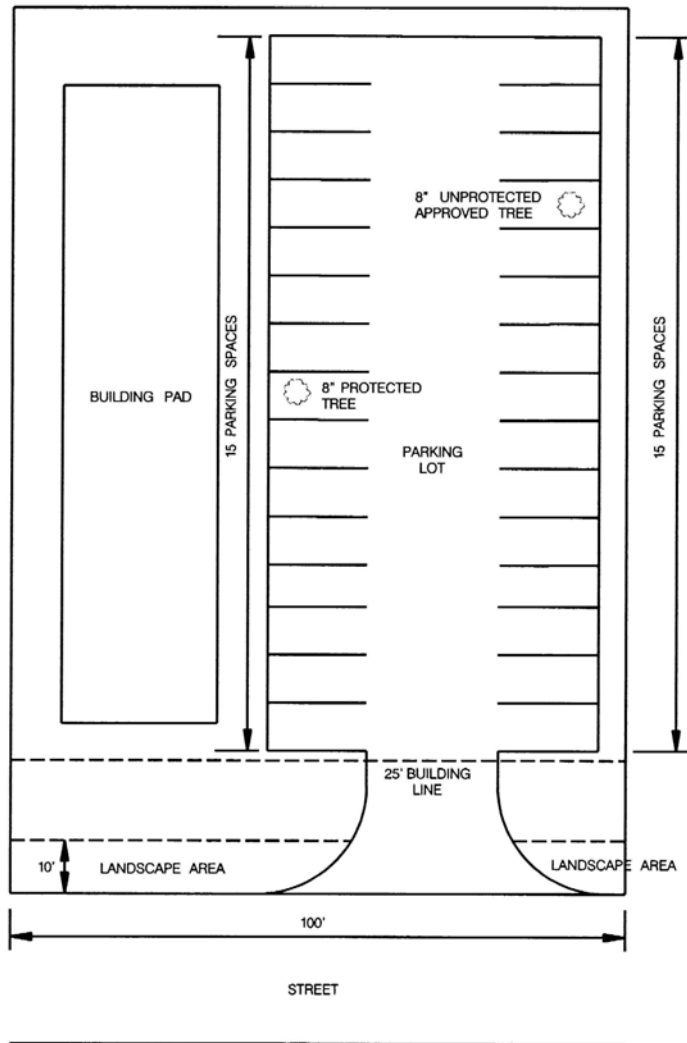


TREE SAVED	CREDIT	RESULTS	OTHER PLANTING REQUIREMENT RESULTS	TOTAL TREES IN PARKING LOT
(1) - 8" PROTECTED TREE	2 - CREDITS	(1) - 8" PROTECTED TREE	0	(2) - 8" TREES
(1) - 8" UNPROTECTED APPROVED TREE	2 - CREDITS	(1) - 8" UNPROTECTED APPROVED TREE	0	

**Figure 43**

**SCENARIO 3**  
**SAVED PROTECTED TREE /**  
**REMOVED UNPROTECTED APPROVED TREE**

GIVEN: ILLUSTRATES PARKING LOT REQUIREMENTS ONLY	
NEW TREE PLANTING REQUIREMENTS	NUMBER OF TREES TO BE PLANTED
PARKING LOT AREA (1 TREE PER 15 SPACES)	2 TREES

