Alachua County
Landscaping Code Update

Board of County Commissioners Workshop
March 5, 2024

Ken McMurry, Senior Planner, Growth Management
Stacie Greco, Water Resources Program Manager, Environmental Protection

OBJECTIVES

- Review staff recommended changes to the Alachua County Landscaping Code
- Receive Board input and direction

BACKGROUND

- **2006** Last Major Update 2006
- **2021** Update to Tree Code
- **2023** Update to Landscape Irrigation Design Code (Water Quality Code)
- **2023** Staff began review and stakeholder meetings on Landscaping Code

TIMELINE


Community Engagement
Staff review of issues
BoCC Workshop: March 5, 2024
Request to advertise: ~May 2024
Public Hearing: ~June 2024

COMMUNITY ENGAGEMENT

Public

• Builders Assoc. of North Central Florida (BANCF)	April 2023
• Local Development community	May 2023
• Local Landscape Architects	June, July 2023
• Citizen Climate Advisory Committee	Nov 2023
• Environmental Protection Advisory Committee	Dec 2023
• Builders Assoc. of North Central Florida (BANCF)	Feb 2024

Academic

• Drs. Bean, Dukes, Klein, Lindsey – soil amendments	ongoing
• Dr. Ryan Klein – tree planting best practices	Feb 2024
• Dr. Brian Bahder – Lethal Bronzing Disease in palms	Feb 2024

ALACHUA COUNTY LANDSCAPING CODE

- Applies to new development and redevelopment in unincorporated County
- Minimum requirements for landscape design, plant selection, installation, and maintenance
- Landscaping requirements for
  - Street trees
  - Stormwater basins
  - Parking areas
  - Buffers
  - Pedestrian paths
  - Overall site tree canopy

ALACHUA COUNTY LANDSCAPING CODE

Current Main Objectives (Sec. 407.41)

- Provide tree canopy coverage and shading
- Use native plants
- Integrate site systems with landscaping
- Promote water conservation
- Minimize utility conflicts with trees
- Reduce visual and acoustical privacy and impacts
- Promote edible plants

UPDATE TOPIC AREAS

- Resilient Landscapes
- Compact Development
- Urban Heat Island
- Urban Forest
- Process

PROCESS

Recommendations:

- Move TND and Stormwater Management landscaping to Landscaping Code
- Reorganize and consolidate to more logical order
- Clarify landscape inspection and certification process
- Specify approved plant species substitution process
- Specify minimum plan submittal elements

URBAN FOREST

Urban Forest Composition

City of Hutchinson, KS

Current:

- Native species required in stormwater basins and for tree mitigation
- Species diversity required only for trees
- Limited edible species in Appropriate Tree List

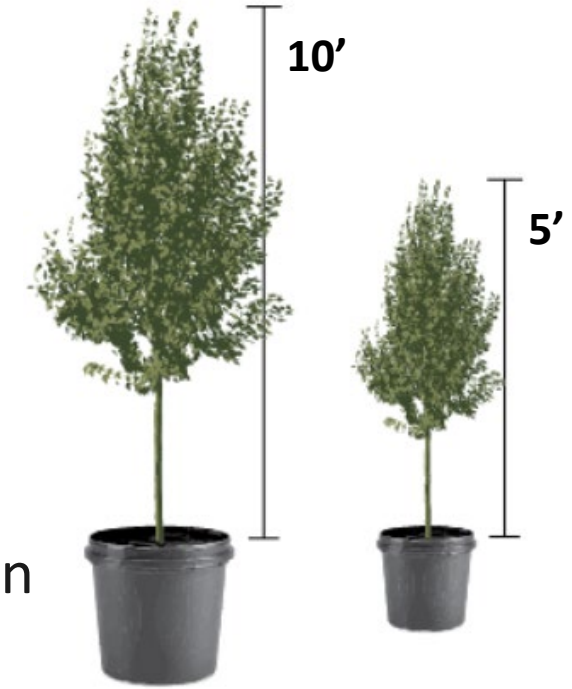
Recommendations:

- Require minimum 75% native species for all trees, shrubs, groundcovers
- Require species diversity for all trees, shrubs, groundcovers
- Include additional edible species (native and non-native) in Appropriate Tree List

Tree installation sizes

Current:

- Minimum street and parking lot tree installation size 2” caliper, 10’ height, 25 gallon container
- No maximum caliper size



Recommendations:

