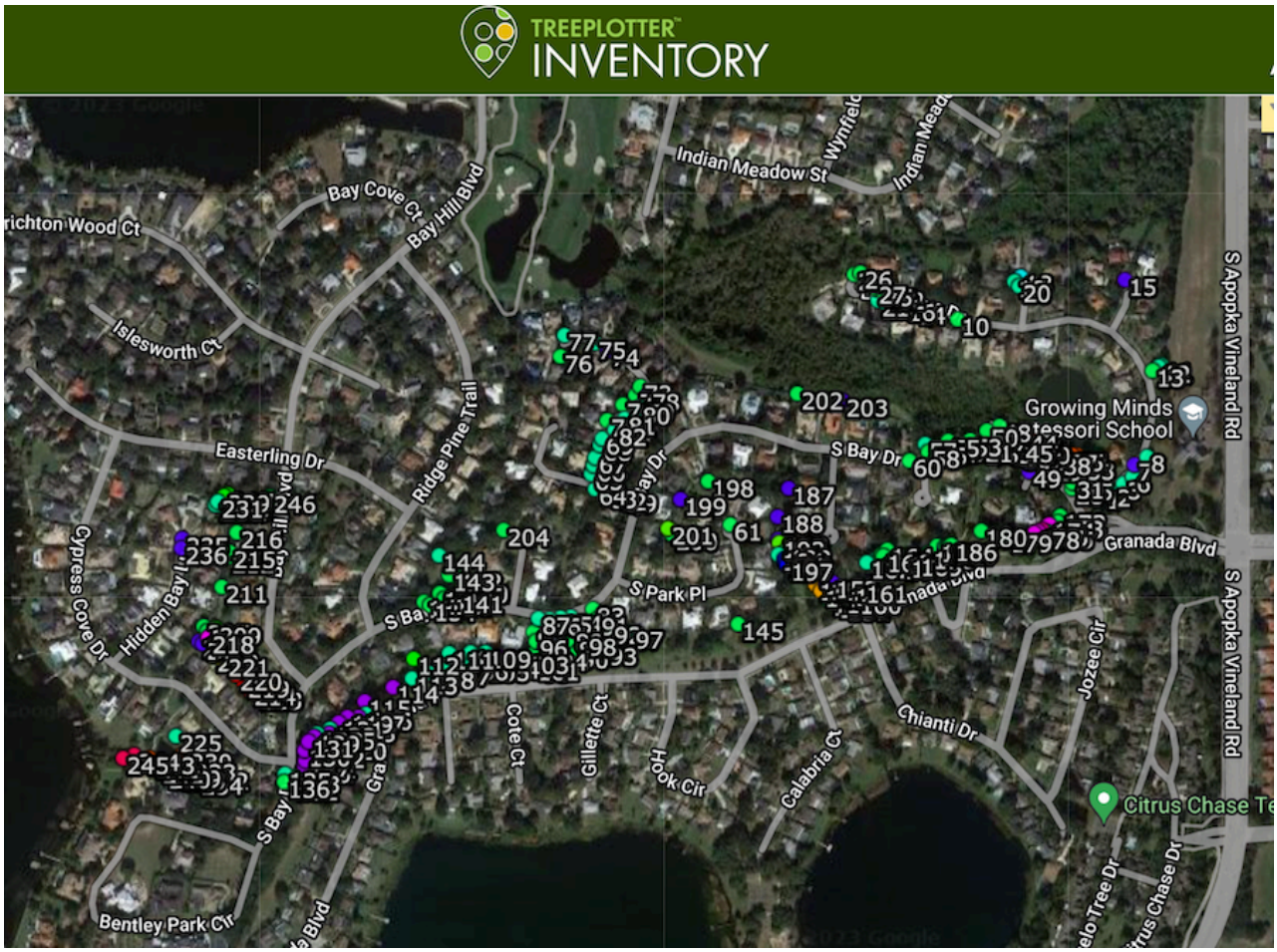
Advanced Tree Care, Inc.

South Bay Community Tree Risk Assessment - Phase 4

June/July 2023



This report describes the tree risk assessment we were asked to perform on the community trees within the South Bay neighborhood in Orlando Florida. The field assessment took place over five days during the months of June and July, 2023. The results of our report and assessment are as of that time. All tree assessments were performed by myself and my father and partner, Chuck Lippi. We are both ISA Board Certified Master Arborists. On each tree, we performed a Level 2 Basic Assessment, which is a detailed visual inspection of a tree and its surrounding site. The Level 2 Assessment includes a 360-degree visual inspection from ground level on the tree and a sounding test of the accessible portions of the trunk with a rubber mallet to listen for tonal variations that may indicate dead external tissue or internal hollows. The inspection was done in accordance with ANSI A300 Standards on Tree Risk Assessment and the current companion publication Best Management Practices, Tree Risk Assessment.[1,2]

For this follow-up phase of the community tree risk assessment we used TreePlotter tree inventory software. TreePlotter is a cloud-based data collection tree inventory platform that can be accessed from any device with internet capabilities. An account has been created for South Bay and a login and password have been provided separately for the Board of Directors in order to access all of the assessed community trees.

