

Sec. 77-504. - Landscaping and screening.

A. Purpose. The purposes of this section are as follows:

1. To aid in stabilizing the environment's ecological balance by contributing to the processes of air purification, oxygen regeneration, groundwater recharge, and stormwater or irrigation runoff retardation, while at the same time aiding in noise, glare and heat abatement;
2. To assist in providing adequate light and air and preventing overcrowding of land;
3. To ensure that landscaping is an integral part of a development or re-development;
4. To enhance the beautification of the city;
5. To enhance property values and to protect public and private investments;
6. To preserve and protect the unique identity and environment of the city and preserve the economic base attracted to the city by such factors;
7. To conserve energy and natural resources; and
8. To protect and enhance the public health, safety and general welfare.

B. Applicability.

1. General applicability. This section shall apply to all development and improvements to property. This shall include, but shall not be limited to, the following:
 - (a) Enlargement of existing development. Applications for building permits for construction work that:
 - i. Increases the number of stories in a building on the lot, or
 - ii. Increases by more than ten percent or 10,000 square feet, whichever is less, of the combined floor areas of a building, or
 - iii. Increases the impermeable lot coverage by more than 2,000 square feet.
 - (b) Re-occupation of a discontinued structure. Re-occupation of a discontinued structure, if the structure has been vacant for six months, or where it has been determined that there has been a reduction of utility usage below what has been or is customary for the preceding use.
 - (c) Change of use. Change of use where the value of improvements to the existing building to accommodate the new use exceeds 30 percent of the tax-appraised value of the structure immediately prior to issuance of a building permit.
 - (d) Subdivision of a structure. Subdivision of a structure into two or more separate units or spaces or the combining of previously divided spaces into less space(s).

2. Planned Development Districts, conditional use permits, and Overlay Districts. Any area within a planned development district, conditional use permit, or overlay district containing landscaping standards shall be regulated by the landscaping requirements of the adopted PD, CUP, or overlay, as may be amended, or landscaping requirements herein, whichever is more strict.
3. Timing of applicability to individual lots. Landscaping plans shall be submitted at such time a site plan is submitted for review or an application for a building permit on such lot is made. When the regulations of this section become applicable to a lot, the requirements are binding on all current and subsequent owners of the lot.
4. Relationship to other requirements.
 - (a) Use-specific standards. Any use required to provide landscaping or screening pursuant to the use-specific standards of subchapter 77-302 shall provide such use-specific landscaping or screening. In the event of a conflict between the use-specific requirements and the general requirements of this subchapter 77-504, the use-specific provisions shall control.
 - (b) Tree preservation requirements. The general landscaping and screening requirements of subchapter 77-504 through 7. shall be in addition to the requirements of subchapter 77-504, Tree preservation. However, if an area designated for tree preservation is located in an area where general landscaping or screening would be required and where the preservation of existing vegetation would serve the same purpose as required landscaping or screening, then the applicant may receive a credit for the protected trees against the required landscaping.

C. Landscape and irrigation plans.

1. Timing of submission.
 - (a) Landscape plans shall be approved by the director.
 - (b) Irrigation plans shall be submitted with building plans when the building permit application is submitted to the chief building official for review.
2. Form and content of application. To be accepted as complete, landscape plans and irrigation plans shall be prepared and sealed by a registered landscape architect licensed to practice in the State of Texas in the format specified by the director of planning and shall contain all information and supporting materials as required therein.
3. Plan review. The planning director shall review each landscape plan submitted to determine whether or not it complies with the requirements of this subchapter 77-504C. Unless otherwise modified as allowed herein, all landscape plans must comply with the provisions of this section.

D. Required landscaping.

1. Landscaped area generally. In all areas other than single-family and two-family dwellings, at least 15 percent of the gross lot area (excluding right-of-way) shall be maintained as landscaped area and shall comply with the following standards.

- (a) All required landscaped edges, screening, parking lot perimeter landscaping, and interior parking lot landscaping shall be included in the overall minimum 15 percent of gross site landscaping.
- (b) Decorative paving square footage may be included in the required landscape area square footage if approved by the city in lieu of the standard city sidewalk specifications.
- (c) No tree may be planted closer than five feet from any impermeable surface or area, unless approved by the director of parks and recreation, and/or unless a greater distance is required due to tree species.
- (d) The existing natural landscape character (e.g., native oaks, elms, and pecan trees) shall be preserved to the extent reasonable and feasible. In an area of the street frontage containing a stand of trees, the developer shall use good-faith efforts to preserve such trees, and also shall comply with subchapter 77-504H, Tree preservation. Existing trees may be incorporated into the required landscaping.
- (e) No unapproved landscaping, object, structure, or sign shall be placed within a visibility easement.

2. Landscape edge (adjacent to all streets). A 20-foot landscape edge shall be provided along the entire length of the portion of the perimeter of the lot where a public or private street exists, exclusive of driveways and accessways at points of ingress and egress to and from the lot. This requirement shall not apply to parking lots, which are addressed in subsection 3., below.

- (a) A public right-of-way shall not be included in the 20-foot landscape edge. A reduction in width of the required landscape edge may be approved when the reduction is required for public improvements or when such requirement presents an undue hardship. Such hardship may not be based on financial considerations.
- (b) The minimum requirements for landscape edge plantings shall be 12 evergreen shrubs and one canopy tree for each 30 linear feet of frontage or portion thereof.

3. Parking lot perimeter landscaping.

- (a) A perimeter strip is required around all parking areas. Parking lots shall maintain a landscaped perimeter strip of at least six feet in width along the entire length of the parking lot perimeter adjacent to a public or private street, exclusive of driveways and accessways at points of ingress and egress to and from the lot.
- (b) Landscaping shall include the following methods:
 - (1) Evergreen shrubs planted three feet on center in a double staggered row in a planting bed that is of a width suitable for the required plant spacing, but at least 36 inches wide.

(2) A berm at least two feet high and covered in live vegetation. If used or required as a screen, plants used for screening on a berm must reach the required screening height within three years of installation.

(c) Where, due to topographical or site constraints, no other method is available to provide parking lot perimeter landscaping, a low fence or wall may be constructed using materials compatible with the principle building. One-third of any such fence or wall must be screened with acceptable plant materials, as approved by the director of planning.

