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Landscape and Vegetation Standards

These Landscape and Vegetation Standards have been developed and will be further refined to achieve each objective discussed in Section 4, Environmental Development Standards. These standards are intended to build on the Landscaping and Vegetation section of the City of Orlando's Land Development Code. As such, the public (i.e., parks, open space and public rights-of-way) and private (i.e., retail, office and residential sites) realm landscape standards are required to respond to:

- Existing conditions within the three upland zones (namely, flatwoods, sand hill and sand pine scrub) and wetland areas on site, and
- The enhancement of the existing landscapes in public and private realms of each area of the plan.

Generalized landscape and vegetation standards that pertain to all areas of the site have been developed to guide the articulation of the landscape vision. These general guidelines are enumerated in the text that follows. Additionally landscape and vegetation standards for the public and private realms of each development area identified in the plan are addressed below.

At this time, the private landscape and vegetation standards have only been broadly defined. These standards will be refined to address in specific detail the standards for private sites during the neighborhood lotting and final design process. These standards and a master landscape plan will be developed in coordination with the City and will be reviewed by the City's Parks, Planning and Engineering Bureaus.

Generalized Landscape and Vegetation Standards

The standards outlined as generalized landscape and vegetation standards apply to all development areas in the plan. The standards cover the preservation, enhancement, installation and maintenance of plant materials. The standards for land clearance are included in this section as well.

Preservation

The highest priority will be given to the preservation of existing ecologically sound plant and animal communities.

Significant natural wetland systems, namely protected and transitional wetlands, will be delineated and preserved intact wherever possible. Some disturbance is expected to occur when alterations are made to the Lake Baldwin shoreline and during the establishment of the surface water connection between Lakes Baldwin and Susannah. On-site mitigation will be performed as necessary to improve the overall quality of wetlands on site. Undisturbed upland habitats of 15 to 25 feet in width will be maintained around preserved wetlands.

Any habitats for threatened or endangered plant or animal species will be preserved and protected from human intrusion.



All specimen or historic trees as defined and designated by the City of Orlando will be protected, monitored and maintained. Historic trees are defined as healthy trees with a trunk caliper of 30 inches or more measured at 4.5 feet dbh. Specimen trees are trees of mature size, excellent form and healthy examples. Trees that meet the City's definitions of specimen or historic trees, but have not been designated such, will be preserved to the greatest extent possible.

The same consideration and protection afforded specimen or historic trees will be given to unique plant material occurring naturally on site.

To the greatest extent possible, healthy native plant species that cannot be preserved at their current location will be located to other suitable areas on site. Suitable areas will be determined based on soil, microclimate, moisture and drainage appropriate to the specific species of plant. Any plant material that cannot be relocated on site appropriately will be recycled.

Landscape Enhancement

The second highest priority is the enhancement of existing vegetation through the installation of native plant species and restoration of existing natural systems.

Any wetland impacts that will have a detrimental effect on the water quality will be avoided.

All invasive or exotic species (i.e., Chinese tallow trees, primrose willows, grapevines, guava and Brazilian pepper) will be removed from all areas of the site and

replaced by the native species identified in the plant palette. In fact, all vegetative species to be installed on site are included in the plant palette.

All properties, including detached housing, will take Xeriscape design principles into consideration such that plants with similar drought tolerance characteristics will be grouped together. Plants range in terms of their water needs from high to moderate to low. The emphasis will be on using plant material that survive on natural rainfall but may require supplemental water during seasonal dry periods.

Targeted wildlife species will be sustained by the installation of appropriate vegetation to enhance habitats and to allow for ecosystem diversity.

Installation

Landscape material will be selected and installed according to size constraints, spacing requirements and compatibility with the architectural styles of adjacent buildings. Additionally all trees and vegetation will be properly located and installed according to their normal growth requirements. Landscape materials will be installed based on an ecosystem approach to landscape design. The Florida Natural Areas Inventory and the Department of Environmental Protection's Guide to Natural Communities of Florida will serve as a resource to identify ecosystems and the appropriate vegetation.

