

Chapter 5

Tree Preservation

(11/04/2009)

Section 5.1 Purpose of This Chapter

The intent of this Chapter is to encourage site planning which furthers the preservation of trees and natural areas; to protect trees during construction; to facilitate site design and construction which contribute to the long term viability of existing trees; and to control the removal of trees when necessary. It is the further intent of this Chapter to achieve the following broader objectives:

Protect healthy trees and preserve the natural ecological environmental and aesthetic qualities of the City.

Protect and increase the value of residential and commercial properties within the City.

Prohibit the indiscriminate clear cutting of property.

Section 5.2 Authorization for Adoption of This Chapter

The regulations contained in this Chapter have been adopted under the authority of *Chapter 51 – General Powers of Municipalities of the Texas Local Government Code*, which authorizes a municipality to adopt ordinances, rules, or police regulations that are for the good government, peace, or the trade and commerce of the municipality. This Chapter is also adopted under the authority of *the Home Rule Charter of the City of Colleyville*, which authorizes the City Council to exercise all powers granted to municipalities by the Constitution or the laws of the State of Texas.

Section 5.3 Variances and Appeals

Any person seeking approval of a development as required by this Land Development Code may request a variance from a requirement contained in this chapter, or appeal a decision of an Administrative Official by submitting a request using the procedures described in *Chapter 1 – General Provisions* of this Land Development Code.

Section 5.4 Definitions

Definitions applicable to this Chapter may be found in *Chapter 2 – Definitions* of this Land Development Code.

Section 5.5 Tree Removal Permit

No person directly or indirectly shall cut down, destroy, remove, move, or effectively destroy through damaging the roots, trunk or canopy, any tree situated on property regulated by this Chapter without first obtaining a tree removal permit, unless otherwise exempted by the provisions of this Chapter.

Section 5.6 Applicability

The terms and provisions of this Chapter shall apply to real properties, persons and trees as follows:

- A. Properties which are regulated by this Chapter:
 - 1. Any real property upon which any protected tree is located.
 - 2. Any property for which a final plat has not been submitted on the date of this Chapter.
 - 3. Any property for which construction plans have not been submitted on the effective date of this Chapter.
 - 4. All municipal / public domain property.

Section 5.7 Submittal, Review and Approval Process and Administrative Procedures

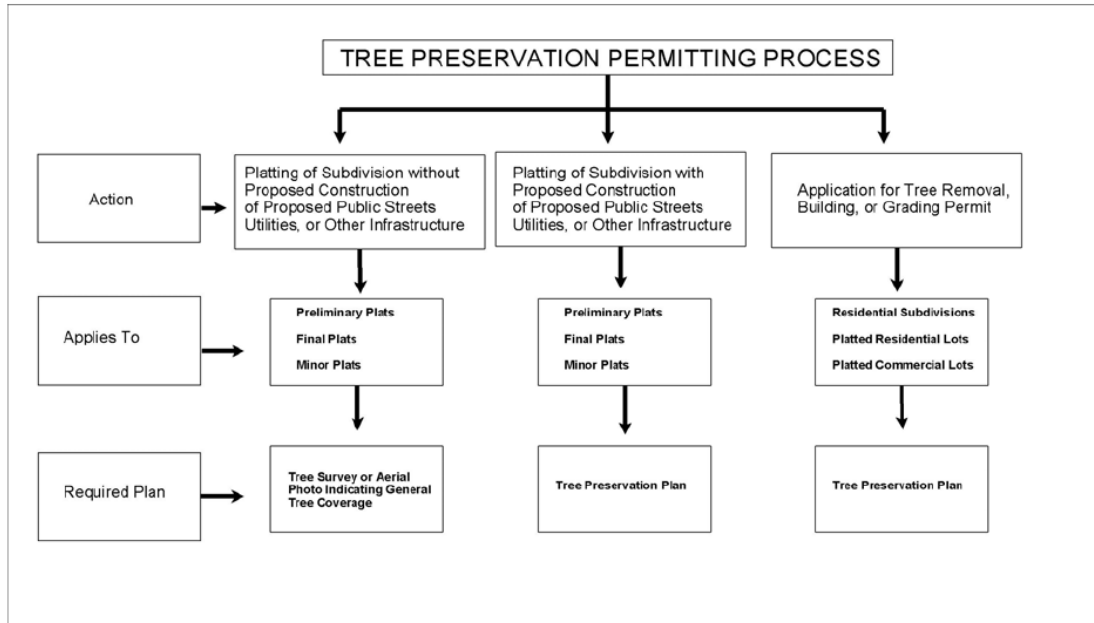
The Administrative Official is responsible for the review and approval or disapproval of all requests for tree removal permits. The request shall be submitted in accordance with the requirements specified herein.

