

TREE PRESERVATION PLAN

For

ELYSE LEVENTHAL

Property Owner

For Service At

140 DARTMOUTH STREET

NEWTON, MA 02465



October 11, 2024



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CONTENTS

Why did SavATree create a tree preservation plan?	3
How did SavATree create the preservation plan?	3
What did SavATree find?	4
Tree Preservation	4
What does SavATree recommend based on our findings?.....	9
Tree Preservation Narrative	12
Appendix.....	13

WHY DID SAVATREE CREATE A TREE PRESERVATION PLAN?

You are performing site improvements at the subject address and the City of Newton requires a tree preservation plan before construction.

You retained SavATree to assess the trees and site and provide a tree preservation plan that meets the requirements of the Newton Tree Preservation Ordinance.

HOW DID SAVATREE CREATE THE PRESERVATION PLAN?

SavATree Consulting Group visited the site on 10/3/2024.

We reviewed the following documents:

- “Site Plan for 140 Dartmouth Street, Newton, MA” By Spruhan Engineering P.C.

We collected data for regulated trees on site that could be impacted. Diameter at breast height (DBH) was estimated at standard height (4.5 feet above grade). Trees under 6” DBH are not regulated by the tree ordinance. Photos and specifications can be found in the Appendix.

We considered industry best practices and standards for tree preservation as well as the requirements of tree preservation measures within the Newton Tree Preservation Ordinance. In order to protect the tree and fulfill the requirements, we assessed the condition of the tree and created a tree preservation narrative.

Within the report below we may utilize the following acronyms or terminology:

- CRZ – Critical Root Zone (1.5 ft radius from the face of the trunk per inch of tree diameter)
- SRZ – Structural Root Zone (0.5 ft radius from the face of the trunk per inch of tree diameter)
- TPZ – Tree Protection Zone (area where disturbance and access is prohibited)
- LOD – Limits of disturbance
- Suitability for preservation - a categorization of a tree’s potential to be an asset to the project following development based on species, size, condition, and species tolerance to construction.

WHAT DID SAVATREE FIND?

Tree Preservation

A total of seventy-five trees were found to be onsite or adjacent to proposed construction.

Approximate locations and CRZ are shown in figure 1.

