ROCKWELL ASSOCIATES

URBAN FORESTRY, NATURAL RESOURCE & LANDSCAPE CONSULTANTS

Radnor Parks

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Via email to: rfoster@radnor.org **&** slegerton@radnor.org

Date: February 13th, 2024

To: Mr. Rick Foster & Mr. Steve Legerton - Radnor Public Works
From: John Hosbach, Jr., RCA
Re: Level One Park Review
File#: 8373RP

Dear Mr. Foster and Mr. Legerton,

I hope this memo finds you well. Pursuant to the direction to review the parks for immediate risk, the following memo and matrix denotes the required scope of work.

Assignment

Our objective was to review imminent risk and therefore these trees should be managed within 6 months to one year, depending on your allocated budget. Our objective was to perform a level 1 tree inspection within the existing park canopy to capture data as it pertains to the subject trees requiring mitigation. After concluding our field study, this report represents our findings.

Parks Reviewed

Odorisio
Bo Conner
The Willows
Cowan
Fenimore
Emlen Tunnell Park
Ithan Valley Park
Dittmar Park
Radnor Memorial Field
The Nature Park
Petrie Avenue Park
Huggler Park
Unkefer Park
Brook Street Park

Methods

We completed an inspection and evaluation for trees greater than two and one-half inches in January of 2023.

The evaluation consists of three parts:

1) All trees that were visibly showing signs of risk from only a optical perspective. The inspection was based on a level 1 assessment. The assessment is a visual assessment only. The assessment is limited to what can be visually observed from the ground. The assessment consists of 360-degree inspection at above ground conditions for each tree within the parks.

Tools and equipment utilized in the inspection: tree flagging, diameter tape, digital camera, probe, tree flagging, hand snips. Priorities were established for this survey, as follows:

1) Tag Number.
2) Tree Species.
3) Tree Diameter.
4) Defect description.
5) Mitigation – prune/remove.

Defects Observed

During our review we observed various defects as follows.

I. Dead branching structure
II. Dead, Emerald Ash Borer
III. Decline
IV. Decay
V. Dead
VI. Basal/Cavity decay
VII. Multiple defects in one tree
VIII. Excessive lean
IX. Structure
X. Storm damage
XI. Bifurcated / structural issues
XII. Snag