- Reduce this minimum tree installation size to 1.5” caliper, 5’ height, 15 gallon container to allow for greater species diversity
- Add maximum caliper size for better establishment, reduced irrigation

URBAN FOREST

Lethal Bronzing Disease (LBD) in Palms

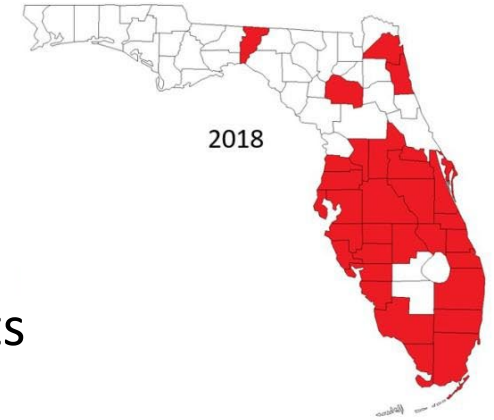
- Untreatable infection known to be fatal to 21 species of Palms
- Since 2006 has spread to 36 counties in Florida, including Alachua County

Current:

- 4 Palm species are included in Appropriate Trees List for fulfillment of requirements for tree mitigation, street trees, canopy coverage, etc.
- Sabal, Pindo, Date, Washington Palms

Recommendations:

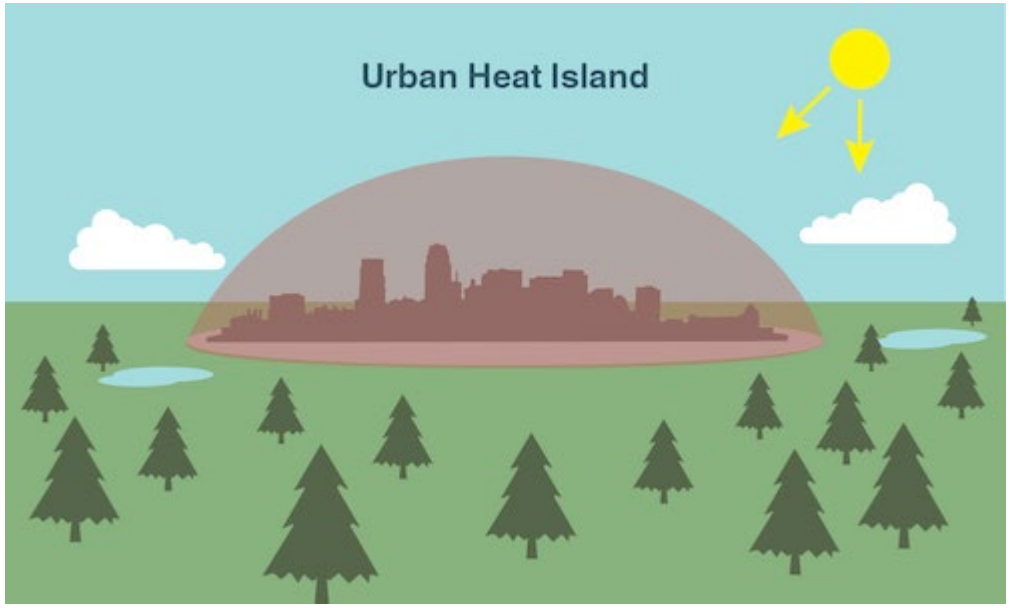
- Prohibit Palms in County-owned projects
- Cap number or percentage of Palms fulfilling landscaping requirements
- Require LBD-negative certification for Palms fulfilling landscaping requirements



both: Dr. Brian Bahder, UF/IFAS

URBAN HEAT ISLAND

Urbanized areas that experience higher temperatures than outlying areas during both day and night



NASA

- Structures such as buildings and roads absorb and re-emit the sun's heat more than natural landscapes such as forests and water bodies
- Trees and vegetation lower surface and air temperatures by providing shade and cooling