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No plants on the Florida Department of Environmental Protection or the Florida Department of Agriculture's lists of prohibited plant species will be used on site.

All installed plant material shall be Florida Fancy or Florida #1 as per Grades and Standards for Nursery Stock, 2nd ed., Florida Dept. of Agriculture and Consumer Services.

New medium and large trees will be anchored until their roots have been established.

Additionally all trees and vegetation will be properly located and installed according to their normal growth requirements. New medium and large trees will be anchored until their roots have been established.

Only plant species listed in the Plant Palette under Wetland Vegetation will be installed or relocated along lake edges.

All landscape materials will be installed so as to present a mature appearance within 12 months of planting assuming normal growing conditions exist.

Upon completion of development, all areas on site will be built on, paved or landscaped. There will be no area where expanses of bare soil are visible.

Berms used as visual screens will not exceed a slope of 3:1 and will be completely covered with shrubs, grass or other living ground cover.

Cypress mulch will not be used on site in an effort to promote the preservation of these rare trees.

· Landscape Maintenance

All vegetation will be maintained as needed for continued health. Trees will be pruned to maintain the health and natural form as appropriate. Trees will not be topped or severely pruned.

Plant materials will be thinned as needed in areas of historic sand hill and pine flatwoods communities in order to maintain safely these fire-dependent systems.

Irrigation systems installed will be maintained in proper working order. The application of Xeriscape principles and the use of reclaimed water for irrigation purposes will contribute to water conservation. The Association of Florida Nurseries' Xeric Landscaping with Florida Native Plants will be referred to in the further refinement of site specific standards for xeriscaping.

Land Clearing

During construction, existing vegetative buffers will be retained along the perimeter of the site, wherever possible, when clearing the land for development. Fencing will be constructed wherever adequate vegetative buffers do not exist during the land-clearing phase of development.



No valuable wetlands, rare upland ecological communities, wildlife corridors or habitats of threatened and endangered species will be destroyed during the process of demolition and land clearance.

Revegetation will occur in coordination with the threetier development phasing proposed for the site.

Landscape and Vegetation Standards by Development Area

The purpose of these landscape and vegetation standards is to address the landscape requirements that vary between developed areas on the N.T.C. site. For the purposes of this discussion, the areas are arranged in order of the densest urban form to the least dense development pattern on site. The landscape patterns that accompany this change in density range from formal streetscape patterns to informal park edges.

The design intent for all areas is to establish a naturalistic landscape that brings elements of the natural systems of the Great Park System into developed areas across the site. Curvilinear patterns reminiscent of natural contours will be used as opposed to strict linear forms. The landscape will provide an environment that is welcoming and comfortable at a pedestrian level in all areas of the development. Street trees will be provided for shade, planting patterns will be regular in terms of spacing for comfort, and a variety of landscape materials and techniques will be used to contribute to visual interest.

• Village Center Core

The Village Center Core as described previously is an

urban area comprised of retail, office and residential uses. Each building is intended to have active ground level uses that may include outdoor spaces such as arcades and porticos.

The accompanying landscape in this area will be comprised of street trees shading sidewalks. Street trees in landscaped planters are also encouraged. The landscape here is meant to be more formal and a bit sparser than that found in other areas on site. There are no front or side setbacks along parcels in this area, leaving little room for additional plantings other than the public streetscape and parks. Individual property owners may choose to incorporate planters, hanging baskets, flower boxes or other features into the design of their active ground floors.

Large canopy trees will be installed with a spacing of 40 to 60 feet. The minimum specifications at installation will be 16 to 18 feet in height, 8 to 10-foot spread and 4 to 5-inch caliper. Small canopy trees will be installed with a spacing of 30 to 50 feet. The minimum specifications at installation will be 12 to 14 feet in height, 6 to 8-foot spread and 3 to 4-inch caliper.