(d) For maintenance and water conservation, no more than 25 percent of any perimeter side shall be turf grasses. Instead, other groundcovers shall be used, and watered by drip or soaker irrigation.

4. Parking lot interior landscaping.

(a) The required percentage of interior parking lot landscaping shall be determined based on the following sliding scale:

TABLE 5.4-1: PARKING LOT
INTERIOR LANDSCAPING
REQUIREMENTS

Total Parking Area (square feet) Interior Planting Area
7,000 to 49,999 5 percent
50,000 to 149,999 8 percent
150,000 and larger 10 percent

(b) To calculate the total parking area and the subsequent percentage of required interior lot planting, total the square footage of all areas within the lot's perimeter, including parking spaces, planting islands, curbed areas, corner lots, and all interior driveways and aisles (except those with no parking spaces located on either side).

(c) Landscaped areas located outside the parking lot may not be used to meet the interior planting requirements.

(d) Wheelstops shall be installed no closer than two feet from the landscaped area provided in order to prevent cars from parking too close to trees or damaging shrubs and screens and to allow routine landscape maintenance.

(e) All planting islands shall be curbed with a raised six-inch concrete curb and must be at least ten feet wide.

(f) Trees shall be provided within each parking lot at a minimum density of one tree for each eight parking spaces provided on the lot. A minimum of eight shrubs shall also be required for each 12 parking spaces. At a minimum, 50 percent of trees shall be canopy trees and 50 percent

understory trees, equally distributed throughout the parking lot. Where only three or fewer trees are required, those trees shall be canopy trees.

(g) Each parking lot tree island shall be a minimum of ten feet wide in any dimension and shall contain no less than 100 square feet of continuous permeable land.

(h) For maintenance and water conservation, turf grasses are not permitted within landscaped islands. Such shall incorporate other groundcovers and watered by drip or soaker irrigation.

5. Buffering of adjacent single-family or duplex zoned properties or properties with such land uses. Whenever a nonresidential use, or multi family use is proposed adjacent to a property used or zoned for single-family or duplex residential use, the nonresidential or multi family land use shall provide a landscaped buffer of at least ten feet in width within the nonresidential or commercial residential property, planted with one canopy tree for each 35 linear feet or portion thereof of adjacent exposure.

E. General landscaping requirements and standards.

1. Landscape materials list. Plant materials must be suitable for local soil conditions and climate and must not be on the prohibited plant list maintained by the city.
2. Plant material substitutions.
 - (a) Due to seasonal planting issues and a lack of plant availability, approved landscape plans may require minor revisions. Revisions to approved plans shall be approved by the director.
 - (b) To minimize conflicts with overhead powerlines, required trees must be on the TXU approved list.
 - (c) Where overhead electrical transmission lines exist, the applicant shall submit landscape plans to the responsible electric company for a determination as to possible interference between landscaping and maintenance/operation of the utility. The applicant shall allow eight weeks for such determination. The final landscape plan shall not be approved by the city until such determination is made. Applicants are encouraged to contact the city prior to any submission to the electric utility, and to submit landscaping proposals within easements well in advance of required approval schedule.
3. Plant measurements. Required plants shall conform to measurements within this section. The caliper measure of a tree shall be measured at a point on the trunk 12 inches above the root ball. The lowest branching height for all canopy trees shall be six feet.
 - (a) Canopy trees shall be minimum four-inch caliper.
 - (b) Understory trees shall have a minimum height of ten feet.
 - (c) The minimum size for evergreen-type shrubs used to fulfill screening requirements shall be a minimum of eight feet in height at time of planting, planted a maximum of six feet on-center,

and of sufficient spread to provide a solid screen at time of planting. A double row may be planted a maximum of ten feet on-center.

- (d) The minimum size for shrubs shall be five gallons. Three-gallon shrubs may be substituted at a rate of three for two.
 - (e) Plant material selection for any area of a lot shall provide species diversity and to minimize impacts from species-specific disease. No more than one-fourth of any plant type (e.g., canopy tree, understory tree, etc.) shall be of the same species. A minimum of four different species shall be used as canopy trees (four species of understory trees, etc.) during landscape development of any lot. This requirement also applies to shrubs. The various species shall be distributed throughout the lot.
4. Irrigation and maintenance. All landscape areas and open space shall be provided with an adequate, inconspicuous, and complete-coverage automatic irrigation system. Under high-voltage power lines and in easements for transmission towers, low pressure systems (drip and soaker hoses) shall be used. No control valve shall be located within an easement for transmission towers.
 5. Shrub beds. All shrub beds shall be separated from turf areas with steel or concrete edging. Beds should have one cubic yard organic bedding mix incorporated into every 1,000 square feet of bedded area. Beds shall be mulched with a minimum two-inch layer of shredded hardwood or cypress mulch. Shrub beds' irrigation shall be separated from turf areas.
 6. Maintenance. Every property owner and any tenants shall keep their landscaped areas in a well-maintained, safe, clean, and attractive condition at all times. Such maintenance shall include, but is not limited to, the following:
 - (a) Landscaped areas shall be kept free of trash, litter, weeds, and other such materials or plants not a part of the landscape.
 - (b) All plant material shall be maintained in a healthy and growing condition, and must be replaced within 30 days with plant material of similar variety and size (size not to be smaller than the minimum required by this Code at the time of replacement) if diseased, damaged, destroyed, or removed. If replacement cannot or should not be effected within the 30-day period due to seasonal temperatures, a letter shall be provided to and approved by the director of planning stating when such planting is to be accomplished. Planting delay shall occur within a growing season as determined by the city not to exceed 90 days.
 - (c) Lawn mowing, trimming and edging, and the proper height maintained for groundcovers.
 - (d) Proper pruning.
 - (e) Watering on a regular basis.
 - (f) Maintenance of landscape lighting in working order.
 - (g) Irrigation systems in working order.

(h) Cleaning of abutting waterways and landscaped areas lying between public right-of-way lines and the property, unless such streets, waterways, or landscaped areas are expressly designated to be maintained by a designated governmental authority.

7. Landscaping on or affecting public property.

(a) The city shall have the power to plant, preserve, spray, trim, or remove any tree, shrub, or plant on any parkway, alley, or public ground belonging to the city to protect the public health, safety, and general welfare.

