LOCAL HISTORIC DISTRICT: Dilworth

PROPERTY ADDRESS: 804 East Kingston Avenue

SUMMARY OF REQUEST: Tree removal

APPLICANT/OWNER: Amit Aravapalli

Details of Proposed Request
Existing Conditions
The property is the site of a single family house with a large, mature tree in the right side yard and partially on the adjacent property. There is second large maturing tree located in the rear yard. A one car driveway apron is located on the right side to provide access to a detached garage that has been demolished. A new detached garage was constructed on the rear left side of the property.

Project
The project is the request to remove the large, mature tree in the side yard to provide clear access to the garage in the rear yard and the installation of a new driveway.


1. Retain existing trees that define the district’s character.
2. When tree removal is needed (due to disease or other reasons) or desired, a certified arborist must be consulted and the written recommendation must be provided to the HDC before removal is granted. This guideline includes trees in front, side and rear yards.
3. Trees less than six inches in diameter may be removed in front, side and rear yards with administrative approval.
4. Identify and take care to protect significant existing trees and other plantings when constructing new buildings, additions or site structures such as garages.
5. New construction that impacts healthy trees must be reviewed by the HDC. Unhealthy mature trees are reviewed by HDC staff. Replacement trees may be required.
6. The HDC may require the planting of additional trees to replace a mature canopy that is removed.

Staff Analysis
The Commission shall determine if the tree should be removed and new tree(s) planted, if possible.
Charlotte Historic District Commission Case 2017-429
HISTORIC DISTRICT: DILWORTH
TREE REMOVAL

804 E. Kingston Av
Dilworth
Historic District
Property Lines
Building Footprints

July 28, 2017
**Basic Tree Risk Assessment Form**

**Client:** Keith Wesolowski  
**Address/Tree location:** 804 E. Kingston Ave., Charlotte, N.C. 28203  
**Tree species:** Quercus phellos (Willow Oak)  
**Assessor(s):** Denny Deihau, Bryan Gray

### Tree Health and Species Profile

<table>
<thead>
<tr>
<th>Vigor</th>
<th>Normal</th>
<th>High</th>
<th>Foliage</th>
<th>None (seasonal)</th>
<th>None (dead)</th>
<th>Normal</th>
<th>Chlorotic</th>
<th>Necrotic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pests</td>
<td>Low</td>
<td>Normal</td>
<td>High</td>
<td>Fresh</td>
<td>None</td>
<td>Normal</td>
<td>40%</td>
<td>Chlorotic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Species failure profile</th>
<th>Branches</th>
<th>Trunk</th>
<th>Roots</th>
<th>Describe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Over extended scaffolds, co dominant with inclusion at 30'</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Site Factors

<table>
<thead>
<tr>
<th>Topography</th>
<th>Flat</th>
<th>Slope</th>
<th>%</th>
<th>Aspect</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site changes</strong></td>
<td>None</td>
<td>Grade change</td>
<td>Site clearing</td>
<td>Changed soil hydrology</td>
</tr>
<tr>
<td><strong>Soil conditions</strong></td>
<td>Limited volume</td>
<td>Saturated</td>
<td>Shallow</td>
<td>Compacted</td>
</tr>
<tr>
<td><strong>Prevailing wind direction</strong></td>
<td>East</td>
<td>Common weather</td>
<td>Strong winds</td>
<td>Ice</td>
</tr>
</tbody>
</table>

### Tree Defects and Conditions Affecting the Likelihood of Failure

#### Crown and Branches

- Unbalanced crown | LCR 80%  
- Dead twigs/branches | 5% overall | Max. dia. 3” |
- Broken/Hangers | Number 1 | Max. dia. 6” |
- Over-extended branches | |

<table>
<thead>
<tr>
<th>Pruning history</th>
<th>Crown cleaned</th>
<th>Thinned</th>
<th>Raised</th>
<th>Reduced</th>
<th>Topped</th>
<th>Lion-tailed</th>
<th>Flush cuts</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Load on defect</th>
<th>N/A</th>
<th>Minor</th>
<th>Moderate</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likelihood of failure</td>
<td>Improbable</td>
<td>Possible</td>
<td>Probable</td>
<td>Imminent</td>
</tr>
</tbody>
</table>