- A. Tree Removal Permit: A request for a tree removal permit must be submitted and approved prior to the removal of any tree. Where any tree is slated for removal, no site grading, dirt disturbance or new construction may occur on the property until a tree removal permit has been issued.
- B. Fees: All tree removal permits shall be accompanied by a check made payable to the City of Colleyville in the amount established by the schedule of fees approved by the City Council.
- C. An application involving a limited portion of a site may be based on an exhibit showing only that portion of the site.
- D. Aerial photographs interpretation may supplant the ground survey for preliminary analyses of large scale developments, such as subdivisions, utility corridors and golf courses, at the discretion of the Administrative Official.
- E. Any tree removal permit request that requires the removal of a protected tree shall be accompanied by a tree preservation plan.
- F. The items required on a tree preservation plan shall include but not be necessarily limited to:
 - 1. Title Block: includes street address; legal description (lot and block, subdivision name); date or revised date, north arrow; graphic (and written) scale; name, address, telephone number of owner and of person preparing the exhibit.
 - 2. Location of all existing or proposed structures, improvements and site uses including pavement and landscaping, setback, easements and service connections, all properly dimensioned and referenced to property lines,

3. Existing and proposed site elevations, grades and major contours. Construction details of permanent grade changes around all trees.
 4. Location of trunks and canopies of all existing trees, graphically differentiating between the trees to remain and those to be removed. A plus (+) character shall indicate trunk location and concentric circle shall indicate the size and canopy configuration.
 5. Proposed general areas or locations of the replacement trees.
 6. Locations of all critical root zones as defined in Chapter 2 - Definitions.
- G. Tree information required shall be summarized in tabular form on the preservation plan (see example below) and shall include:
1. The list of trees to be removed.
 2. The total diameter of trees to be removed.
 3. Replacement trees listed by species name, quantity, size and total diameter required for replacement of trees. (See Section 5.13 for replacement tree list.)

Example of Tree Survey and Mitigation Table to Be Inserted on Preservation Plan							
Tree Species	Number of Trees on Site	Total Caliper Inches	Number of Exempt Trees Removed	Caliper Inches Exempt to be Removed	Number of Non-Exempt Trees Removed	Caliper Inches Non-Exempt to be Removed	Replacement Trees to be Planted (3" Caliper)
Red Oak	12	108	3	42	1	12	4
Post Oak	35	350	18	168	2	24	8
Cedar	10	89	1	12	0	0	0
Pecan	5	75	0	0	5	75	25
TOTAL	62	622	22	222	8	111	37

- H. Tree protection notes and details shall be included on site plans, subdivision plans or landscape plans and always included with the bid documents given to the contractor. (See Section 5.12)
- I. Appeals: Any decision made by the Administrative Official with regard to a request for a tree removal permit may be appealed by any party to the Planning and Zoning Commission. All actions of the Commission shall be final.
- J. Permit Validity: Permits for tree removal issued in connection with a building permit, subdivision plan and site plan shall be valid for the period of that building permit's or site plan's validity. Permits for tree removal not issued in connection with a building permit, subdivision or a site plan shall become void ninety (90) days after the issue date on the permit.



