

***ARTICLE 12. LANDSCAPING AND BUFFER REQUIREMENTS**

*Amended
8/1/89

12.1 Intent

Landscaping and screening requirements are established to improve the appearance of vehicular use areas and property abutting public rights-of-way; to require screening between non-compatible land uses; to protect, preserve and promote the visual appeal, character and value of the surrounding neighborhood and properties; and to promote the public health, safety and welfare through the reduction of noise pollution, air pollution, visual pollution, air temperature extremes, soil erosion, and glare from vehicle headlights and exterior lighting fixtures.

The intent of this ordinance shall be achieved through the preservation of existing vegetation and the addition of plantings where necessary to meet the minimum requirements set forth in this Article. Existing vegetation may be used to meet the requirements of this Section, provided, however, use of such vegetation will be determined by site inspection by Planning and Inspections Department personnel.

12.2 General Requirements

Excluding single-family detached dwellings and duplexes, no new site development, building, structure or vehicular use area shall hereafter be erected, constructed or used unless minimum landscaping and screening is provided as required by the provisions of this Article.

No building, structure, or vehicular use area shall be expanded unless the minimum landscaping required by this Article is provided for the property to the extent of its alteration or expansion.

12.2.1 Protection of Existing Vegetation

On any land for which application for site plan approval has been made after the effective date of this ordinance, no person, firm or corporation shall remove or cause to be removed any trees or other vegetation except in accordance with approved plans.

12.2.2 Designation of Tree Protection Areas

Existing trees, regardless of size, shall not be cut or otherwise damaged or destroyed within a primary tree protection area, and existing trees having a diameter of one (1) foot or greater, as measured four and one-half (4.5) feet above ground level, shall not be cut, damaged or destroyed within a secondary tree protection area as defined as follows:

- (a) Primary Tree Protection Area. That portion of a lot which is to be used for required recreation/open space area; front, side and rear yard setback areas; and Land Use Buffers as required by this Ordinance. If no side and/or rear setbacks are required, the Primary Tree Protection Area shall be ten (10) feet in width.
- (b) Secondary Tree Protection Area. Any portion of a lot not included within the Primary Tree Protection Area.

12.2.3 Exceptions

Upon site plan approval trees may be removed only from designated vehicular surface areas and utility and/or storm water drainage easements.

In cases where retention of existing trees would create unusual hardship or development problems in building sites, recreation/open space, setback and/or buffer areas, the Planning Director shall determine when such hardships exist and may designate areas that may be exempt from tree protection and may approve replacement of trees removed from such areas. The Planning Director may approve the planting of new trees if one or more of the following exists:

- (a) Necessity to remove trees in order to survey existing and/or proposed property lines and easements;
- (b) Necessity to remove diseased trees or trees weakened by age, storm, fire, or other injury;
- (c) Necessity to remove trees in order to construct proposed improvements, as a result of the need for access of construction equipment around proposed buildings, the need for construction access to the lot, and the need to alter the existing grade of the site or to install utilities and/or drainage structures; and
- (d) Necessity to observe good forestry practices, i.e., the number of healthy trees that a given parcel of land will support.

All applicable exceptions to tree protection must be listed on the required landscape plan.

12.2.4 Protective Measures

During construction activities, adequate protective measures shall be provided to minimize damage to existing trees and other vegetation. Protective devices such as a wooden or rope fence with strips of surveyor's flagging attached shall be installed prior to any grading, construction traffic or activity taking place near trees to be retained. Such protective devices shall effectively protect the roots, trunks, and tops of trees to be retained and shall be maintained until all work has been completed.

Construction traffic, storage of vehicles and materials, and grading shall not take place within the drip line of trees to be retained. Construction access to a site should occur where an existing or proposed entrance/exit is located. A stabilized open area should be designated for storage of materials (including stockpiling of soil and gravel) and for parking construction vehicles and equipment. Except for sidewalks and curb and gutter, no paving with concrete, asphalt or other impervious material within the drip line of trees to be retained shall be allowed.