(b) It shall be unlawful for any person to cut or break any branch of any tree or shrub or injure in any way the bark of such tree or shrub growing on public property.

(c) The city shall have the right to trim or remove, or to order the trimming or removal, of vegetation that conflicts or interferes with the delivery of public services, or that creates a hazard or nuisance to public rights-of-way or easements.

8. Irrigation. All landscaped areas shall be irrigated according to the following standards:

(a) Irrigation systems shall be calibrated and designed to provide the appropriate amount of water that relates to the plant species, and shall not over-water.

(b) All planted areas shall be irrigated.

(c) An irrigation plan shall be signed and sealed by a state-licensed irrigator.

(d) All irrigation systems shall be equipped with rain and freeze sensors.

(e) Drip or soaker irrigation shall be used in all vegetated areas exclusive of turf grass areas.

F. Screening standards.

1. Screening of service and off-street loading spaces. All service areas and designated off-street loading spaces on a site shall be screened from all public and more restrictive, conforming adjacent uses. Screening shall comply with the following standards:

(a) To the maximum extent feasible, service and off-street loading areas shall not be visible from public streets. If a service or loading area will be visible from a public street, approval of the planning and zoning commission shall be required. Off-street loading shall not include spaces for vehicles operated by the U.S. Postal Service or express-type package vehicles with three axles or less.

(b) No service and off-street loading areas shall be located within 20 feet of any public street, public sidewalk, or internal pedestrian walkway.

(c) Vehicle maneuvering areas shall not encroach into required landscaped areas.

- (d) Service and off-street loading areas shall be incorporated into the overall design of the building and landscaping so that the visual and acoustic impacts of these functions are fully contained and out of view from adjacent properties and public streets.
 - (e) Service areas not enclosed by a wall or fence shall be concealed by screening materials at least eight feet in height measured from the horizontal plane passing through the nearest point of the off-street loading space. Such screening may be provided by using one of any of the following methods; however, off-street loading spaces located adjacent to residentially zoned property shall use the method in subsection 6.c. below.
 - i. A combination of evergreen trees and shrubs that are planted in a double staggered row that provides the required screening.
 - ii. Masonry wall that matches the primary building.
 - iii. A combination of any two of the following: A six-foot ornamental iron fence, large evergreen-type screening shrubs, and/or berm.
 - (f) When screening for service areas and off-street loading spaces is provided by earthen berm or plant materials, the following regulations apply:
 - (1) The berm shall have a minimum side slope of four to one and a minimum crown width of one and one-half feet.
 - (2) The area shall be designed so that a berm will undulate from one to maximum height, not to exceed five feet in height.
 - (3) Large evergreen-type shrubs shall be selected from the approved planting materials list and planted in accordance with specifications herein. In addition, the plant materials shall:
 - i. Be located in a bed that is of a width suitable for the required plant spacing, but at least five feet wide. The director of parks and recreation or designee may require a wider bed width depending on type, species and/or growing habit.
 - ii. Be planted in staggered rows over the entire length of the bed unless the director of parks and recreation approves an alternative planting density as being capable of providing a solid screen within two years of planting.
 - iii. Be a minimum of eight feet in height at time of planting and provides the required visual barrier.
2. Dumpster and trash compactor screening.
- (a) Dumpsters shall be enclosed on three sides with six-foot walls constructed of the same materials and finishes as the buildings; a double metal gate shall be required on the fourth side, and shall be kept closed at all times other than for immediate access. The opening shall not face,

or shall be screened from, a public street or access easement. Alternate materials may be approved by the planning and zoning commission.

- (b) An eight-foot wall constructed of the same materials and finishes as the buildings shall be provided around compactors.
- (c) Screens are not required for dumpsters in nonresidential developments when located in the service area and screened by the buildings, wing wall or screening wall from public view.
- (d) Dumpsters are required and shall be identified on a site plan for all developments that require a site plan. The specific screening requirements specified in this section shall be placed on the site plan.

3. Screening walls between residential and nonresidential districts.

(a) Generally: Masonry wall or living screen required.

- (1) When a nonresidential zoning district and/or use abuts a residential zoning district, a screening wall shall be erected along the entire property line separating these districts, except where visibility triangles or easements are required. The screening wall shall be constructed by the owner/developer of the nonresidential use at such time as the property is developed.
- (2) The screening wall may be either a solid masonry wall or, subject to the approval of the planning and zoning commission, a living screen consisting of vegetative material. A masonry wall shall comply with the standards in subsection 6.ii. below. A living screen shall comply with the standards in subsection 6.iii. below.

(b) Masonry wall standards.

- (1) Design and materials. A masonry screening wall installed under this section shall consist of a reinforced wall of the same materials, color, and texture as used on the primary use, having a minimum height of six feet and a maximum height of eight feet. The wall shall include masonry details and form varying angles similar to the primary structure. A graphic detail and schedule of materials shall be shown on the facade plan. Reinforced concrete footings are required and shall be designed, and signed by a structural engineer licensed to practice in the State of Texas.
- (2) Engineering requirements. Plans and specifications for the wall shall be submitted with the civil plans and approved by the city engineer.
- (3) Installation of landscaping between wall and alley prohibited. Where a masonry screening wall erected pursuant to this section backs onto an alley, any required landscaping shall be installed between the nonresidential use and the screening wall, rather than between the screening wall and the alley.
- (4) Additional requirements.

- i. The wall shall be designed by a professional structural engineer registered in the state with seal and signature affixed to the plans.
 - ii. The wall shall be designed so that water will drain under, through, and away from the wall on all sides. No ponding of water shall be allowed.
 - iii. The wall shall be designed with footing or pier and sized to allow for no more than one inch of movement over eight feet.
 - iv. Unless otherwise constrained by topography, curvature, and location of infrastructure, where walls are aligned with residential alleys, the face of the wall or column shall be a minimum of one foot from the property line.
 - v. Masonry wall construction shall be in accordance with the city's design specifications.
 - vi. Slip-form or similar type walls are prohibited.
- (c) Living screen standards. If a living screen is authorized, it shall consist of a berm and plant materials and shall comply with the following standards:
- (1) The berm shall have a minimum side slope of four to one and a minimum crown width of one and one-half feet.
 - (2) The berm shall undulate from one foot to the maximum height not to exceed five feet in height.
 - (3) Large evergreen-type shrubs shall be selected from the approved planting materials list and planted in accordance with specifications herein. In addition, the plant materials shall:
 - i. Be located in a bed that is of a width suitable for the required plant spacing, but at least five feet wide. The director of parks and recreation may require a wider bed width depending on type, species and/or growing habit.
 - ii. Be planted in staggered rows over the entire length of the bed unless the director of planning or designee approves an alternative planting density as being capable of providing a solid screen within one year of planting.
 - iii. Be a minimum of eight feet in height at time of planting and provides the required visual barrier.
 - (4) A wrought iron fence having a minimum height of not less than six feet nor more than eight feet in combination with evergreen plant material (minimum eight feet in height at time of planting) is required if a living screen is proposed.