Refer to the following street standards for street layouts relevant to this area:

- Typical Boulevard (BLVD-1),
- Main Street (VC-1 or VC-2),
- Village Center Street (VC-3) and
- Core Service Streets (VC-4).



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Parking areas will be separated and screened from public streets, sidewalks or rights-of-way using a landscaped area at least five feet wide. Three to six foot hedges, walls or fences shall be used to screen public parking lots and service areas. If walls or fences over three feet in height are used, the materials used must be at least 50 percent open. Landscaping shall be placed on the outside to provide visual interest.

In Village Center Core areas, landscaping must shade at least 25 percent of parking areas and open spaces on private property.

Village Center General

The Village Center General continues the urban context of the core area. This area serves as a transition between the dense development of the core and the surrounding neighborhood development. The landscape will be comprised of street trees along the public right-of-way and landscaped areas within the private realm. The introduction of landscape into the private realm begins to reduce the formality of plantings and increase opportunities for some personalization of landscape design.

Front setbacks in the Village Center General area range from 6 to 12 feet. This setback allows for the introduction of landscaping in the fronts of buildings. Parcels on which the structure is setback 12 feet may introduce small canopy, ornamental trees. Otherwise properties should incorporate shrubs and ground cover only.

As for streetscaping, large canopy trees will be installed with a spacing of 40 to 60 feet. The minimum specifications at installation will be 16 to 18 feet in height, 8 to 10-foot spread and 4 to 5-inch caliper. Small canopy trees will be installed with a spacing of 30 to 50 feet. The minimum specifications at installation will be 12 to 14 feet in height, 6 to 8-foot spread and 3 to 4-inch caliper.

Refer to the following street standards for street layouts relevant to this area:

- Typical Boulevard (BLVD-1),
- Lake Boulevard (BLVD-2),
- Village Center Street (VC-3),
- Core Service Streets (VC-4),
- Campus District Streets (VC-5) and
- Residential Street (RES-1).

Parking areas will be separated and screened from public streets, sidewalks or rights-of-way using a landscaped area at least five feet wide. Three to six foot hedges, walls or fences shall be used to screen public parking lots and service areas. If walls or fences over three feet in height are used, the materials used must be at least 50 percent open. Landscaping shall be placed on the outside to provide visual interest.

In Village Center General areas, landscaping must shade at least 25 percent of parking areas and open spaces on private property.



• Campus District Overlay

The same landscape and vegetation standards as in the Village Center General will be upheld in the Campus District Overlay.

Neighborhood Centers

The Neighborhood Centers will be in walking distance of residential properties and is expected to be a destination for pedestrian and bicycle traffic. The shade offered by tree canopies becomes even more important in this area. Landscaping must assume the role of sheltering pedestrians from the weather.

Because the front setbacks are set at 12 feet, private property owners will landscape these front yards and are encouraged to use combinations of trees, shrubs and ground cover to enhance their property.

The streetscape will be comprised of primarily of large canopy trees. Large canopy trees will be installed with a spacing of 40 to 60 feet. The minimum specifications at installation will be 12 to 14 feet in height, 6 to 8-foot spread and 4 to 5-inch caliper.

Refer to the following street standards for street layout information relevant to this area:

- Lake Boulevard (BLVD-2),
- East Entry Boulevard (BLVD-4),
- · Residential Streets (RES-1 and RES-2) and
- Residential Street at Neighborhood Parks (RES-3).

Off-street parking areas will be required to buffer their parking lots according to the same standards established for the Village Core. A three to six foot hedge, wall or fence will be mandatory. On-street parking does not require screening. The landscape strip between the roadway and the sidewalk provide an adequate buffer for pedestrians.

In Neighborhood Center areas, landscaping must shade at least 40 percent of open space areas.

