

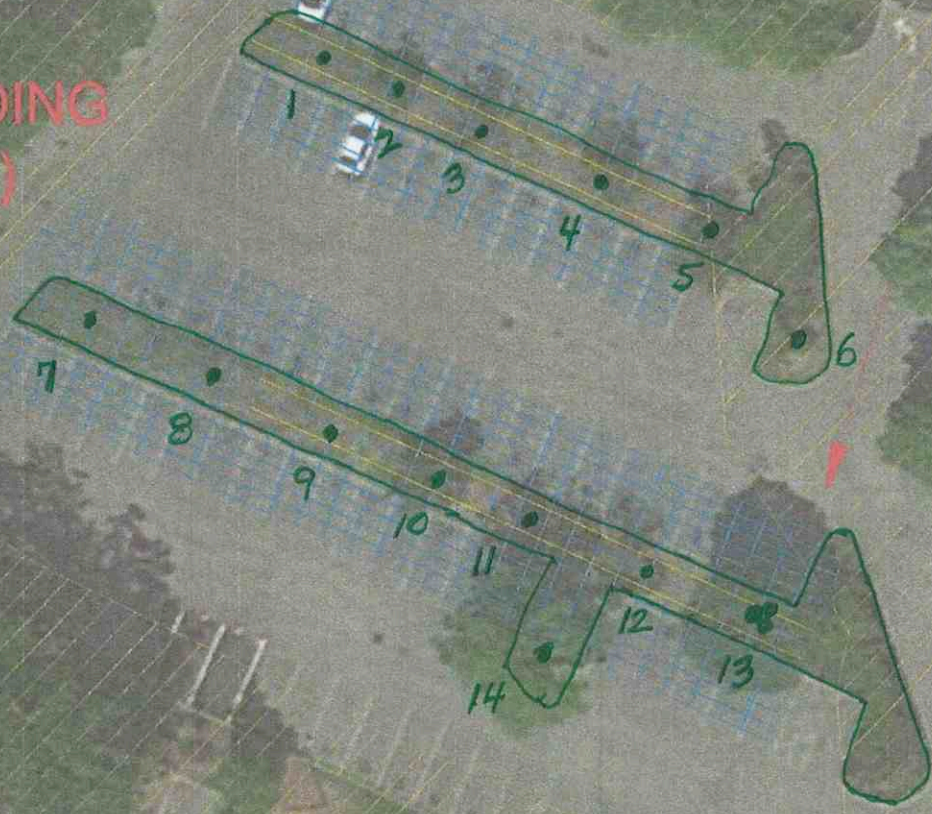
Map #	Species (Latin)	Common name	Caliper*	DBH**	Condition	Comments	2 yrs twig growth (inches)
1	Acer saccharum 'Arrowhead'	Sugar maple	2"	1-3/8"	Fair	Some dead twigs?	7-3/4, 4-3/4, 15
2	Ulmus Americana 'Princeton'	American elm	2-3/8"	1-3/4"	Fair	Buds all over, but slow twig growth for elm. Most growth in last year.	8-1/4, 7-3/4, 11-3/4
3	Gleditsia TT 'Shademaster'	Honeylocust	2"	1-1/2"	Fair	Gash on trunk (mechanical), dead ends on lowest branches, water sprouts low on trunk need pruning	7-1/2 (other branches too high to reach)
4	Acer ***	Maple		8.1"	Poor	Buds on low branches, not upper. Bird's nest	
5	Pyrus?	Pear		13.5" total	Fair	Multi-trunk (3.5+2.5+3.25+4.25). Buds all over. Low limb with gash & branch trapped between trunks should be pruned.	
6	Acer***	Maple		5"	Poor	Half of bark gone on trunk, dead leader	
7	Acer saccharum 'Arrowhead'	Sugar maple	2"	1-1/2"	Good	Buds all over.	8, 14, 11-1/2
8	Platanus x acerifolia	London plane tree	2-1/4"	1-3/4"	Good	Buds all over.	
9	Acer saccharum 'Arrowhead'	Sugar maple	1-3/4"	1-3/8"	Fair	Buds all over but slow growth.	3-1/4, 3-3/4, 13-1/2
10	Acer***	Maple		7.8"	Poor	Very damaged bark & trunk (canker?), top of tree dead.	
11	Amelanchier 'Autumn Brilliance'	Serviceberry	1-3/4"	1"	DEAD	Could plant large-maturing new tree.	
12	Amelanchier 'Autumn Brilliance'	Serviceberry	1-3/4"	1-1/4"	Fair	Trunk damage where lower branch torn off (not recent). Buds on most of tree, starting to open, but slow twig growth.	2-1/2, 6-1/2, 6-1/4
13	Acer platanoides	Norway maple		28" total	Poor	Triple trunk (11.1+9.6+7.3). Buds mostly on lower branches. Dead smaller branches	
14	Quercus	White oak		16.4"	Fair/Good	Some dead branches at top but most appear to have buds.	
	* Trunk diameter 6" off ground	(young trees)			NOTE:	All newer trees surrounded by mulch/soil doughnut. Could benefit from removing excess to give roots more O2.	
	** Diameter at breast height	(4.5 ft off ground)					
	*** Bark like red maple, buds like Norway maple						
	Prepared by Julia Malakie	3/20/2016					

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ARRAY 1

SHADING
(TYP.)