Where grading within a tree drip line cannot be avoided, the following measures shall be used to maintain the life of the trees affected by grading:

- (a) Limit cut and fill to one-fourth (1/4) to one-half (1/2) of the area within the drip line of the tree;
- (b) Avoid cut and fill around the entire circumference of the trunk of the tree;
- (c) Root prune a tree several months prior to any cuts within the drip line;
- (d) Prune tree limbs in an amount which reflects the area of the roots to be severed, but in no case allow pruning to exceed thirty percent (30%) of the tree crown. Fertilize and water the undisturbed root area of the tree;
- (e) Where grading has left roots exposed, cut roots clean; and
- (f) Avoid filling within the drip line of a tree without some mechanism being installed such as a tree well or perforated pipe to allow water and air to reach the roots.

12.3

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Plan Review and Approval

Whenever any property is affected by these landscape and buffer requirements, the property owner or developer shall submit a plan for review and approval by the Zoning Officer. The Zoning Officer shall follow the requirements of this Article in approving or disapproving any plan required herein.

The contents of the plan shall include the following:

- a. The dimensions and acreage of each lot or plot or portion thereof to be built upon or otherwise used;
- b. The layout of the entire project, its relationship to surrounding properties, including the proposed uses of all buildings, utilities, overhead and underground where known, storm drainage and refuse storage facilities;
- c. The location and dimensions of present and proposed streets and highways, the layout of all off-street parking and loading areas, including the location of entry and exit points, the internal vehicular circulation pattern and the location and dimension of required parking and loading spaces;

- d. Natural features such as streams, water bodies, rock outcroppings, etc.;
- e. The location, name and size of all existing plant materials to be retained;
- f. Proposed plantings to meet Ordinance requirements labeled according to species (common name), spacing, and size;
- g. The location of walls, berms, fences and railings and an indication of their height and construction materials; and
- h. Title; north; scale; names of owner, developer, and person responsible for plan preparation; and the date that the plan was drawn or subsequently revised.
- i. Methods of disposal of trees, limbs, stumps and construction debris associated with the permitted activity, which shall be by some method other than open burning.

No building permit shall be issued until the required landscaping plan has been submitted and approved. No certificate of occupancy shall be issued until the landscaping is completed as certified by an on-site inspection by the Zoning Officer, unless a performance bond, letter of credit, or escrow agreement as a guarantee of improvements has been posted.

Before a building permit can be issued the landscape plan approval shall contain as a condition a prohibition of the open burning of trees, limbs, stumps and construction debris associated with the permitted activity.

The financial guarantee shall be accompanied by an estimate of the cost to purchase and install the required landscaping. The cost estimate must be prepared by a nursery operator, landscape contractor, landscape architect, or other individual qualified to calculate the cost to complete the required improvements based on the approved landscape plan, who has no direct or indirect ownership interest in the project for which landscaping is required. The amount of the bond, letter of credit, or escrow agreement shall be 110 percent of the estimate.

Where site plan approval by the Board of County Commissioners or Board of Adjustment is required, neither a building permit nor a certificate of occupancy shall be issued until such approval has been granted. In the event that there are conflicting requirements within this Article, the more restrictive shall apply. If any of the requirements contained in this Article are applicable to a Special Use (See Section 12.13), the requirements must be included in the site plan as required in Section 8.8.a. or on an attached Landscape Plan.

12.4 Landscaping Standards

Where construction is proposed either on unforested land or trees have been approved for removal under one or more of the exceptions listed in 12.2.3, new trees shall be planted in accordance with the provisions of this Section.

12.4.1 Required Landscaping

(a) Along Street Frontage

- (1) As a requirement of site plan approval, the applicant shall plant trees along the frontage of the lot(s) to be developed. In calculating the number of trees required per lot frontage, tree types have been assigned a value in linear feet based on the average mature canopy spread. The values are forty (40) feet for large trees and twenty-five (25) feet for small trees. Each lot must have one (1) large tree per street frontage (value of 40 feet). The number of trees to be planted on the remaining frontage (total frontage less value for one large tree) is determined by dividing the remaining frontage by the value(s) assigned to tree types selected for planting by the developer.