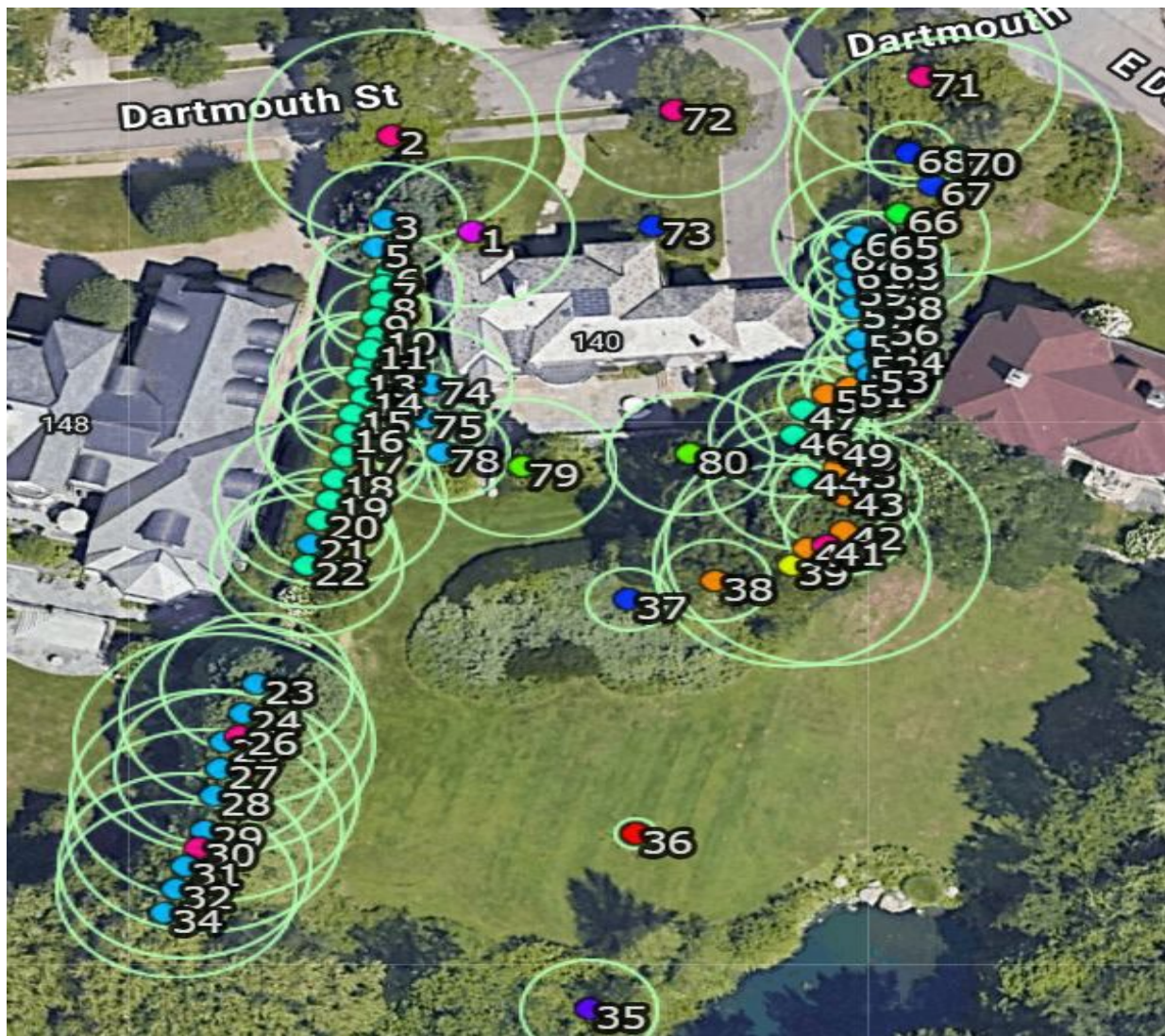


Figure 1. Subject trees shown in relation to the subject property and CRZ is yellow/green circle.

Table 1. Tree data.

TREE #	TREE SPECIES	DBH (in)	CRZ (ft)	SRZ (ft)	CONDITION	SUITABILITY FOR PRESERVATION	RECCOMENDATIONS	LIVE CROWN PERCENT
1	Katsura tree	17	25.5	8.5	Fair	Medium	Preserve	60
2	Norway maple	24	36	12	Good	High	Preserve	70
3	White pine	13	19.5	6.5	Fair	Medium	Preserve	60
4	Not used							
5	White pine	26	39	13	Fair	Medium	Preserve	60
6	Eastern hemlock	11	16.5	5.5	Poor	Medium	Preserve	60
7	Eastern hemlock	12	18	6	Poor	Medium	Preserve	60
8	Eastern hemlock	5	7.5	2.5	Poor	Low	Preserve	55
9	Eastern hemlock	9	13.5	4.5	Poor	Low	Preserve	55
10	Eastern hemlock	10	15	5	Poor	Medium	Preserve	60
11	Eastern hemlock	8	12	4	Poor	Low	Preserve	55
12	Eastern hemlock	11	16.5	5.5	Poor	Medium	Preserve	60
13	Eastern hemlock	15	22.5	7.5	Poor	Medium	Preserve	65
14	Eastern hemlock	7	10.5	3.5	Poor	Low	Preserve	50
15	Eastern hemlock	10	15	5	Poor	Medium	Preserve	60
16	Eastern hemlock	15	22.5	7.5	Poor		Preserve	
17	Eastern hemlock	13	19.5	6.5	Poor	Medium	Preserve	

