



CHARLESTON Tree Experts

Over 12 years managing Charleston's urban forest for greater growth

Premier Specialties
Arborist consulting, tree preservation,
hazardous tree removals and tree
pruning.

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Charleston Tree Experts Scope of Work

- Requested to provide an independent, objective opinion regarding:
 - the health and structural stability of the subject trees
 - impact of the proposed road construction
- Level 2: Basic Tree Risk Assessment (BTRA)
 - Used to identify, analyze and evaluate tree risk

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Summary of Findings


- Tree #s 1 & 2 will not sustain through construction
- Preservation attempts cause impact to more trees & properties

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Summary of Findings

- Misguided Focus
- Preserve Tree #3: Viable Grand Live Oak



TREE #3:
30" LIVE OAK,
QUERCUS VIRGINIANA

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Comparison of Impacts Alternative Submission A & Concept B

Submission A

- 2 Properties before Intersection: Lots 5 & 13
- 2 Trees Require Removal, 3 Other Trees Impacted
- 3 Trees Retained

Concept B

- 3 Properties before Intersection: Lots 5, 13 & 12
- 3 Trees Require Removal, 8 Other Trees Impacted
- 2 Trees Retained

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Round-A-Bout Alternative Submission A



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Round-A-Bout Alternative Concept B



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General Science of Trees

- Trees provide numerous benefits to the urban environment. However, as a tree becomes larger and more mature, it is likely to shed branches or develop decay or other conditions that can predispose it to failure.
- Various components of trees contribute to their ability to live and ability to stand.

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General Impact of Construction on Trees



- Construction generally has a stressful impact on trees.
- Trees suffer from root damage when the area is excavated.
- Root compaction and oxygen deprivation: materials/soil & heavy machinery.
- Other negative impacts: Likelihood of mechanical injury.

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TREE #1:
36" LIVE OAK,
QUERCUS VIRGINIANA



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Tree #1: Proximity to Construction

Within 3' of Existing Roadway



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Tree #1: Conditions

Damaged Root System



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Tree #1: Conditions

Root Collar Compromised



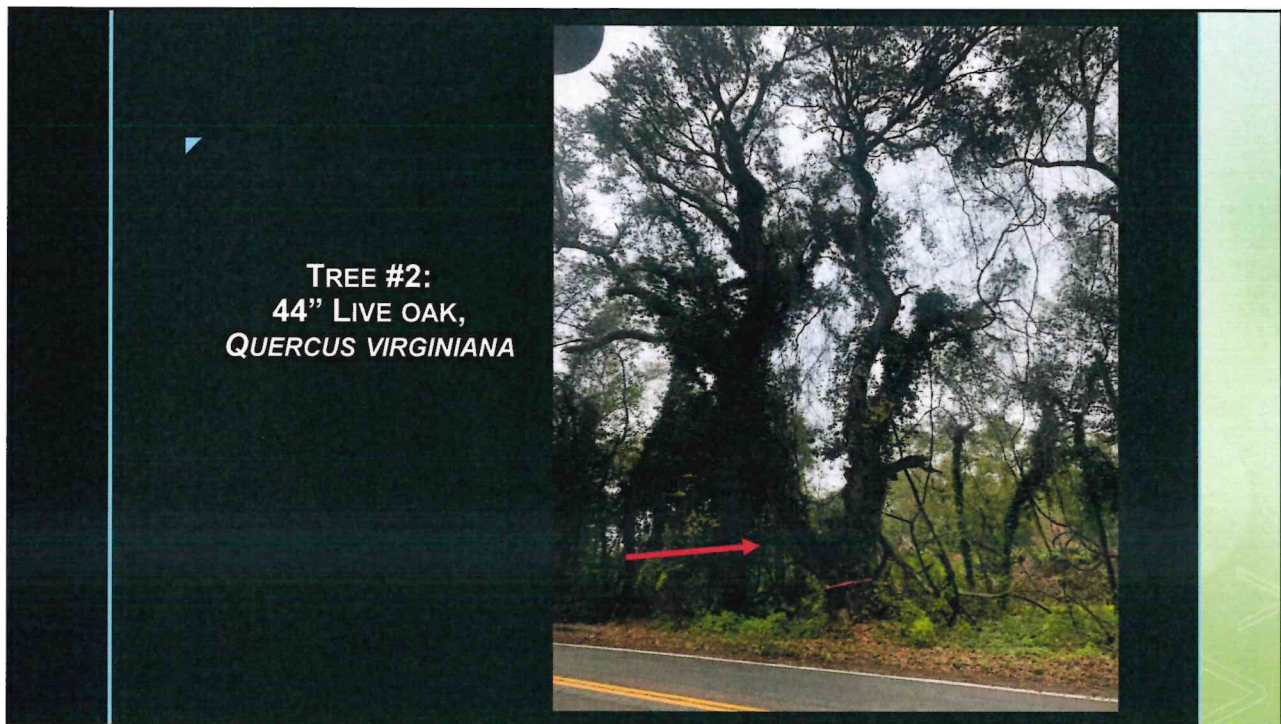
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Tree #1: Conditions