G. Administration and enforcement of landscaping provisions.

1. Surety. When a property owner seeks a certificate of occupancy prior to landscaping being installed, the director of planning shall require an irrevocable letter of credit or cash escrow equivalent to 135 percent of the total cost of the landscaping.
2. Deferral of planting. In any case in which a certificate of occupancy is sought during a season of the year in which the director of planning determines that it would be impractical to plant trees or shrubs, or to lay turf, a temporary certificate of occupancy may be issued, if a letter of agreement from the property owner is provided stating when the installation shall occur. All landscaping required by the approved landscape plan shall be installed within a growing season as determined by the city or no longer than 90 days from the date of issuance of the temporary certificate of occupancy or the site shall be deemed to be in violation of this Code and the temporary certificate of occupancy shall be revoked. This provision relates only to new site construction.
3. Certificate of occupancy. No certificate of occupancy shall be issued prior to the complete installation and approval of the irrigation system as indicated on the approved landscape and irrigation plans. Permits issued contrary to this provision are void from the moment of issuance and may not be relied on by the permit recipient.

H. Tree preservation.

1. Purpose. The purpose of this section is to encourage the preservation of long-established trees of sizes that, once removed, can be replaced only after many generations of tree growth; to preserve protected trees during construction; and to control the removal of protected trees. It is the intent of this section to achieve the following:
 - (a) Prohibit the indiscriminate clearing of trees from property;
 - (b) To the greatest extent possible, preserve and maintain protected trees so as to enhance the quality of development;
 - (c) Protect and increase the value of residential and commercial properties within the city by maintaining the city's current tree inventory;
 - (d) Maintain and enhance a positive image for the attraction of new business enterprises to the city;
 - (e) Protect healthy quality trees and promote the natural ecological environmental and aesthetic qualities of the city; and
 - (f) Help provide needed shaded areas in order to provide relief from the heat by reducing the ambient temperature.
2. Applicability.
 - (a) Definition of "protected tree". For purposes of this Chapter a "protected tree" is any tree with a minimum eight inch caliper at DBH (11 inches DBH for Hackberry) that is not listed on the Prohibited Plant List.

- (b) Removal of protected trees prohibited without tree removal permit. Unless the area or activity is exempt under subsection H.2 below, no person, directly or indirectly, shall cut down, destroy, remove or move, or effectively destroy through damaging, any protected tree situated on property regulated by this section without first obtaining a tree removal permit under subsection H.4.(c) below.
- (c) Exemptions. Subsection 77-504(H) shall not apply to the following areas or activities:
- (1) Single-family residential uses. Property of not more than two acres, already occupied by a single-family detached, single-family attached, duplex, or townhouse dwelling. However, any construction, paving, or other activity on the property that may damage trees on the public right-of-way shall comply with the standards of subchapter 77-504H.(e)(2), Tree protection during construction.
 - (2) Damaged/diseased trees. The removal of a tree that is dead, diseased, naturally fallen, damaged beyond the point of recovery, or in danger of falling, or a tree that the director of parks and recreation or designee finds to be a threat to public health, welfare, or safety. This would include requiring the removal of a diseased tree to reduce the chance of spreading the disease to adjacent healthy trees. Mitigation will be required if damage is caused by construction activity.
 - (3) Irregularly pruned trees. A tree that has been irregularly pruned in such a way so that it is damaged beyond the point of recovery and has lost its aesthetic value. Mitigating may be required at the direction of the director of planning or director of parks and recreation.
 - (4) Utility service interruption. The removal of a tree that has disrupted a public utility service due to a tornado, storm, flood, or other act of God. Removal shall be limited to the portion of the tree reasonably necessary to reestablish and maintain reliable utility service.
 - (5) Public right-of-way. Removal of a tree in the right-of-way owned or leased by a governmental entity.
 - (6) Public utility. Removal of a tree on property owned or leased by a public utility excluding property used for administration offices or functions.
 - (7) Landscape nursery. All licensed plant or tree nurseries shall be exempt from the tree protection and replacement requirements and from the tree removal permit requirements only in relation to those trees planted and growing on the premises that are so planted and growing for sale to the general public.
 - (8) Golf course. Golf courses shall be exempt from the tree protection and replacement requirements and from the tree removal permit requirements for removal of protected trees within areas designated as tee boxes, fairways, or greens. All other areas shall be subject to the requirements of this section.

3. Tree removal permits.

(a) Purpose. This section sets forth the procedure for review and approval of tree removal permits, which are required prior to removal of any protected tree.

(b) Tree location map.

(1) General requirement. Applications for tree removal permits must be obtained from the planning department. All requests for tree removal permits shall be accompanied by a map showing at a minimum the requirements listed in subsection 8.c.ii.(B). below. These requirements may be modified by the director of planning as needed to administer this section. Upon prior approval by the director, the map exhibit may be limited only to the applicable portion of the site. An aerial photograph may be allowed to satisfy a portion of the requirements if densely populated by trees and no construction activity is to take place in this area.

(2) Map requirements. The location of all buildings, structures, and other improvements intended on the lot shall be shown. The limits of the construction line shall be shown, if applicable. The location of trees to be removed shall be located by measurements from the two nearest property lines and assigned a reference number as required by (D) below. The caliper (DBH) and common name of all protected tree(s) shall be shown. Any required replacement trees shall be shown with the caliper size, and the common name and scientific name of the tree. The scientific name will include Genus and species (e.g., *Ulmus americana*).