• Neighborhood General

Unlike many modern subdivisions, the neighborhoods will have no walls or gates distinguishing one neighborhood from another. Streets will be narrow and allow on-street parking. The streets are to be thought of as continuous parkways with canopy trees and lawns or other ground cover. The setbacks enable private property owners to supplement the public streetscape with additional canopy trees. The private owners are encouraged to plant shrubs and to install ground cover. At a minimum, turf grass will cover each lawn in this area.

The side setbacks allow only for the planting of shrubs and ground cover. The area of separation between attached housing can be used as small courtyards where trees, shrubs and ground cover can be installed to enhance the property.

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Large canopy trees will be installed with a spacing of 40 to 60 feet. The minimum specifications at installation will be 12 to 14 feet in height, 6 to 8-foot spread and 4 to 5-inch caliper. Refer to the following street standards for street layout information relevant to this area:

- Typical Boulevard (BLVD-1),
- Lake Boulevard (BLVD-2),
- Entry Boulevard (BLVD-3),
- East Entry Boulevard (BLVD-4),
- Village Center Street (VC-3),
- Campus District Street (VC-5),
- · Residential Streets (RES-1 and RES-2) and
- · Residential Street at Neighborhood Parks (RES-3).

In Neighborhood General areas, tree canopy must shade at least 50 percent of the open space areas.

Park Edge Overlay

Because the setbacks for Zone A park edges are equal to those in Neighborhood Center areas, those landscape standards apply for this zone. Zone B is based on an expansive garden concept in which parks and private uses merge. Setbacks in Zone B provide ample opportunity for private property owners to enhance their properties using canopy trees of all sizes, understory trees, shrubs and ground cover. Tree canopy must shade at least 60 percent of the open space area in this Zone.

Upon approval of the regulatory plan, these landscaping and vegetation standards developed specifically for the N.T.C. redevelopment shall apply to the site in lieu of Sections 60.200 through 60.266 of the

City of Orlando's Land Development Code.



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Streetscape Vegetation: Large Canopy Trees

Common Name: Live Oak

Botanical Name: Quercus Virginiana

Mature Height: 50' - 60'

Moderate growth, prefers well-drained conditions. Short, massive, Special Attributes:

very wide spread with horizontal branches. Ideal native tree for shade, open space; parks and schools and where there are generous rights-ofway for boulevard or highway

planting.

Laurel Oak Common Name:

Quercus Laurifloia **Botanical Name:**

60' - 100' Mature Height:

Rapid growth, prefers moist to wet **Special Attributes:**

upright, conditions. Dense, developing in age to large haystack crown. Ideal for use as a water survivor in its favorite locations.

Common Name: Southern Magnolia

Magnolia grandiflora **Botanical Name:**

60' - 100' Mature Height:

Special Attributes:

Moderate to rapid growth, prefers moist conditions. Usually a broad pyramidal and symmetrical shape with long, lustrous, dark green foliage and white bowl-shaped flowers. Ideal as a highway tree in natural groups of

varied sizes.









Streetscape Vegetation: Large Canopy Trees

Common Name: Red Maple

Botanical Name: Acer rubrum

Mature Height: 50' - 70'

Special Attributes: Prefers wetland and swampy

conditions, but adaptable to higher drier locations. Cylindrical, tall, well-developed trunk and branching with deep green foliage and attractive red and yellow Fall color. Excellent shade

tree.

Common Name: Sabal Palm

Sabal palmetto **Botanical Name:**

45' - 70' Mature Height:

Special Attributes:

Slow growing, drought resistance. Fan-shaped bluish-green leaves with a midrib giving them a characteristic, twisted appearance. Used in commercial, residential and municipal

landscaping.





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Streetscape Vegetation: Understory Small Canopy Trees

Dahoon Holly

Ilex cassine

40'

Slow growth, prefers moist conditions. Erect, narrow with dense shiny dark green foliage. A colorful small scale specimen for residential planting.



East Palatka Holly

Ilex x attenuata 'East Palatka'

20' - 30'

Medium growth, prefers moist conditions. Pyramidal form with dark green foliage and white flowers. Excellent accent tree.



