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MALVERN BOROUGH

Delivery – Via Email Only

Date: January 30, 2023

To: MS. TIFFANY M. LOOMIS

MALVERN BOROUGH MANAGER & ZONING OFFICER

From: JOHN HOSBACH

Reference: PROPOSED BIKE TRACK

File: 74721

Dear Ms. Loomis,

As requested, we were commissioned to review the subject parcel that is being proposed for a suitable and safe area for families to utilize as a bike track. For many years, the residents of the Malvern Borough have requested a safe and usable area for kids to ride bikes. As with any community, recreation and outside activities are imperative to the well-being of the residents.

Summary

The proposed improvements and track are located on a degraded 1-acre +/- parcel of land that borders a restricted road (Fire company access road). The emergency access road joins East King Road and Ruthland Avenue. The road is the main pathway for Malvern Fire Company to reach the borough while answering emergency calls and assistance. The proposed improvements abuts the Randolph Woods Nature Preserve which includes 38.2 acres of woodlands, trail, wildlife habitat and numerous types of forest types.



The proposed area adjoins numerous dwellings. The intent of the designers is to increase the buffers that will aid in screening, noise abatement and provide a solid delineation of the properties.

In reviewing the proposed area, we have observed the following issues with the existing vegetation.

- I. The subject trees are in decline and are degraded.
- II. No rare or endangered plants were found.
- III. The area provides no food, very limited cover and no structure for wildlife benefit.
- IV. The understory is a highly prolific stand of invasive plants.
- V. There are numerous defects that now pose a risk to anyone traveling the fire lane, the adjacent properties or anyone within the vicinity of this parcel.

Inventory

We conducted an on-site inspection and evaluation for trees greater than two-inches in diameter within the one-acre parcel on January 18th, 2023. The evaluation is a level 2, basic risk assessment. The assessment is limited to what can be observed from the ground. The assessment consists of 360-degree inspection at above ground conditions for each tree of specified size, within the one-acre area.

Observations

Tools and equipment used in the inspection: diameter tape, digital camera, I-pad with GPS mapping capability.

Priorities were established for this survey, as follows: [See attached Spreadsheet Matrix for results.](#)

- 1) Tree Species.
- 2) Size (> two inches).
- 3) Condition (good, fair, poor).
- 4) Defect description.
- 5) Longevity.
- 6) Failure potential.
- 7) Site condition.

Trees rated as fair condition have minimal visible defects. These trees did possess the following:

- 1) Smaller dead branches < two-inch diameter.
- 2) Excess fill soil against the lower stem.

Most trees rated as poor condition have critical defects, such as;

- A) Dead trees.
- B) Declining trees.
- C) Trees with missing top sections (due to breakage).
- D) Trees that possess bifurcated main stems.
- E) Trees with severe lean.
- F) Trees with structural issues.

We surveyed 131 trees. Many of the mature trees are defective and in poor condition. Most are overgrown with invasive, competing vines, particularly Bittersweet and Fox Grape.

- 14% of trees are rated as fair.
- 86% are rated as poor.
- No trees were rated as good condition.

Norway Maple '*Acer platanoides*' is considered an invasive plant by the Department of Environmental protection.

Risk levels associated with various tree conditions are as follows: low, moderate, and high.

Soil condition within the plot is a mix of parent soil, existing fill and aggregate.

An understory of invasive shrubs, such as Yew, Bittersweet, Amur Honeysuckle and Wineberry appear to be shading out more favorable regeneration. There is very little regeneration other than invasive vegetation. This is evidenced by a lack of young, beneficial forest species growing at ground level.

Four predominant species constitute 61% of trees growing on the site:

- 1) Boxelder '*Acer negundo*'
- 2) Blue Spruce '*Picea pungens*'
- 3) Norway Maple '*Acer platanoides*'
- 4) Black Walnut '*Juglans nigra*'

Trees are rated for their failure potential:

- 17% - low failure potential.
- 22% - moderate failure potential.
- 61% - high failure potential

Here is a breakdown of longevity for the site:

- 19% are greater than 20 years.
- 11% are less than 20 years.
- 15% are greater than 5 years.
- 51% are less than 5 years.
- 16% are dead trees with no prospect for survival.

Supporting photos showing examples of various tree conditions are as follows:



Photo 1, Mature Tulip Poplar rated in fair condition.



Photo 2, Young Eastern Redbud rated in fair condition.



Photo 3, Boxelder with top missing, rated high risk.



Photo 4, Dead, declining and decayed Blue Spruce, rated high risk.



Photo 5, Declining Eastern White Pine.



Photo 6, Wild Cherry uprooted and re-rooted.



Photo 7, Declining Eastern White Pine.



Photo 8, Mature Ash infested with Emerald Ash Borers, rated high risk.



Photo 9, Large, declining Boxelder, rated high risk.



Photo 10, Wild Cherry split and close to ground.