URBAN HEAT ISLAND

Tree canopy coverage of paved parking and vehicular use areas

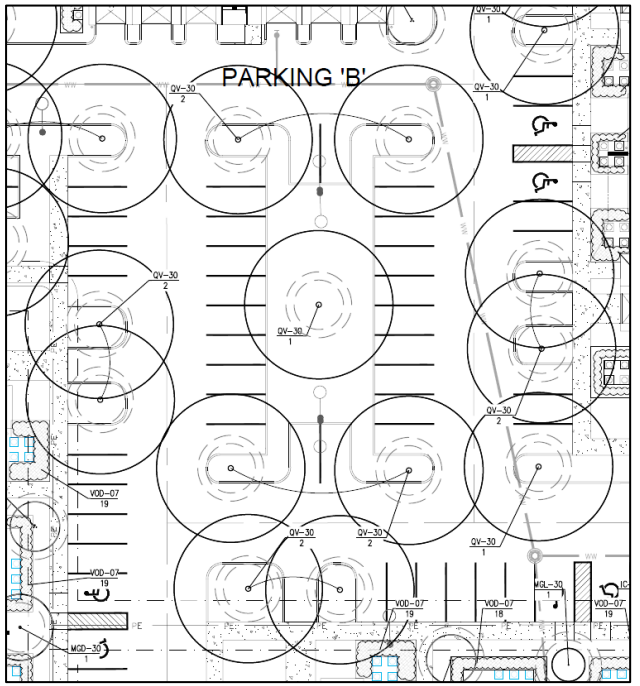
Current:

- 50% tree canopy coverage calculation required

Recommendation:

- Simplify provision of tree canopy using number of parking spaces approach (similar to City of Gainesville)
- Goal remains 50% tree canopy coverage

TREE SPECIES	EST. 20 YEAR CROWN	CROWN AREA (SF)	PROPOSED QUANTITY	PROPOSED % OF CANOPY ON SITE	PROPOSED CANOPY AREA ON SITE (SF)
Acer rubrum	25	490.63	27	50%	6623.4375
Fraxinus americana	40	1,256.00	5	100%	6280
Fraxinus americana	40	1,256.00	19	50%	11932
Liriodendron tulipifera	25	490.63	4	100%	1962.5
Liriodendron tulipifera	25	490.63	8	50%	1962.5
Quercus virginiana 'Cathedral'	45	1,589.63	18	100%	28613.25
Quercus virginiana 'Cathedral'	45	1,589.63	31	75%	36958.78125
Quercus virginiana 'Cathedral'	45	1,589.63	25	50%	19870.3125
Ulmus floridana	35	961.63	12	100%	11539.5
Ulmus floridana	35	961.63	6	75%	4327.3125
Ulmus floridana	35	961.63	1	50%	480.8125
Platanus occidentalis	40	1,256.00	5	50%	3140
				Total Proposed 20-Year Canopy	133,690.41
				Pavement Area	225,996.60
				% Site Under Canopy at 20 Years	59.16%



URBAN HEAT ISLAND

Tree canopy coverage of Industrial paved vehicular use areas

Current:

- 50% tree canopy coverage calculation required

Recommendations:

- Limited exemption for Industrial uses
  (e.g., warehouses, distribution facilities, waste collection centers) for truck loading and driving areas
- Still subject to tree canopy coverage for parking spaces
- Still subject to 30% tree canopy coverage for overall site

URBAN HEAT ISLAND

Tree canopy coverage and solar installations in paved parking areas

Current:

- Covered parking structures (including with solar panels) are exempt from 50% tree canopy coverage requirement for paved parking areas
- Overall development site requires 30% tree canopy coverage

Martin E. Comas/Orlando Sentinel

URBAN HEAT ISLAND

Tree canopy coverage and solar installations in paved parking areas

Considerations:

Martin E. Comas/Orlando Sentinel

Trees in parking areas

- Reduce Urban Heat Island up to 10°
- 2 acres of treed parking cleans ~1 ton of CO_2/year – Arbor Day Foundation/USDA
- Absorb ozone, nitrogen dioxide, sulfur dioxide
- Provide oxygen
- Evapotranspiration cooling
- Reduces storm water runoff
- Noise mitigation up to 40%
- Reduce stress and crime

URBAN HEAT ISLAND

Tree canopy coverage and solar installations in paved parking areas

Considerations:

Solar panels in parking areas

- May reduce Urban Heat Island
- 1.5 MW solar parking prevents ~1,000 tons of CO_2/year – US EPA/freeingenergy.com
- Renewable energy source
- Shares developed land
- 2x-5x more $$ to build than on open land

Tree canopy coverage and solar installations in paved parking areas

Considerations:

- Should there be limits on addition of covered parking structures (including with solar panels) and reduction of tree canopy in paved parking areas?

