natural tree
& Lawn Care

P.O. Box 175
Avon, MA 02322
Telephone: 781.297.3674
Facsimile: 781.344.4444
Toll Free: 888.567.7200
www.naturaltree.com

A MALTBY COMPANY

Michael Carter
GCG associates Inc.
84 main St
Wilmington ma 01887

August 10, 2016

Mr. Carter,

I have reviewed the trees subject to removal for the Green Street Phase 1, Roadway Improvement Project in Fairhaven Massachusetts. I have taken brief notes on all of the trees that would be impacted by reconstructing the sidewalks and resetting curbing. The main characteristics I looked at are rough diameter in inches, tree species, the roots in relation to the curb and sidewalk, overhead utilities, wounds and decay, and a general crown condition relative to a healthy tree of the same species given adequate room to grow. The trees marked for removal by the plan are listed 1-18 and I have also noted trees A-F as existing trees that are proposed to stay.

Trees with 90% of their canopy are in very good condition, 80% is good, 70% fair, 60% and less are in relatively poor condition. Half of all the trees in Phase 1 have an 80% or better canopy rating but only 5 are not lifting the sidewalk, growing over the curb or have other physical damage where decay will compromise the structure of the tree (A, B, C, E & F). Most of the trees have far out grown the 3-4' planting strips and begun growing over the existing curbs and sidewalks. Trees growing in planting strips are already growing in adverse conditions such as low soil volume, poor soil quality, salt etc. If roots are cut during construction this added stress will cause decline of the trees. Damage to the roots of trees is not always evident shortly after construction, but may take years for symptoms to develop. If trees are left during construction they may need to be removed in the future. My recommendation is removal of trees 1-18, D, G and H, replace existing planting strip fill with quality top soil and replant with new trees. Although trees D, G & H are not part of the proposed removal, you may consider them for removal considering existing damage and potential for more damage.

In this short segment the composition is 65% maple (46% Norway, 19% red maple), 15% elm, 8% oak, 4%ash, 4%cherry, and 4%plane tree. When choosing replacement trees, the more diversity the better in resisting future insect and disease infestations. I would also consider mature size of the trees when deciding placement, opting for smaller growing trees under power lines etc. the Mass DOT has a good list of trees that have a higher tolerance for urban conditions that I have included in my report. I have highlighted the trees that I feel are better suited for the site and are less prone to insect and disease problems.

Sincerely,

Todd Caswell, MCA
Natural Tree & Lawn Care

1- 10" Norway maple, roots growing over curb and side walk ~80% canopy
2- 18" Red maple, roots growing over curb and lifting sidewalk ~90% canopy
3- 18"Norway maple, roots growing over curb and side walk, decay present ~80% canopy
4- 18" Red maple, grown up over curb, large pruning wound, decay present, Overhead wires present ~60% canopy
A- 4" Kwanzan cherry ~90% canopy (120 Green St)
5- 21" Red maple, roots over curb and lifting sidewalk, Overhead wires present ~80% canopy
B- 2" hybrid elm, Overhead wires present ~80% canopy (between 114 and 110 Green St)
C- 8"hybrid elm, Overhead wires present~80% canopy (110 Green st)
D- 16"Norway maple now sidewalk but heavy compaction, physical root damage, large wound and decay present , ~70% canopy (between 115 and 109 Green St)
6- 15" Norway maple, roots growing over curb and lifting sidewalk, decay at base of the tree ~80% canopy
7- 16" Norway maple, canopy dieback, decay present ~50% canopy
E- 15" hybrid elm included bark, ~80% (Corner of Green and Center St)
F- 8" Crimson king maple ~90%canopy (Corner of Green and Center St)
8- 17" Norway maple, roots growing over curb and lifting sidewalk, decay at the base of the tree, Overhead wires present ~10% canopy
9- 25"red maple, exposed roots, large wound at the base with decay present, Overhead wires present ~70% canopy
10- 18" red maple roots growing over curb, top dead and decay present, Overhead wires present ~30% canopy
11- 26" white ash, brick sidewalk lifted, ~70% canopy
G- 14" hybrid elm, physical damage to trunk in 2 places ~90% canopy (in front of park)
H- 10"Pin oak, root damage at the base, lifting the sidewalk ~90% canopy (91 Green St)
12- 14" pin oak, lifting sidewalk, root damage curbside ~90% canopy
13- 11" Norway maple, roots growing over the sidewalk, canopy dieback~60% canopy
14- 17" Norway maple, roots growing over curb and sidewalk, root damage curbside, leaning over the street, decay present, Overhead wires present ~40% canopy
15- 17" Norway maple, lots of decay present and roots growing over the curb ~20% canopy
16- 16" Norway maple, roots growing over curb and sidewalk, girdling roots ~50% canopy
17- 18" London Plane roots lifting sidewalk and growing over curb, surface root damage,~80% Canopy
18- 16" Norway maple, roots growing over the curb and sidewalk, surface root damage, ~50% canopy