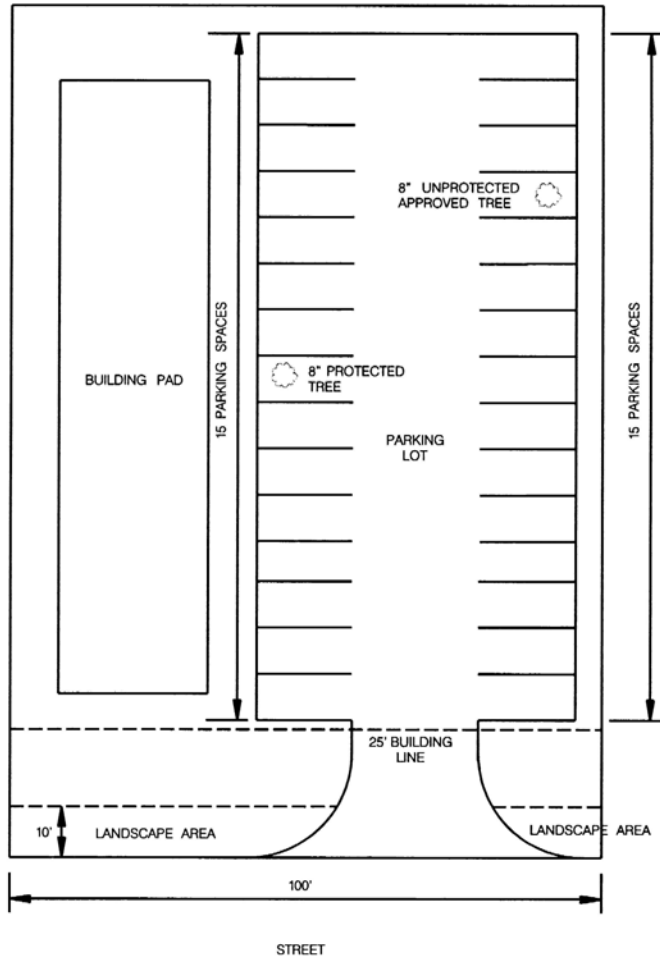


TREE STATUS	CREDIT /PENALTY	RESULTS	OTHER PLANTING REQUIREMENTS	TOTAL TREES IN PARKING LOT
(1) - 8" PROTECTED TREE SAVED	2 CREDITS	(1) - 8" PROTECTED TREE	0	(1) - 8" PROTECTED TREE
(1) - 8" UNPROTECTED APPROVED TREE REMOVED	NO PENALTY	0	0	

**Figure 44**

## SCENARIO 4 REMOVE PROTECTED TREE / SAVE UNPROTECTED APPROVED TREE

GIVEN: ILLUSTRATES PARKING LOT REQUIREMENTS ONLY	
NEW TREE PLANTING REQUIREMENTS	NUMBER OF TREES TO BE PLANTED
PARKING LOT AREA (1 TREE PER 15 SPACES)	2 TREES



TREE STATUS	PENALTY /CREDIT	RESULTS	OTHER PLANTING REQUIREMENTS	TOTAL TREES IN PARKING LOT
(1) - 8" PROTECTED TREE REMOVED	* REPLANT 1 : 1 RATIO OR PAY	(4) - 2 1/2" TREES OR \$500.00	0	5
(1) - 8" UNPROTECTED APPROVED TREE SAVED	2 - CREDITS	(1) - 8" UNPROTECTED APPROVED TREE	0	

\* REPLANTING OF PROTECTED TREES SHALL NOT COUNT TOWARD TREE PLANTING REQUIREMENTS AS OTHERWISE REQUIRED.

**Figure 45**

**Sec. 6-123. MULTI-FAMILY AND NON-RESIDENTIAL LANDSCAPING REQUIREMENTS.**

(a) These standards shall apply to all commercial, industrial and multi-family zoning districts and to all non-residential uses allowed in single family detached and attached residential districts. These standards may be met by saving existing trees on the site or planting new trees from the approved list.

(b) A landscaped strip shall be provided adjacent to all public and private streets. The landscaped strip shall be a minimum of ten (10) feet, exclusive of street right-of-way. Within the landscaped strip, one (1) shade tree (2.5" caliper minimum) shall be provided per every five hundred (500) square feet, or any portion thereof, of landscaped strip. These trees shall be generally evenly spaced along the street frontage and shall not be clumped. All privacy and security fences must be placed beyond the required landscape strip.