(c) Authority for review.

(1) The director shall be responsible for the review and approval of all requests for tree removal permits and associated tree survey and preservation plan for three trees or less submitted in accordance with the requirements specified in this section. Unless otherwise exempted above, the removal of more than three trees shall be approved by city council upon recommendation of the planning and zoning commission.

(2) At the discretion of the director applicants submitting a tree removal permit application not associate with development plans may be required to submit a final or preliminary landscape plan, and elevation renderings, depending on the scope of activity involved and the sensitivity of the location or the perceived value of any relative stand of trees in the permit request.

(3) The director may defer the approval of a tree removal permit and associated tree survey and preservation plan to the city council with recommendation of the planning and zoning commission for any reason. All decisions made by the city council shall be final and binding.

(d) Approval criteria. The director or the city council shall deny a tree removal permit and associated tree survey and preservation plan if it is determined that:

(1) Removal of the tree is not reasonably required in order to conduct anticipated activities;

(2) A reasonable accommodation can be made to preserve the tree; or

(3) The purpose and intent of this subchapter is not being met by the applicant.

- (e) Appeal. Any tree removal permit and associated tree survey and preservation plan decision made by the director may be appealed to the planning and zoning commission, whose decision may be appealed to the city council. An appeal must be filed in writing with the director not more than 20 days after the rendering of a decision by the director or action taken by the planning and zoning commission. All decisions made by the council shall be final and binding.
- (f) Permit expiration. Permits for tree removal shall be issued in connection with a building permit or site plan, and 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 or a site plan shall become void 180 days after the issue date on the permit.

4. Tree survey/preservation plan.

- (a) When required. For all development subject to this subchapter 77-504H the applicant or developer shall prepare and submit a tree survey/preservation plan along with the site plan.
- (b) Contents. The tree survey/preservation plan shall be a separate plan, and shall be submitted with the landscaping plan required in subchapter 77-504, Landscaping and screening, and any development required by subchapter 77-807. The tree survey/preservation plan shall contain sufficient detail and legibility to enable the city to verify compliance with this subchapter 77-504. The tree survey/preservation plan shall, at a minimum, include the following information:
 - (1) Identification and location of individual trees that are healthy and classified as a protected tree, or that are otherwise noteworthy because of species, age, size, or rarity. Each tree shall be referenced by a distinct number and the plan shall indicate the approximate canopy width of each tree or, if within a grove of protected trees where canopies combine, the overall width of the canopy.
 - (2) A summary table of protected trees on the site, containing:
 - a. Individual tree reference number;
 - b. Both the common name and the botanical name of each tree including Genus and species;
 - c. DBH, diameter of protected canopy trees and height of protected understory trees on the site;
 - d. General appearance of the tree(s) with regard to health;
 - e. Inches of credit, if applicable, and
 - f. Whether the tree is proposed for removal.
 - (3) Calculation (indicating formula) of total protected tree inches on site, number of protected tree inches to be removed, any credits, and mitigation tree inches required.

- (4) The range of height, caliper, and canopy width of the trees on the site.
 - (5) Individual trees proposed for removal shall be indicated by a heavy line with an "X." A tree survey/preservation plan that shows protected trees proposed for removal shall be accompanied by an application for a tree removal permit (subsection 3 above).
- (c) Prepared by knowledgeable professional. Tree survey/preservation plans shall be prepared by persons such as arborists, foresters, or landscape architects, who have the competence and knowledge to satisfactorily develop plans required by this section.
- (d) Relationship to landscaping requirements. The requirements of this subchapter shall be in addition to the general landscaping requirements set forth in subchapter 77-504A through G.
- (e) Standards for tree protection and replacement.
- (1) Early tree removal prohibited. Thinning of trees is permitted prior to approval of a site plan; however, the removal of any protected tree, or the clearing or damage of trees from any contiguous area of 500 square feet or more, is prohibited unless authorized by an approved tree survey/preservation plan or site plan. Removal of any protected tree, or the clearing or damage of trees from any contiguous area less than 500 square feet must be approved by the director of parks and recreation or their designee.
 - (2) Tree protection during construction. During construction, the following limitations shall be observed in order to protect all protected trees that are not going to be removed:
 - a. Prior to construction.
 - i. Tree flagging. All protected trees or groups of trees to be saved on the subject property shall be flagged with bright, fluorescent, orange vinyl tape wrapped around the main trunk at a height of four feet or more such that the tape is visible to workers operating construction equipment. Such fencing shall be placed beneath the dripline/canopy edge to prevent all possible access or intrusion by construction equipment. Fencing shall be supported at a maximum of six-foot intervals by 4-stakes or by other approved methods. Single-incident access for the purposes of clearing underbrush with handheld equipment is allowed. A tag with an assigned reference number shall be located on each protected tree for future identification. It shall be the responsibility of the property owner and/or developer to ensure that such fencing and reference tags remain as required during the construction process.
 - ii. Protective fencing. Protective fencing around the critical root zone shall be required in the area of intended construction or grading.
 - iii. Bark protection. In situations where a protected tree remains in the immediate area of intended construction, the tree shall be protected by enclosing the entire circumference of the tree with two-inch by four-inch lumber encircled with wire or other means that do not damage the tree. The intent is to protect the bark of the tree against contact by large construction equipment.