ARRAY 2



Map #	Species	Caliper*	DBH**	Condition	Comments	Conflict w/solar
1	Red oak	6"	4-1/4"	Good		No? Away from carports
2	Sugar maple	5"	3-3/4"	Fair	Broken lower branches to prune	No? Away from carports
3	Sugar maple	3-3/4"	2-3/4"	Fair/Poor	Leader may be dead. Canker at base.	No? Away from carports
4	Sugar maple	5"	3-1/4"	Fair	Canker at base.	No? Away from carports
5	Sugar maple	6+"	5"	Good	3 broken branches need pruning.	No? Away from carports
6	Red oak (pin oak?)		5-1/2"	Good/Excellent	Lower branches need pruning for clearance.	Unclear. Trunks close, Tree canopy could overhang solar
7	Red oak		5-1/4"	Good/Excellent		Unclear. Trunks close, Tree canopy could overhang solar
8	Red oak		5-1/4"	Good/Excellent		Unclear. Trunks close, Tree canopy could overhang solar
9	Red oak		5-3/4"	Excellent		Unclear. Trunks close, Tree canopy could overhang solar
10	Red oak		4-1/4"	Fair	Canker on trunk.	Unclear. Trunks close, Tree canopy could overhang solar
11	Sugar maple	3-3/4"	3"	Fair	No root flare; planted too deep? Try to uncover.	Unclear. Photoshopped out of rendering
12	Sugar maple	5-1/4"	4"	Good	Has bird's nest.	Unclear. Photoshopped out of rendering
13	Sugar maple	3-3/4"	3"	Fair	Small dead stuff to prune. Need to uncover root flare.	Unclear. Close to east side of carport
14	Missing - small stump	--	--	--	Could plant new tree.	Yes, would be under carport, per aerial view
15	Sugar maple	7+"	5-1/2"	Excellent		Unclear. Could shade carport when tree is taller.
16	Sugar maple	6+"	5"	Good	But plow scraped soil & cut root on one side (recent).	Unclear. Could shade carport when tree is taller.
17	Sugar maple	6"	4-3/4"	Good/Excellent	Has bird's nest. Small girdling root should be cut.	Yes, would be under carport, per aerial view
18	Missing - small stump	--	--	--	Could plant new tree.	Yes, would be under carport, per aerial view
19	Sugar maple	6"	4-1/2"	Good		Yes, would be under carport, per aerial view
20	Sugar maple	4-1/4"	3-1/4"	Fair	Mostly ok, but dead leader.	Unclear. Could shade carport when tree is taller.
*	Trunk diameter 6" off ground	(young trees)			<i>NSHS</i>	
**	Diameter at breast height	(4.5 ft off ground)				

NOTES:

1. SHADING PATTERN IS CALCULATED BASED ON FEBRUARY 21ST FROM 9AM TO 3PM AND DECEMBER 21ST AT NOONTIME. IT TAKES INTO ACCOUNT SITE LATITUDE AND LONGITUDE.
2. SHADING FOR OBJECTS NOT IMPACTING THE PV SYSTEM IS NOT SHOWN

NEWTON SOUTH HIGH SCHOOL	POWER TABLE									
	# OF MODULES	MODULE TYPE	VA (STC)	KWH/yr	PITCH	MODULE	TYPE	EFFICIENCY	kW/AC	
ARRAY 1	52	PCV 300 12	104.51	200			DISCRETE MODULES		24.28	
ARRAY 2	30		21.45	223						
ARRAY 3	48		14.04	182					45.28	
ARRAY 4	55		45.07	150						
ARRAY 5	115		27.58	219	15	CARPET				
ARRAY 6	152		40.28	251			DISCRETE MODULES	20.94	62.38	
ARRAY 7	131		52.15	194			DISCRETE MODULES		46.32	
ARRAY 8	171		61.15	154			DISCRETE MODULES		45.28	
ARRAY 9	171		61.15	154			DISCRETE MODULES		45.28	
TOTAL	1,270		388.27						311.28	



NEWTON SOUTH HIGH SCHOOL PARKING LOT - OVERALL ARRAY LAYOUT

SCALE: 1" = 32'-0"

NOT FOR CONSTRUCTION

Renderings: Car Canopies at South HS

Oak trees
#7, 8, 9, 10
missing

Tree #6
would hit
carport

just
the
shadows