18	Eastern hemlock	10			Dead		Preserve	0
19	Eastern hemlock	19	28.5	9.5	Fair	Medium	Preserve	60
20	Eastern hemlock	11	16.5	5.5	Fair	Medium	Preserve	65
21	Eastern hemlock	15	22.5	7.5	Fair	Medium	Preserve	65
22	Eastern hemlock	16	24	8	Fair	Medium	Preserve	65
23	White pine	16	24	8	Fair	Medium	Preserve	65
24	White pine	21	31.5	10.5	Fair	Medium	Preserve	65
25	White pine	25	37.5	12.5	Fair	Medium	Preserve	60
26	Norway maple	7	10.5	3.5	Fair	Medium	Preserve	65
27	White pine	18	27	9	Fair	Medium	Preserve	65
28	White pine	24	36	12	Fair	Medium	Preserve	65
29	White pine	23	34.5	11.5	Fair	Medium	Preserve	60
30	Norway maple	8	12	4	Fair	Medium	Preserve	65
31	White pine	21	31.5	10.5	Fair	Medium	Preserve	65
32	White pine	20	30	10	Fair	Medium	Preserve	60
33	Not used							
34	White pine	31	46.5	15.5	Fair	Medium	Preserve	65
35	Gray birch	11	16.5	5.5	Good	High	Preserve	70
36	Apple	3	4.5	1.5	Poor	Low	Preserve	40
37	Native dogwood	7	10.5	3.5	Fair	High	Preserve	70
38	Arborvitae	9	13.5	4.5	Fair	Medium	Preserve	60

39	Black oak	23	34.5	11.5	Fair	Medium	Tree removal	65
40	Arborvitae	17	25.5	8.5	Poor	Low	Tree removal	30
41	Norway maple	27	40.5	13.5	Fair	Medium	Tree removal	65
42	Arborvitae	10	15	5	Poor	Low	Tree removal	40
43	Arborvitae	13	19.5	6.5	Poor	Low	Tree removal	40
44	Eastern hemlock	16	24	8	Poor	Low	Tree removal	40
45	Arborvitae	6	9	3	Poor	Low	Tree removal	40
46	Eastern hemlock	14	21	7	Poor	Low	Tree removal	35
47	Eastern hemlock	11	16.5	5.5	Poor	Low	Tree removal	35
48	Arborvitae	4	6	2	Poor	Low	Tree removal	20
49	Arborvitae	5	7.5	2.5	Poor	Low	Tree removal	20
50	Arborvitae	8	12	4	Poor	Low	Tree removal	30
51	Arborvitae	7	10.5	3.5	Poor	Low	Tree removal	30
52	White pine	7	10.5	3.5	Poor	Low	Tree removal	25
53	White pine	12	18	6	Poor	Low	Tree removal	30
54	White pine	10	15	5	Poor	Low	Tree removal	30
55	White pine	6	9	3	Poor	Low	Tree removal	30
56	White pine	8	12	4	Poor	Low	Tree removal	35
57	White pine	7	10.5	3.5	Poor	Low	Tree removal	30
58	White pine	9	13.5	4.5	Poor	Low	Tree removal	40
59	White pine	8	12	4	Poor	Low	Tree removal	25
60	White pine	8	12	4	Poor	Low	Tree removal	30
61	White pine	10	15	5	Poor	Low	Tree removal	30

62	White pine	6	9	3	Poor	Low	Tree removal	30
63	White pine	11	16.5	5.5	Poor	Low	Tree removal	40
64	White pine	6	9	3	Poor	Low	Tree removal	30
65	White pine	18	27	9	Fair	Low	Tree removal	50
66	Crab apple	10	15	5	Poor	Medium	Preserve	50
67	Native dogwood	8	12	4	Fair	High	Preserve	65
68	Native dogwood	7	10.5	3	Fair	High	Preserve	65
69	Not used							
70	Eastern hemlock	27	40.5	13.5	Fair	High	Preserve	65
71	Norway maple	23	34.5	11.5	Fair	High	Preserve	65
72	Norway maple	20	30	10	Fair	High	Preserve	65
73	Native dogwood	10			Dead			0
74	White pine	13	19.5	6.5	Poor	Low	Tree removal	45
75	White pine	11	16.5	5.5	Poor	Low	Tree removal	45
76	Not used							
77	Not used							
78	White pine	11	16.5	5.5	Poor	Low	Tree removal	40
79	Columnar beech	16	24	8	Good	High	Tree removal	75
80	Columnar beech	14	21	7	Good	High	Tree removal	75

WHAT DOES SAVATREE RECOMMEND BASED ON OUR FINDINGS?