Martin E. Comas/Orlando Sentinel

COMPACT DEVELOPMENT

Street trees

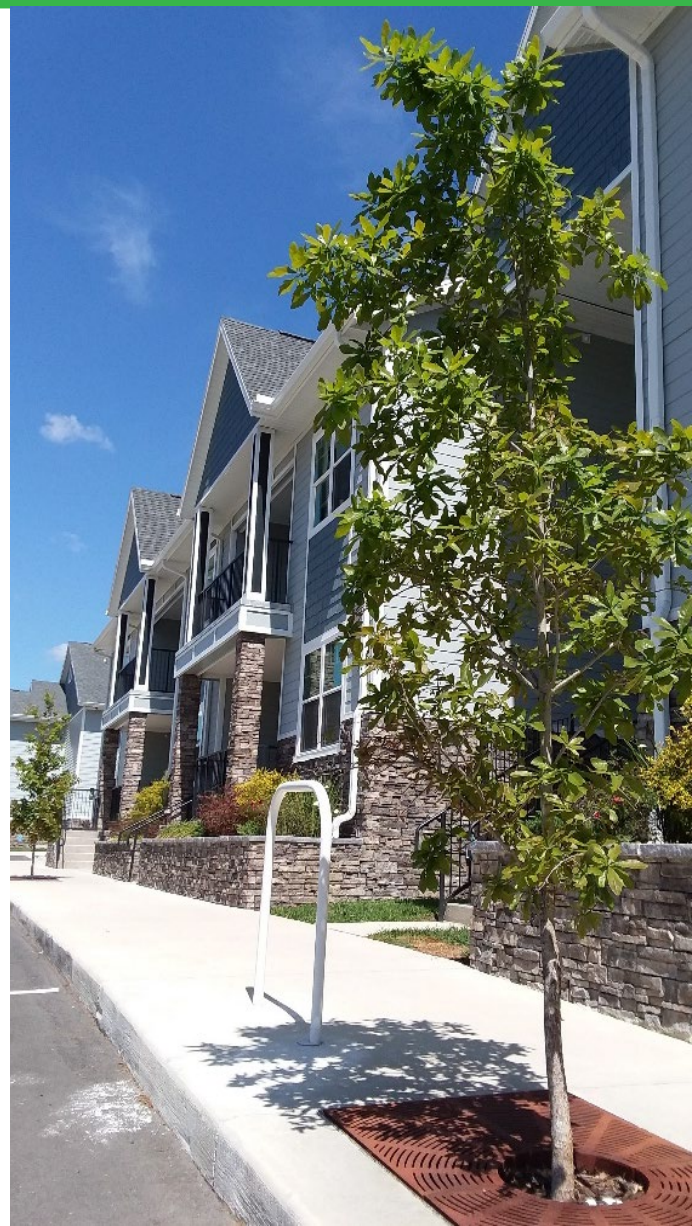
Recommendations:

- More flexibility for street tree spacing based on average spacing rather than spacing between each tree (similar to City of Gainesville)
- Clarify on-street parking is allowed between street trees rather than vice-versa (similar to City of Gainesville)
- Clarify trees are prioritized over utilities in County-owned rights-of way (Comprehensive Plan)

Trees in constrained areas

Current:

- Minimum planting area requirements vary for street trees in right-of-way strips, in islands between on-street parking, trees in standard and TND parking lot islands
- Street trees are allowed to further reduce these planting areas with “alternative planting systems” (engineered soils, root barriers, etc.)