For example, where a Land Use Buffer is not required, the number of trees required on a lot having a frontage of 130 feet would be calculated as follows:

TOTAL LOT FRONTAGE	130 feet
<u>LESS: VALUE OF REQUIRED LARGE TREE</u>	<u>40 feet</u>
EQUALS: REMAINING LOT FRONTAGE	90 feet

OPTION #1: ALL SMALL TREES

90 feet divided by 25 feet (value for small tree) = 3.6 or 4 trees.

Total # of required trees = 4 small trees
+ 1 large tree

OPTION #2: ALL LARGE TREES

90 feet divided by 40 feet (value for large tree) = 2.3 or 2 trees.

Total # of required trees = 3 large trees

OPTION #3: COMBINATION/LARGE & SMALL TREES

90 feet-40 feet (1 lg. tree) = 50 feet
50 feet divided by 25 feet = 2 small trees
Total # of required trees = 2 large trees
2 small trees

- (2) Upon installation, trees shall be spaced at least fifteen (15) feet apart, but preferably no greater than the spread of the canopy normally achieved by the tree species upon maturity.
- (3) Street trees shall be planted within the required front yard setback. Selection and location of trees shall consider existing and future site conditions including, but not limited to, overhead and/or underground utility lines, vehicular access drives, the location and extent of existing vegetation, and soil suitability. Selection of tree types shall be made from the list of acceptable plant materials provided in Tables 12.1, 12.2, & 12.3. Other suitable alternates may be used if approved by the Planning and Inspections Department.

(b) Lot Perimeter

- (1) Where a Land Use Buffer is not required, a landscape area ten (10) feet in width exclusive of drainage and/or utility easements shall be provided along the interior of side and rear lot lines of each lot being developed. If the existing trees are not sufficient, the applicant shall provide a minimum of one (1) tree per one thousand (1000) square feet of land contained within the 10 foot landscape area.
- (2) Trees to be planted within recreation and open space areas, and side and rear yard landscape areas shall be installed to reflect the natural growth patterns of materials selected. Tree species shall be spaced in a manner which permits full spread of the canopy upon maturity and shall be selected from the list of acceptable plant materials in Tables 12.1, 12.2, and 12.3. Other suitable alternates may be used if approved by the Planning and Inspections Department.
- (3) When buffers, as required by Article 12.6, or approved utility and drainage easements overlap or cross the ten foot landscape areas or recreation and open space areas, those overlap areas shall be exempted from computing the number of required trees to be installed in the side and rear landscape areas.

(c) Where parking/vehicular surface, outdoor storage, or an undesirable view is adjacent to the road right-of-way and side and rear lot lines, to screen undesirable views, additional plantings shall be required for screening.

- (1) A landscape area at least ten (10) feet in width exclusive of drainage and/or utility easements shall be provided between the parking/vehicular surface or outdoor storage and the right-of-way lot line except where permitted driveway openings are to be provided.
- (2) In addition to the trees required by Article 12.4.1a and 12.4.1b, a hedge or other durable landscape material (fence or berm) of at least three (3) feet in height shall be installed to provide a continuous opaque landscape barrier for the purpose of reducing glare and visual distractions to passing motorists and to adjacent properties.
- (3) To screen outdoor storage areas or undesirable views, a six foot hedge may be required. A fence, wall, or earth berm may be used in combination with plantings to achieve screening.
- (4) The provisions of this subsection shall not be applicable in the following situations.
 - (a) Where any off-street parking, loading or other vehicular use area will be entirely screened visually, from any point of view, by an intervening building or structure from abutting property or when differences in topographic elevation eliminate visual impact to adjacent roads or properties.

- (b) Where planting and/or fencing is required for screening between certain non-compatible land uses.

12.4.2 Interior Coverage Requirements

Not less than five (5) percent of the interior of any parking, loading or other vehicular use area shall be landscaped. The location of such landscaping is at the option of the owner or developer, provided, however, no more than ten (10) parking spaces shall be permitted in a continuous row without being interrupted by a landscaped median strip or island and be it further provided that every fourth row of parking shall be separated by a median strip for landscaping and pedestrian purposes of not less than eight (8) feet in width. Such median strips shall be planted with at least one (1) tree per median strip except that one (1) tree for every sixty (60) feet or fraction thereof shall be planted in median strips that exceed sixty (60) feet.