We recommend that the tree preservation narrative below be overseen by a qualified Certified Arborist. We recommend that this preservation narrative is approved by the City of Newton before any more work continues.

Tree preservation decisions are best identified in the planning phase and provided for in the design phase. As tree preservation occurs later in the sequence from planning->design->pre-construction->construction->post-construction, the cost of implementation increases and the probability of success decreases. This project is in the design phase.

There is a proposed larger garage and addition to the rear left of the existing house. A new landscape design will be planted. Diameter/caliper to be replaced or tree ordinance fee is in appendix. Digging by hand or utilizing an air spade may be required if digging within the critical root zone is required. Tree protection fencing (4 foot snow fence) shall be installed per tree protection plan. Tree protection signs shall be placed on fences. Root protection matting will be needed if construction equipment needs to go over any critical root zones.

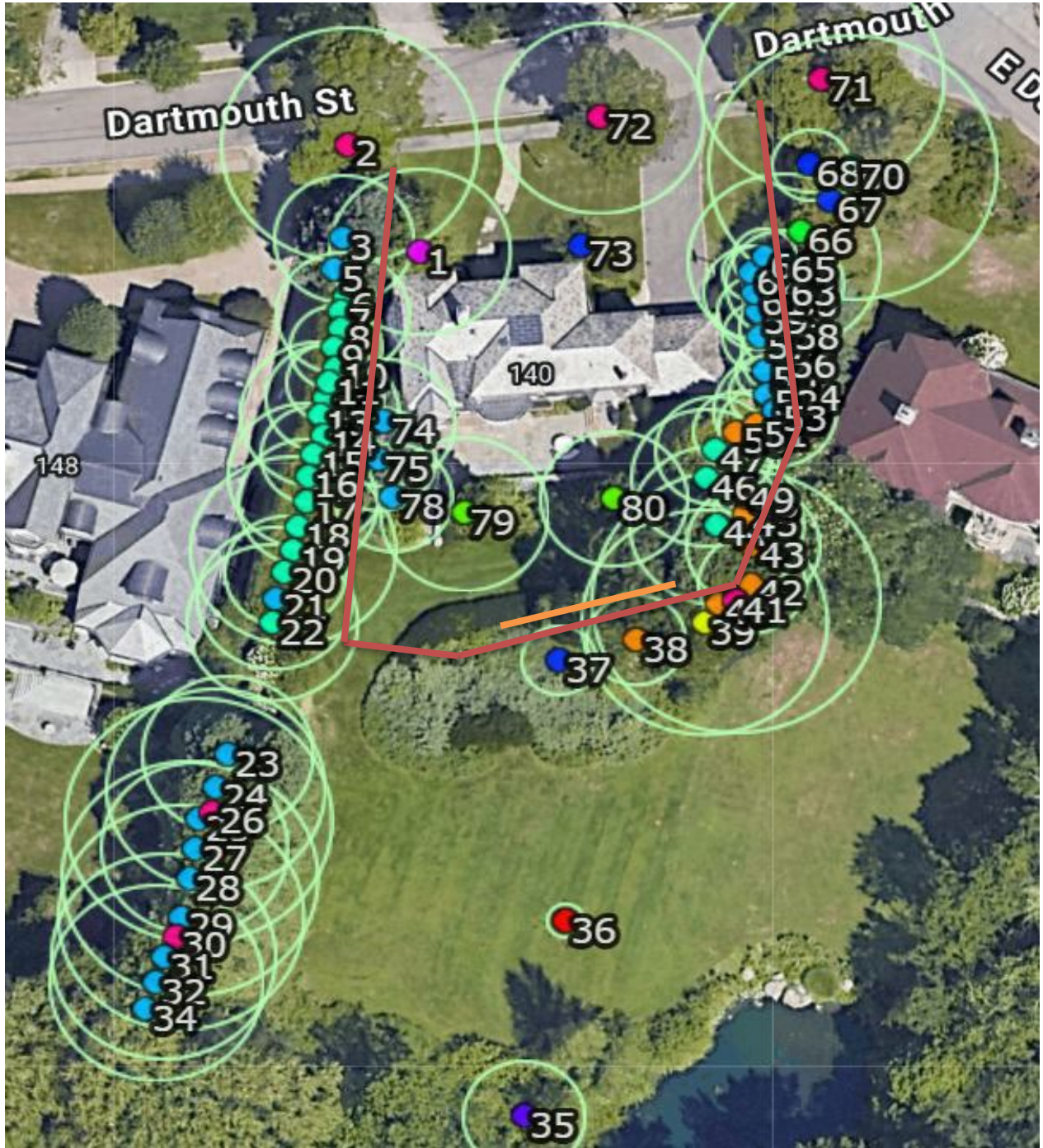


Figure 3. Tree protection plan (red line is tree protection fence to be installed, orange line is air spade/root prune).

TREE PRESERVATION NARRATIVE

1. Install 4 foot snow fence and tree protection signs to create tree save areas per tree protection plan.
2. Air spade and root pruning recommended for trees #37 to 38.
3. Install tree planking to trees #2, 71 and 72.
4. Do not store materials or work inside tree protection areas.
5. A qualified certified arborist shall inspect and oversee all tree protection methods.
6. No heavy equipment shall go over critical root zones. Root protection matting shall be used if lifts or other equipment is needed within critical root zones.
7. No excavation within critical root zones. Hand digging or air spade may be utilized by permission from the City of Newton.

Please let me know if you have any questions or concerns.

All the best,

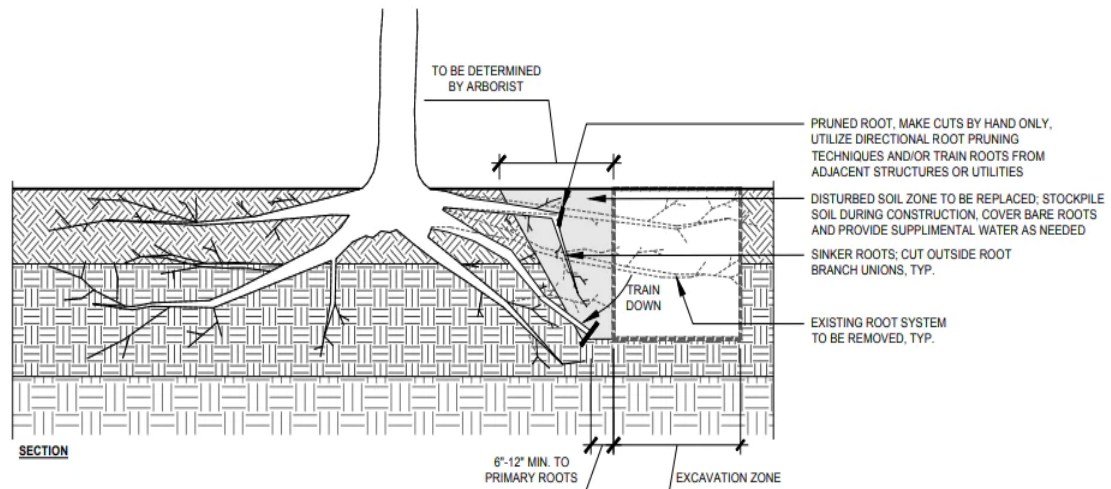
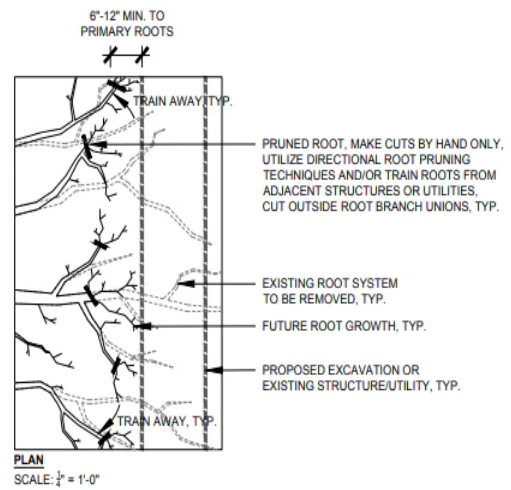
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APPENDIX