Suggested Urban Street Trees

Landscape Design

Plant Information

- Invasive Plant List
- **Suggested Urban Street Trees**

References & Resources

Landscape Related Special Provisions

Links

Short List of Suggested Street Trees*

Large Trees (mature size more than 40')

Botanical Name	Common Name	Cultivars	Size	Characteristics
Acer rubrum	Red Maple	'Red Sunset', 'Armstrong', 'Bowhall', 'Columnare'	40-75'	Does not tolerate heavily polluted areas, dry soils. Prefers acid soils.
Celtis occidentalis	Common Hackberry		40-60'	Wind tolerant, salt and drought resistant. Subject to pests and disease.
Fraxinus pennsylvanica	Green Ash	'Marshall's Seedless', 'Summit'	50-60'	Tolerant of heat, cold, wet and dry soils. Subject to borers and scale. Select male cultivars.
Ginkgo biloba	Ginkgo	'Autumn Gold', 'Princeton Sentry'	50-80'	Tolerates extremes of soil, heat and pollution. Choose male clones only.
Gleditsia triacanthos var. inermis	Thornless Honeylocust	'Skyline', 'Shademaster'	30-70'	Very adaptable to soils and tolerant of salt, drought, and soil compaction. Over-used. Subject to pests and disease.
Platanus x acerifolia	London Planetree	'Bloodgood', 'Columbia', 'Liberty', 'Yarwood'	70-100'	Tolerates wide range of soils. Select anthracnose resistant cultivars. Best where has large space.
Quercus palustris	Pin Oak	'Crownright', 'Sovereign'	60-70'	Fairly tolerant of city conditions. Intolerant of high pH soils. May need to be limbed up.
Quercus robur	English Oak	'Fastigata'	40-50'	'Fastigiata' is good for restricted areas, but red and pin oak are better choices where space allows. Mildew can be a problem.
Quercus rubra	Northern Red Oak		60-80'	Tolerates range of soils, withstands pollution. Intolerant of high pH.
Tilia cordata	Littleleaf Linden	'Corinthian', 'Glenleven', 'Greenspire'	60-70'	Tolerates pollution and pruning. Susceptible to salt, as well as aphids and Japanese beetle.
Ulmus americana	American Elm	'Princeton', 'Valley Forge', 'New Harmony'	60-80'	Withstands extremes of soil conditions, salt tolerant. Subject to pests and decay. Select Dutch elm resistant cultivars.
Ulmus parvifolia	Chinese Elm	'Allee', 'Athena', 'Milliken'	40-50'	Adaptable to wide range of soil, tolerant of urban conditions. Resistant to Dutch elm disease, elm leaf beetle and Japanese beetle.
Ulmus sp.	Elm hybrids	'Frontier', 'Regal', 'Homestead'	40-50'	Tolerant of urban conditions. Select resistant cultivars. Susceptible to elm leaf beetle.
Zelkova serrata	Japanese Zelkova	'Green Vase'	50-80'	Tolerant of soils, wind, drought, pollution. Good resistance to Dutch elm disease, elm leaf and Japanese beetle.

Medium Trees (mature size approximately 30-40')

Botanical	Common	Cultivars	Size	Characteristics

Name	Name			
Acer campestre	Hedge Maple		25-35'	Very adaptable, tolerant of dry soils, soil compaction and air pollution. Withstands severe pruning.
Koelreuteria paniculata	Golden Raintree	'Fastigiata'	30-40'	Tolerant of heat, drought, wind, compacted soils, and air pollution. Possibly weak
Pyrus calleryana	Callery Pear	'Aristocrat', 'Chanticleer'	30-35'	Adaptable to soils, tolerates dryness and pollution. Overplanted. Use only disease/pest resistant cultivars, narrow cultivars for restricted space.

Small Trees (mature size less than 30')

Botanical Name	Common Name	Cultivars	Size	Characteristics
Acer ginnala	Amur Maple		15-20'	Adaptable to wide range soils, tolerant of wind and drought. Select single stem. May need to be limbed up.
Amelanchier sp.	Serviceberry	'Autumn Sunset', 'Cumulus'	15-25'	Adaptable to soil, not pollution tolerant. Subject to insects and diseases. Select resistant cultivars and single stem.
Malus sp.	Crabapple	'Wyman', 'Cardinal', 'Prairifire', 'Snowdrift', 'Zumi'	15-30'	Tolerant of drought, salt, air pollution. Wide variety of sizes and shapes. Select disease/pest resistant cultivar. Fruit litter -- choose species with small fruit, or that hold fruit. Low branching can be issue, especially near walkways.
Syringa reticulata	Japanese Tree Lilac	Ivory Silk', 'Regent', 'Summer Snow'	25-30'	Adaptable to difficult sites. Resistant to mildew, borers and scale.

*List is not a comprehensive urban tree list. Trees in list may not be appropriate for all conditions.