

Art. 6-7: Landscaping

6-7-1: Purpose

1. To mitigate the reduction of vegetative cover from the urban landscape.
2. To mitigate the heat generated by the densely built urban landscape, known as the heat island effect.
3. To mitigate the loss of aesthetics associated with the loss of vegetation.
4. To mitigate the increase in the area of impervious surfaces in the urban landscape.
5. To improve the appearance of buildings.
6. To improve the appearance of vehicle use areas.
7. To encourage the preservation of existing trees.

6-7-2: Applicability and Exemptions

The requirements of this chapter shall apply to all public, private, and institutional developments, other than single family residential or duplex residential developments, approved after the date that this ordinance is adopted with the following exceptions:

1. Existing development. Improvements or repairs to existing development that do not result in an increase in floor area of 20 percent or more in any one expansion, or changes in use that do not result in an increase in floor area, shall be exempt from all the standards of this section. If an existing industrial or commercial building is renovated or expanded to increase its total building square footage by 20 percent or more in any one expansion you are required to go by this section.
2. Developments within the C-1 District and in which buildings front on the street right-of-way and utilize more than 75% of the property.

Prior to requesting a Certificate of Occupancy, the requirements meeting the criteria herein for quantity and quality of plantings shall be met.

6-7-3: Landscape Plan Submittal Requirements

- All new development and redevelopment must provide a landscape plan meeting the requirements below. Any changes made to the landscaping after the plan has been submitted and permitted must be approved by city prior to obtaining a building permit. Plan shall include:
 - Name and address of Owner / consultant
 - North arrow and scale
 - Property boundary
 - Area designated for development (Developed Land Area)
 - All improvements (buildings, structures, parking, sidewalks, etc.)
 - All proposed and existing landscape
 - Proposed plant's name (common and scientific), size, and quantity
 - Tabulation chart showing quantities and formula of required and provided landscape items
 - Description of how required landscaping is to be regularly watered (location of any proposed irrigation meters or, if watering manually, location of proposed hose bibs)

6-7-4: Criteria for Quantity of Plantings

1. A percentage of the developed land area will be devoted to landscaping.
 - a. Developer is not required to include portions of the subject property that are undisturbed by the development in the calculation of required plantings.
2. Commercial or Multi-Family Developments
 - a. Total Number of Plantings
 - i. Developments 2 Acres and Larger
 1. A minimum of 20% green space with 1 Planting meeting the criteria herein for every 2,000 square feet of developed land area, OR
 2. A minimum of 15% green space with 1 Planting meeting the criteria herein for every 1,500 square feet of developed land area.
 - ii. Developments less than 2 acres
 1. A minimum of one new Planting meeting the criteria herein for every 2,000 square feet of developed land area.
 - b. Total Number of Trees
 - i. A minimum of 25% of plantings required shall consist of trees.
 - c. Total Number of other Plantings
 - i. The remainder of required plantings shall be shrubs meeting the criteria herein.
 - ii. Perennials may be substituted for up to 15% of the required number of shrubs at a ratio of 10 perennials: 1 shrub.
 - d. Parking Areas
 - i. Parking lots containing 15 or more spaces shall be landscaped with tree islands
 1. Single bay parking areas shall have tree islands with a minimum width of 10 feet and a minimum length of 18 feet, and an area not less than 180 square feet.
 2. Double bay parking areas shall have tree islands with a minimum width of 10 feet and a minimum length of 36 feet, and an area not less than 360 square feet.
 3. A maximum run of 15 parking spaces shall be permitted without a tree island.
 4. Each tree island shall have at least one tree planting, and these trees may be counted towards the total number of trees required
3. Industrial Developments
 - i. A minimum of one tree meeting the criteria herein per fifteen parking spaces, PLUS
 - ii. A minimum of one tree meeting the criteria herein per 40 linear feet of street frontage, excluding curb cuts.
4. Credit for Existing Trees
 - a. Credit towards the required number of plantings will be considered for existing trees within 50' of the newly-developed portion of the site provided they meet the following criteria:
 - i. They are of desirable type, are healthy specimens, they contribute to the compatibility of the development, and they are not threatened by the construction or placement of the proposed development.
 - ii. Existing trees that are damaged or show signs of distress after construction of the project shall not be counted as credit for required landscaping.
 - iii. Trees more than 30' from the developed land area of the site shall not be considered.