Descriptions and definitions pertaining to tree health, structure, and risk rating have not changed from the previous tree assessments and all continue to adhere to the current ANSI A300 Standards for tree risk assessment and the corresponding publication, Best Management Practices. Below we have presented a graphic summary of tree risk assessment.

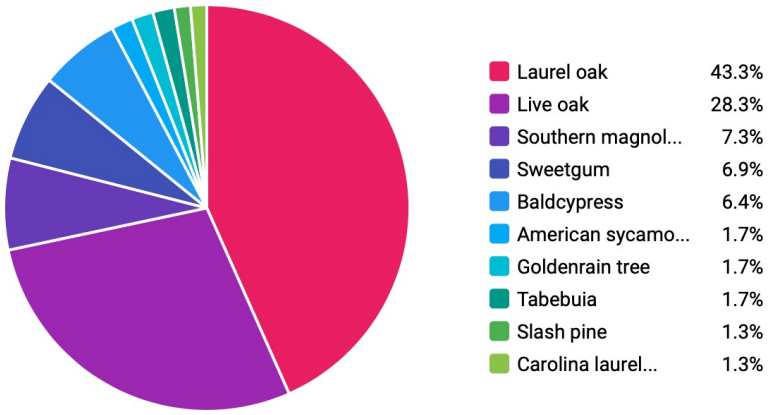


Image 1. Tree species breakdown - graph.

Tree Species

Of the 246 trees assessed, the majority continue to be laurel oaks (*Quercus laurifolia*). University of Florida Professor Emeritus of environmental horticulture, Ed Gilman describes the tree, “Laurel Oaks have a life span of 50 to 70 years. Tree trunks and large branches often hollow from decay and wood rot. The smallest trunk injury or improper pruning cut can result in columns of decay inside the trunk which are 10, 20 or more feet

long." Gilman goes on to say, "It (the laurel oak) grows well as a street tree and will serve the community well, but hollows with age as it approaches 50 years old."[3]

The outcomes of our continued tree risk assessments over the years in South Bay and other communities throughout Florida, continue to validate Dr. Gilman's description of laurel oaks as they age.

For this reason, it is important to continue to monitor the community trees for signs of reduced health and structure in order to identify problems before they manifest as tree failures.

Most Common Species - Top 10

COMMON NAME	COUNT	PERCENTAGE
Laurel oak	101	43.3%
Live oak	66	28.3%
Southern magnolia	17	7.3%
Sweetgum	16	6.9%
Baldcypress	15	6.4%
American sycamore	4	1.7%
Goldenrain tree	4	1.7%
Tabebuia	4	1.7%
Slash pine	3	1.3%
Carolina laurelcherry	3	1.3%

Image 2. Most common tree species.