(c) Where parking lots and drives abut the landscape strip along a street right-of-way, evergreen shrubs must be provided for screening. The shrubs must be a minimum of two (2) feet in height and planted according to the spacing shown below. The screening must extend along the entire street frontage of the parking lot, exclusive of driveways and visibility clips. A landscape berm may be provided in lieu of required shrubs. The berm must be a minimum of 36 inches above the average grade of the street and parking lot curbs with a slope not to exceed 3:1. If a parking lot is located a minimum of 50 feet from the street right-of-way line, no shrubs or berm will be required.

(1) *Recommended Shrubbery List:*

Botanical Name	Common Name	Spacing
Berberis thunbergii	Barberry, Red	Spacing 2' - 3'
Ilex cornuta 'Burfordii Nana'	Dwarf Burford Holly	Spacing 2' - 3'
Elaeagnus macrophylla	Elaeagnus, Silverberry (Ebbenji')	Spacing 3' - 4'
Myrica pusilla	Myrtle, Dwarf Wax	Spacing 2' - 3'
Rhapiolepis indica	Indian Hawthorn	Spacing 2' - 3'
Juniperus sabina 'Tamariscifolia'	Tam Juniper	Spacing 3'

Other varieties complying with height and spacing requirements may be acceptable when approved by the City of Lewisville.

(d) Interior parking areas shall be landscaped in addition to the required landscaped strip. Trees must be provided in each parking lot spaced at a ratio of one (1) shade tree (2.5" inch caliper minimum) for each fifteen (15) parking spaces provided, or any fraction thereof. These trees must be spaced a maximum of 15 parking spaces apart. In the case of mini warehouses, such parking spaces shall be determined by the number of parallel parking spaces contained in the required loading and unloading lanes. Additionally, interior parking lot landscaping shall be provided in accordance with the following table. Interior landscaping for mini warehouse parking may be planted on the interior or the perimeter of the property.

Total Parking Area	Interior Landscape Area
0 - 24,999 square feet	5%
25,000 - 49,999 square feet	8%
50,000 square feet and larger	10%

(e) Except for customer and employee parking, parking lot landscape requirements do not apply to storage or standing parking spaces incidental to uses, such as sales and rental of motor vehicles, mobile homes, boats, trailers or other similar uses.

(f) To calculate the total parking area and the subsequent percentage of required interior lot landscaping, total the square footage of parking spaces, planting islands, curbed areas and all interior driveways and aisles except those with no parking spaces located on either side. Landscaped areas located outside the parking lot may not be used to meet the interior landscaping requirement.

(g) The required landscaping for parking lots shall be more or less evenly distributed throughout the parking lot, although adjustments may be approved by the Community Development Department where the shape or size of the parking lot, the location of existing trees or other natural constraints reasonably prevent such distribution.

(h) All landscaped areas, including the permeable areas and drip lines around trees and planting beds used for visual screening which abut any parking lot or vehicular travel area, shall be protected with curbs, parking blocks or similar barriers sufficient to protect them from vehicular intrusion.

(i) An automatic irrigation system is required for all landscaping. Water conservation is encouraged.

**Sec. 6-124. LANDSCAPING OF DEDICATED STREETS, MEDIANS OR OTHER PUBLIC RIGHTS-OF-WAY.**

(a) *General provisions.* All unpaved public medians and parkways shall be landscaped with a minimum of four inches of topsoil, sodded with Bermuda grass and irrigated with a properly designed and installed system. Refer to Section 6-97 (h) with regard to irrigation meters. One (1) tree (minimum 2.5" caliper from the approved tree list for public right-of-way) shall be planted for every 750 square feet, or any portion thereof in accordance with items 1-6 listed below. The location of trees shall be coordinated with the City to avoid conflict with any utilities within the medians and traffic movement. These landscape areas shall be maintained by the developer or owner until adequate coverage is attained at a maintenance level compatible with like areas in other parts of the City, unless other contractual arrangements are made between the developer and the City. The City will assume responsibility after one year. This allows the landscaping materials to go through a full cycle of season change. All water usage shall be metered and paid for by the developer. Individuals installing water meters shall pay administration fees, meter costs, meter deposits, but shall be exempt from capital recovery fees associated with meters installed on City rights-of-way. Within medians, no plantings or irrigation facilities shall be permitted within areas five (5) feet in width or less. All such areas shall be covered with stamped concrete in accordance with City regulations.