Planting required by Sections 12.4.1 and 12.6 shall not be considered as part of the interior landscaping requirement.

12.4.3 Additional Requirements

- a. Plantings as required by this ordinance shall not be located in drainage, access or utility easements, under overhead power lines or in sight triangles as described in Article 9.2a.
- b. All developments shall provide secure, safe, and sanitary facilities for the storage and pickup of refuse. Such facilities shall be convenient to collection and shall be appropriate to the type and size of the development being served. All dumpsters/refuse storage facilities shall be screened by a solid wall, fence, tight evergreen hedge, or a combination of the above. Such screening shall be of sufficient height and design to effectively screen the facility from the view of adjacent properties and roads.
- c. Fences, walls, and earth berms may be used in combination with trees and shrubs to fulfill required landscaping; provided, however, that these manmade features are designed and located in such a way that will not conflict with other site features and functions and will be in harmony with the surrounding landscape.
- d. All portions of the landscaping area not planted with shrubs and trees or covered by a wall or other barrier shall be planted in grass and/or ground cover, or covered by a natural mulch of a minimum depth of three (3) inches.

12.5 Land Use Buffer Requirements

Land Use Buffers shall be required to separate a proposed land use from adjacent major streets and different land uses or zoning designations in order to protect, preserve and promote the visual appeal, character and value of the proposed land use and/or surrounding property; to provide for the separation of spaces, creating a sense of privacy; to promote the public health, safety and welfare by minimizing potential nuisances such as the transmission of noise, odor, dust, litter, glare of lights, and other unpleasant visual distractions.

Except as otherwise specifically provided in this Ordinance, the type of Land Use Buffer required between a proposed development and adjacent streets, land uses or zoning designations shall be specified in Articles 12.6 and 12.7 of this Ordinance.

The table in Section 12.6.2 in conjunction with the explanations in Section 12.6.1 concerning the types of buffers establish levels of screening that satisfy the intent of this Article. This table is intended to show the minimum level of screening acceptable. However, owners and developers may substitute equal or better materials for review and approval.

12.5.1 Location and Utilization of Land Use Buffers

Required Land Use Buffers shall be located along the interior or street lot lines nearest the adjacent streets, land uses and/or zoning designations. Buffers shall not be located on any portion of an existing or proposed street right-of-way, drainage or utility easement.

No building or structure of any type shall be erected, constructed or installed in a required Land Use Buffer.

12.5.2 Designation of Land Use Buffers

A required Land Use Buffer shall be designated site plan and shall have the following restriction lettered on the face of the site plan:

"Land Use Buffer: The use and maintenance of this buffer and the building of structures thereon is restricted pursuant to Article 12.5 of the Orange County Zoning Ordinance."

In addition, the Land Use Buffer shall be labeled according to type and dimension.

12.6 Standards For Required Land Use Buffers

The types of Land Use Buffers described in the following table are to be used as the basis for the Schedule of Required Land Use Buffers set forth in Article 12.6.2.

An opaque screen is intended to obstruct visual contact between uses and to create a strong impression of spatial separation. A semi-opaque screen is intended to partially block visual contact between uses while maintaining a sense of spatial separation.

In areas of dense mature forest, existing vegetation may be used to fulfill the buffer requirements. Where there is no existing vegetation in the buffer area, or if the existing vegetation does not provide a sufficient buffer, additional planting shall be required.

Compliance of planted vegetative buffers will be judged on the basis of the average height and density of foliage of the subject species upon maturity. Compliance of existing vegetative buffers will be judged on the basis of field observation. Upon maturity, the semi-opaque or portion of the intermittent visual obstructions should not contain any completely unobstructed openings more than ten (10) feet in width.

Suggested planting patterns to achieve the buffer standards are provided in the Appendix. New plant materials installed to satisfy the buffer requirements of Article 12.6.1 shall be installed and maintained in accordance with the provisions of Article 12.9.