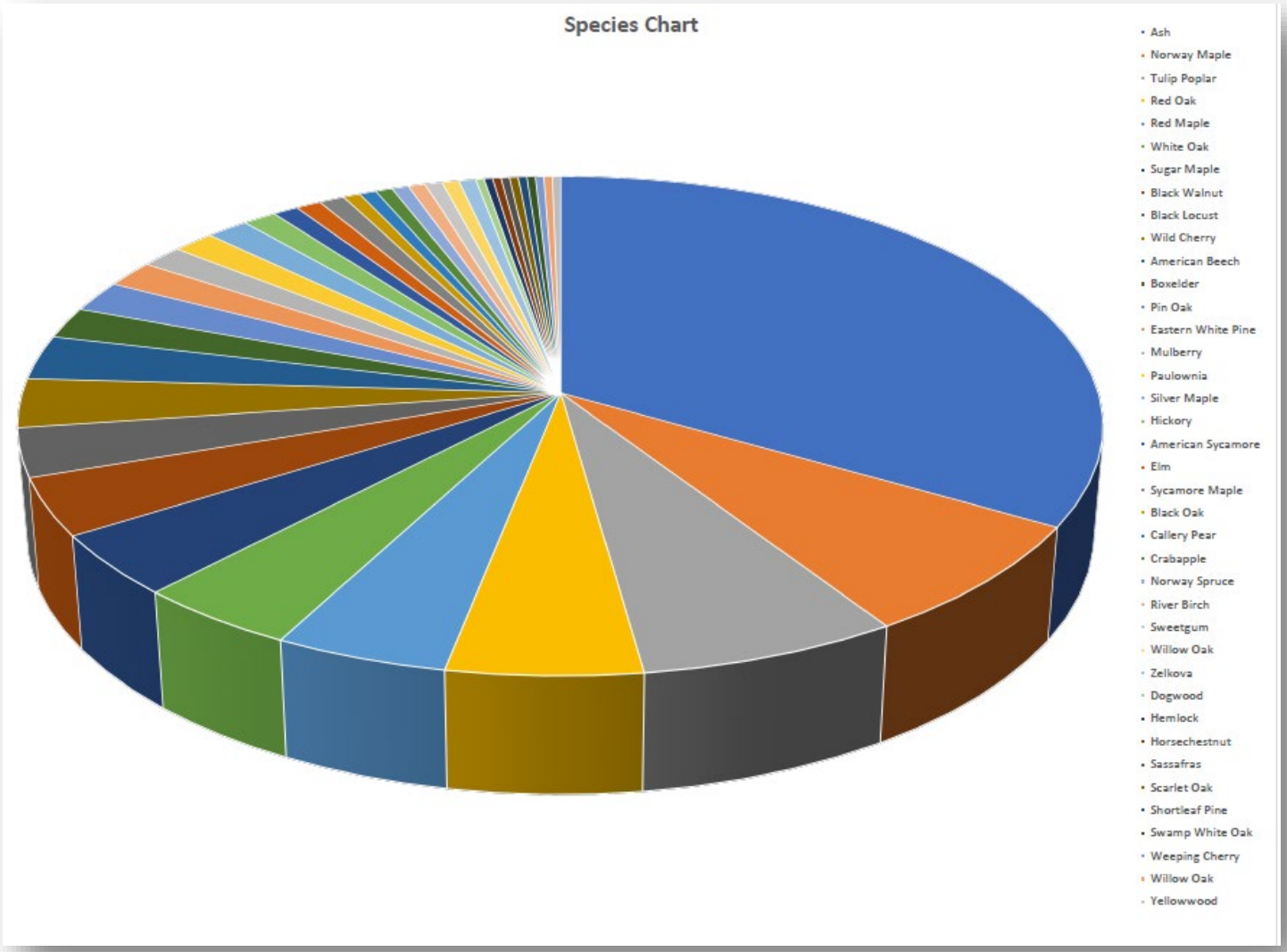
Summary

SUMMARY (page 1)					
Species Detail:			**Total Trees:**		
Ash	117	33.5%	All Species	349	
Norway Maple	26	7.4%			
Tulip Poplar	24	6.9%			
Red Oak	18	5.2%	**Species Detail (cont):**		
Red Maple	16	4.6%	Norway Spruce	2	0.6%
White Oak	15	4.3%	River Birch	2	0.6%
Sugar Maple	14	4.0%	Sweetgum	2	0.6%
Black Walnut	13	3.7%	Willow Oak	2	0.6%
Black Locust	11	3.2%	Zelkova	2	0.6%
Wild Cherry	11	3.2%	Dogwood	1	0.3%
American Beech	10	2.9%	Hemlock	1	0.3%
Boxelder	7	2.0%	Horsechestnut	1	0.3%
Pin Oak	7	2.0%	Sassafras	1	0.3%
Eastern White Pine	6	1.7%	Scarlet Oak	1	0.3%
Mulberry	5	1.4%	Shortleaf Pine	1	0.3%
Paulownia	5	1.4%	Swamp White Oak	1	0.3%
Silver Maple	5	1.4%	Weeping Cherry	1	0.3%
Hickory	4	1.1%	Willow Oak	1	0.3%
American Sycamore	3	0.9%	Yellowwood	1	0.3%
Elm	3	0.9%			
Sycamore Maple	3	0.9%			
Black Oak	2	0.6%	**Recommendations:**		
Callery Pear	2	0.6%	Removals	255	73.1%
Crabapple	2	0.6%	Pruning	93	26.6%
			Inspection	1	0.3%

