

16 landscape design guidelines

GOAL 1: To enhance the existing landscape character and landscape structure of the campus, by providing a sense of place, introducing more shade and drought-tolerant plants, and creating a safe environment for students.

PLANTING

The Boca Raton campus boasts a wide variety of canopy trees that offer character to the center of the campus and provides shade, even if some mature trees were lost during the passage of Hurricane Irma in 2017. A well-defined network of pedestrian paths connects the academic buildings. The campus also includes a system of lakes to the southeast that add interest to the campus grounds, and act as an integral part of the stormwater infrastructure. All of these qualities are to be enhanced and are a priority initiative.

Objective 1A: In order to improve and expand upon the campus aesthetic, experience, and identity, FAU will implement the following policies:

- **Policy 1A-1:** The University shall promote conservation and reduce environmental impacts by complementing the existing plant palette with more native and drought tolerant plants.
- **Policy 1A-2:** Group plants in the landscape according to their water requirements so their irrigation system shall not over or underwater some plants at the expense of others.
- **Policy 1A-3:** Reduce campus water needs by reducing the amount of turf on campus and replacing it with drought tolerant species wherever possible.
- **Policy 1A-4:** Avoid planting grass and other turf in areas that are too shady, dry, wet, or steep to be mowed safely. Use ground covers and other plants better suited to these areas.
- **Policy 1A-5:** Planting beds should be added around foundations of buildings for aesthetic improvement of the campus.
- **Policy 1A-6:** Enhance campus wayfinding and create focal points by placing planting beds with more ornamental plants around building entrances and main thoroughfares.
- **Policy 1A-7:** Use mulch in the plant beds to decrease water evaporation and reduce watering frequency.



Precedent photography exemplifies the strategies described in the accompanying policies

- **Policy 1A-8:** Use a cohesive plant palette throughout the campus.
- **Policy 1A-9:** Strive to incorporate campus-wide stormwater management into the overall landscape improvements.
- **Policy 1A-10:** Screen utilities by using hedges.
- **Policy 1A-11:** Non-native, unique, or other plants not listed below can be added in an effort to diversify the campus planting palette with prior approval from FAU. Planting should include but is not limited to the list below:

TREES AND PALMS

Cabbage Palm	<i>Sabal palmetto</i>
Gumbo Limbo	<i>Bursera simaruba</i> (In large open spaces only)
Pigeonplum	<i>Coccoloba diversifolia</i>
Satin Leaf	<i>Chrysophyllum oliviforme</i>
South Florida Slash Pine	<i>Pinus elliottii</i>
Strangler Fig	<i>Ficus aurea</i>
Virginia Live Oak	<i>Quercus virginiana</i>

SHRUBS AND GROUNDCOVERS

Wax Myrtle	<i>Myrica cerifera</i>
American Beautyberry	<i>Callicarpa americana</i>
Coontie	<i>Zamia pumila</i>
Eastern Gamagrass	<i>Tripsacum dactyloides</i>
Firebush	<i>Hamelia patens</i>
Giant Leather Fern	<i>Acrostichum danaeifolium</i>
Saw Palmetto	<i>Serenoa repens</i>
Shiny-leaved Wild Coffee	<i>Psychotria nervosa</i>
Swamp Lily	<i>Crinum asiaticum</i>
Adam's Needle	<i>Yucca filamentosa</i>
Cocoplum	<i>Chrysobalanus icaco</i>

- **Policy 1A-12:** Plants listed as prohibited and invasive in Palm Beach County shall not be used on campus, and any existing such plants shall be removed. Following is the list of Palm Beach County Prohibited Plants:

Air Potato	<i>Dioscorea bulbifera</i>
Australian Pine	<i>Casuarina spp.</i>
Brazilian Pepper	<i>Schinus terebinthifolius</i>
Carrotwood	<i>Cupaniopsis anacardioides</i>
Earleaf acacia	<i>Acacia auriculiformis</i>
Kudzu	<i>Pueraria montana var. lobata</i>
Old World Climbing Fern	<i>Lygodium microphyllum</i>
Melaleuca	<i>Melaleuca quinquenervia</i>
Queensland Umbrella Tree	<i>Schefflera actinophylla</i>


















- For more information on Palm Beach County invasive species, refer to the following links:

<http://discover.pbcgov.org/erm/Publications/ProhibitedPlantsBrochure.pdf#search=invasive>
<http://discover.pbcgov.org/parks/NaturalAreas/InvasivePlants.aspx>

- **Policy 1A-13:** For campus gateways, preserve and enhance the existing landscape, using Royal palms as vertical accents, as well as other trees, palms and shrubs. The University shall work in partnership with the Research Park to create a visible gateway at the north entrance to the campus. The entrance near Palm Beach State College shall be diversified to include Royal Palms and flowering trees.
- **Policy 1A-14:** For the main intersection of the campus loop road with the entrance drives, use flowering or shade tree accents, in conjunction with signage to highlight a sense of arrival. The planting layout shall be complemented by hardscape treatments such as concrete pavers and decorative crosswalks to reduce traffic speed. Signage shall also be added.
- **Policy 1A-15:** For the loop road and access roads, use a consistent planting palette, with shade trees on both sides of the road, and palm trees, flowering or shade trees in the median.