#### Trunk

- Dead/Missing bark | Abnormal bark texture/color |
- Codominant stems | Included bark | Cracks |
- Sapwood damage/decay | Cankers/Galls/Burls | Sap ooze |
- Lightning damage | Heartwood decay | Canks/Mushrooms |
- Cavity/Nest hole | % circ. | Depth | Poor taper |
| Lean | 4w | Corrected? |

<table>
<thead>
<tr>
<th>Response growth</th>
<th>Main concern(s)</th>
<th>New construction damage to lower trunk</th>
</tr>
</thead>
</table>

#### Roots and Root Collar

- Collar buried/Not visible | Depth | Stem girdling |
- Dead | Decay | Conks/Mushrooms |
- Ooze | Cavity | % circ. |
- Cracks | Cut/Damaged roots | Distance from trunk 6’ |
- Root plate lifting | Soil weakness |

<table>
<thead>
<tr>
<th>Response growth</th>
<th>Main concern(s)</th>
<th>Decay from new construction damage</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Load on defect</th>
<th>N/A</th>
<th>Minor</th>
<th>Moderate</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likelihood of failure</td>
<td>Improbable</td>
<td>Possible</td>
<td>Probable</td>
<td>Imminent</td>
</tr>
</tbody>
</table>

---

**Target Assessment**

<table>
<thead>
<tr>
<th>Target number</th>
<th>Target description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>House</td>
</tr>
<tr>
<td>2</td>
<td>Right Neighbors house</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Load on defect**  
**Likelihood of failure**

---

**Target zone**

<table>
<thead>
<tr>
<th>Target within drip line</th>
<th>Target within 1 x Ht.</th>
<th>Target within 1.5 x Ht.</th>
<th>Occupancy rate</th>
<th>Practical to move target?</th>
<th>Restriction practical?</th>
</tr>
</thead>
</table>

**History of failures**

- Heartwood decay
- Decay
- Conks/Mushrooms
- Sap ooze
- Cavity/Nest hole
- Conks/Mushrooms
- Sapwood damage/decay
- Cankers/Galls/Burls
- Cavity/Nest hole
- Abnormal bark texture/color
- Abnormal bark texture/color

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**Tree frame** Very soon  
**Tools used** Resistograph  
**Address/Tree location** Denny Deihau, Bryan Gray  
**Date** Sept. 9, 2016  
**Time** 11:30 am
### Matrix 1. Likelihood matrix.

<table>
<thead>
<tr>
<th>Condition number</th>
<th>Tree part</th>
<th>Conditions of concern</th>
<th>Part size</th>
<th>Fall distance</th>
<th>Target number</th>
<th>Target protection</th>
<th>Likelihood of Failure</th>
<th>Likelihood of Impacting Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scaffolds</td>
<td>Over extended</td>
<td>40'</td>
<td>80'</td>
<td>1/2</td>
<td>N.a.</td>
<td>Improbable</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Scaffolds</td>
<td>Decal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Probable</td>
<td>X</td>
</tr>
<tr>
<td>2</td>
<td>Root collar</td>
<td>Construction damage</td>
<td>100'</td>
<td>100</td>
<td>1/2</td>
<td>N.a.</td>
<td>Likely</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Root collar</td>
<td>Construction damage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very likely</td>
<td>X</td>
</tr>
</tbody>
</table>

### Matrix 2. Risk rating matrix.

<table>
<thead>
<tr>
<th>Likelihood of Failure</th>
<th>Likelihood of Impacting Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very low</td>
<td>Low</td>
</tr>
<tr>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>High</td>
<td>Unlikely</td>
</tr>
<tr>
<td>Imminent</td>
<td>Somewhat likely</td>
</tr>
<tr>
<td>Probable</td>
<td>Likely</td>
</tr>
<tr>
<td>Possible</td>
<td>Very likely</td>
</tr>
<tr>
<td>Improbable</td>
<td>Unlikely</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consequences of Failure</th>
<th>Negligible</th>
<th>Minor</th>
<th>Significant</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very likely</td>
<td>Low</td>
<td>Moderate</td>
<td>High</td>
<td>Extreme</td>
</tr>
<tr>
<td>Likely</td>
<td>Low</td>
<td>Moderate</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Somewhat likely</td>
<td>Low</td>
<td>Low</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Unlikely</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
</tbody>
</table>

**Notes, explanations, descriptions**

- 2 cavities at 30' in right lead
- Diam. 28", cavity total 16", Opening total 14"
- Total strength loss... 32% in right lead
- Drilling results... Less than 5% S.L. in lower trunk