12.6.1 Standards for Required Buffers

<u>Buffer Type</u>	<u>Required Buffer Width</u>	<u>Buffer Description</u>
Type A	30 feet	A buffer composed of deciduous and/or evergreen vegetation, forming semi-opaque intermittent visual obstructions from the ground to a height of at least thirty (30) feet.
Type B	30 feet	A buffer composed of deciduous and/or evergreen vegetation that is opaque from the ground to a height of at least five (5) feet, with semi-opaque intermittent visual obstructions from the opaque portion to a height to at least thirty (30) feet.
Type C	40 feet	A buffer composed of 50-75% evergreen vegetation distributed so as to create a semi-opaque screen to a height of at least thirty (30) feet.
Type D	50 feet	Same as Type C.
Type E	75 feet	A buffer composed of predominantly (at least 75%) evergreen vegetation that is opaque to a height of at least thirty (30) feet.
Type F	100 feet	Same as Type E.

12.6.2 Schedule of Required Land Use Buffers

The type of Land Use Buffer required between a proposed development and adjacent streets, land uses and/or zoning designations shall be specified in the following table. The type of buffer required is determined by the existing and/or proposed principle use(s) on the lot(s) for which site plan approval is requested. To determine which type of buffer is required adjacent to an existing and/or proposed land use, identify the existing and/or proposed principle use(s) on the lot(s), then identify the adjacent existing zoning district(s) and/or land uses. At the intersection of the two columns is a letter which indicates the type of Land Use Buffer required.

For the purposes of this Article, "adjacent" land uses shall also include uses and lands across a street, other than an interstate highway, from the proposed development.

In addition to the Land Use Buffers specified in the following schedule, buffers shall also be required on developments proposed adjacent to areas of cultural, historic, or natural significance as listed in An Inventory of Sites of Cultural, Historic, Recreational, Biological, and Geological Significance in the Unincorporated Portions of Orange County. The type of buffer required in those cases shall be determined by the Planning Director based on individual site evaluations.

The following is a list of other specific land uses not included in the Schedule of Required Land Use Buffers. The type buffer listed with each is the minimum buffer which may be required. Other types of buffers from Article 12.6 may be required when land uses adjacent to the proposed development are considered.

<u>Land Use</u>	<u>Buffer Type</u>
P13 Military Installations	B
P15 Parking as a Principal Use (Structure)	C
S4,S5 Assembly Facility	A
S8 Clubs or Lodges	A
S9 Drive In Theatres	A
S27 Nightclubs, Bars, Pubs	B
S48 Sawmills	D

12.7

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Requirements for Special Use Permits

The following Special Uses shall provide land use buffers as required below or as required in Section 12.6.2. Buffers required shall apply to all property lines including road right-of-way lines.

- a. Extraction of Earth Products - as required in Section 8.8.1 with a one hundred (100) foot buffer, Type F.
- b. Landfills - as required in Section 8.8.2 with a one hundred (100) foot buffer, Type F.
- c. Public Utility Stations and Substations, Water Treatment, Sewage Treatment, Switching Stations, Telephone Exchanges-Type B with a Landscape Plan as required in Section 8.8.3.
- d. General Aviation Airports, STOL and Heliports - as required in Section 8.8.8.
- e. Adult uses - Type B, a thirty (30) foot buffer).
- f. Junkyards - As required in Section 8.8.10 with a one-hundred (100) foot buffer, Type F.
- g. Kennels or Riding Stables/Academies - as required in Section 8.8.11, Type B.
- h. Community Center - as required in Section 8.8.13, Type A.
- i. Commercial Cemeteries - Type A.
- j. Day Nurseries, Day Care Facilities and Private Kindergartens as required in Section 8.8.16, Type B.
- k. Radio and Television Transmitting and Receiving Towers, and Elevated Water Storage Tanks as required in Section 8.8.17, Type D.
- l. Residential Hotel, Dormitory, Fraternity, Sorority, and Religious Quarters - as required in Section 8.8.20, Type A.
- m. Recreational Facilities - as required in Section 8.8.21 with a twenty (20) foot buffer, Type A.
- n. Waste Management Facility, Hazardous and Toxic Use - with additional requirements in Section 8.8.22, Type F.
- o. Planned Developments - as required by Article 12.6.2 for the type of use within the Planned Development.