- **Policy 1A-16:** For primary pedestrian promenades, use a continuous row of drought-tolerant shade trees along primary pedestrian promenades, to provide a pleasant walking environment throughout the year. The walk shall be complemented with site furniture and updated lighting fixtures.
- **Policy 1A-17:** For secondary pedestrian promenades, use a continuous row of drought-tolerant shade trees or palms.
- **Policy 1A-18:** For formal spaces on campus, use planting layouts with a strong geometric structure. The planting palette should be drought tolerant and easy to maintain. The hardscape areas can include special treatments, such as pavers or natural stone.
- **Policy 1A-19:** For the residential areas, the landscape shall provide shaded areas, but also flowering trees and shrubs and plants with year-round interest. Plants shall not block lines of site and shall not create unsafe spaces. A variety of site furniture should also be provided.
- **Policy 1A-20:** The hammock areas shall be preserved, and new native trees shall be planted in the areas where trees have been lost due to the hurricane.
- **Policy 1A-21:** The outdoor study and dining spaces shall include plants that provide shade a pleasant environment for study.
- **Policy 1A-22:** Preserve and enhance the buffer planting areas located to the south of the campus and along the side edges.
- **Policy 1A-23:** Enhance campus safety by following CPTED (Crime Prevention Through Environmental Design) planting guidelines:
 - 2' maximum growncover height along pedestrian pathways
 - 3' maximum shrub height (placed minimum 6' away from walks)
 - 7'-8' minimum tree canopy clearance
- **Policy 1A-24:** General Planting Notes:
 - All planting materials shall be Florida Fancy or Florida Grade #1 as defined by the "Florida State Plant Board Standards for Nursery Stock" and "Grades and Standards for Nursery Plants," State of Florida, Department of Agriculture.



-  GATEWAY
-  MAJOR ROAD LANDSCAPE
-  MAJOR INTERSECTION TREATMENT
-  FORMAL SPACES
-  PRIMARY PEDESTRIAN PROMENADE
-  SECONDARY PEDESTRIAN PROMENADE
-  LAKE
-  LAKE BANK PLANTING
-  RECREATION AREAS
-  PARKING AREAS
-  CONSERVATION AREAS
-  RETENTION AREAS
-  RESIDENTIAL OPEN SPACE
-  COVERED WALKS
-  HAMMOCK AREAS
-  OUTDOOR STUDY AREAS
-  DINING AREAS