- b. Permanent construction methods.
 - i. Boring. Boring of utilities under protected trees may be required in certain circumstances. When required, the length of the bore shall be the width of the critical root zone at a minimum and shall be a minimum depth of 48 inches.
 - ii. Trenching. All trenching where possible shall be designed to avoid trenching across the critical root zone of any protected tree. This shall not inhibit the placement of necessary underground services such as water, sanitary sewer, storm sewer, electric, telephone, or gas.
 - iii. Root pruning. All roots two inches or larger in diameter that are exposed as a result of trenching or other excavation shall be cut off square with a sharp medium-tooth saw and covered with pruning compound within two hours of initial exposure.
 - c. Issuance of permit; conditions. No building permit or grading permit shall be issued unless the applicant signs an application or permit that states that all construction activities have met the requirements of this subsection. The building official shall make available to the applicant a copy of this subsection.
- (3) Prohibited activities. The following activities shall be prohibited within the limits of the critical root zone of any protected tree:
- i. Material storage. No materials intended for use in construction, or soil and waste materials accumulated due to excavation or demolition, shall be placed within the limits of the critical root zone of any protected tree.
 - ii. Equipment cleaning; liquid disposal. No liquid used to clean equipment (other than water) shall be deposited or allowed to flow overland within the limits of the critical root zone of a protected tree. Materials removed by cleaning, such as paint, oil, solvents, asphalt, concrete, mortar, or similar materials, shall not be deposited or allowed to flow within the limits of the critical root zone of a protected tree.
 - iii. Tree attachments. No signs, wires, or other attachments, other than those of a protective nature, shall be attached to any protected tree.
 - iv. Vehicular traffic. No vehicular and/or construction equipment traffic or parking shall take place within the limits of the critical root zone of any protected tree other than on an existing pavement. This subsection does not apply to occasional access within a critical root zone for purposes of clearing underbrush, establishing the building pad and associated lot grading, vehicular traffic necessary for routine utility maintenance or emergency restoration of utility service, or routine mowing operations.
 - v. Grade changes. No grade changes (cut or fill) shall be allowed within the limits of the critical root zone of any protected tree unless adequate construction methods are approved by the director of planning.

- vi. Impervious paving. Unless otherwise approved where no other option is available, no paving with asphalt, concrete, or other impervious materials in a manner that may reasonably be expected to kill a tree shall be placed within the limits of the critical root zone of a protected tree.
- (4) Replacement of protected trees. Protected trees removed pursuant to an approved tree removal permit and associated tree survey and preservation plan shall be replaced according to the following requirements:
- a. Plan submittal. At the discretion of the director, applicants submitting a tree removal permit application not associated with development plans may be required to submit a final or preliminary landscape plan and elevation renderings, depending on the scope of activity involved and the sensitivity of the location or the perceived value of any relative stand of trees in the permit request.
 - b. Amount of replacement trees required. For each caliper inch removed, protected trees must be replaced at the following ratio: each caliper inch removed will be replaced with one caliper inch. Replacement trees must be a minimum of four-inch caliper.
 - c. Replacement restriction. Any required replacement tree shall be planted such that the mature canopy of the tree will not interfere with overhead utility lines.
 - d. Landscaping plans. Trees required to be added per the landscaping requirements in section 77-504 shall not be considered as replacement trees. Trees used as replacement trees must be clearly indicated as such on the landscaping plan.
 - e. Credit for saved trees. For every one-caliper inch that is saved, the developer shall receive a credit of one-caliper inch that does not have to be replaced.
 - f. Replacement trees planted off site. Replacement trees may be planted off site in areas or locations approved by the director or city council upon recommendation from the planning and zoning commission and may be planted:
 - i. Within a specified city-designated park or other city-owned property or facility;
 - ii. Within a specified private open space (i.e. private park, preserve, or similar property that is open for public use); or
 - iii. Within a specified public right-of-way median.
 - g. Tree mitigation fees. In lieu of planting replacement trees, the director or city council, upon recommendation from the planning and zoning commission, may approve a request to pay tree mitigation fees. The city council has the authority to waive or reduce mitigation fees as they see fit:
 - h. The director shall assess tree mitigation fees paid in lieu of replacement tree planting during submission and review of a tree survey and preservation plan and/or tree removal permit

application. Fees shall be collected prior to issuance of a tree removal permit and deposited into the reforestation fund.

- ii. The director shall determine the monetary value of a replacement tree by contacting landscape companies, plant nurseries, or garden centers for the price of a four-inch caliper tree installed, then averaging that cost to determine the mean cost of a four-inch tree; and then dividing by four to determine the mean cost of a one-inch tree installed. The mean cost of a one-inch tree installed is then multiplied by the required number of replacement tree inches proposed for fee payment in lieu of planting. Said formula is represented as follows:

$((A+B+C+D)/4)/4 * X = \text{Replacement Tree Escrow Fee}$ where A, B, C, and D represent the installed cost of a four-inch tree from four sources, and where X represents the required number of replacement tree inches.

(5) Tree pruning restrictions.

- a. Generally. No protected tree shall be pruned in such a manner that significantly disfigures the tree or in a manner that would reasonably lead to the death of a tree, except where such pruning is necessary for safety and function of utilities.
- b. Pruning standards. All pruning shall be in accordance with the National Arborist Association Standards for Pruning of Canopy Trees.

(6) Maintenance or replacement. If any of the trees proposed for protection or trees planted as a part of this section should die within a period of one year after completion of the activities associated with construction, the owner of the property shall replace the trees within six months at a ratio of one-to-one with an approved tree.

(7) In the event of a conflict or inconsistency with the provisions of this section and any other provision in the Code of Ordinances, this section shall prevail.

- (f) Incentive for additional tree protection. Applicants are encouraged to save as much existing vegetation and tree cover on a development site as possible. A reduction in the number of required parking spaces may be granted for preservation of additional tree cover beyond that required by this section, so that the reduction in the amount of required pavement can help preserve existing healthy trees in an undisturbed, natural condition. The amount of reduction can be determined only after taking into consideration any unique site conditions and the impact of the reduction on parking needs for the use. The reduction of parking shall only occur where the trees being protected are within the parking area. The maximum reduction in parking under this section shall not exceed 20 percent.

I. Residential landscape, entryway, and buffer yard plans for subdivisions.

1. Purpose. This section provides standards for the installation of landscaping and irrigation, site stabilization, revegetation, and the provision of buffer yards on residential development projects within the city. The preservation and protection of existing plants and the replanting of landscaping materials, including native groundcovers, shrubs and trees, facilitates the control of erosion and the reduction of glare and dust, as well as the visual softening of building masses. Landscaping, buffer

yards, walls, and screening allow for the separation of incongruous uses and for the buffering of incompatible activities. Landscaping, buffer yards, walls, and screens together help to effectuate privacy, logical development, and enhancement of property values.

