



Date: July 18, 2016

To: Mr. Lee Fischman, Ms. Lena Crandall, Ms Madelaine Eppenstein, et al.

From: Kim Eierman, EcoBeneficial!

### **Re: Scarsdale Meadow Project**

Thank you for the opportunity to work on the transition of the Secor Road landscape to a native meadow. During our site visit in late June, we discussed the options available, as well as the parameters that are practical, given your resources. This document defines the project, next steps and timing involved.

#### **Overview**

The area under discussion consists of a large turf area (1/2 acre+) bordered on two sides by roadway - now planted with mature trees - and a third side bordered by a fence with "volunteer" trees, shrubs, and herbaceous material. This wooded section is highly invaded with invasive vines and other invasive woody and herbaceous plants. There are some native plants in the area that should be preserved.

#### **Invasive Plant Removal**

Prior to preparation and planting of a meadow, the invasive plant material on the border should be removed, as much as possible. If this removal is not accomplished, these invasive plants will perpetuate and increase in biomass. They will also likely invade the meadow area, which unlike turf, will not be frequently mowed. This would greatly complicate the future meadow management.

The removal work will likely entail at least some heavy equipment for vine removal, which should not be brought onto the site after the meadow is planted.

#### **Native Plant Enhancement**

The voids created by the removal of invasive plants, should be filled with native plant material. This can be accomplished inexpensively with restoration plants (trees and shrubs) and live plugs (perennials).

To eliminate the need for mowing by the roadsides, you may want to consider

establishing planted “medians” along the two tree lines next to the road. In effect, planted strips would be created next to the street, anchored by the existing trees, and enhanced with short perennials with a spreading habit, which can survive tree root competition and road salt. These medians or strips would be mulched until the vegetative material has established. Inexpensive native plugs could be used in this area as well.

Fall planting is ideal for most live native plants (there are some exceptions such as broad-leaved evergreens, et al.). The warm days and cool nights of fall promote good root development, at a time of year where supplemental irrigation is less critical.

The best practice is to install live plants at least 6 weeks before hard frost – which admittedly, is a moving target these days. Shoot for installation by the end of September, if possible, for best root establishment.

I can assist you with plant recommendations and acquisition.

### **Seeded Meadow and Timing**

Based on your limited funding, a seeded meadow (vs. a live plug meadow) will be established. Native meadows have a significant component of warm season native grasses – typically 40% to 50%, with forbs (flowering perennials) consisting of the balance. The grasses provide a structural matrix for the meadow, both below ground and above ground, and are important for meadow ecology (host plants, seeds, habitat, cover). Native grasses are also deer-resistant, making them even more valuable.

Warm season grass seeds have a much better germination rate when planted in the spring rather than the fall. Although a late fall seeding (dormant seeding) could be done, there would be a higher failure rate for the warm season grass seeds, and the desired ratio of grass to forbs (flowering perennials) would be more difficult to insure.

In this region, the best time to install a seeded meadow of grasses and forbs will be mid-May to mid-June. Other times of year can be considered, but there may be a reduction in germination. I suggest that you target mid-May, in the event that we have a hot spring/summer.

### **Meadow Preparation**

Preparation is the key to success with meadow establishment. Given budget and labor constraints, you have determined that tilling will be the method you will use. The area will likely have to be tilled at least twice.

Please let me know the equipment Scarsdale has available, and the ability/budget to rent equipment, so that I can make recommendations on exact methods and timing for meadow preparation and seeding.

## **Seeds and Seeding**

There are several reliable sources for native meadow seeds. I do not suggest using a pre-designed mix, which may contain species that are not optimal for our area or the site itself. Custom seed mixes will be slightly more expensive, but are still affordable. The approximate seeding rate is 10 pounds of seed per acre, at an approximate cost of \$35 - \$40 per pound.

The shaded and/or wet areas of the site should be seeded with a different combination of plant species than the dry, sunny areas. I can work with you to determine the exact dimensions for each area, the appropriate species for each area, and seed sourcing.

Seeding can be done with specific equipment, or by hand with volunteers – a cheaper option which would also engage the community. If you decide on this method, I can provide specific instructions, accordingly.

## **TIMING**

### **Immediate**

Remove of invasive plants in wooded sections, in front of fenced areas.

### **Summer 2016**

Create list of replacement plants for wooded sections and select plant sources.

### **Fall 2016 – preferably by late September**

Replace invasive plants with native restoration plants (trees and shrubs) and plugs (perennial plants).

Plant the tree “medians” with native plugs (this could also be done after the meadow is installed – possibly in the fall of 2017).

### **Late Winter /Early Spring 2017**

Determine exact species for each seed mix; order seeds.

### **Late April 2017**

Turf to be mowed to the lowest possible height in meadow areas.

### **Late April to Mid-May 2017**

Till the turf areas (possibly multiple times), using minimum till equipment, not a rototiller, if possible.

Line up volunteers for seeding day.

### **Mid to Late May 2017**

Seed the meadow with volunteers.

Ensure good seed to soil contact via light compaction by foot or turf roller.

Mulch lightly with sterile straw mulch (weed + seed-free).

If there is a water source near the meadow, irrigation would be helpful, but not required.

**Summer 2017 and Beyond**

Initial mowing of the meadow will be based on plant height – that of the weeds and the native species. Early weeds will be taller than the emerging natives. The goal is to preserve the native species and weaken emerging weeds until they are outcompeted.

The first few years will require multiple mowings. After the meadow has fully established, mowing can be done annually in the early to mid spring, after the soil has dried up a bit (to avoid compaction of wet soil – the bane of healthy soil).

Consider mowing only 1/3 to 1/2 of the meadow annually to preserve habitat for insects and other wildlife.

As discussed, I will be happy to provide a maintenance plan for the site that Scarsdale DPW or an outside contractor can utilize.

Please feel free to contact me with any questions and let me know when you would like further assistance.

Sincerely yours,

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