Tree Health Assessment Report

Stone Place Park

Somerville Parks Tree Health Program

IFB #23-26

Prepared by Alden Johnson, MCA, ISA, TRAQ

Feb 17, 2023

Overview:

Morse-Kelly playground is a small pocket park located at the transition between a residential neighborhood and the busy Union Square commercial district. If is well-hidden, shady quiet spot at the end of several dead-end streets with a large density of trees- primarily Honeylocust and European Hornbeam.

General tree health

The predominant species in the park is Honeylocust, and their overall health is good on average. Limited root area and close planting will lead to some of these trees being crowded over time as they grow. The Hornbeam and Elm are in good condition. Limited root area and crowing are likely the main stress factors of the trees in the park.

Soil Health

Trees within the park are largely restricted to small mulched planting beds around the perimeter of the turf area in the center of the park. The majority of the soil in the park is typical urban soil, with organic leaf litter and mulch mixed in the planting beds . Soil throughout the planting beds has good amount of organic matter in the top 3-6 inches, pale colored sandy-gravel base beginning at 4-8". Soil does not stick together. No odor noted. A soil-sample probe could be submerged about 8 inches deep into the bed areas. Medium-heavy compaction in the center turf areas, low-medium compaction in the garden beds. Overall, though limited in area, the soil quality seems better than most other parks due to the paved paths directing foot traffic through the park and, the mulched beds around the perimeter and the transitory use of the park. Soil sample has been sent to lab for further analysis to be included in final report.

Pests and Diseases

None noted at time of report.

Other correction of adverse conditions

The newly planted trees should have their guy ties removed so as to not girdle the stems. My Level 1 TRAQ assessment of all the trees in this park results in a "low" risk rating.

Removal Needs:

Remove volunteer Honeylocust sprouts.

Pruning needs

Honeylocust and Elm should be pruned provide 8-10' off the walkways and parking surface, as well as 3-4 off fences, lights, and 6-8' of private residences. Canopy clean to remove dead and broken branches, 2" and larger in trees throughout the park. Sever hanging vines in the hornbeams and leave to desiccate. The hornbeams should be pruned to limit encroachment and simplify structure. Several of the young ornamental shrubs and trees should be pruned to contain, rejuvenate and improve structure.

2023 Priorities:

- Pruning: Canopy cleaning, raising, containing
- Volunteer tree removal
- Shrub pruning and rejuvenation

5-10 year Priorities:

- Biostimulant for all trees in the park:
- Young Tree training

Stone Place Map

Site ID	Species	DBH	Park Name	TRAQ-Risk Rat	Recommendations	Pruning units	Prunign Cost
42512	hornbeam: European (Carpinus betulus)	5.9	STONE PLACE PARK	Low	Prune to raise out of the fence and off adjacent buildings by 2-3', Prune to remove crossing/redundant branches, prune off of walkway by 8'	[redacted]	[redacted]
42524	hornbeam: European (Carpinus betulus)	4.8	STONE PLACE PARK	Low	Prune to raise out of the fence and off adjacent buildings by 2-3', Prune to remove crossing/redundant branches, prune off of walkway by 8'	[redacted]	[redacted]
42532	hornbeam: European (Carpinus betulus)	5.7	STONE PLACE PARK	Low	Prune to raise out of the fence and off adjacent buildings by 2-3', Prune to remove crossing/redundant branches, prune off of walkway by 8'	[redacted]	[redacted]
42543	hornbeam: European (Carpinus betulus)	5.5	STONE PLACE PARK	Low	Prune to raise out of the fence and off adjacent buildings by 2-3', Prune to remove crossing/redundant branches, prune off of walkway by 8'	[redacted]	[redacted]
42553	hornbeam: European (Carpinus betulus)	4.9	STONE PLACE PARK	Low	Prune to raise out of the fence and off adjacent buildings by 2-3', Prune to remove crossing/redundant branches, prune off of walkway by 8'	[redacted]	[redacted]
42559	honeylocust: thornless (Gleditsia triacanthos inermis)	13.8	STONE PLACE PARK	Low	Prune to remove deadwood larger than 2" in diameter, raise off of parking lot by 10-12', wires, signs and structures by 3-5'	[redacted]	[redacted]
42568	honeylocust: thornless (Gleditsia triacanthos inermis)	13	STONE PLACE PARK	Low	Prune to remove deadwood larger than 2" in diameter, raise off of parking lot by 10-12', wires, signs and structures by 3-5'	[redacted]	[redacted]
42577	honeylocust: thornless (Gleditsia triacanthos inermis)	18.9	STONE PLACE PARK	Low	Prune to remove deadwood larger than 2" in diameter, raise off of parking lot by 10-12', wires, signs and structures by 3-5'	[redacted]	[redacted]
42591	honeylocust: thornless (Gleditsia triacanthos inermis)	17.9	STONE PLACE PARK	Low	Prune to remove deadwood larger than 2" in diameter, raise off of parking lot by 10-12', wires, signs and structures by 3-5'	[redacted]	[redacted]