SUMMARY (page 2)

Defects Observed:		Recommendations by Location:	Pruning	Removal
Dead branches	92	Bo Conner	1	16
Dead, Emerald Ash Borer	84	Brook	0	1
Decline	63	Cowan	5	1
Decay	33	Dittmar	8	9
Dead	32	Fenimore	22	32
Basal/Cavity decay	26	Huggler + *1 inspection*	3	2
Multiple	9	Ithan	9	82
Excessive lean	3	Memorial Field	1	22
Structure	3	Nature Park	9	11
Storm damage	2	Odorisio	2	29
Bifurcated	1	Petrie	2	0
Snag	1	Tunnell	5	12
		Unkefer	4	2
		Willows	22	36

Diameter Inches:	
Removals	5,145
Pruning	2,969
Inspection	60
Total	8,174



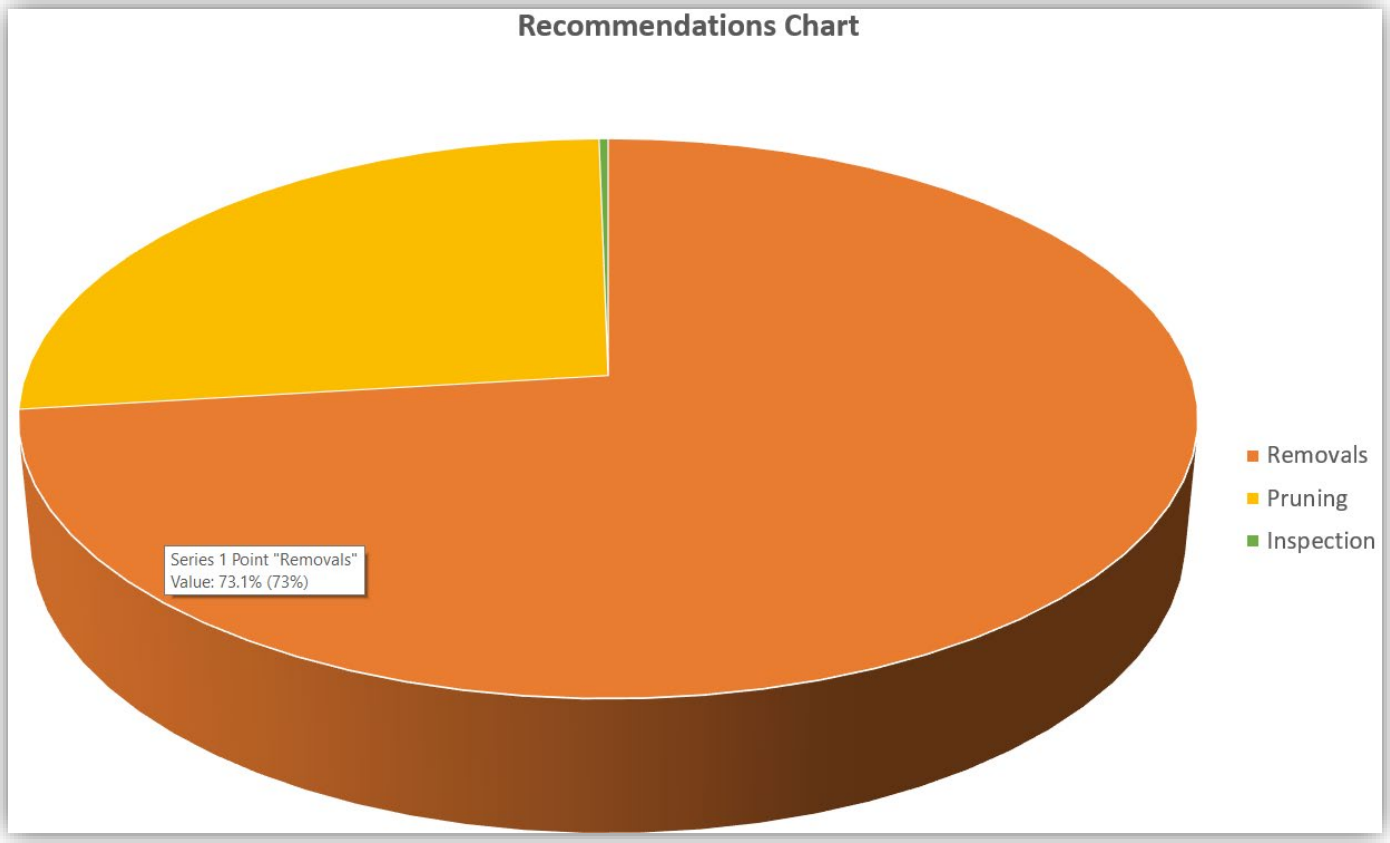


Photo 1, Black Locust showing multiple defects and decay at root flare. Removal recommended.

Photo 2, Red Maple showing large broken branches. Pruning recommended.

Photo 3, Norway Maple with basal decay. Removal recommended.

Photo 4, Norway maple with large squirrel hole, hidden decay. Removal recommended.

Photo 5, Norway Maple with split/ seam. Removal recommended.

Photo 6, Black Locust with stem decay. Removal recommended.

Photo 7, Mature Oak with massive dead branches. Pruning recommended.

Photo 8, Top of dead Ash, Killed by Emerald Ash Borers. Removal recommended.

Photo 9, Dead Ash with stem deterioration. Removal recommended.

Photo 10, Ash and Walnut fused at stems with hidden decay in both trees. Both trees are recommended for removal.

Photo 11, Crown of declining Ash infested with Emerald Ash Borers. Removal recommended.

Photo 12, upper stem of Black Locust showing stem decay. Removal recommended.

Photo 13, Upper-stem of Black Locust showing crook with bracket fungi. Removal recommended.

Photo 14, Red Maple with lower stem decay. Removal recommended.

Photo 15, Red Maple with basal decay and buttress damage.

Photo 16, Red Maple with basal and buttress root decay. Removal recommended.