NOTES:

1. HAND PRUNE ROOTS ONLY BY CERTIFIED ARBORIST. DO NOT SHEAR ROOTS.
2. COVER ROOTS AND PROVIDE SUPPLEMENTAL WATER AS NECESSARY. IF LARGE ROOTS OR A LARGE PERCENTAGE OF ROOTS ARE REMOVED, EXTENDED RECOVERY PERIOD MAY BE NECESSARY.
3. ALL WORK TO BE DONE UNDER THE SUPERVISION OF CERTIFIED ARBORIST OR APPROVED CONTRACTOR. ENSURE THAT TREES ARE IN GOOD HEALTH AND NOT EXPERIENCING UNUSUAL STRESS PRIOR TO COMMENCING WORK.
4. PROTECT TREE AND TREE ROOTS THROUGHOUT CONSTRUCTION. AIRSPADE OR HAND DIG ONLY WITHIN THE CRITICAL ROOT ZONE. DOCUMENT AND ADDRESS ALL DAMAGES TO TREES AT COMMENCEMENT AND THROUGH COMPLETION OF WORK. DAMAGES TO BE COMPENSATED BASED ON PRE-AGREED TERMS. SEE SPECIFICATIONS.
5. ENSURE PROPER SOIL MOISTURE LEVELS THROUGH DURATION OF WORK. SOIL MUST BE NEAR FIELD CAPACITY, BUT NOT SATURATED, AND PASS A FIELD MOISTURE TEST PRIOR TO USE OF AN AIR SPADE. HAND WATER TREES AS NECESSARY BEFORE COMMENCEMENT OF WORK AND WITHIN 24 HOURS OF COMPLETION. COVER BARE ROOTS AND WATER AS NECESSARY DURING WORK.
6. ARBORIST TO EVALUATE THE OVERALL HEALTH OF TREES, AND TO MAKE A REPORT AND RECOMMENDATIONS FOR ADDITIONAL TREE CARE BEFORE, DURING, AND AFTER THE COMPLETION OF WORK.
7. CALL 811 OR CONTACT THE APPROPRIATE LOCAL AGENCIES TO LOCATE EXISTING UTILITIES PRIOR TO ANY EXCAVATION. PROTECT EXISTING UTILITIES THROUGHOUT THE CONSTRUCTION PROCESS AND REPAIR ANY DAMAGE TO THESE AT NO COST TO THE OWNER.
8. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALSO SEE MANUFACTURER'S GUIDE FOR PROPER SAFETY AND OPERATION.



6 ROOT PRUNING W/ AIRSPADE
 $\frac{1}{2}'' = 1'-0''$



Tree Protection Fence: Orange Snow Fence
Urban Forest Manager Approved Tree
Protection Detail