2. Applicability. With the exception of individual lots in residential subdivisions, this section shall apply to all new subdivisions in every residential zoning district. However, the regulations of this division do not apply to the districts listed below:
 - (a) Multifamily residential: MF-2F, MF-TH, MF-S, and MF-U.
 - (b) Office: O-1 and O-2.
 - (c) Commercial/retail: C-1, C-2 and C-3.
 - (d) Manufacturing - M-1 and M-2.
 - (e) Mixed-use: All MU districts.
 - (f) Institutional-Urban: I-U.
 - (g) Other districts: Floodplain, special use permits, and applications for building permits or for certification of occupancy for buildings previously unoccupied.
3. Form, submission, and filing fee.
 - (a) Copies of the landscape, entryway, and buffer yard plans and supporting data, prepared in accordance with the requirements set forth in this section and the user's guide, shall be filed with the director of planning and development or designee as part of any subdivision final plat submittal. The approved landscape, entryway, and buffer yard plans shall be included with, and made part of, the approved final plat.
 - (b) All landscape, entryway, and buffer yard plans shall be prepared and sealed by a registered landscape architect licensed to practice in the State of Texas.
4. Plan contents and standards.
 - (a) Plan content. Landscape, entryway, and buffer yard plans shall include, but are not limited to, the location of existing and proposed street improvements; alleys; locations and types of landscaped areas; complete planting and revegetation plans; walls, fences, and other screening; and proposed lot layout. Additional information to be shown on the landscape, entryway, and buffer and plans is listed in the user's guide.
 - (b) Standards of design and development.
 - (1) Any part of the development site that has been disturbed and is not required for buildings, structures, private residential yards, loading and vehicular accessways, streets, parking and utility areas, pedestrian walks and hard-surfaced activity areas shall be landscaped.

- (2) Each parcel to be developed shall meet the requirements of this section, as well as the requirements of the zoning district in which it is located.
- (3) Native plants salvaged from the site shall be transplanted into common area/s, landscaped areas, or front yards.
- (4) All plant materials shall meet required specifications.
- (5) Landscaped areas along street frontages shall conform to the streetscape requirements of this Code. These street frontages shall provide variations in grade, visual relief, buffering and screening.
- (6) Landscape design to minimize soil erosion and sedimentation by stormwater or other runoff.
- (7) Automatic irrigation is required for all landscaped areas. Drip and soaker hose systems are required beneath transmission lines.

5. Maintenance.

- (a) After the landscape installation is complete and before public improvements are scheduled for acceptance by the City of Rowlett, an on-site landscape inspection will be completed by city staff and the landscape architect.
- (b) The landscaped areas shall be maintained in a condition free of weeds and trash.

6. Streetscape.

- (a) Purpose. The purpose of this section is to outline the general design standards for street landscaping.
- (b) Applicability of standards. The following shall be required or allowed as options:
 - (1) Subsection 9.iii.(A) through (G) of this section are required.
 - (2) Entry medians are optional, with standards as outlined in this section.
 - (3) However, if the choice is made to reduce the primary entryway landscaping by up to 25 percent, then an equal percentage of landscaped street medians shall be installed to compensate for the reduced percentage of the primary entryway landscaping requirements.
- (c) Internal to subdivision.
 - (1) Drive lanes;
 - (2) Alleys;

- (3) Curbs;
- (4) Sidewalks;
- (5) Protected trees;
- (6) Existing trees (see tree preservation);
- (7) Unless required, street medians are optional. Where required or proposed, the ROW shall sufficiently widen to include medians. Drive lanes are required on both sides of medians. Medians shall be located to assist with:

- i. Headlight screening;
- ii. Screening homes and lots from roadway;
- iv. Privacy, and
- v. To reduce the required landscaped area on each side of an entryway.

(8) Buffer yard.

- i. A 40-foot (minimum width) landscaped buffer yard adjacent to external primary or secondary thoroughfares, measured from the existing ROW, or dedicated ROW line, in conformance with the thoroughfare plan.
- ii. Berms can be used within the buffer yard. Berms shall be constructed as required in this Code.
- iv. Masonry screening wall is required within the landscape buffer. Screening walls shall be constructed in accordance with this subsection and chapter. Masonry Wall Standards.
- v. Sidewalks within the landscape buffer shall conform to the master thoroughfare plan map. Sidewalks shall meander through the required landscape buffer; however, at a street corner, the sidewalk must return to the ROW (maximum one-foot from ROW line) for proper alignments with a crosswalk and transitions to adjacent sidewalks.

7. Entryways.

(a) Entryway areas.

- (1) Entryway areas are required regardless of whether the entryway is a primary or secondary entry into the subdivision as defined in this section.
- (2) The entry area will flank each side of the intersection formed by an external or perimeter street and an internal street.
- (3) The entry area will have a resulting square footage, created by these setbacks, and shall be maintained equally on both sides.

(b) The primary entryway shall be the major entrance into a residential subdivision, as identified by the developer. Both sides of the primary entrance shall be part of the subdivision,

(c) The secondary entryway/s shall be all other entrance from an external or perimeter street into a residential subdivision. Both sides of a secondary entrance shall be part of the subject subdivision. A secondary entrance shall not include the following:

(1) Access into the subdivision from a residential street stub in an adjacent subdivision, or

(2) Access into a subdivision that is separated from an external street by another subdivision or property under different ownership.

(d) Dimensional and area requirements are as follows:

(1) All dimensioning is measured from the R-O-W lines.

(2) Each primary entryway shall total 9,600 square feet minimum; that is, 4,800 square feet of landscaped area per side as follows:

i. Eighty feet measured from the external street by 40 feet measured from the internal residential street, plus, an additional 1,600 square feet of landscaped area along the external street and adjacent to the required 3,200 square feet.

ii. The planning and zoning commission can reduce the above landscaping requirements by up to 25 percent if the applicant chooses to provide landscaped street medians.

(e) Each secondary entryway shall total 6,400 square feet minimum; that is, 3,200 square feet of landscaped area per side as follows:

i. Eighty feet measured from the external street by 40 feet measured from the internal residential street.

ii. The planning and zoning commission may reduce the above landscaping requirements by up to 25 percent if the applicant chooses to provide landscaped street medians.

(f) Median dimensions.

i. Primary entryway median shall be a minimum of 24 feet.

ii. Secondary entryway median shall be a minimum of 16 feet.

iii. The minimum depth for primary and secondary entryway medians shall be 40 feet.

8. Planting requirements.

(a) Entryway areas.