Drake Elm

Ulmus parvifolia 'Drake'

30' - 40'

Medium growth, drought resistance. Showy trunk bark and dark green foliage. Ideal as a patio tree.





Streetscape Vegetation: Understory Small Canopy Trees

Common Name: Wax Myrtle

Botanical Name: Myrcia cerifera

Mature Height: 20' - 30'

Special Attributes:

Prefers wet to moist conditions. Crooked, gray branches support a well-balanced crown with dense olive-green foliage. Can be used for loose, informal hedges and screens. Excellent accent tree.

Common Name: Crape Myrtle

Botanical Name: Lagerstroemia indica

15' - 25' Mature Height:

Drought resistant. Upright and open or rounded with dense multi-trunked **Special Attributes:**

branching. Often used in line on a repetitive linear rhythm on 12'-15'.





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Streetscape Vegetation: Large Shrubs

Florida Anise

Illicium floridanum

15'

Prefers moist conditions. Shiny green foliage with crimson red flowers. Serves as a background or specimen shrub.



Yellow Anise

Illicium paviflorum

15'

Prefers moist conditions. Shiny green foliage with small yellow flowers. Often used ornamentally. It softens corners of houses, as a shrub set off in the yard, or as a hedge or background plant.



Spanish Bayonet

Yucca aloifolia

8' - 10'

Requires well-drained soils. Evergreen, clump-forming shrub with an erect, densely leafy stem and overlapping leaves with white conspicuous flowers.





Streetscape Vegetation: Small Shrubs

Common Name: Dwarf Yaupon Holly

Botanical Name: Ilex vomitoria

Mature Height: 2' - 3'

Special Attributes: Prefers well-drained conditions.

Dense flattened globe, symmetrical form with dark green foliage. Prime ground cover material by virtue of its crisp rounded form. Also, makes a low rigid hedge or edger.

Common Name: Florida Flame Azalea

Botanical Name: Rhododendron austrinum

2' - 6' Mature Height:

Prefers moist conditions. Loosely-**Special Attributes:**

branched, deciduous shrub with redbrown twigs and orange to red orange fragrant flowers. Most often-

used landscaped plant.

Lantana Common Name:

Botanical Name: Lantana camara

4' - 6' Mature Height:

An erect, deciduous, multi-branched **Special Attributes:**

shrub with multi-colored and colorful, pink, yellow, orange, and

white flowers.







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Streetscape Vegetation: Small Shrubs

Common Name: Needle Palm

Botanical Name: Rhapidophyllum hystrix

Mature Height: 3' - 5'

Special Attributes:

Prefers moist conditions. Low-growing, leafy evergreen palm with dark green foliage. An attractive foundation shrub.





Wetland Vegetation: Understory Trees

Common Name: Paurotis Palm

Botanical Name: Acoelorraphe wrightii

Special Attributes:

Slow growth to 25' in height. Very round, fan-shaped leaves, green on top and silvery underneath with a slender, clustered, fiber-covered trunk. Drought resistant, prefers

moist conditions.

Common Name: Swamp Dogwood

Botanical Name: Cornus foemina

Shrub or small tree to about 20' tall. **Special Attributes:**

A broad, low dome form with white flowers. Usually found on stream banks, pond and lake shores, wet thickets and clearings, floodplain forests, swamps, wet forests; also

well-drained forests.

Dahoon Holly Common Name:

Ilex cassine **Botanical Name:**

Special Attributes:

Evergreen tree with leathery, glossy, elliptic leaves and red berries. Located on edge of streams, floodplains, cypress-gum ponds or depressions or flatwoods depressions.









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Wetland Vegetation: Wildflowers

Common Name: Sea-oxeye Daisy

Botanical Name: Borrichia frutescens

Special Attributes:

Perennial bushy herb with gray-green leaves and yellow ray flowers. Can be found in marshes and mud flats.