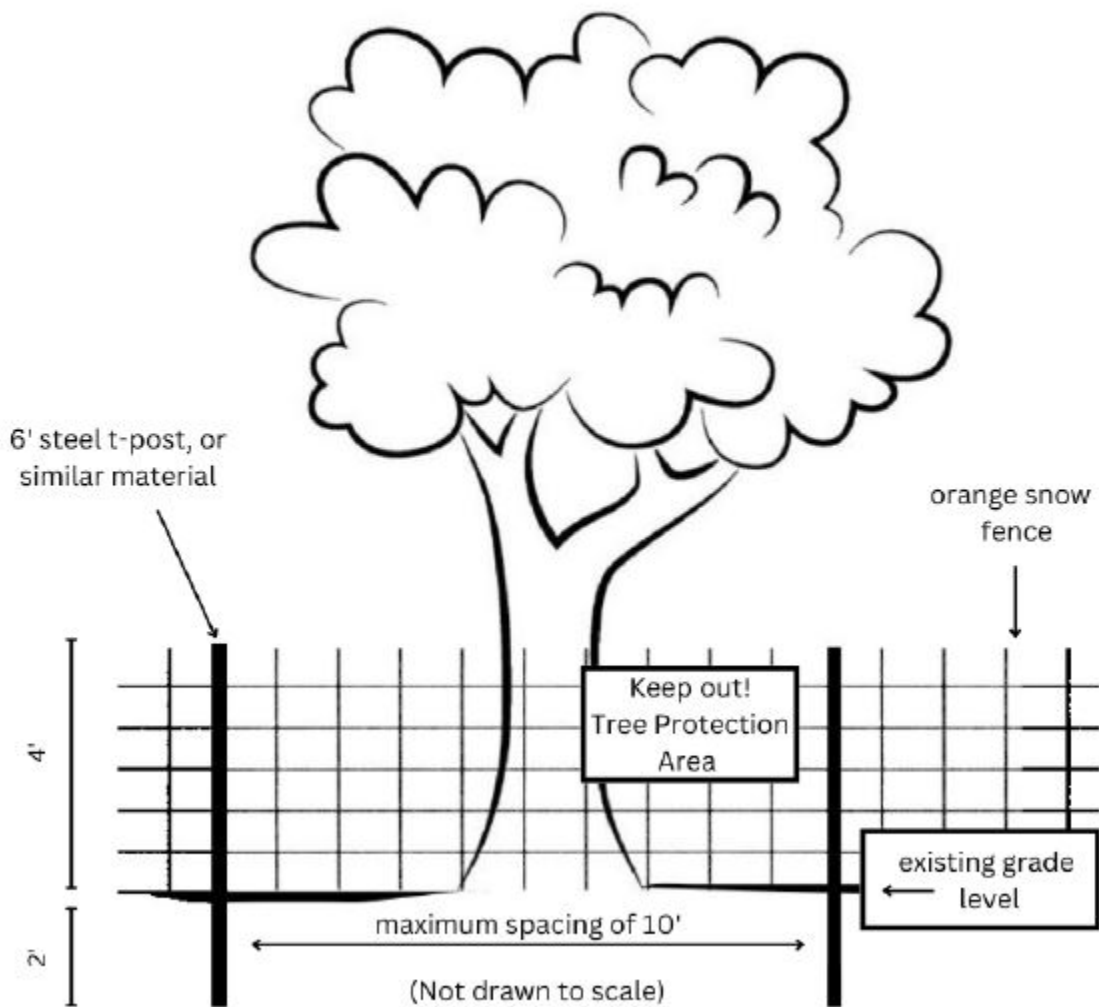


Table 2: Tree removal and tree ordinance payment data

TREE #	TREE SPECIES	DBH (in)	TREE ORDINANCE PAYMENT COST
39	Black oak	23	\$8,510
40	Arborvitae	17	\$0
41	Norway maple	27	\$10,665
42	Arborvitae	10	\$0
43	Arborvitae	13	\$0
44	Eastern hemlock	16	\$5,920
45	Arborvitae	6	\$0
46	Eastern hemlock	14	\$0
47	Eastern hemlock	11	\$0
48	Arborvitae	4	\$0
49	Arborvitae	5	\$0
50	Arborvitae	8	\$0
51	Arborvitae	7	\$0
52	White pine	7	\$0
53	White pine	12	\$4,440
54	White pine	10	\$3,700
55	White pine	6	\$0
56	White pine	8	\$0
57	White pine	7	\$0
58	White pine	9	\$0
59	White pine	8	\$0
60	White pine	8	\$0
61	White pine	10	\$0
62	White pine	6	\$0
63	White pine	11	\$0
64	White pine	6	\$0
65	White pine	18	\$6,660
74	White pine	13	\$0
75	White pine	11	\$0
78	White pine	11	\$0
79	Columnar beech	16	\$5,920
80	Columnar beech	14	\$5,180