Section 5.8 Tree Preservation Requirements

- A. Minimum Existing Tree Preservation Requirements: When any new construction occurs, there shall be a minimum number of trees protected on the property. For new residential subdivisions, the entire boundary of the subdivision shall be considered as one property for the purpose of this section. The chart below shall be used to determine the minimum protection requirements:

Existing Tree Coverage Preservation Requirements:

<i>Percentage of existing protected tree coverage</i>	<i>Minimum percentage of the existing protected tree coverage to be preserved</i>
0% – 20%	70%
20.1 – 40%	60%
40.1% - 60%	50%
60.1% - 80%	40%
80.1% - 100%	30%

Protected trees located within any of the exempted areas specified in section C below may be credited toward the minimum existing preservation coverage requirements in the above table such that no more than 50% of the existing protected trees may be credited within an exempt area. NOTE: The minimum preservation coverage requirements listed above may not be mitigated for as described in Section 5.10.

- B. Preservation of Heritage Trees: Heritage Trees, as defined in Chapter 2 - Definitions, may not be classified as exempted trees, regardless of whether or not they are located in an exempted area as defined in the sections below.
- C. Exempted Areas, Persons and Tree Species from preservation requirements:
1. New Residential Subdivisions with Street Dedications: Except where noted above, the following areas shall be exempt from the tree preservation requirements of this chapter:
 - a. Rights-of-way of newly dedicated streets

- b. Easements
 - c. Residential setback envelope
 - d. NOTE: When submitting a new residential subdivision plat, the Planning and Zoning Commission may evaluate whether an alternate street layout and grading plan which complies with all City subdivision standards would result in substantially greater tree preservation. In the event such an alternate layout is determined by the Commission to be a reasonable use of the land then the applicant may substitute said alternative plan without being required to submit a new Preliminary Plat application. If, however, the applicant does not substitute said alternate layout or another acceptable plat to the Commission, failure of the applicant to do so shall be a basis for denial of the applicant's application.
2. Platted Residential Lots: Except where noted above, the following areas shall be exempt from the tree preservation requirements of this chapter:
- a. Residential setback envelope
3. Platted Commercial Lots: Except where noted above, the following areas shall be exempt from the tree preservation requirements of this chapter:
- a. Trees located within the new commercial building footprint.
4. Exempted Tree Species: The following tree species shall be exempt from the tree preservation requirements of this chapter:
- a. Mesquite
 - b. Hackberry
 - c. Chinese Tallow
5. Exempted Persons: The following persons are exempt from the provisions of this Chapter only to the extent of their control over the particular class of properties and trees described below. Persons exempt from the provisions shall not be required to obtain tree removal permits.
- a. An employee of the City of Colleyville, a public utility or an authorized contractor working in a dedicated public right-of way may in the course of business, remove or prune that portion of a tree which prohibits the safe construction, repair or maintenance of a service line or facility.
 - b. The resident of a single family home may remove all or a portion of a tree which exists on the lot of record on which the single family home is built.
 - c. A property owner or his authorized contractor, employee or tenant may remove a tree which has become severely diseased or damaged to the extent that it is beyond the point of recovery or is in danger of falling, as determined by the Administrative Official.
 - d. All landscape nurserymen shall be exempt from the terms and provisions of this section only in relation to those trees planted and growing on the nursery premises which are planted and grown for the sale or intended sale to the general public.

- e. Any person may remove all or a portion of a tree which has disrupted a public utility service due to tornado, storm, flood, or other act of God, but only that portion of the tree which is necessary to safely restore normal utility service.
- f. The following persons shall be exempt from the tree replacement provisions of this Chapter. However, such persons shall provide tree protection and replacements as per this Chapter for all remaining trees in non-exempt areas.
 - (1) A person performing work authorized by a building permit in the residential buildable area.
 - (2) A person performing work authorized by an approved site plan in the commercial building footprint.
 - (3) A person performing work authorized by the approved grading and drainage plan in the residential setback envelope.
 - (4) An employee of the City of Colleyville, a public utility or a person performing work authorized by an approved subdivision plat or a separate dedication instrument in a dedicated public right-of-way, drainage or utility easement.