42601	crabapple: flowering (Malus spp.)	4.4	STONE PLACE PARK	Low	Yttp	
42613	honeylocust: thornless (Gleditsia	3	STONE PLACE PARK	Low	Volunteer. Crowding. Remove	
42623	honeylocust: thornless (Gleditsia triacanthos inermis)	4	STONE PLACE PARK	Low	Volunteer. Crowding. Remove	
42633	maple: Amur (Acer tataricum ginnala)	0.5	STONE PLACE PARK	Low	Actually a Viburnum. Prune to rejuvanate- remove several declining stems	
42637	linden: littleleaf (Tilia cordata)	14.2	STONE PLACE PARK	Low	Prune to remove deadwood larger than 2" in diameter, raise off of #8 Stone place by 6-8'	
18003	honeylocust: thornless (Gleditsia triacanthos inermis)	15.6	NA	Low	Prune to remove deadwood larger than 2" in diameter, raise off of parking lot by 10-12', wires, signs and structures by 3-5'	
NA	Spice Bush (Lindera benzoin)	Multi	STONE PLACE PARK	low	Prune to improve and simplify structure, contain siz	
	Total Pruning				I day large crew. MD will need to outreach RE parking under the honeylocust	
	Removals				2 weed trees	
	Permits					
	Reports				Before and After reports	

Accredited Tree Care by Certified Arborists

Malik Drayton
City of Somerville
93 Highland Ave
Somerville, MA 02145

Home:
Mobile:
Office: 617-625-6600
e-mail: Cmiller@Somervillema.gov
Alt e-mail: Jhoward@somervillema.gov

February 17, 2023
Proposal #: 66589

Job Site: 26
Malik Drayton
IFB 23-26 Parks Tree Health Program
Stone Place Park
Somerville, MA 02143

Phone:
Email:
Alt Phone:

Tree and Shrub Care Recommendations on 2/17/2023

Description of Services

- ***Work Plan for Stone Place Park Pruning/Removal March 13, 2023.***

Park will need to be closed from 7AM- 4PM Monday March 13 for the pruning and removal work. We will post permits as needed on public streets. City urban forester to obtain permits for private parking spaces under Locust trees. Equipment access will be limited to sidewalk /street. Trees within park will all be accessed by climbers.

- **Pruning on Maturing-Mature deciduous Shade and Ornamental trees throughout the park. Individual tree specs listed on the attached spreadsheet.**
  Structural Pruning - Selective pruning to improve branch architecture; select, develop and maintain strong, properly spaced scaffold branches by reducing or removing interfering, overextended, defective and poorly attached limbs as specified
  Canopy Cleaning - Selective pruning to remove declining, dead and broken branches as specified
  Canopy Raising - Selective pruning to provide and envelope of clearance of walkways, roadways, utilities, structures, as specified.

[redacted]

- **(2) 2" diameter Locust clumpings of sprouts in the park:**
  Tree Removal - Take down and cut stump low to grade as equipment allows, dispose of brush, logs and chipped debris generated from removal operations.

[redacted]

[redacted]

This proposal is valid for 45 days, assuming there are no changes to the site (driveway, plantings, buildings etc. remain unchanged).
All work performed in accordance with ANSI A300 Standards.

Payment due upon completion of work. 1 ½% per month, 18% per year on unpaid balances.

Massachusetts Arborists Association

- **Posting No Parking Permits.** [redacted]

[redacted]

- **Debris Disposal:** Costs include removal and disposal of brush, logs and chipped debris generated from tree care operations.

[redacted]

Thank you for considering Barrett Tree Service East, Inc. Sincerely,

Alden Johnson
Certified Arborist

This proposal is valid for 45 days, assuming there are no changes to the site (driveway, plantings, buildings etc. remain unchanged).
All work performed in accordance with ANSI A300 Standards.

Payment due upon completion of work. 1 ½% per month, 18% per year on unpaid balances.