32 Trees	DBH To Be Replanted	136	\$50,995
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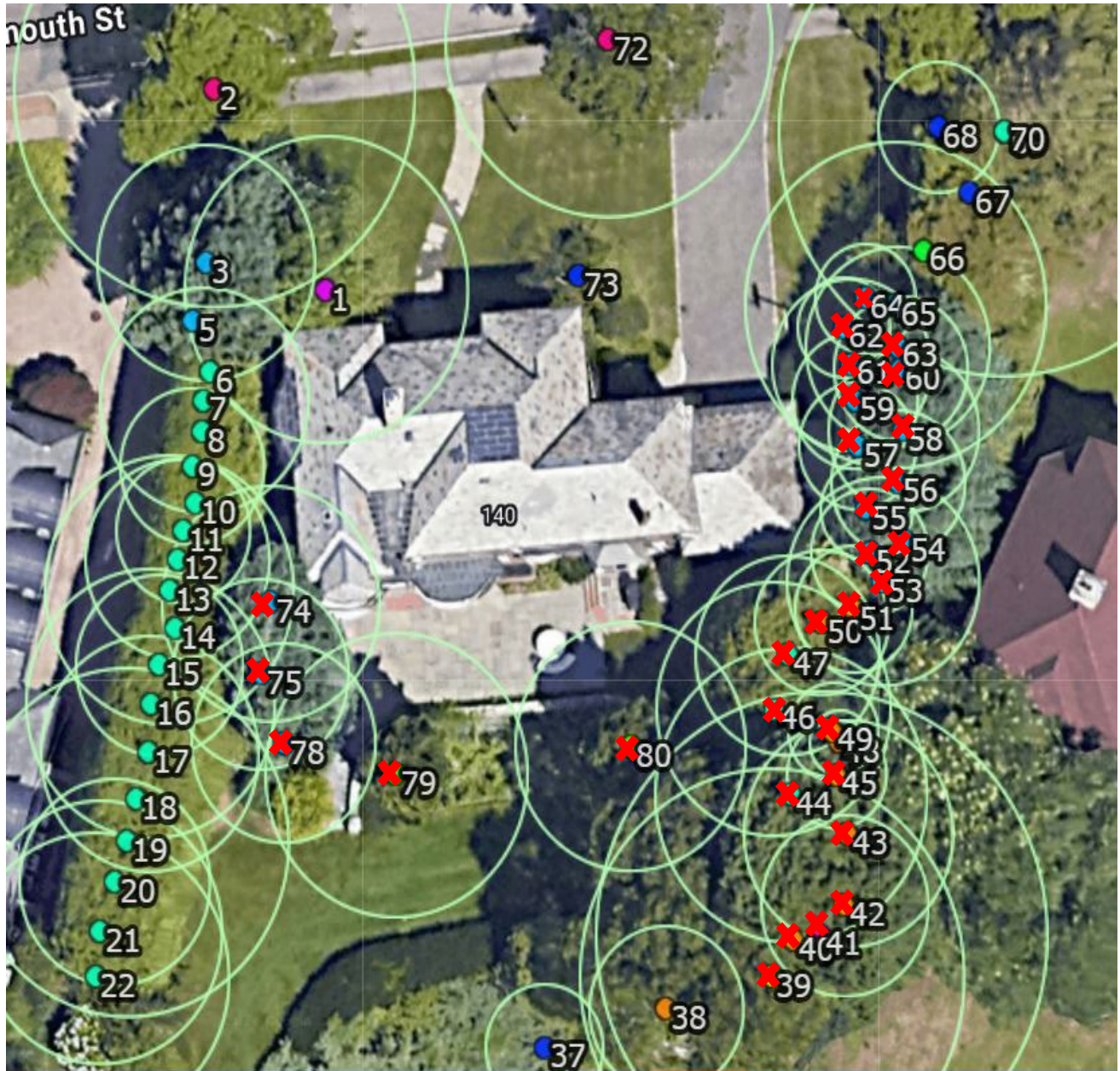


Figure 4. Tree removal plan.