

## ***DECEMBER 1, 2021 MILL PLAZA LANDSCAPING PLAN: PLANT MATERIAL SELECTION***

*Notes from Robin Mower, January 10, 2022 plus Appendix B from the Site Plan Regs*

1. On June 10, 2020, CDA/Harriman’s Emily Innes responded to Planning Board questions about the landscaping plan. She stated that “we are drawing from the tree list and list of shrubs that’s provided on the Town of Durham’s website as the recommended trees.” [Innes presumably referred to the current site plan regulations’ Appendix B; CDA is not legally bound by the Appendix, since it was approved later.]
2. **Landscape architect Howard Snyder spoke to the Board** on June 17, 2020. The [DCAT recording may be viewed here](#).
3. On the next page I provide **links to websites** providing photos and other information about the proposed shade trees for the parking area and for the planters/tree boxes in front of Building A and around Buildings B and C.
4. The base of this document is **Appendix B** of the Durham Site Plan Regulations dated April 24, 2019, [posted here](#). Plants listed on Appendix B may or may not be appropriate for this site or for specified locations on this site.
5. I have added a column to the Appendix tables to reflect what is proposed on the landscaping plans dated December 1, 2021, including tree size (HxW). (What does that listed “size” mean? Ask the landscape architect.)
6. CDA’s “Plant Legend” on site plan Sheets L2.1, L2.2, and L2.3 categorize plant material differently from the Town, but I have tried to map specified plants to the Town’s list.
7. Plants on the December 1, 2021 plan are **highlighted**. Plants not on the Town lists are shown at the end of category tables; names begin with **ADD**.
8. I have added a table for the **plants shown on the December 1, 2021 site plan sheet C-702 Restoration Plan** (for the 75-foot wetland upland buffer strip to College Brook). See the last table, below.
9. If a tree is listed in the 2009 [“Trees for Parking Lots and Paved Areas”](#) (or the [more user-friendly PDF](#)) from Virginia Tech’s Cooperative Extension, I note it as “VT good” or “VT bad,” listed as “Trees unsuitable for restrictive paved areas due to large surface roots,” **including red maples and hackberries**. (Query for landscape architect?)
10. “Cultural notes” are the Town’s for species on the Town lists, with my occasional additions. For species not on the Town lists, I have added excerpts—with links—from the “Plant Finder” database at the Missouri Botanical Garden ([MOBOT website](#)) (also see below). Links provided elsewhere in the table are also from MOBOT. Definitions, such as “fastigate,” may be included at MOBOT’s [Dictionary of Botanical Latin](#).

## Resources for “shade trees for parking areas” and trees around buildings

Provided by Robin Mower, January 2022

Shade trees for parking areas—number proposed by CDA

- American Hornbeam (*Carpinus caroliniana*)—4
- Blackgum (*Nyssa sylvatica* var. ‘Marshal’)—9
- Ginkgo (*Ginkgo biloba* ‘Princeton Sentry’)—10
- Hackberry, Common (*Celtis occidentalis*)—5
- Red maple, ‘October Glory’ (*Acer rubrum* ‘October Glory’)—8

Tree for planters or tree boxes around buildings—number proposed by CDA

- Red maple, Freeman ‘Armstrong’ (*Acer rubrum x freemanii* ‘Armstrong’)—24

\* \*

### Lists for specific conditions .....

[Trees Suitable for Use in CU-Structural Soil](#)<sup>TM</sup> (Cornell University, Woody Plants Database; scroll down to the section)

Salt tolerant?