- p. Country Inns - as required in Section 8.8.28 with a twenty-foot Type A perimeter buffer.

12.8 Waiver of Land Use Buffer Requirements

There may be cases where the topography of a site, or the size of a parcel, or the presence of existing structures, gardens or active farmland in the buffer area would make the strict adherence to this ordinance serve no useful purpose. In those cases, the Planning Director is empowered to waive the requirements for screening provided that the request is submitted in writing stating the reason for such request, and the spirit and intent of this ordinance is adhered to.

In all such cases the applicant for waiver must submit a written application to the Planning Director setting forth the facts relied upon to support the application. The Planning Director, or his designee, shall file in his office and deliver to the applicant a written decision on the application which decision shall contain a statement of the facts relied upon by the Planning Director to either deny or approve the application for waiver.

12.9 Installation and Maintenance

Existing landscape material in a healthy condition may be used to satisfy these requirements in whole or in part when such material achieves the intent of this Article. Sound and accepted horticultural practices shall be used to protect the root zones of all retained existing plant material during construction and also during underground utility installation (refer to Article 12.2). All new landscaping shall be of good quality and installed in a sound, workmanship-like manner and according to the following planting procedures:

- a. Planting holes should be dug at least one-third (1/3) larger than the root ball. (See Figure 12.3 and Figure 12.4)
- b. Plants shall be planted in their permanent location immediately upon delivery to the site. It is not necessary to remove the burlap, but the strings from around the stem of the plant must be removed and the burlap should be folded from the top 1/3 of the ball after the plant is in the hole. The soil around the plant should be tamped to remove air pockets. Mulching with a good mulch 3-4" deep to help retain moisture is mandatory. (See Figure 12.3 and Figure 12.4)
- c. Trees which have heavy tops or which are over six (6) feet in height shall be staked to prevent winds from loosening the roots. (See Figure 12.5 and Figure 12.6)
- d. All plants shall be soaked thoroughly with water at planting time and once a week (unless soaking rains occur) thereafter during the first growing season.

- e. All new plant material should meet or exceed the standards set forth in the American Standard for Nursery Stock by the American Association of Nurserymen (AAN).

Parked vehicles may overhang a landscaped area no more than two and one-half (2 1/2) feet, provided curbing or other wheel stops are installed to insure no greater overhang or penetration of the landscaped area. Landscaping, walls, fences, and other material shall be so located as to prevent its damage and/or destruction by overhanging vehicles.

The type of landscape material to be used in meeting the requirements of this Article is at the option of the owner or developer but shall be appropriate for this climate and for the specific location of the plant on the site. Around parking/vehicular use areas, avoid tall shrubs and low branching trees that will restrict visibility.

Tables 12.1 through 12.6 provide a listing of acceptable plant materials which are adapted to the local climate and soil conditions. Use of native plant materials is encouraged. No synthetic plant materials may be used to satisfy the landscaping requirements.

At installation, trees shall be not less than six (6) feet tall; with a caliper of three fourths (3/4) to one and one-fourth (1 1/4) inches. Shrubs should not be less than fourteen (14) inches high. Horticulturally and aesthetically appropriate earth berms may also be used to contribute to overall required heights. Construction procedures shall be utilized which preserve and replace existing topsoil.

The owner or tenant of the property shall be responsible for the continued proper maintenance of all landscaping materials, and shall keep them in a proper, neat and orderly appearance, free from refuse and debris, at all times. All landscaped areas should be provided with a readily available water supply. All unhealthy or dead plant material shall be replaced by the owner or developer within one (1) year of the issuance of the Certificate of Occupancy or by the next planting season, whichever comes first. Orange County shall insure continued maintenance of all landscaping material using the enforcement authority of Article 23 of the Zoning Ordinance of Orange County.