Common Name: Swamp Hibiscus

Botanical Name: Hibiscus grandiflorus

Large herb with several stems from **Special Attributes:**

base with alternate leaves and large pink to white flowers. Located in marshy shores of ponds, lakes, streams, swamps, glades, sloughs, ditches, canals, commonly in water.

Spider Lily Common Name:

Hymenocallis spp. **Botanical Name:**

A white lily-like flower with 6 narrow, Special Attributes:

white petals; white membranous tissue connecting the stamens, and broad, strap-shaped leaves. Often found in swamps, floodplain forests, wet forests, sloughs, and streams









Wetland Vegetation: Groundcover

Common Name: Pickerelweed

Botanical Name: Pontederia cordata

Special Attributes: Herb with blue or rarely white

flowers with narrow to ovate leaves on long fleshy stalks. Located in marshes, streams, ditches, wet prairies, shallow water of ponds and

lakes.

Muhly Grass Common Name:

Botanical Name: Muhlenbergia capillaris

Special Attributes:

Grass growing in clumps, with narrow rolled blades, pointed projection at top of sheath with large seedheads and flowers at tips of branches. Can be found on low flatwoods, coastal strand and cypress

swamps.

Marsh Hay Common Name:

Spartina patens **Botanical Name:**

Special Attributes:







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Wetland Vegetation: Canopy Trees

Common Name: Cabbage Palm

Botanical Name: Sabal palmetto

Special Attributes: Slow growing, drought resistance.

Fan-shaped bluish-green leaves with a midrib giving them a characteristic,

twisted appearance.

Common Name: Bald and Pond Cypress

Botanical Name: Taxodium spp.

An upright, pyramidal form to about **Special Attributes:**

100'. Can be found in fresh water swamps flooded for at least part of the year. Plant in staggered sizes in colonies at stream banks, wetlands

and shorelines of lakes.

Red Maple Common Name:

Acer rubrum **Botanical Name:**

Special Attributes:

Prefers wetland and swampy conditions, but adaptable to higher drier locations. Cylindrical, tall, welldeveloped trunk and branching with deep green foliage and attractive red and yellow Fall color.









GENERAL LANDSCAPING STANDARDS

Wetland Vegetation: Canopy Trees

Common Name: Laurel Oak

Botanical Name: Quercus Laurifloia

Special Attributes:

Rapid growth, prefers moist to wet conditions. Dense, upright, developing in age to large haystack crown. Ideal for use as a water survivor in its favorite locations.



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Wetland Vegetation: Aquatic Plants

Common Name: Spatterdock

Botanical Name: Nuphar luteum

Special Attributes:

Rooted emersed aquatic plant. Often found in pond margins and areas along rivers in shallow depths. It grows particularly well in slow flowing canals, swamps, and other areas where the rootstock may attach and spread.

and spread.

Common Name: American Lotus

Botanical Name: Nelumbo lutea

Special Attributes:

Large leaf aquatic with a very showy yellow flower. Grows best in muddy, shallow areas, such as ponds and lake margins, marshes and lime sinks in 3'-

6' of water.

Fragrant Water-Lily Common Name:

Nymphaea odorata **Botanical Name:**









Wetland Vegetation: Shrubs

Common Name: Leather Ferns

Botanical Name: Acrostichum spp.

Special Attributes:

A large fern with simply pinnate, leathery leaves and the upper leaflets covered beneath by sporangia. Located in freshwater and brackish

shores and swamps.

Common Name: Buttonbush

Botanical Name: Cephalanthus occidentalis

Shrub or small tree, rarely 50' tall with **Special Attributes:**

opposite leaves and small white flowers and brown fruits. Can be found in swamps, sloughs, shallow ponds, small stream banks and

marshes.

Common Name: Wax Myrtle

Botanical Name: Myrica cerifera

Special Attributes:

Shrub or small tree to about 20' tall with alternate brownish-yellow leaves. Characteristic odor when crushed. Located in fresh and brackish banks, shores, flats, swales, pine savannas

and flatwoods, and swamps.









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