

The Shade Tree Department LLC

July 15, 2015

Borough of Chatham
Att: Tony Torello, Deputy Director
Department of Public Works
54 Fairmount Avenue
Chatham, NJ 07928
Email: ETorello@chathamborough.org

RE: Evaluation of a 50.8" diameter Scarlet Oak at Lower Lum Field

Dear Mr. Torello,

On Friday, July 10, 2015, at your request, I examined a 50.8" diameter Scarlet Oak tree on the lawn north of Borough Hall.

Assignment

The purpose of this inspection was to assess the potential viability and risk factor of the tree in consideration of recent tree failures in neighboring communities.

Observations and Discussion

The tree itself is less than 100' in height. Visually the tree is symmetrical in appearance with no visible defects other than the presence of normal deadwood. Leaf color and density appeared to be normal. Upon closer observation, at least one of the major scaffold branches contained a pocket cavity and carpenter ant activity was present. When the trunk was sounded with a rubber mallet it was apparent that there was a hidden trunk cavity on the west side of the tree. Fungal fruiting bodies were found in two locations near exposed surface roots.

On Monday July 13, 2015 I returned to the site with a cordless drill and a 1/8" 10" long drill bit for the purpose of assessing the extent of the trunk decay on the west side of the tree.

- The west sample penetrated 7" before hitting decay
- The southwest sample penetrated 4.75"
- The south sample also penetrated 4.75"
- The southeast sample penetrated 10" before hitting decay
- All other samples appeared to be solid to the full extent of the bit

From this it was determined that the internal cavity was approximately 24" in diameter which converts to be approximately 452 square inches. The total cross section area of the tree is 2042 square inches. This represents approximately 22% of the cross section area as being decayed.

Worksheets

Attached is a Tree Hazard Evaluation Form worksheet. It is a 12 point rating scale with 3 being the lowest risk and 12 being the highest risk. Under adverse conditions, all trees pose some level of risk for tree failure.

There are two conditions that must be met in order for a tree to be deemed hazardous.

- The first condition is that there must be a **defect** such as trunk decay, co-dominant stem, root pruning or severance, etc.
- The second condition is that there must be a **target** such as a building, pedestrian or vehicular traffic, parked vehicles, etc.

The hazard rating for this tree is a 7.

Photographs

The photographs show the shape of the tree, its distance from potential targets, a pocket cavity in a scaffold branch and the presence of a fungal fruiting body on an exposed root.

Conclusion

The tree is in fairly good condition for a tree of this age (approximately 175 years old). It exhibits good crotching structure. The canopy is well distributed. It has very little residual storm damage.

Although the evidence of decay and carpenter ant activity is a concern, however, in my opinion, if these conditions are addressed and activity beneath the tree is restricted, the risk this tree poses can be maintained at an acceptable level for years to come.

Certification

I certify to the best of my knowledge and belief that the statements of fact contained in this report are true and correct, that opinions, evaluation and conclusions are limited only by the reported assumptions and limiting conditions, and that they are my personal, unbiased, professional analysis, opinions and conclusions. I have no personal or prospective interest in the subject of this report and I have no personal interest or bias with respect to the parties involved. My compensation is not contingent upon a predetermined direction or outcome which favors either party.

My analysis, opinions and conclusions were developed, and this report was prepared in conformity with "A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas" by Matheny and Clark published by the International Society of Arboriculture.

If you have any questions about this report, or if I can be of additional service, please do not hesitate to contact me.

Sincerely,

John D. Linson

John D. Linson

NJ Certified Tree Expert #198

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Att: Tree Hazard Evaluation Worksheet Form and (3) Photographs



A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas
TREE HAZARD EVALUATION FORM 2nd Edition

Site/Address: Bozrah Hall
 Map/Location: Lawyer's Field
 Owner: public private unknown other
 Date: 7/13/16 Inspector: John Larson
 Date of last inspection: initial

HAZARD RATING:			
<u>2</u>	<u>3</u>	<u>2</u>	<u>1</u>
Failure Potential	Size of part	Target Rating	Hazard Rating
<input checked="" type="checkbox"/> Immediate action needed <input type="checkbox"/> Needs further inspection <input type="checkbox"/> Dead tree			