Preserved Tree Diameter at Breast Height	Credits Toward
4-5 inches	2 required trees
6-12 inches	3 required trees
13-18 inches	4 required trees
19-24 inches	6 required trees
25-32 inches	8 required trees
33-48 inches	10 required trees
Above 48 inches	12 required trees

6-7-5 Criteria for Planting Materials

1. Tree Type Requirements
 - a. A minimum of 40 percent of trees required shall be native species
 - b. No more than 25 percent of trees required shall be ornamental
 - c. At least 10% of trees required shall be evergreen.
 - d. Trees may be selected from the recommended plants found later in this section.
 - e. Trees shall be selected for hardiness in local zones.
 - f. The following trees shall not be given planting credits on landscape plans.
 - i. Black locust (Robinia Pseudacacia)
 - ii. Cottonwood (Populus Trichocarpus)
 - iii. Bradford pear (Pyrus Calleryana "Bradford")
 - iv. Mimosa (Albizia Julibrissin)
 - v. Privet (Ligustrum Sinese)
2. Tree Size Requirements
 - a. Deciduous shade trees must be at least 2" caliper.
 - b. Deciduous ornamental trees must be at least 1.5" caliper.
 - c. Evergreens must be at least 8' in height above finished grade
3. Tree Location Requirements
 - a. Trees shall be equally distributed across the site to the extent possible.
4. Shrub Type Requirements
 - a. Shrubs shall be selected for hardiness in local zones.
5. Shrub Size Requirements
 - a. Shrubs shall be three-gallon size at a minimum
6. Perennial Requirements
 - a. Perennials shall be 6" pot size at a minimum.

6-7-6 Screening

Landscape buffer zones, screening fences, or walls will be required where nonresidential zones abut residential zones. The width of the buffer shall be enough to provide a solid screen and shall be verified by the city. If plants or trees are to be used for screening, they must be evergreen and planted to provide a solid screen within three years.

6-7-7 Installation, maintenance, and replacement

1. Installation - All landscaping shall be installed according to sound nursery practices and in a manner designed to encourage vigorous growth. All landscape material, both living and nonliving, shall be in place prior to issuance of a certificate of occupancy or letter of credit for the full amount of the landscaping provided to the city.

2. Maintenance and replacement - Trees, shrubs, fences, walls and other landscape features, which includes screening depicted on plans approved by the city, shall be considered as elements of the project in the same manner as parking, building materials, and other details are elements of the plan. The landowner, or successors in interest, or agent, if any, shall be jointly and severally responsible for the following:
 - a. Regular maintenance of all landscaping must be kept in good condition and in a way that presents a healthy, neat, and orderly appearance. All landscaping shall be maintained free from disease, pests, weeds and litter. This maintenance shall include weeding, watering, fertilizing, pruning, mowing, edging, mulching or other maintenance, as needed and in accordance with acceptable horticultural practices;
 - b. Regular watering of all required landscape. There must be a description of how the required landscape shall be watered submitted to the city before approval of the landscape plan.
 - c. The repair or replacement of required landscape structures e.g., fences and walls, to a structurally sound condition;
 - d. The regular maintenance, repair, or replacement, where necessary, or any landscaping required by the section; and
 - e. Continuous maintenance of the site.
3. Nothing contained in this section shall be construed to prohibit any utility from cutting, pruning, trimming or removing trees and other plant materials that encroach or interfere with any electric, gas, water, sewer or other utility lines and pipes, equipment, or infrastructure or access thereto.