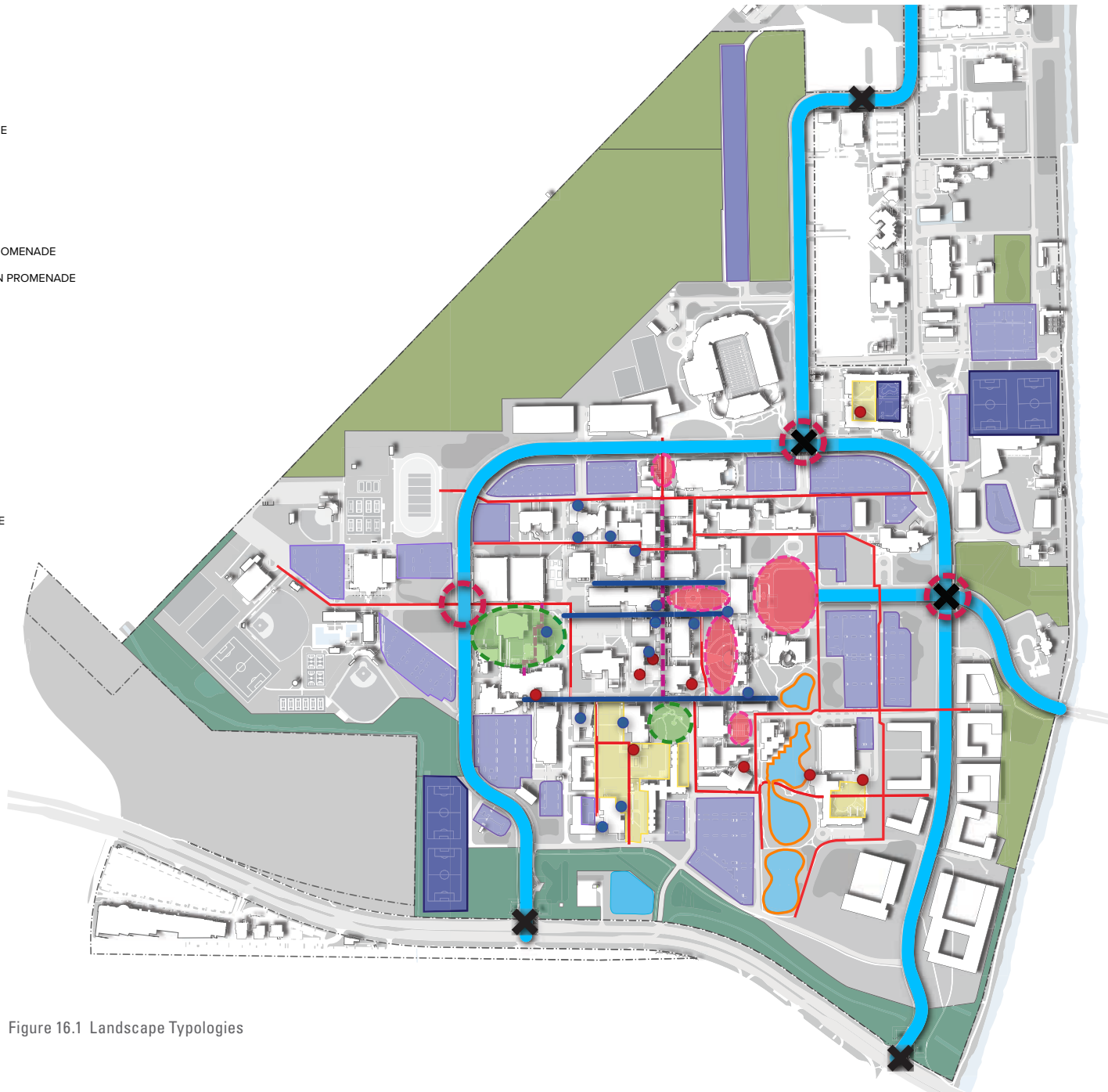
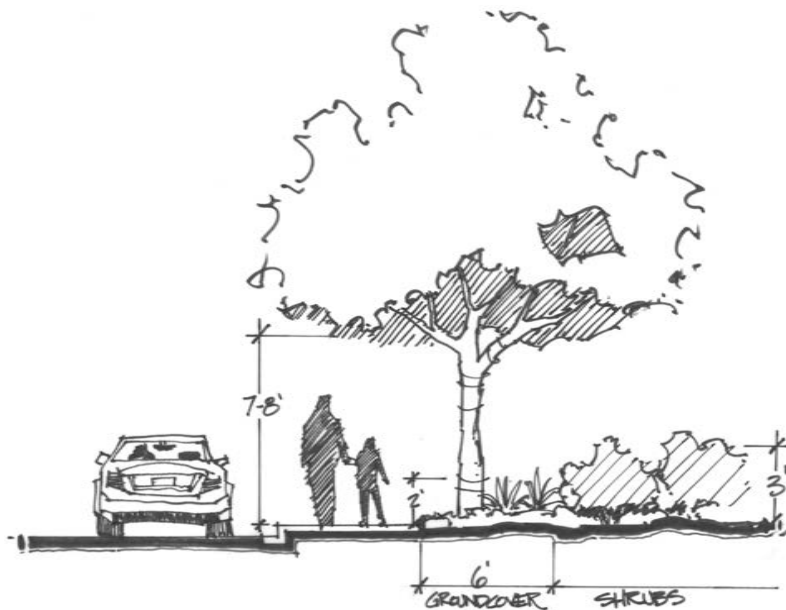


Figure 16.1 Landscape Typologies

- All trees are to be planted according to the following standards:
 - a. Shade trees must be installed at least 4 feet away from all hardscape areas.
 - b. Palm trees must be installed at least 2 feet away from hardscape areas
- Planting soil mix for trees, shrubs, and groundcover shall consist of a thoroughly blended mixture of:
 - a. Palms:
 - 90% clean D.O.T. sand
 - 10% approved topsoil/Florida Peat mixture
 - b. Royal Palms:
 - 60% clean D.O.T. sand
 - 40% approved topsoil/Florida Peat mixture
 - c. Trees/Shrubs/Groundcover
 - 70% clean D.O.T. sand
 - 30% approved topsoil/Florida Peat mixture



**Please refer to CPTED policy for more information*



Precedent photography exemplifies the strategies described in the accompanying policies

SHADING

Objective 1B: In order to enhance the outdoor experience, FAU will implement the following policies:

- **Policy 1B-1:** The University shall enhance outdoor experience and learning by providing ample shade opportunities by using planting and overhead features (covered walk, trees, shade sails, etc.).
- **Policy 1B-2:** Maximize canopy cover in all surface parking lots to create a comfortable outdoor environment and to reduce the urban heat island effect. This can be achieved by locating islands every 10 spaces and at the ends of the parking aisles, and plant with a canopy tree and groundcover.
- **Policy 1B-3:** Replenish canopy lost during Hurricane Irma in 2017 and add trees along primary and secondary pedestrian promenades.