TREE CHARACTERISTICS

Tree #: _____ Species: Scarlet Oak *consider evaluation for decay*
 DBH: 50-3 # of trunks: 1 Height: ±80' Spread: _____
 Form: generally symmetric minor asymmetry major asymmetry stump sprout stag-headed
 Crown class: dominant co-dominant intermediate suppressed
 Live crown ratio: 90 % Age class: young semi-mature mature over-mature/senescent
 Pruning history: crown cleaned excessively thinned topped crown raised pollarded crown reduced flush outs cabled/braced
 none multiple pruning events Approx. dates: nothing recent
 Special Value: specimen heritage/historic wildlife unusual street tree screen shade indigenous protected by gov. agency

TREE HEALTH

Foliage color: normal chlorotic necrotic Epileormies? Y N
 Foliage density: normal sparse Leaf size: normal small
 Annual shoot growth: excellent average poor Twig Dieback? Y (N)
 Woundwood development: excellent average poor none
 Vigor class: excellent average fair poor
 Major pests/diseases: concentric ants present

SITE CONDITIONS

Site Character: residence commercial industrial park open space natural woodland/forest
 Landscape type: parkway raised bed container mound lawn shrub border wind break
 Irrigation: none adequate inadequate excessive trunk wetted
 Recent site disturbance? Y (N) construction soil disturbance grade change line clearing site clearing
 % drip line paved: 0% 10-25% 25-50% 50-75% 75-100% Pavement filled? Y N
 % drip line w/ ill soil: 0% 10-25% 25-50% 50-75% 75-100%
 % drip line grade lowered: 0% 10-25% 25-50% 50-75% 75-100%
 Soil problems: drainage shallow compacted droughty saline alkaline acidic small volume disease center history of fall
 clay expansive slope _____ aspect _____
 Obstructions: lights signage line-of-sight view overhead lines underground utilities traffic adjacent veg.
 Exposure to wind: single tree below canopy above canopy recently exposed windward, canopy edge area prone to windthrow
 Prevailing wind direction: _____ Occurrence of snow/ice storms never seldom regularly

TARGET

Use Under Tree: building parking traffic pedestrian recreation landscape hardscape small features utility lines
 Can target be moved? Y (N) Can use be restricted? Y (N)
 Occupancy: occasional use intermittent use frequent use constant use

The International Society of Arboriculture assumes no responsibility for conclusions or recommendations derived from use of this form.

TREE DEFECTS

ROOT DEFECTS:

Suspect root rot: Y N Mushroom/conk/bracket present: Y N ID: _____
 Exposed roots: severe moderate low Undermined: severe moderate low
 Root pruned: _____ distance from trunk Root area affected: _____ % Buttress wounded: Y N When: _____
 Restricted root area: severe moderate low Potential for root failure: severe moderate low
 LEAN: _____ deg. from vertical natural unnatural self-corrected Soil heaving: Y N
 Decay in plane of lean: Y N Roots broken: Y N Soil cracking: Y N
 Compounding factors: _____ Lean severity: severe moderate low

CROWN DEFECTS: Indicate presence of individual defects and rate their severity (s = severe, m = moderate, l = low)

DEFECT	ROOT CROWN	TRUNK	SCAFFOLDS	BRANCHES
Poor taper				
Bow, sweep				
Codominants/forks				
Multiple attachments				
Included bark				
Excessive end weight				✓
Cracks/splits				
Hangers				
Girdling				
Wounds/scar		✓		
Decay		✓		
Cavity				
Conks/mushrooms/bracket	✓			
Bleeding/sap flow				
Loose/cracked bark				
Nesting hole/bee hive				
Deadwood/stubs				
Borers/termites/ants		✓	✓	✓
Cankers/galls/burls				
Previous failure				

HAZARD RATING

Tree part most likely to fail: branches Failure potential: 1 - low; 2 - medium; 3 - high; 4 - severe
 Inspection period: _____ annual _____ biannual _____ other initial Size of part: 1 - <6" (15 cm); 2 - 6-18" (15-45 cm);
 3 - 18-30" (45-75 cm); 4 - >30" (75 cm)
 Failure Potential + Size of Part + Target Rating = Hazard Rating Target rating: 1 - occasional use; 2 - intermittent use;
2 + 3 + 2 = 7 3 - frequent use; 4 - constant use

HAZARD ABATEMENT

Prune: remove defective part reduce end weight crown clean thin raise canopy crown reduce restructure shape
 Cable/Brace: _____ Inspect further: root crown decay aerial monitor
 Remove tree: Y N Replace? Y N Move target: Y N Other: excluding any fencing
 Effect on adjacent trees: none evaluate
 Notification: owner manager governing agency Date: 7/13/15

COMMENTS

Decay does not appear to exceed 1/3 of the cross section canopy.