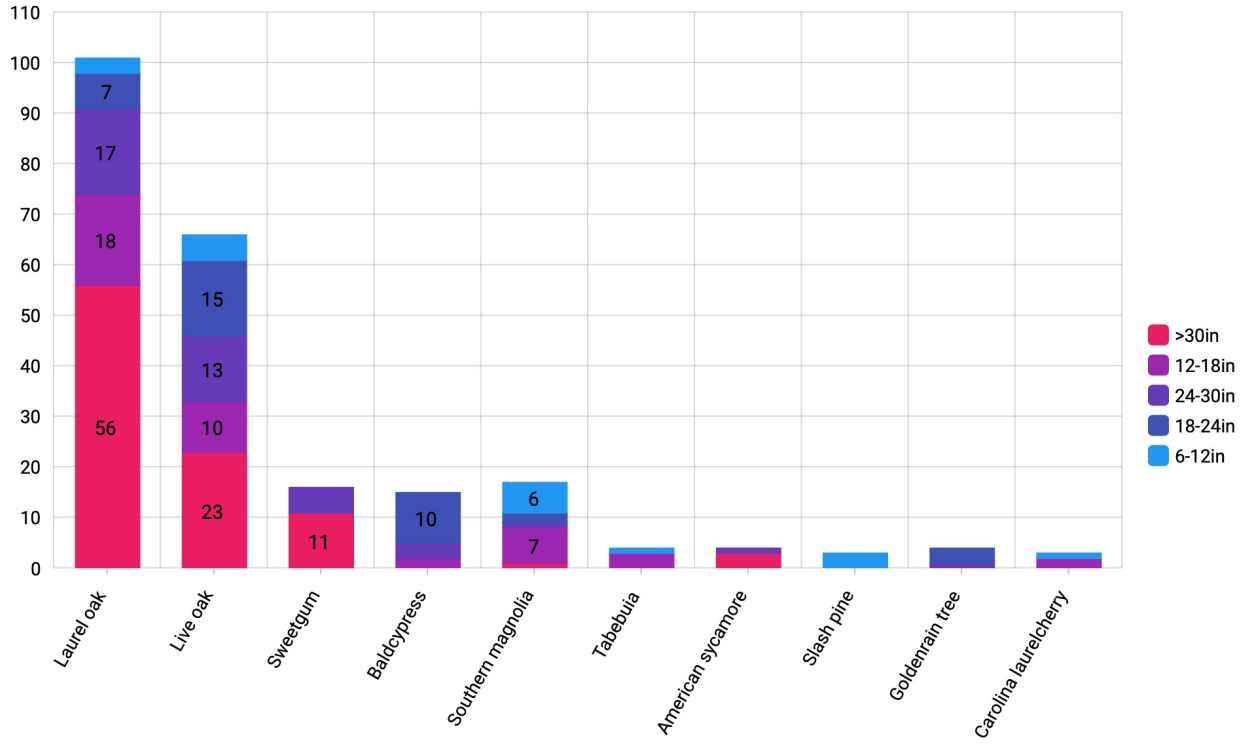


Image 3. Species represented by DBH (diameter at breast height).

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Risk Rating

Forty two percent of community trees had a risk rating of “low”. Of the 141 trees with a risk rating of “moderate, high, or extreme”, 83 trees were laurel oaks. Larger trees also tended to have higher risk ratings. This is normal because older trees have more weight, over-extended branches, and years of physical damage to deal with. Some of the damage is from storms, some is from humans such as improper pruning or installation into areas with too little soil volume that restricts root systems.

Risk Rating

RISK RATING	COUNT	PERCENTAGE
Low	105	42.7%
Moderate	93	37.8%
High	45	18.3%
Extreme	3	1.2%

Image 4. Risk rating.

Tree Work

Tree work such as removal of dead branches, end weight reduction, and tree removal are presented in the graph labeled *image 5*. Thirty three percent of all trees required no work at all. The most common tree work recommended was removal of dead branches, also known as “dead wooding.” Dead branches can form as a natural result of the growing process, or as a result of reduced health. Because the general health of your canopy trees is good, the dead branches are most commonly a result of natural tree growth.

As discussed with previous reports, “end weight reduction” is an advanced method of pruning that seeks to create a more compact and stable canopy that places less load on weakened areas within a tree. This is accomplished by shortening the limbs rather that “shaving” or “cleaning” the interior of a canopy. Shaving and cleaning are generally not recommended and have been shown to increase the likelihood branch failures during wind events.

Pruning Work

TREE WORK-PRUNING	COUNT	PERCENTAGE
None recommended	107	33.6%
Remove dead branches	60	18.9%
End weight reduction	41	12.9%
Priority 2 Prune	37	11.6%
Structural prune	22	6.9%
Clearance Prune	14	4.4%
Large tree routine prune	10	3.1%
Priority 2 Removal	8	2.5%
Remove hanger	4	1.3%
Manage epicormic sprouts	4	1.3%
Deadwood	3	0.9%
Priority 3 Removal	2	0.6%
Priority 1 Removal	2	0.6%
Priority 1 Prune	2	0.6%
Restoration prune	2	0.6%

Image 5. Tree work.

Health

Very few pests, diseases, or other metabolic stressors were identified during the tree assessment. Eighty seven percent of the community trees had “good” health. This indicates that overall, the growing conditions are good for the trees and there is no concern of disease, pest or environmental stressors within South Bay. Additionally, there is no need for community-wide insecticidal spraying, fertilization, trunk injections, removal of moss, or other treatments offered by landscapers or maintenance firms to maintain the health of the trees.

Anyone offering treatments should be able to describe in detail what the treatment is and why it is being recommended. General statements such as “diseased” or “sick” are vague and do not sufficiently describe specific pathogens, pests, or other stressors.

Trees by Condition Hide

HEALTH CONDITION	COUNT	PERCENTAGE
Good- tree vigor is normal for the species. There are no significant signs or symptoms due to pests or diseases, no more than minor discoloration, defoliation and twig or branch dieback.	216	87.8%
Fair- tree has reduced vigor and/or significant signs or symptoms from insects or diseases associated with foliar damage but are not likely to be fatal. Foliage discoloration can be significant.	21	8.5%
Excellent- tree has high vigor, nearly perfect health with little or no pest activity, defoliation, discoloration or twig/branch dieback.	5	2.0%
Poor- tree has poor vigor, low foliage density and poor foliage color. It could also have a fatal pest and significant twig and branch dieback.	3	1.2%
Dead	1	0.4%