Photo 11, Leaning Wild Cherry over-hanging street.



Photo 12, deformed Wild Cherry with sweep caused by invasive vines.



Photo 13, Base of mature Elm, Tree was rated fair with low risk.



Photo 14, Decayed base of severely declining 32-inch diameter Paulownia.



Photo 15, Very large cavity in main stem of mature Tulip Poplar, rated as high risk.



Photo 16, Mature Tulip Poplar with cavity, also showing severe lean.



Photo 17, Mature Tulip poplar with large cavity located in upper stem, rated high risk.



Photo 18, Mature Black Locust with bifurcated stem arrangement, rated high risk.



Photo 19, Mulberry with bifurcated stem, rated high risk.

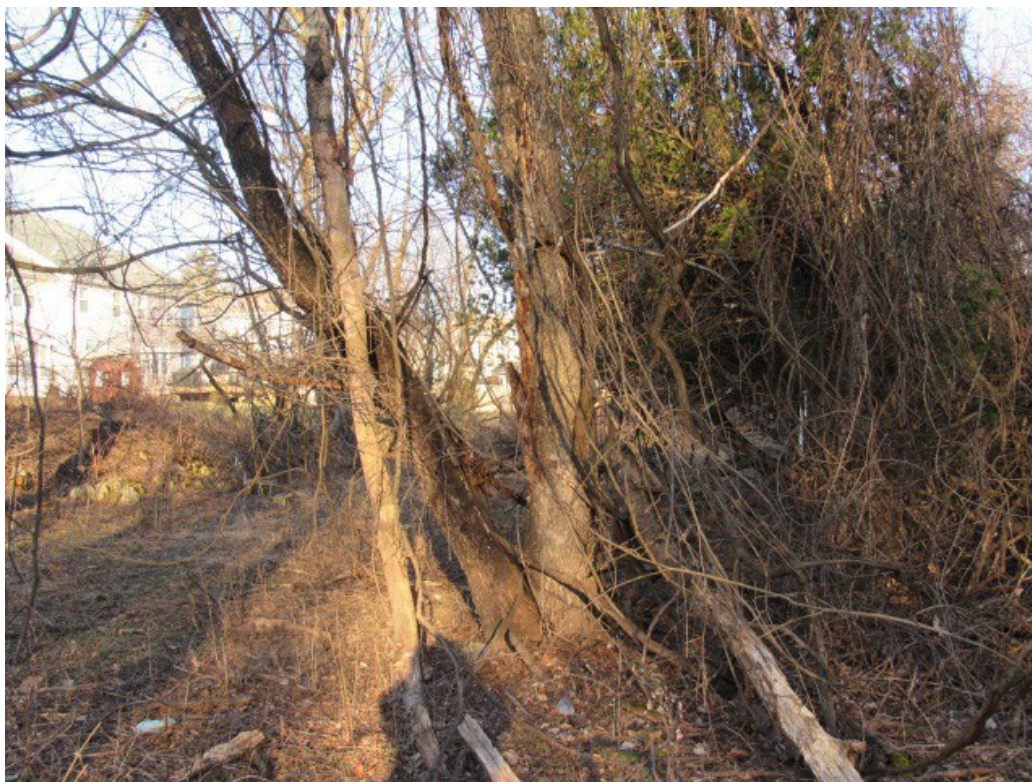


Photo 20, Wild Cherry with bifurcated stem, rated high risk.

**Inventory
Summary**

Species Detail:		Species %:	Total Trees:			
Boxelder	22	17%	All Species		131	
Blue Spruce	20	15%				
Norway Maple	20	15%	Condition of Trees:			
Black Walnut	18	14%	Fair	18	14%	
Wild Cherry	11	8%	Poor	113	86%	
Mulberry	10	8%				
Paulownia	7	5%	Failure Potential:			
Tulip Poplar	6	5%	Low	22	17%	
Black Locust	4	3%	Moderate	29	22%	
White Pine	4	3%	High	80	61%	
Ash	2	2%				
Crabapple	2	2%	Longevity:			
Eastern Redbud	2	2%	0	21	16%	
Sycamore	2	2%	< 5 years	51	39%	
Elm	1	1%	> 5 years	20	15%	
			< 20 years	14	11%	
			> 20 years	25	19%	

Memo drafted by Mr. Alex Roberts - Certified Arborist PD-1616A

The memo dated June 29, 2021, by Mr. Roberts, is a clear example of working with a biased objective while not reporting a basis for his findings. Mr. Roberts claims that the trees are providing benefits including storm water management, pollution control and so forth. He also claims that “the trees also create tremendous shade to keep the ground cool. The leaves that fall create a mulch which makes the forest floor a filter which then absorbs storm water very well”. However, at no time does he discuss the risk, health and longevity of this area. In addition, there is no mention of testing, inventory or providing backup of his statements. He clearly utilizes basic text which is common via the web. In fact, the area is degrading (as seen in our review and provided via the excel spreadsheet) which would limit the number of benefits provided vs. a healthy woodland structure. While on site, we observed standing water, dead trees, invasive plants, risk, trash, debris, dog waste and lawn waste from adjacent properties. None of this was noted in the Roberts report.