- (1) Entryway plantings shall include at least one of the following:
 - (2) Two canopy trees per 500 square feet; or
 - (3) One canopy tree and two understory trees per 500 square feet; or
 - (4) One canopy large tree, one understory tree, and three large shrubs per 500 square feet; or
 - (5) Four understory trees per 500 square feet; or
 - (6) Each side of the overall entryway area shall be landscaped as follows:
 - i. Seventy-five percent of the total area must be landscaped with trees, shrubs or ground cover.
 - ii. Twenty-five percent of the total area can be treated with:
 - (A) Grass; or
 - (B) Hardscape amenities such as:
 - aa. Enhanced paving.
 - bb. Raised/built planters.
 - cc. Fountains.
 - dd. Sculpture.
- (b) Entryway medians.
- (1) Median plantings shall include at least one of the following:
 - (2) One canopy tree per 500 square feet; or
 - (3) Two understory trees per 500 square feet.
 - (4) Overall median to be planted as follows:
 - a. Eighty-five percent of the total area must be landscaped with additional combinations of shrubs or ground cover.
 - b. Fifteen percent of the total area can be treated with:
 - i. Grass.
 - ii. Hardscape amenities such as:

- aa. Enhanced paving.
- bb. Raised/built planters.
- cc. Fountains.
- dd. Sculpture.

(c) Landscape buffer.

- (1) One canopy tree per 1,000 square feet (excluding drives, entryways, alleys and entry yard areas).
 - (2) Plant evenly spaced or random placement, within the buffer yard.
- (d) All improvements within this area shall conform to the requirements of the city regulations governing sight distance for traffic safety and other city standards.

9. Individual lot requirements. The goal of individual lot requirements is to encourage development to consider design relationships between R-O-W/open space/residential lots.

(a) R-O-W/residential lot relationships:

- (1) Encourage cluster tree planting at common lot line/R-O-W line.
- (2) Use a variety of tree species and sizes.
- (3) No hedges, fences or other visual barriers or obstructions are to exceed the front setback lines.

(b) Front yard landscape: Prior to the final inspection of a house in any subdivision, the builder shall plant trees in the front yard of each platted lot as outlined in this section. Trees shall be selected from the approved plant materials list and size specifications as outlined in the users guide.

- (1) Two canopy trees per lot; or
- (2) One canopy tree and two understory tree per lot.

(c) Tree removal/replacement: Refer to tree preservation in this chapter.

10. Masonry screening walls.

- (a) Intent. The overall intent of this section is to provide an outline to influence the design of the perimeter screening wall to encourage interest, provide a visual sequence as viewed from and along adjacent transportation corridors. The objective is to create variety and interest and avoid monotonous and repetitive appearance of the required screen/perimeter wall component. The screen walls should promote a feeling of security and comfort for homeowners and drivers as

well as a sense of aesthetic quality. Considerations for screening wall approval include aesthetic characteristic of the wall such as, color, pattern, texture, plant material, etc.

(b) Design considerations. Design considerations should adhere to the following:

- (1) Integrate well with required landscape design.
- (2) Dense planting of trees with under story of shrubs can result in a reduction of noise.
- (3) Integrate well with existing landscape features:
 - i. Existing tree stands.
 - ii. Interesting land forms/grade changes.
 - iii. Interesting preexisting site characteristics.
- (4) Change or vary texture and color from preexisting, adjacent screening walls.
- (5) Use a variety of masonry materials within the screening wall design.
- (6) Articulating wall forms (refer to screening wall options in this subsection).
- (7) Design should respond to potential traffic noise influence and provide a buffer.
- (8) Avoid smooth surfaces and fine textured finishes.
- (9) Avoid monolithic mass combinations of continuous horizontal/vertical lines in wall design.
- (10) Combinations of horizontal/vertical line usage, within the wall design, can reduce the apparent height of a wall.

(c) Masonry screening wall requirements.

- (1) Six-foot minimum wall height required, adjacent to all external (major or secondary thoroughfare) streets. Residential minor streets are excluded from this requirement.
- (2) Wall height adjacent to manufacturing and industrial districts is to be reviewed and established by the planning and zoning commission.
- (3) A masonry finish shall be provided on both sides of the wall, equal in color, material and finish treatment. The finish will be the same on both sides. Allowable materials include:
 - i. Natural stone (preferably regional source).
 - ii. Brick.
 - iii. Custom concrete masonry units such as split-face units.

- (4) Walls will consist of fixed panels, columns and full caps. No channeled or slip (moveable) panel screen wall systems shall be permitted or installed.
 - (5) Screening walls shall also adhere to masonry wall standards in this chapter.
 - (d) Maintenance easement. A minimum five-foot wall maintenance easement shall be required within residential lots that abut the masonry screening wall. Wall maintenance easement shall be dedicated to the Homeowners' Association.
 - (e) Screening wall options. Screening wall options shall consist of the following design alternatives, when used adjacent to transportation corridors:
 - (1) Solid wall.
 - (2) Window (baffle wall) 80 percent solid, 20 percent transparent.
 - (3) Offset panel.
 - (4) Ornamental iron fence may be used as an accent not to exceed 20 percent of the total screening wall.
 - (f) Sight visibility. All improvements within this area shall conform to the requirements of the city ordinance governing sight distance for traffic safety and other city ordinances.
11. Common areas. For purposes of this section, "common areas" are defined as real property and/or improvements thereon including, but not limited to: private storm drains, streets, sidewalks, utilities, parks, lakes and/or screening walls; open space; trails and/or floodplain management areas. The common area is either owned in fee, controlled as an easement or is property leased by the homeowner's association (HOA) for the common use, enjoyment and benefit of the members of the homeowner's association. The members of the homeowner's association, not the city, shall maintain all common areas.
- (a) Medians.
 - (b) Entryway.
 - (c) Internal streetscape (within residential minor street ROW).
 - (d) Entry yard areas.
 - (e) Landscape buffers.
 - (f) Buffer yards.
 - (g) Cul-de-sac landscaped areas (center interior radii).

(Ord. No. 025-06, § 1(Exh. A), 6-6-2006; Ord. No. 012-08, §§ 3—9, 16, 17, 4-1-2008; Ord. No. 019-08, § 3, 7-15-2008; Ord. No. 016-09, § 11, 6-2-2009; Ord. No. 033-09, § 1, 10-20-2009)