Section 5.9 Tree Protection

A major purpose of this Chapter is to protect all trees which are not removed and to allow approved construction to occur. The following procedures shall apply to all types of construction projects which involve development around trees.

The following procedures are deemed appropriate in the situations noted; however, unique circumstances may allow modifications if deemed necessary by the Administrative Official.

- A. Prohibited Activities: The following activities shall be prohibited within the limits of the critical root zone of any tree which is subject to the requirements of this Chapter.
 - 1. Material Storage: No materials intended for use in construction or waste materials accumulated due to excavation or demolition shall be placed within the limits of the critical root zone of any tree.
 - 2. Equipment Cleaning / liquid disposal: No equipment may be cleaned or other liquids deposited within the limits of the critical root zone of a tree. This would include but not be limited to, paint, oil, solvents, asphalt, concrete, mortar or other materials.
 - 3. Tree Attachments: No signs, wires or other attachments, other than those of a protective nature shall be attached to any tree.
 - 4. Vehicular Traffic: No vehicular and construction equipment traffic or parking is allowed within the limits of the critical root zone of trees.
- B. Pre-Construction: The ensuing procedures shall be followed prior to construction.
 - 1. Tree Flagging: All trees to be removed from the construction site shall be flagged with bright red vinyl tape wrapped around the main trunk at a height of four feet (4') or more such that the tape is visible to workers on foot or driving equipment.
 - 2. Protective Fencing: All protected trees shall have protective fencing located at the tree's critical root zone. The protective fencing may be comprised of snow fencing, orange vinyl construction fencing, chain link fence or other similar fencing with a four-

foot (4') approximate height. The protective fencing may be located within the critical root zone of the specimen tree for approved construction only. The fencing shall follow the delineation of the approved construction. In order to protect the trunk, the trunks of all protected trees shall be wrapped with orange vinyl construction fencing such that the trunk will be easily visible during construction activities.

3. Bark Protection: in situations where a tree remains in the immediate area of intended construction, the tree shall be protected by enclosing the entire circumference of the tree's trunk with lumber encircled with wire or other means that does not damage the tree.
4. Construction Pruning: In a case where a low hanging limb may be broken during the course of construction, the obtrusive limb may be cut. The limb shall be cut either flush to the trunk on or at the next joint of the limb. The wound shall then be sealed with pruning paint.

In no instance shall pruning involve a portion of the trunk or thirty percent (30%) of the entire canopy without the Administrative Official's prior approval.

C. Improvement within the Critical Root Zone of a Tree: Design constraints often dictate that trees slated for preservation have some encroachment on their critical root zone, as defined in Chapter 2 - Definitions. The following is the minimum design criteria, which is allowed within the critical root zone of a tree. Development exceeding the criteria would put the tree at risk and therefore no longer be considered a preserved tree. In such a case replacement trees shall also be required.

1. Grade Changes: In the event that grade changes must be made around a tree or group of trees, the following shall be implemented in order to maintain oxygen and water exchange within the tree's critical root zone.
 - a. A minimum of seventy-five percent (75%) of the critical root zone must be preserved at natural grade with natural ground cover or landscaping for the tree to be considered a preserved tree.
 - b. No cut or fill greater than two inches (2") shall be located closer to the tree trunk than one half (1/2) of the radius of the critical root zone radius distance.
 - c. Increase Grade: Provide an aeration system just outside the tree's critical root zone. A dry well located a minimum of one-half (1/2) of the radius of the critical root zone.
 - d. Decrease Grade: Provide retaining walls outside the critical root zone to mitigate cuts.
2. Boring of Utilities: May be permitted under protected trees in certain circumstances. The minimum length of the bore shall be the width of the tree's canopy and shall be a minimum depth of forty-eight inches (48").
3. Trenching: irrigation systems shall be designed to avoid trenching across the critical root zone of any tree.
4. Paving: A maximum of twenty five percent (25%) of the critical root zone of a tree may be covered with impervious paving. The pavement and the cut and fill for the pavement is to not exceed one-half (1/2) of the critical root zone radius distance.