Image 6. Tree health

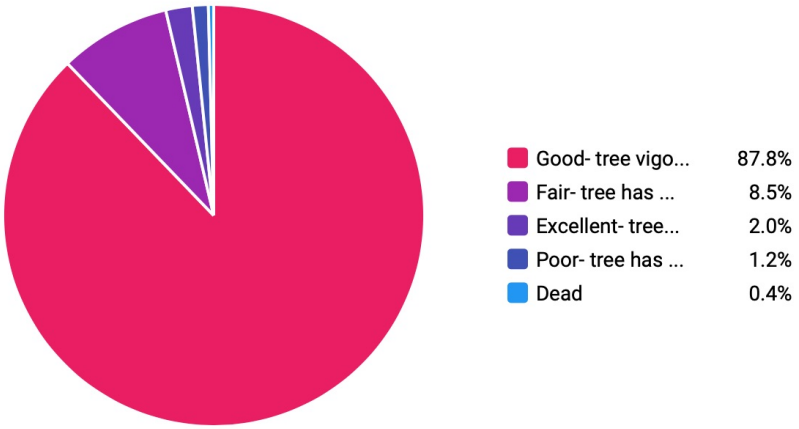

Image 7. Tree Health - graph.

Structure

Tree structure pertains to a tree's ability to remain in-tact without dropping branches or falling over. There are many reasons trees fail, mostly these are a result of loading during wind events, but with time, branches can become too long or over-extended and this places excessive leverage and load on a tree's architecture. Eventually all trees reach a point known as "retrenchment" whereby canopies are simply too large and over-extended and a trees will begin to break apart under its own weight in an effort to become smaller, more compact and stable. This places less leverage, weight, and load on weakened areas within a canopy. End weight reduction, the method of pruning described earlier in the report, is a way of controlling this retrenchment process and reducing the likelihood of these large unexpected branch and trunk failures.

Removing dead branches immediately reduces a tree's risk rating. Additionally, because many of the trees in the community are older laurel oaks, and the structurally expansive live oak (*Quercus virginiana*), in or near this state of retrenchment, it is important to continue to reduce canopies to keep the trees structurally sound.

All pruning must be performed by an ISA Certified Arborist familiar with ANSI A300 pruning standards and the corresponding Best Management Practices.

Structure — Hide

STRUCTURE	COUNT	PERCENTAGE
Good- tree has a well-developed structure and defects such as decay are minor and can be corrected with pruning or support.	140	56.9%
Fair- there is either a single significant defect or multiple moderate defects. Branch or trunk failure is possible to probable. Defects may or may not be practical to correct or would require multiple treatments over several years.	83	33.7%
Excellent- tree structure is nearly ideal and free of defects. Failure is improbable.	12	4.9%
Poor- a single serious defect or multiple significant defects. It could also indicate a recent change in trunk angle. Branch, root or trunk failure is probable. Defects may or may not be correctable.	11	4.5%

Image 8. Tree structure.

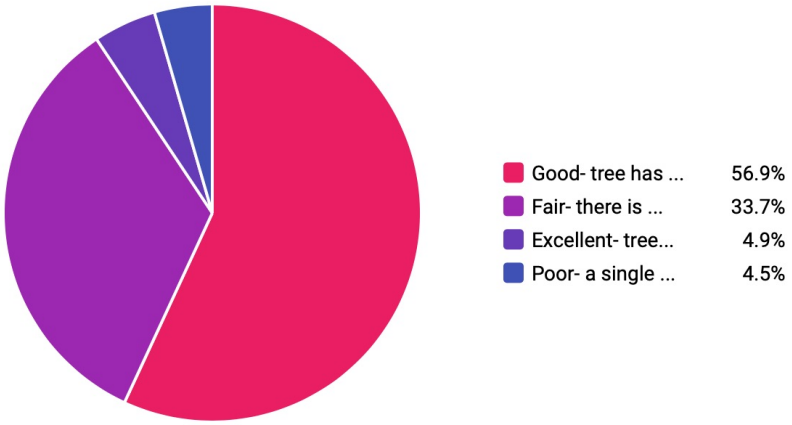

Image 9. Tree structure - graph.

If you have any questions about our observations or recommendations, please feel free to contact me.

Sincerely,

Danny Lippi

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And

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[1] American National Standards Institute (ANSI) A300 Risk Assessment Part 9 Tree, Shrub, and Other Woody Plant Management Standard Practices (***Tree Risk Assessment*** a. Tree Structure Assessment), 2011.

[2] Thomas Smiley, Nelda Matheny and Sharon Lilly, ***Best Management Practices Tree Risk Assessment***, International Society of Arboriculture, Champaign, Illinois, 2011.

[3] Dr. Ed Gilman, ***Trees for Urban and Suburban Landscape***, Delmar Publisher, New York, 1996, p. 483.

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