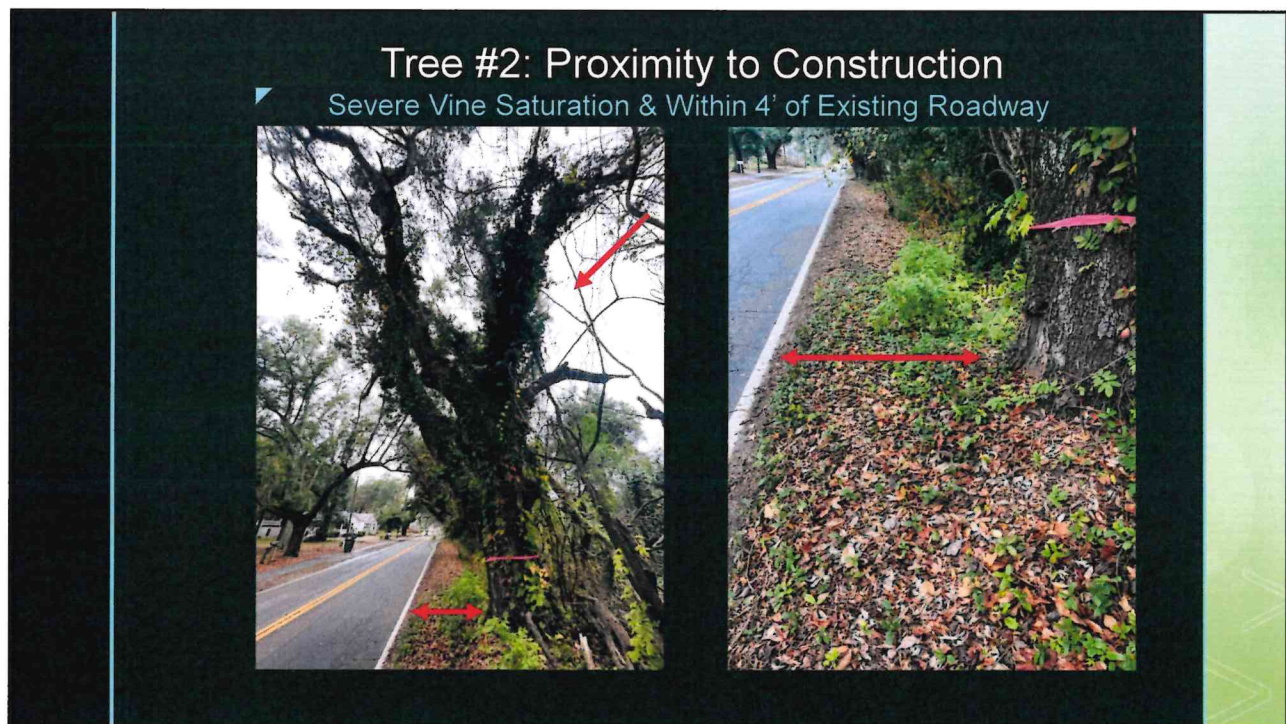
Cavities of Decay in Large Leaders



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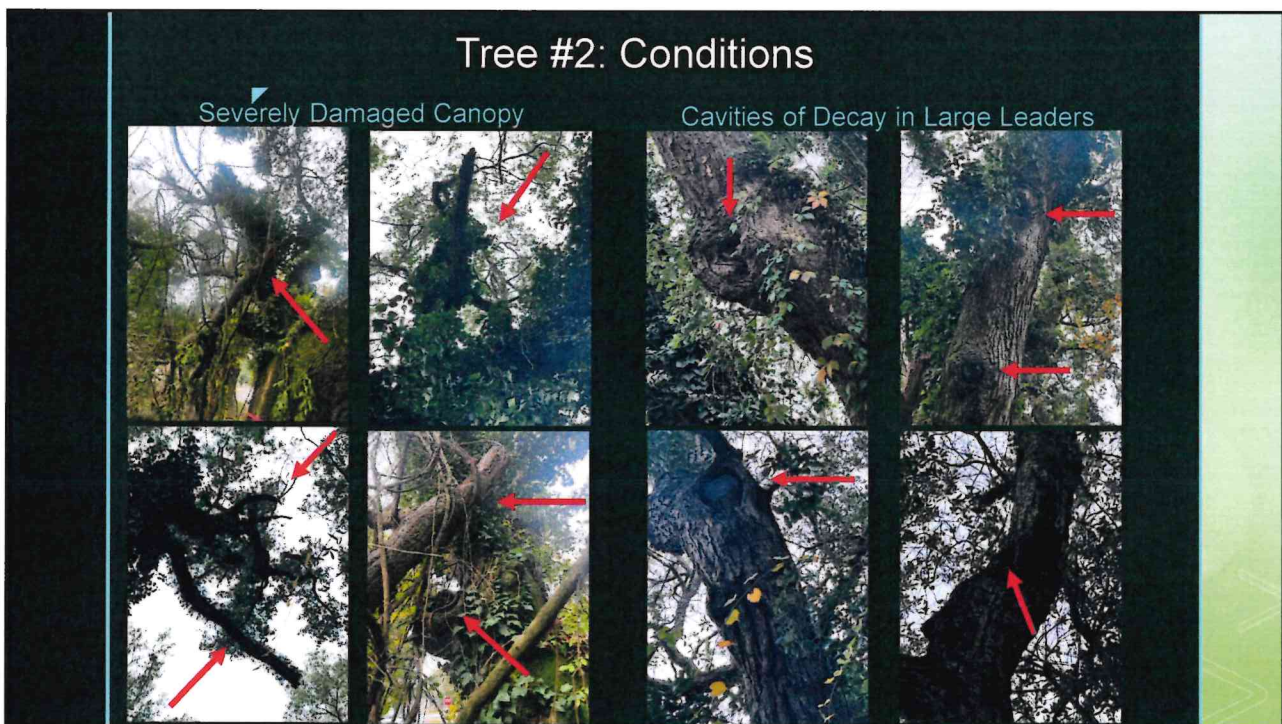
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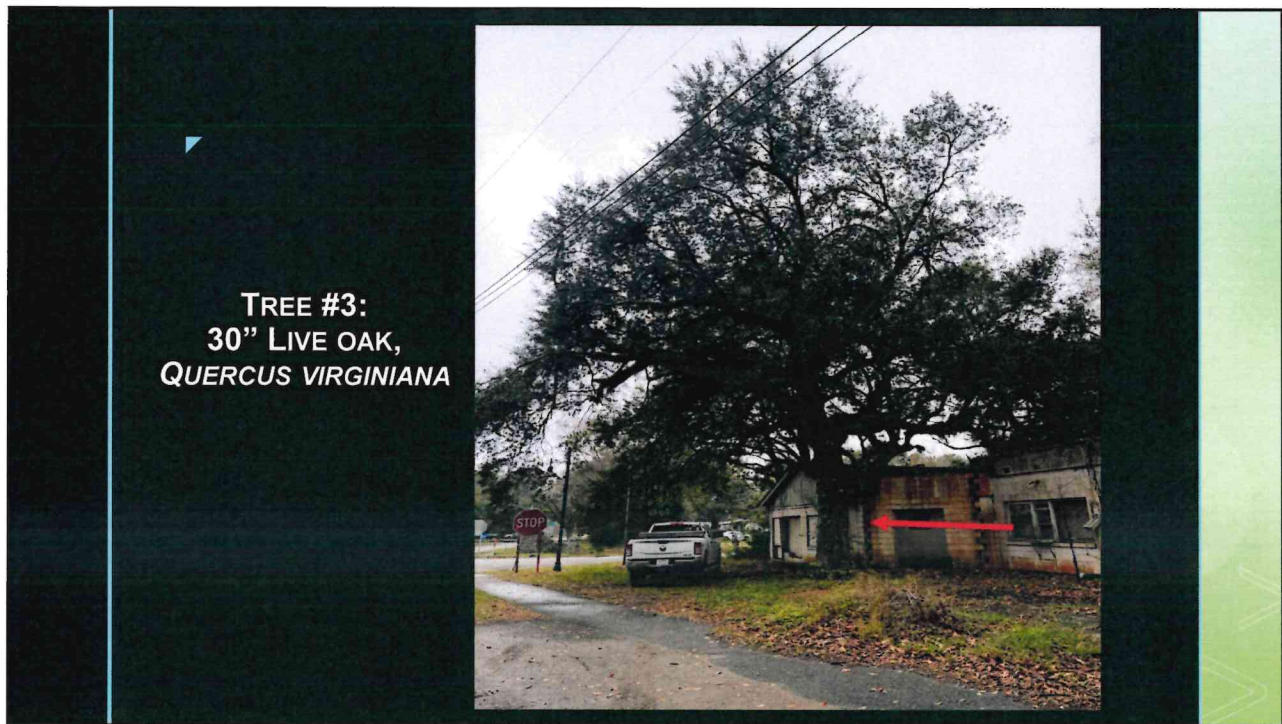
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Tree #3: Conditions

Limbs with Bark Canker -
do not overhang roadway



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Conclusion & Recommendations

Conclusion:

- **Trees #1 and #2** are hazardous and no longer viable specimens.
 - Round-A-Bout Concept B would significantly increase the risk of mechanical failure, increase the hazard each tree poses to life and property within 1x its height.
 - There is no way to mitigate risk and removal is the only option.
- **Tree #3** is a moderate risk and will sustain through construction under Round-A-Bout Concept A if an adequate Tree Preservation Plan is enacted.

Recommendations:

- **Trees #1 and #2:** Do not cater plans to retain these trees.
 - Complete removal utilizing ANSI A300 Standards for Tree Care Operations.
- **Tree #3:** Cater construction plans for the preservation and retainment of Tree #3. Enact an adequate Tree Preservation Plan, and prune to remove dead limbs 1" in diameter and greater to reduce risk.

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