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6-7-8: Recommended Plant Lists

1. Shade Trees (2" caliper minimum): *native

Scientific Name	Common Name
*Acer rubrum	Red Maple
*Acer saccharum	Sugar Maple
Acer x freemanii	Freeman Maple
Cedrus deodara	Deodar cedar (Evergreen)
Ginkgo biloba (male)	Ginkgo
*Gleditsia triacanthos	Thornless Honeylocust
*Gymnocladus dioicus	Kentucky Coffeetree
*Liriodendron tulipifera	Tulip Tree
*Liquidambar styraciflua	Sweetgum
*Magnolia Grandiflora	Southern Magnolia (Evergreen)
Metasequoia glyptostroboides	Dawn Redwood
*Nyssa sylvatica	Black Tupelo
Pinus nigra	Austrian Pine (Evergreen)
*Pinus strobus	Eastern White Pine (Evergreen)
Pistacia chinensis	Chinese Pistache
*Quercus alba	White Oak
*Quercus michauxii	Swamp Oak
*Quercus coccinea	Scarlet Oak
*Quercus falcate	Southern Red Oak
*Quercus imbricaria	Shingle Oak
*Quercus muehlenbergii	Chinkapin Oak
*Quercus nigra	Water Oak
*Quercus palustris	Pin Oak
*Quercus phellos	Willow Oak
*Quercus rubra	Northern Red Oak
*Quercus shumardii	Shumard Oak
*Taxodium distichum	Bald Cypress
Tilia cordata 'Greenspire'	Little Leaf Linden
*Ulmus Americana	American Elm (Dutch Elm resistant)
Ulmus parvifolia	Lace Bark Elm
Zelkova serrata 'Green Vase'	Zelkova

2. Narrow or Columnar Tree (2" caliper minimum): *native

Scientific Name	Common Name
*Acer saccharum 'Reba'	Belle Tower Sugar Maple
Carpinus betulus 'Fastigiata'	European Hornbeam
Liquidambar styracifua 'Slender Silhouette'	Columnar Sweetgum
Quercus robur	English Oak
Quercus x Crimson Spire	Crimson Spire Oak
Zelkova serrata 'Musashino'	Columnar Zelkova

3. Deciduous Ornamental Trees (1.5" caliper minimum): *native

Scientific Name	Common Name
Acer ginnala	Amur Maple
Acer palmatum	Japanese Maple
Amelanchier arborea	Downy Serviceberry
Amelanchier stolonifera	Running Serviceberry
*Cercis Canadensis	Eastern Redbud
*Cercis reuiformis	Oklahoma Redbud
*Chionanthus virginicus	White Fringetree
*Cornus florida	Flowering Dogwood
Cornus kousa	Kousa Dogwood
Magnolia grandiflora 'Little Gem'	Little Gem Magnolia
Magnolia stellate	Star Magnolia
*Magnolia virginia	Sweetbay Magnolia
*Hamamelis virginiana	Common Witchhazel
Lagerstromia indica	Crape Myrtle (Tree varieties)

4. Evergreen Ornamental Trees (8' height above natural grade minimum): *native

Scientific Name	Common Name
Cryptomeria japonica 'Radicans'	Radicans Cryptomeria
Cryptomeria japonica 'Yoshino'	Yoshino Cryptomeria
*Ilex opaca	American Holly
Ilex vomitoria	Yaupon Holly
Ilex x attenuata 'Fosteri'	Foster Holly
Ilex x attenuata 'Savannah'	Savannah Holly
Ilex x 'Nellie R Stevens'	Nellie Stevens Holly
*Juniperus virginiana	Eastern Red Cedar
Thuja occidentalis 'Smaragd'	Emerald Arborvitae
Thuja standishii x plicata 'Green Giant'	Green Giant Arborvitae

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