Massachusetts Arborists Association

Soil and Plant Nutrient Testing Laboratory
203 Paige Laboratory
161 Holdsworth Way
University of Massachusetts
Amherst, MA 01003
Phone: (413) 545-2311
e-mail: soiltest@umass.edu
website: soiltest.umass.edu

Soil Test Report

Prepared For:

Sonia Vivas
Barrett Tree Service East Inc
340 Middlesex Ave
Medford, MA 02155

svivas@barretttreeeast.com
617-616-5281

Sample Information:

Sample ID: H7171

Order Number: 64152
Lab Number: S230221-105
Area Sampled:
Received: 2/21/2023
Reported: 3/3/2023

Results

Analysis	*Value Found*	*Optimum Range*
Soil pH (1:1, H2O)	6.2	
Modified Morgan extractable, ppm		
Macronutrients		
Phosphorus (P)	6.7	4-14
Potassium (K)	177	100-160
Calcium (Ca)	1723	1000-1500
Magnesium (Mg)	151	50-120
Sulfur (S)	16.1	>10
Micronutrients *		
Boron (B)	0.2	0.1-0.5
Manganese (Mn)	10.8	1.1-6.3
Zinc (Zn)	25.0	1.0-7.6
Copper (Cu)	3.7	0.3-0.6
Iron (Fe)	9.3	2.7-9.4
Aluminum (Al)	64	<75
Lead (Pb)	14.4	<22

Analysis	*Value Found*	*Optimum Range*
Cation Exch. Capacity, meq/100g	16.5	
Exch. Acidity, meq/100g	6.2	
Base Saturation, %		
Calcium Base Saturation	52	50-80
Magnesium Base Saturation	7	10-30
Potassium Base Saturation	3	2.0-7.0
Scoop Density, g/cc	0.77	
Optional tests		
Soil Organic Matter (LOI), %	10.5	

* *Micronutrient deficiencies rarely occur in New England soils; therefore, an Optimum Range has never been defined. Values provided represent the normal range found in soils and are for reference only.*

Soil Test Interpretation

Nutrient	Very Low	Low	Optimum	Above Optimum
Phosphorus (P):				
Potassium (K):				
Calcium (Ca):				
Magnesium (Mg):				

Soil and Plant Nutrient Testing Laboratory
203 Paige Laboratory
161 Holdsworth Way
University of Massachusetts
Amherst, MA 01003
Phone: (413) 545-2311
e-mail: soiltest@umass.edu
website: soiltest.umass.edu

Recommendations for Deciduous Trees, Shrubs & Vines-Maintenance

Limestone (Target pH of 6.0)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 100 sq ft		
0	.1 - .2	0.1	0

Comments:

*To supply Nitrogen, apply EITHER 1 - 1.5 lbs. Dried Blood (12-0-0) OR 0.2 - 0.4 lbs. Urea (45-0-0) per 100 square feet. Application should be split between early spring and mid-June.
*To supply Phosphorus, apply EITHER 0.8 lbs. Bone Meal (4-12-0) OR 0.2 lb. Triple Phosphate (0-45-0) per 100 square feet.
*Soil test value for potassium is above optimum. Do not add additional potassium at this time.
-For instructions on converting nutrient recommendations to fertilizer applications in home gardens and landscapes, see Reference "Step-by-Step Fertilizer Guide for Home Grounds and Gardening" (listed below).
-Avoid over-fertilization. In addition to threatening water quality, excessive nutrient applications can compromise plant health and contribute to insect and disease problems. For details, see Reference "Corrective Measures and Management of Over-Fertilized Soils" (listed below).
-The lead level in this soil is less than 22 ppm, which falls below the listed optimum level. However, many variables affect this result, and safety thresholds vary by location and soil use. There is still a potential risk of lead exposure for soils used for growing food or as play areas for children. Our Total Sorbed Metals test provides an accurate measurement of soil lead. For more information about lead levels in soil, see the fact sheet entitled "Soil Lead: Testing, Interpretation, & Recommendations," listed under General References at the end of this report. ATTN: The Total Sorbed Metals Test is currently unavailable. We apologize for any inconvenience.

References:

Home Lawn and Garden Information	http://ag.umass.edu/resources/home-lawn-garden
Step-by-Step Fertilizer Guide for Home Grounds and Gardening	https://ag.umass.edu/SPNTL-4
Corrective Measures and Management of Over-Fertilized Soils	https://ag.umass.edu/SPNTL-13

General References:

Interpreting Your Soil Test Results	http://soiltest.umass.edu/fact-sheets/interpreting-your-soil-test-results
Soil Lead: Testing, Interpretation & Recommendations	http://ag.umass.edu/soil-plant-nutrient-testing-laboratory/fact-sheets/soil-lead-fact-sheet
For current information and order forms, please visit	http://soiltest.umass.edu/
UMass Extension Nutrient Management	http://ag.umass.edu/agriculture-resources/nutrient-management