Section 5.10 Mitigation and Violations

Any protected tree which is six inches (6") or greater that is removed, destroyed or more than 50% damaged and does not meet the exemption provisions of this chapter shall be mitigated per the requirements of this section. In the event that the loss of a protected tree requires mitigation, the party responsible for mitigation shall either replace the protected tree(s) by planting new trees, pay a mitigation fee or a combination of both. For the purpose of this Chapter, trees removed within any City right-of-way or other City owned property by anyone not exempted by Section 5.8(C)5 shall be mitigated per the requirements of this section and other applicable City ordinances.

The mitigation authorized by this section is not meant to supplant good site planning. Tree replacement will be considered only after all design alternatives which could save more existing trees have been evaluated.

A. Mitigation Through Planting New Replacement Trees: A sufficient number and diameter of replacement trees shall be planted in order to equal the total diameter inches or fraction thereof of trees six inches (6") or greater and slated for removal.

1. Replacement trees shall be a minimum of three inches (3") diameter when measured one foot (1') above the soil line and a minimum of eight feet (8') in height when planted.

Examples-

- a. A total of 18" diameter to be removed shall be replaced with 6 – 3" diameter trees.
- b. A total of 19" diameter to be removed shall be replaced with 7 – 3" trees or 5 – 3", trees and 1-4" tree.

2. All replacement trees shall be a species listed on the replacement tree list and guaranteed for one year from the date of the final inspection and acceptance of the project.
3. The location of replacement trees is restricted from utility easements and rights-of-way. The location shall not be in an area such that the mature canopy of the tree will interfere with overhead utility lines. No trees shall be planted within ten feet (10') of a fire hydrant.
4. Replacement trees should be planted on the site from which existing trees are to be removed. If this is not feasible, an applicant may initiate a proposal to plant trees off-site. This may be approved if the planting site is no more than one-half mile from the site where the original trees were removed.
5. Replacement trees shall be planted prior to the issuance of the certificate of Occupancy or project release. Optimum planting times do not always correspond to project completion. For that reason, replacement tree plantings may take place after the project is released by the City; provided, that before project release, a fiscal security is posted in the amount equal to the prevailing rate for installed trees with a one (1) year guarantee, plus fifteen percent (15%) to cover administrative cost.

B. Mitigation Through Payment of Fee: A monetary fee of \$250.00 per diameter inch of the tree(s) removed or damaged shall be assessed and paid to the City of Colleyville. All mitigation fees shall be deposited into the City's Tree Preservation Fund.

- C. Mitigation of Heritage Trees: Heritage Trees, as defined in Chapter 2 – Definitions and noted in Section 5.8:
1. A monetary fee of \$500.00 per diameter inch of the Heritage Tree removed or damaged shall be assessed and paid to the City of Colleyville and deposited into the City's Tree Preservation Fund, or;
 2. If replacement trees are to be planted, the total amount of replacement inches to be planted shall be in an amount that is twice the diameter inches of the Heritage Tree(s) removed and shall, otherwise, meet the requirements of Section A above.
- D. Colleyville Tree Preservation Fund: All mitigation fees shall be paid into the Colleyville Tree Preservation Fund. The fund shall be administered by the City Manager or his/her designee and shall only be used for the planting of new trees on City owned or leased properties, rights-of-way and other public properties such as public schools, county and State properties located within the City of Colleyville.
- E. Penalty for Violation: Any person violating or failing to comply with any provision or requirement of this Chapter, including but not limited to the mitigation requirements of this section, shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall, without exception, be fined the maximum amount of \$2,000.00. A separate offense shall be deemed committed upon each day during or on which each separate violation or failure to comply occurs or continues to occur and shall be punishable as such.
- F. If any protected tree dies within three (3) years of the issuance of the certificate of occupancy, final inspection or acceptance of public improvements and is brought to the attention of the city manager or his/her designee, the original permit applicant shall be subject to the replacement/mitigation requirements for protected trees per this section.