LAKES, WATERWAYS & STORMWATER PONDS AND CANALS

The Boca Raton Campus includes a series of lakes that shall be a part of the proposed campus greenway. The land along the water's edge is called the riparian zone and is often a wetland.

Objective 1C: In order to enhance and protect the water quality, FAU will implement the following policies:

- **Policy 1C-1:** Establish shoreline vegetation to attract native wildlife and reduce erosion.
- **Policy 1C-2:** Use native aquatic plants in the riparian zone, and remove invasive, exotic species.
- **Policy 1C-3:** Establish a 'no maintenance' zone 10' back from the riparian zone to protect water from runoff and keep the waterways healthy. This area will not be mowed, fertilized, or have pesticides applied.
- **Policy 1C-4:** Use plants for riparian and 'no maintenance' zones that do well without fertilization or irrigation after establishment.
- **Policy 1C-5:** The lakes are lined and the types of plants along the lake edge shall be carefully chosen so the falling leaves do not impact water quality.
- **Policy 1C-6:** A study of the wildlife in the greenway corridor shall be performed.



- **Policy 1C-7:** Plant native, flood-tolerant species that are known to help reduce contaminants in water, to include:

Arrow Arum	<i>Peltandra virginica</i>
Golden Canna	<i>Canna flaccida</i> **
Lemon Bacopa	<i>Bacopa caroliniana</i>
Blue-Eyed Grass	<i>Sisyrinchium angustifolium</i>
Cardinal Flower	<i>Lobelia cardinalis</i>
Duck Potato	<i>Sagittaria lancifolia</i>
Mexican Water Lily	<i>Nymphaea Mexicana</i> **
Fragrant Water Lily	<i>Nymphaea odorata</i> **
Skyflower	<i>Hydrolea corymbosa</i>

**=Species that clean contaminants from the water

- **Policy 1C-8:** Implement more seating and study areas along the waterways, along with trellises or shade sails to provide shade.



FURNITURE AND LIGHTING

Objective 1D: In order to create a unified campus brand, FAU will implement the following policies:

- **Policy 1D-1:** The University shall implement standardized, consistent furniture throughout the campus to unify the campus brand.
- **Policy 1D-2:** Using similar materials and colors of furniture shall promote campus identity.
- **Policy 1D-3:** Outdoor study areas shall include a variety of seating options (study cabanas, benches, lounge furniture, tables with chairs and umbrellas, etc.), which also include charging stations and/or solar charging stations.
- **Policy 1D-3:** The University shall use the same types of lighting fixtures throughout the campus to create a cohesive feel for the campus.
- **Policy 1D-4:** The light fixtures should be optimized for efficiency and be full cut-off in order to respond to the night sky policy.



Precedent photography exemplifies the strategies described in the accompanying policies

PUBLIC ART AND SIGNAGE

Objective 1F: FAU has a tradition of using public art to create a unique and iconic campus experience and has a strong cohesiveness in its signage installations. In order to preserve these features, FAU will implement the following policies:

- **Policy 1E-1:** Continue to use public art installations and signage to create campus focal points as a method of wayfinding and hierarchy of spaces.
- **Policy 1E-2:** Introduce historical markers, signage and art in areas of the campus that would benefit from its presence.
- **Policy 1E-3:** Maintain signage standards to create cohesive signs both across the campus and throughout all campuses.
- **Policy 1E-4:** Use art and signage at main entrance to create sense of place and draw people into the center of campus.



CAMPUS SAFETY

Objective 1F: In order to enhance safety on campus, FAU will implement the following policies:

- **Policy 1F-1:** The University shall follow CPTED (Crime Prevention Through Environmental Design) principles in all aspects of design improvements on campus. The principles of CPTED are as follows:
 - Territoriality: Clearly delineating public and private space
 - Natural surveillance: Keeping intruders under observation
 - Access control: Decreasing criminal accessibility
 - Activity support: Presence of planned activity for the space
 - Maintenance: Maintain spaces to avoid neglected-looking areas which attract criminal activity
- **Policy 1F-2:** The CPTED principles shall be accomplished through the following recommendations:
 - A choice of paths to get to one destination
 - Adequate lighting
 - Conveniently placed emergency telephones
 - Creation of an escort service on campus
 - Transport service
 - Campus patrols
 - Safe access to buildings
 - Placement of parking in a way that increases safety and visibility