In the case where undeveloped land exists on both sides of a public street intended to have a median, the first to develop will carry the burden of submitting plans for landscaping and irrigating the median along with escrowing half the accepted estimated cost of implementation. The second to develop will adjust those accepted plans (if necessary), escrow half the cost of implementation according to the current construction cost, and complete the landscaping with irrigation using both escrowed amounts. In the event that the original escrow amount has fallen short of current construction cost, the City will make up the difference in cost, however if current construction cost have fallen and the original amount covers more than half of the cost, then the extra funds shall be placed in the City's account for maintaining and planting medians.

Additional rights-of-way landscape requirements shall include:

- (1) Trees must not be planted within thirty (30) feet of intersections or utility poles. City staff may require a greater setback for safety based on line of sight issues.
- (2) Trees shall be spaced in accordance with Figure 41 depending on median configuration. To prevent uniform disease susceptibility and eventual uniform senescence, no single species shall make up more than 20% of the total trees.
- (3) Only trees with a mature height of less than thirty (30) feet may be planted directly under utility lines. Trees with mature heights greater than thirty (30) feet must be planted a minimum of fifteen (15) feet from the outside edge of the last energized line.
- (4) Ornamental tree spacing will be evaluated based on the desired effect.

- (5) Trees must be planted a minimum of ten (10) feet from the edge of the curb.
- (6) Areas where median cuts are made, solid sod (Bermuda grass) will be used to repair any disturbed area. Stamped concrete will be used to cover median noses to the radius point (maximum) or as defined by the City.

(b) *Submittal Of Plans.* Landscape construction plans shall be submitted as part of the overall construction plans associated with a related plat or engineering site plan, whichever is applicable. The plans shall include the following:

- (1) A scale drawing (1" = 40') clearly indicating the location, type, size and description of all proposed landscape materials and existing utilities. Planting design of materials must be submitted to ensure adequate coverage.
- (2) The name of the subdivision or addition, and the name and address of the developer.
- (3) A north arrow, scale, and date of preparation.
- (4) A clear indication of the configuration, location, type and size of all irrigation, piping, heads and controllers, including the name, address and license seal of the designer.
- (5) Such other information reasonably deemed necessary by the Community Development Department.

(c) *Landscape And Irrigation Criteria.* In areas to be maintained by the City, all landscape and irrigation materials to be used by the developer shall be designed to conserve water and be of low maintenance. All landscape and irrigation improvements shall conform to the requirements of the City governing sight distance for traffic safety and other ordinances of the City.

A list of all plant types and irrigation plans shall be submitted as part of the Engineering Site Plan for review and approval. The developer shall furnish, or cause to be furnished at its sole expense, all labor, equipment, accessories, and services necessary to install all landscaping materials and irrigation facilities in accordance with the plans as approved by the City. All installation will be inspected by the City. All planting, if maintained by the City, must be approved by the City of Lewisville.

Irrigation facilities within medians or adjacent to curbs shall be designed and installed with low gallonage and low angle nozzles in such a way as to avoid water overflow into the street. A freeze sensor will be placed in each controller to prevent the irrigation system from activating to create unsafe spillage on roads and/or sidewalks.

(d) *Maintenance Requirement and Agreement.* Developer, at its sole expense, shall furnish or cause to be furnished, all labor, materials, equipment, accessories, and services necessary to maintain all plant materials when and as they become damaged or die. The developer shall also provide a maintenance fee to the City for ten percent (10%) of the total value of the proposed improvements prior to initial acceptance of the project (prior to building permit issuance). The purpose of the maintenance fee is to ensure the proper maintenance and replacement of all landscaping and irrigation facilities beyond the one (1) year agreement.