Section 5.11 Replacement Tree List

The following is the list of appropriate and approved replacement trees which have been selected on the basis of their suitability in the urban environment of North East Tarrant County.

REPLACEMENT TREE LIST			
<u>SCREENING TREES</u>	<u>ORNAMENTAL TREES</u>	<u>MEDIUM AND LARGE TREES</u>	<u>PALMS</u>
ARBORVITAE	BLUE POINT JUNIPER	AMERICAN ELM	CALIFORNIA FAN PALM
BLUE POINT JUNIPER	CAROLINA BUCKTHORN	ARISTOCRAT PEAR	MEXICAN FAN PALM
CHINESE PHOTINIA	CAROLINA CHERRY LAUREL	ARIZONA CYPRESS	NEEDLE PALM
CAROLINA CHERRY LAUREL	GRAPE MYRTLE	BALD CYPRESS	SABAL PALM
EAST PALATKA HOLLY	DECIDUOUS HOLLY	BOIS D' ARC	WINDMILL PALM
EASTERN RED CEDAR	DESERT WILLOW	BUR OAK	
LITTLE GEM MAGNOLIA	EAST PALATKA HOLLY	CEDAR ELM	
NELLIE R. STEVENS HOLLY	FIG	CHINESE PISTACHE	
SAVANNAH HOLLY	ITALIAN CYPRESS	CHINQUAPIN OAK	
WAX MYRTLE	JAPANESE MAPLE	DEODAR CEDAR	
YAUPON HOLLY	LACEY OAK	EASTERN RED CEDAR	
	MEXICAN BUCKEYE	EVE'S NECKLACE	
	NELLIE R. STEVENS HOLLY	FOREST PANSY REDBUD	
	OKLAHOMA REDBUD	GINKGO BILOBA	

	SAVANNAH HOLLY	LACEBARK ELM	
	SUMAC	LITTLE GEM MAGNOLIA	
	TEXAS MOUNTAIN LAUREL	LIVE OAK	
	VITEX	PECAN	
	WAX MYRTLE	PERSIMMON	
	YAUPON HOLLY	SHANTUNG MAPLE	
		SHUMARD RED OAK	
		SOUTHERN MAGNOLIA	

Section 5.12 Construction Plan Requirements

The following notes shall be required as a part of all construction plans.

1. All trees shown on this plan to be preserved shall be protected during construction with temporary fencing. Tree protection fences shall be installed prior to the commencement of any site preparation work (clearing, grubbing or grading).
2. Fences shall completely surround the tree or clusters of trees. The fence shall be located at the outermost limits of the tree branches or critical root zone. The fence will be maintained throughout the construction project in order to prevent the following.
 - A. Soil compaction in the critical root zone resulting from vehicular traffic or storage of equipment or materials.
 - B. Critical root zone disturbances due to grade changes greater than two inches (2") cut or fill or boring which was not authorized by the City.
 - C. Wounds to the trunk, limbs or exposed roots by mechanical equipment.
 - D. Other activities detrimental to trees such as chemical storage, cement trunk cleaning, and fires.
3. In cases of area constraints where the protective fence is closer to the trunk than four feet (4'), the trunk must be protected with strapped-on planking to a height of eight feet (8') or to the limits of the lower branching.
4. All grading within critical root zones of protected trees shall be performed by hand or small equipment to minimize damage. Prior to grading, relocate the protective fencing to two feet (2') behind the grade change area.
5. Trees most heavily impacted by construction activities should be watered deeply once a week during periods of hot and dry weather. Tree crowns should be sprayed with water periodically to reduce dust accumulation on the leaves.
6. Trenching for landscape irrigation shall be located as far from the existing trunks as possible.
7. Pruning to provide clearance for structures, vehicular traffic and equipment shall take place before construction begins.

Section 5.13 Amendments

Reserved for listing of amendments to this Chapter.

Ord. Number	Date	Subject
O-00-1214	4-18-00	Adoption of Tree Preservation in Land Development Code
O-09-1734	11-4-09	Amendments to Chapter 5 based on recommendations of consultant