**Mitigation options**

- Removal is recommended

**Residual risk**

- Overall tree risk rating
  - Low □ Moderate □ High ☑ Extreme □
  - Work priority 1 ☑ 2 □ 3 □ 4 □
- Overall residual risk
  - Low □ Moderate □ High ☑ Extreme □
- Recommended inspection interval

**Data**

- Final □ Preliminary
- Advanced assessment needed □ No ☑ Yes-Type/Reason: __________

**Inspection limitations**

- None □ Visibility □ Access □ Vines □ Root collar buried Describe __________

**Construction material at flares**

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This datasheet was produced by the International Society of Arboriculture (ISA) and is intended for use by Tree Risk Assessment Qualified (TRAQ) arborists – 2013
9/21/16

Keith Wesolowski
804 E. Kingston Avenue
Charlotte, NC 28203

RE: Risk Assessment of 42” Willow Oak (*Quercus phellos*)

Dear Mr. Wesolowski,

On 9/19/16 I inspected the 42” diameter Willow Oak located in the right side of your property. The purpose of the inspection was to gain a more informed understanding of the strength loss associated with visible structural defects, and to determine the level of risk associated with the tree’s present condition. My inspection consisted of two separate procedures, a drilling analysis and a visual inspection.

The drilling analysis of the main lower trunk was completed using a Resistograph. The Resistograph is a machine that measures and records wood density and integrity at the drilling points. The measurements of decayed wood and sound wood were used to calculate the approximate strength loss percentage for the tree. Generally, a tree is considered to represent an unreasonable risk of failure when strength loss exceeds 33%.

The visual inspection was performed for the purpose of detecting structural defects such as cracks, weak branch unions, stem or branch decay, cankers, dead branches, root problems, poor tree form, etc. Observations of tree defects and other characteristics plus site conditions and target use were recorded on a Tree Risk Assessment form. The form was developed according to specifications endorsed by the International Society of Arboriculture and taught in the Tree Risk Assessment Qualification Course. The drilling analysis and key visual findings are as follows:

**Inspection Results**

- The drilling analysis revealed a 32% approximate strength loss at 30’ in right lead
- The drilling analysis also revealed a less than 5% strength loss in lower trunk
- Co-dominant stems with included bark at 30’
- Soil compaction and approximate 80% pavement over critical root zone
- Construction damage to approximately 15% of cambium of lower trunk
Recommendations

- Based on the inspection results, your tree does present a high risk of failure at this time and should be removed.

Please call your arborist, Josh Milbourne, with any questions or concerns regarding these findings.

Sincerely,

Brian Gray
Consulting Arborist, TRAQ Qualified
ISA Certificate #SO-7417A
Dear Mr. Wesolowski;

On 9/19/2016, I inspected the 42” diameter Willow Oak, located in the right side of your property. The purpose of the inspection was to gain a more informed understanding of the strength loss associated with visible structural defects, and to determine the level of risk associated with the trees' present condition. My inspection consisted of two separate procedures, a drilling analysis and a visual inspection.

The drilling analysis of the decay areas and lower trunk was completed using a Resistograph®. The Resistograph® is a machine that measures and records wood density and integrity at the drilling points. The measurements of decayed wood and sound wood were used to calculate the approximate strength loss percentage. Generally, a tree is considered to represent an unreasonable risk of failure when strength loss exceeds 33%.

The visual inspection was performed for the purpose of detecting structural defects such as cracks, weak branch unions, stem or branch decay, cankers, dead branches, root problems, poor tree form, etc. Observations of tree defects and other characteristics plus site conditions and target use were recorded on the enclosed Tree Risk Assessment form. The form was developed according to specifications endorsed by the International Society of Arboriculture as outlined in the book A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas. The drilling analysis results and key visual findings are as follows:

**Inspection Results**

- The drilling analysis revealed a 32% approximate strength loss at 30 feet in right lead.
- Drilling analysis also revealed a less than 5% strength loss in lower trunk.
- Co-dominant stems with included bark at 30 ft.
- Soil compaction and approximate 80% pavement over critical root zone.
• Construction damage to approximately 15% of cambium of lower trunk.

Recommendations:

Your tree presents a high risk at this time and removal is recommended.

Please call your arborist, Josh Melbourne, with any questions or concerns regarding these findings.

Sincerely,

Denny Defibaugh
Technical Arborist
ISA Certificate # SO-5101A