The Roberts report does not provide a solution other than denoting that trees should be replaced. In fact, there is a mitigation action plan and it is ongoing. A report providing insight on what exist should have accompanied Mr. Roberts memo. In my review, the memo paints a picture of a healthy structure. This is not factual.

Memo of Ms. Patricia M Nastase Vice-President, Valley Forge Audubon Society

As I respect the work and devotion of the Valley Forge Audubon Society, I have apprehension over the memo (no date provided) that is clearly defining the large woodland stand (Randolph Woods Nature Preserve 38.2 acre) vs. the actual subject parcel. Ms. Nastase describes the habit. I concur that the Randolph Woods Nature Preserve is healthy structure for bird habit as well as mammals. However, she indicates that she observed along Ruthland Avenue, the subject parcel, that this area inhabits low brushy areas with small trees, vines, grasses, and wildflowers provide cover and food sources for birds in this area. When we performed our review, there was nothing but a degrading overhead canopy and a prolific invasive and non-native ground intrusion. Found on the site were the following invasive understory.

1. Japanese wineberry - 'Rubus phoenicolasius'.
2. Morrow honeysuckle - 'Loncera morrowi'.
3. Poison Ivy - 'Toxicodendron radicans'
4. Devil's walking stick - 'Aralia spinosa'
5. Multiflora rose - 'Rosa multiflora'.
6. Japanese knotweed / Asian knotweed - 'Fallopia japonica'.
7. Wild Grape vine - 'Vitis spp'.
8. American bittersweet - 'Celastrus scandens'

The following photographs denote the invasive plants found on the ground plan / understory.









At no time did we find wildflower remnants (spent stems, flowers, seed heads or any other wildlife benefit). Just invasive and intrusive plants.

In fact, in review of the Essentials of a Healthy Habitat, authored by the Valley Forge Audubon Society, it states;

All living creatures require food, water, cover, and places to raise their young. **A diversity of plants native to our local area supports most wildlife and enhances biodiversity. Layers of native vegetation**, including canopy trees, understory trees, shrubs, vines, perennials, native grasses, and ferns provide for the needs of the many creatures living in the ecosystem. Plant shrubs and perennials close together for maximum benefit. This was not present at this parcel.

From the review of this site, none of the above exist and the reporting by Ms. Nastase is conflicting to the what is noted on the educational website of her employer.

Design / planting - Mitigation

I understand that the neighboring properties are concerned about the proposed bike track. However, the resources and fundamentals of the opposition should not be used in a manner to create this vision that a healthy, native, prime habitat and sensitive area exist. Instead, working with the borough to create recreation while enhancing their own properties for future screening should be the focus.

I am proposing, along with previously discussed design measures, that a screening buffer utilizing both native and non-native (unfortunately there is not a sufficient species list of evergreens that are native that provide dense screening and noise abatement while adding diversity) be constructed to aid in noise abatement and screening objectives.

A buffer should be created at two levels.

- 1- Level 1 - Screening trees - Add in triangular formation - 5 white spruce, 5 red cedar, 7 Norway spruce,
- 2- Level 2 – Shrub layer- 9 chokeberry, 9 red osier dogwood, 11 arrowwood viburnum and 11 silky dogwood.

I will assist the designers in transcribing this plant palate to the design. In addition, the subject remaining area that will be used for the bike track should have specified trees within the track route. I have attached a plant fact sheet that will assist in the selection for suitable trees for the site. Amending the existing grade will be required to prepare for a sustainable screening objective.

Conclusion

The subject proposed site and its vegetation is degrading, failing and is currently risk related. The site is not prime wildlife habitat. Wildlife habitat begins with management and the introduction of sound species. This site has not been managed in 20 years. In fact, the overhead degrading canopy with an invasive understory is reason, solely, for renovation. From my review and research, the residents, the Audubon society, local arborist and no one for that fact, were interested in protecting and enhancing wildlife value or storm water management until this project was proposed. Now is the time to create balance with both recreation and ecological benefits. This is a safe area (very little traffic), easily viewed from street view and will be able to be designed to meet all the environmental benefits that we strive to accomplish.

This is not a healthy forest, and it should not be pitched as an environmentally sound system.

CERTIFICATION OF PERFORMANCE

I, John Rockwell Hosbach, Jr., certify that:

- I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions and conclusions stated herein are my own and are based on current scientific procedures and facts.
- My analysis, opinions and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated within the report.
- My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the American Society of Consulting Arborists and the International Society of Arboriculture. I have been involved in the field of Arboriculture in a full-time capacity for a period of more than 25 years.



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