A one (1) year maintenance agreement shall be executed between the City and the developer to identify the developer's landscaping maintenance responsibility. The agreement shall incorporate the time period between initial acceptance of public improvements associated with the development and final acceptance of landscaping. The one (1) year agreement shall be executed prior to initial acceptance. Initial acceptance shall be defined, for the purposes of this section, as that time period related to completion and acceptance of all public improvement construction associated with the development.

In commercial developments, developer, commercial property owners association, or abutting property owners may permanently maintain all landscape and irrigation materials installed in dedicated streets or other public right(s)-of-way (per agreement with the City).

When a homeowners association or commercial property owners association, or other entity is created for the responsibility of maintaining any areas landscaped under the "median and right-of-way landscape and irrigation agreement", association documents shall be submitted for review and approval by City Staff.

Upon installation, all landscape and irrigation materials within medians or right(s)-of-way shall become the property of the City.

City shall periodically inspect the areas landscaped under the "median and right-of-way landscape and irrigation agreement", to determine that such areas are being properly maintained by the developer, or other entity. If the City finds that the developer or other entity is not properly maintaining such areas, the City shall notify the developer or other entity in writing, specifying the deficiencies. If the developer or entity does not remedy such deficiencies within 15 days following receipt of such notice, the City shall have the option of performing the necessary maintenance work itself and bill the developer or other entity for all costs for such maintenance.

(e) *Miscellaneous Median Construction*: If existing trees are removed, they shall be replaced on a 1:1 basis.

(f) Sequencing and Final Landscaping Acceptance:

Sequencing and final landscaping acceptance related to public R.O.W. landscaping is required as follows:

1. Landscape construction plans shall be submitted as part of the overall construction plans associated with a related plat or engineering site plan.
2. Obtain City approval of plans
3. Upon construction completion, the developer, contractor, or responsible party shall pay the 10% landscape maintenance fee to the City, have an executed one (1) year maintenance agreement approved by the P.A.L.S. Department, and must obtain an initial acceptance inspection.
4. The developer shall maintain all landscaping features including but not limited to all plantings (grass, trees, etc.) and irrigation systems in accordance with the executed one (1) year maintenance agreement.
5. At the end of the one (1) year maintenance agreement (or other timeframes specified in a particular agreement), the P.A.L.S. Department shall inspect the R.O.W. for final landscaping acceptance.
6. Upon final acceptance, the City will assume maintenance

#### **Sec. 6-125. TREE SURVEY & MITIGATION REQUIREMENTS**

This section shall apply to all new construction in single family and commercial developments.

A tree survey and mitigation plan shall be prepared by a civil engineer, arborist, landscape architect or surveyor. A tree survey and mitigation plan shall be required with single-family preliminary plats, single-family final plats with construction plans, engineering site plan submittals and with individual building permit applications for single family residential development (new lots). Trees within rights-of-way and City easements do not have to be shown.

Tree surveys, protection and inspection shall include the following:

- (a) Single Family: Protected trees (both caliper size and species) outside the building area.

(b) Commercial: Protected trees (both caliper size and species) outside the building pad, driveways and mutual accesses.

(c) Established drip lines that fall within or encroach onto building areas for single family parcels of land or building pads for commercial parcels of land, shall be considered as establishing the tree within the "exempted area".

All protected trees shall be protected during construction by marking protected trees, fencing drip lines and inspections by the developer. All tree protection measures shall be in place and approved prior to the commencement of any on-site construction. Protection measures such as fencing shall be maintained at all times during construction.

If determined by a registered arborist and the City that a protected tree is diseased, it shall be exempt from the requirements of this section.

Prior to the issuance of a certificate of occupancy a third party inspection shall be conducted verifying on-site compliance with the approved plan, paid for by the developer. The results must be submitted to and approved by the City.

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