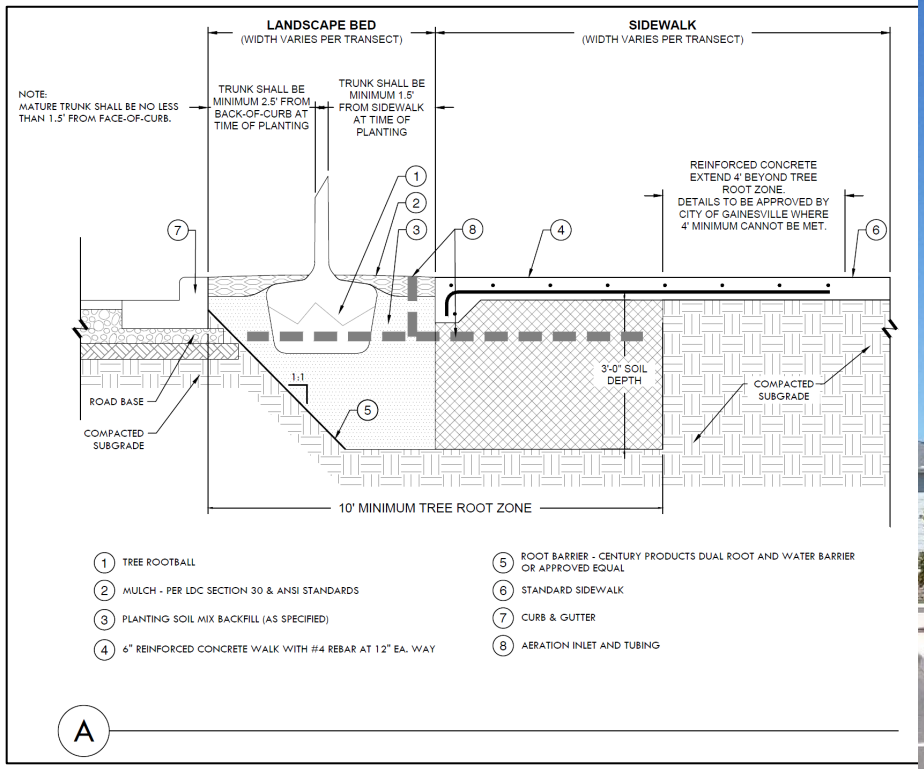


COMPACT DEVELOPMENT

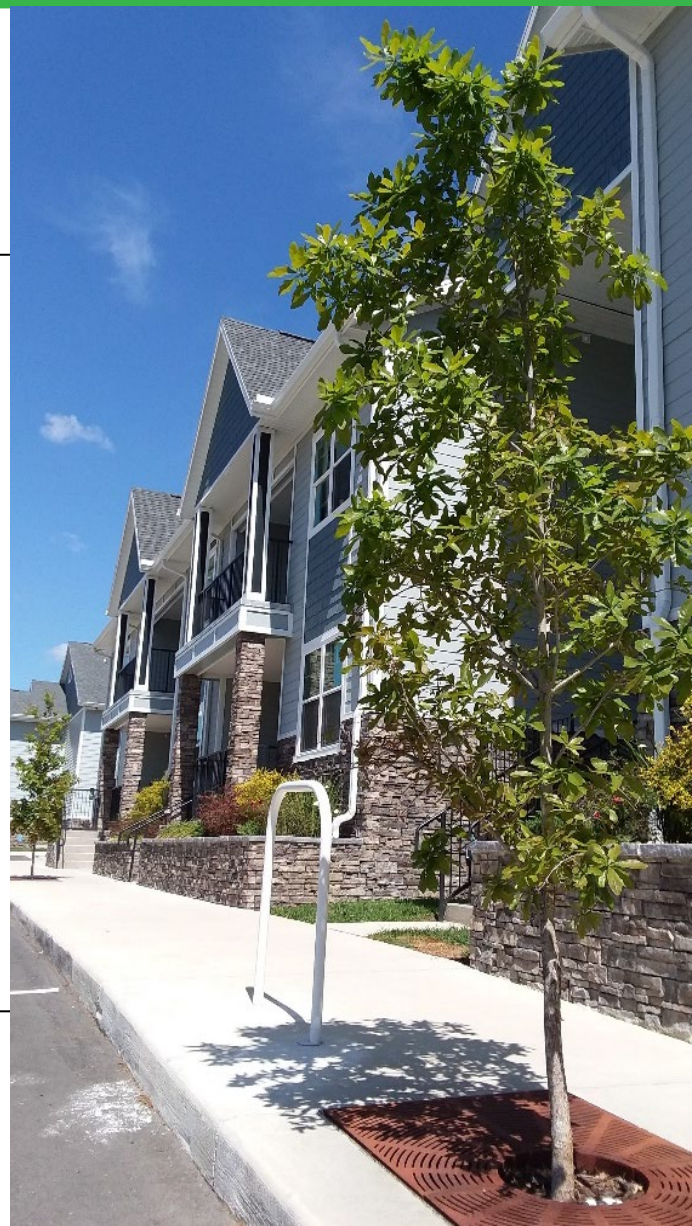
Trees in constrained areas

Recommendations:

- Require consistent minimum planting areas for all trees
- Require consistent minimum reduced planting areas with “alternative planting systems”



City of Gainesville



COMPACT DEVELOPMENT

Stormwater basins

Current:

- Resemble natural areas resulting in a facility not required to be fenced
- Be an integral part of the development as a physical or visual amenity
- Provide usable public or civic space or natural aesthetic feature
- Must be “irregular shape and have no parallel sides”

Mark Clark, UF/IFAS

Stormwater basins

Recommendation:

- Add clarity to usable public or civic space design and landscaping requirements to allow for large, square, deep, walled, fenced basins as an amenity

RESILIENT LANDSCAPES

Landscaping practices that do not include the application of fertilizer and permanent irrigation and are more resilient to extreme weather conditions.