Photo 17, Sycamore Maple with stem decay. Removal recommended.

Photo 18, Leaning, uprooted Ash enveloped in ivy. Removal recommended.

Photo 19, Ash trees killed by Emerald Ash Borer infestation. Removal recommended.

Photo 20, Deteriorated Ash. Removal recommended.

Photo 21, Black Walnut (43 in DBH) and White Ash (35 in DBH) growing together, both trees have stem decay, Ash also has severe decline. Removal is recommended for both trees. These trees are located at the side entrance drive at Odorisio Park.

Photo 22, Ash in severe decline due to Emerald Ash Borers. Removal recommended.

Photo 23, Bifurcated Black Locust with stem decay. Removal recommended.

Photo 24, Red Maple with lower stem decay. Removal recommended.

Photo 25, Wild Cherry wit buttress root decay. Removal recommended.

Photo 25, Large Wild Cherry with excessive lean. Removal recommended.

Photo 26, Mature Tulip Poplar with lower stem decay. Removal recommended.

Photo 27, Deteriorated, dead tree adjacent trail in Ithan Valley Park. Removal recommended.

Photo 28, Mature American Beech with upper-stem decay. Removal recommended.

Photo 29, Red Maple with lower stem decay. Removal recommended.

Photo 30, Mature Red Maple with lower stem decay adjacent stream, fishing spot. Removal recommended.

Tree designated for removal were marked with two purple slashes. Trees requiring pruning were marked with one slash.

Please find the attached matrix for individualized park by park inventory. Only trees in turf areas shall be stump ground.

Please note – this was a visual inspection, and we cannot predict snow and ice load, winds exceeding 15MPH, floods, soil saturation, unforeseen defects, lightning and any other inward/below ground defect as it pertains to tree failure.

Please call me with any questions,

John Rockwell Hosbach Jr., RCA, Urban Forester| Principal