(Comprehensive Plan)

Recommendations:

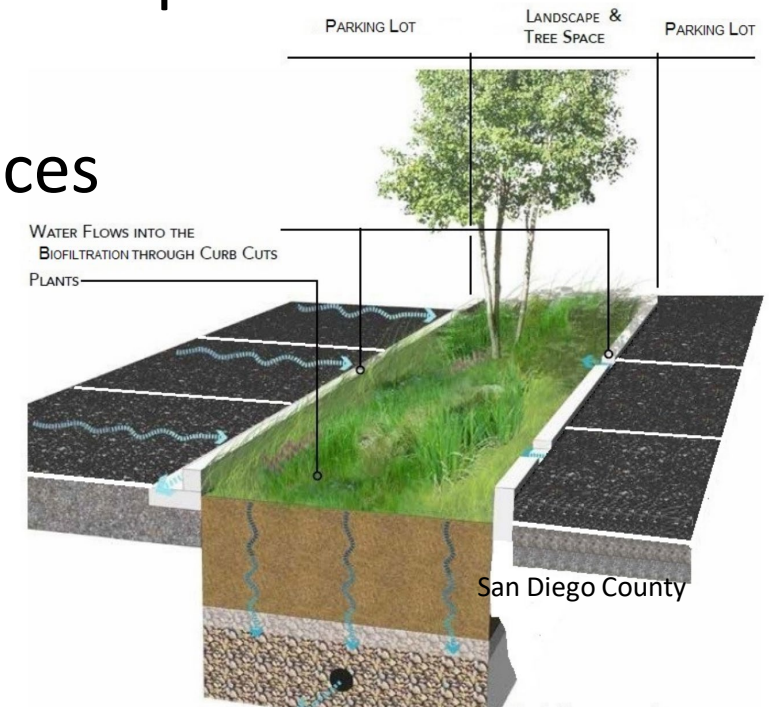
- Clarify turf is for functional uses only (pedestrian traffic, recreation, erosion control)
- Prohibit turf in parking islands and in strips less than 4 feet wide
- Promote groundcovers as an alternative
- Clarify use of existing vegetation for buffers and eliminate new shrubs where other screening is provided

Outside Collaborative

RESILIENT LANDSCAPES

Recommendations:

- Encourage temporary irrigation (establishment or 1 year, whichever occurs first) as outlined in Temporary Irrigation Guidance Document
- Require Low Impact Development (LID) stormwater techniques in parking areas
  - Applies to parking lots of more than 40 parking spaces
  - Landscape islands and strips
  - Pervious pavement



San Diego County

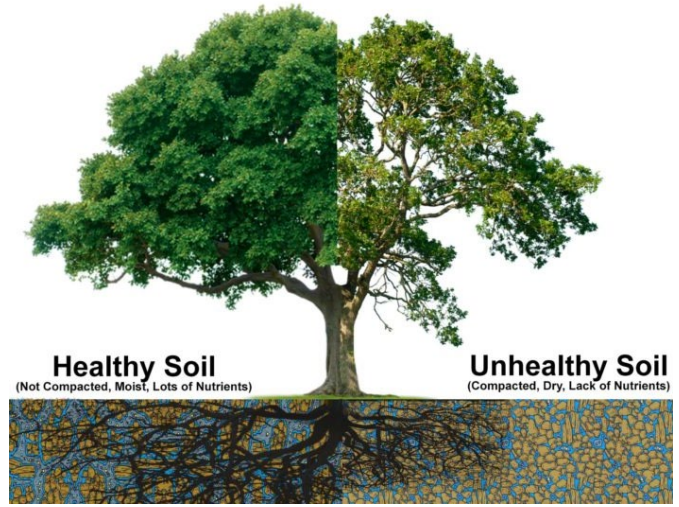
RESILIENT LANDSCAPES

Current:

- Required minimum depth of planting area “free from compacted material” is 18 inches
- No required minimum tree soil volume or quality

Recommendations:

- Require minimum tree soil volumes and quality (similar to City of Gainesville)
- Density, texture, pH, and organic matter specifications
- Natural topsoil of the site may qualify



CityGreen

RESILIENT LANDSCAPES

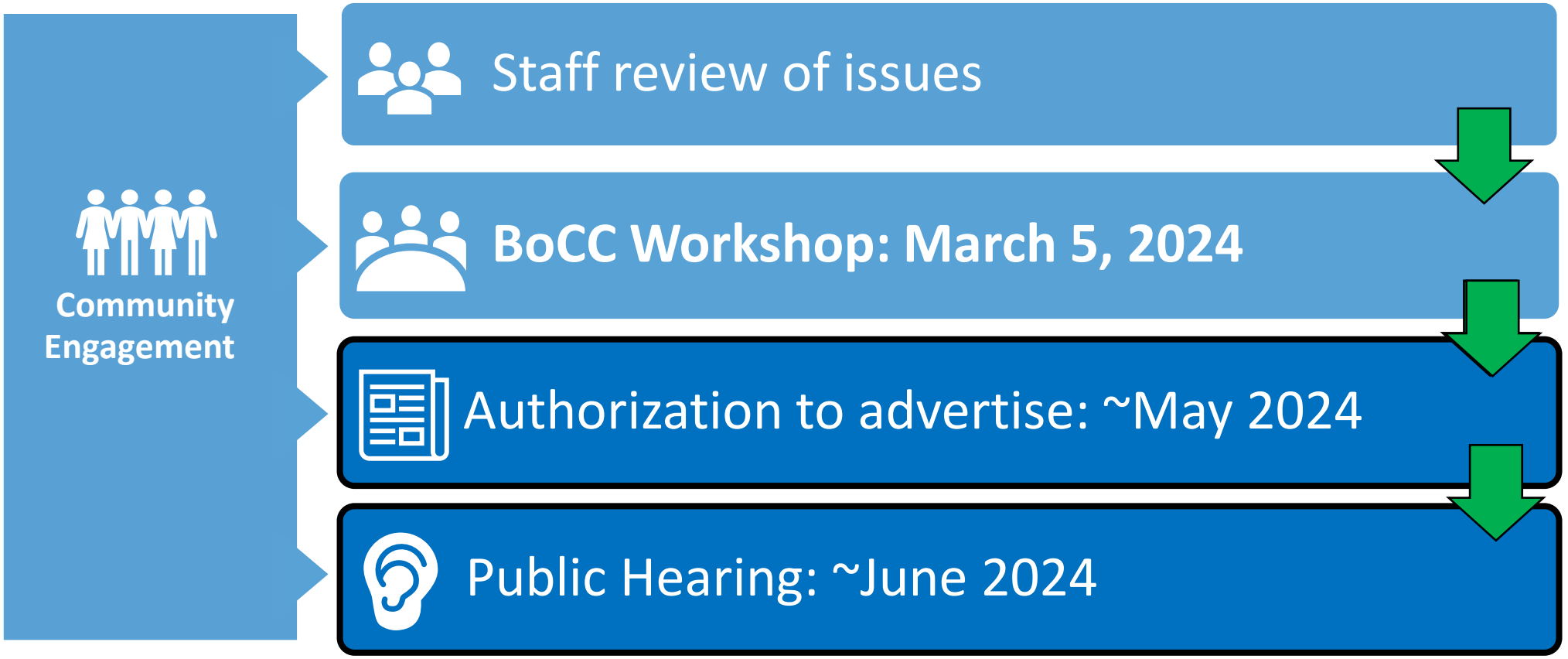
Recommendations:

- Encourage use of soil amendments (certified by US Composting Council) for new landscaping on residential lots, common areas, and commercial sites (excluding stormwater basin slopes and bottoms).
  - Incorporate into top 6 inches of soil at 4 cubic yards per 1,000 square feet
- Staff will recommend amending the Code to **require** soil amendments in early 2026 when it is anticipated there will be a local source(s).

Soil Amendments Rebates and Incentives

- Alachua County Stormwater Code amended areas:
  - Will not be counted as part of project area for determining LID storage requirements of 77.27 (d).
  - Will be considered a filter strip and included for meeting treatment requirements of 77.27 (a, b, or c).
- $250 rebate per amended lot within SJRWMD (likely March-September)
- 50% rebate per lot in SRWMD (working on price limit)

NEXT STEPS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