[Salt-tolerant Species](#) (Greenbelt Plant Center, NYC)

[Trees Observed to Have Some Salt Tolerance](#) (Cornell University, Woody Plants Database)

### Shade trees for parking areas (number proposed by CDA) .....

#### 1) American Hornbeam (*Carpinus caroliniana*)

Common Name(s): American Hornbeam; Blue Beech; Hornbeam; Ironwood; Musclemwood  
Muscle Wood; Water Beech

[Missouri Botanical Garden \(MOBOT\)](#)

[Virginia Tech Dendrology](#)

[North Carolina Extension Gardener](#)

[USDA Plants Database](#)

Cornell’s “[Woody Plants Database](#)”

#### 2) Blackgum (*Nyssa sylvatica* var. ‘Marshal’)

Common Name(s): Blackgum; Black Gum; Black Tupelo; Nyssa; Pepperidge; Sour Gum

[North Carolina Extension Gardener](#)

[Missouri Botanical Garden \(MOBOT\)](#)

[USDA Plants Database](#)

Cornell’s “[Woody Plants Database](#)”

**3) Ginkgo (*Ginkgo biloba* ‘Princeton Sentry’)**

Common Name(s): Maidenhair tree

[Missouri Botanical Garden \(MOBOT\)](#)

[USDA Plants Database](#)

[US Forest Service fact sheet](#)

Cornell’s “[Woody Plants Database](#)”

**4) Hackberry, Common (*Celtis occidentalis*)**

Common Name(s): American Hackberry; Beaverwood; Common Hackberry; False Elm; Hackberry; Nettle Tree; Northern Hackberry

[Missouri Botanical Garden \(MOBOT\)](#)

[USDA Plants Database](#)

[North Carolina Extension Gardener](#)

Cornell’s “[Woody Plants Database](#)”

**5) Red maple, ‘October Glory’ (*Acer rubrum* ‘October Glory’)**

Common Name(s): Red maple

[Missouri Botanical Garden \(MOBOT\)](#)

[Arbor Day Foundation](#)

[North Carolina Extension Gardener](#)

Cornell’s “[Woody Plants Database](#)”

**Tree for planters or tree boxes around buildings .....**

**6) Red maple, Freeman ‘Armstrong’ (*Acer rubrum x freemanii* ‘Armstrong’)**

Common Name(s): Freeman maple

[Missouri Botanical Garden \(MOBOT\)](#)

[North Carolina Extension Gardener](#)

Cornell’s “[Woody Plants Database](#)”

see also sources for the ‘October Glory’ red maple, above

**Site Plan Regulations Appendix B on next pages: Notes from Robin Mower,  
January 2022**

The tables on the following pages comprise a notated version of the original document posted at the current Site Plan Regulations website. The Colonial Durham Associates site plan is not required to comply with this Appendix.

**Highlighted** name of tree or plant indicates that it is shown on the December 1, 2021 site plan.

Cultural Notes are original except where sources or comments are indicated.

Last page lists shrubs shown on the RESTORATION PLAN, Sheet C-702 of the site plan.

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**APPENDIX B**  
**RECOMMENDED LANDSCAPING SPECIES**  
**AND PROHIBITED INVASIVE SPECIES**

Consult the Missouri Botanical Garden website for information about individual landscaping species at:  
<http://www.missouribotanicalgarden.org/plantfinder/plantfindersearch.aspx>

- 1) Recommended Shade Trees
- 2) Recommended Small/Ornamental Trees
- 3) Recommended Shrubs
- 4) Recommended Shrubs and Trees for Screening/Buffering
- 5) Prohibited Invasive Plants

## Recommended Shade Trees

COMMON NAME	LATIN NAME	INTEREST	CULTURAL NOTES	MILL PLAZA 12/1/21
Beech, American	<i>Fagus grandifolia</i>	magnificent specimen tree	intolerant to salt, drought, compaction	N
Birch, Paper	<i>Betula papyrifera</i>	NH state tree, fall color, bark	intolerant to drought, soil compaction, pollution	N
<b>Black Gum</b> [MOWER: also called tupelo]	<a href="#">Nyssa sylvatica</a>	beautiful in fall, fine architecture	requires moisture; intolerant to pollution, soil compaction   [MOWER: <a href="#">Cornaceae Nyssa sylvatica Marshall VA Tech</a> and "slow-growing, reaching about 12 to 15 feet in about ten years, growing faster with a good watering and fertilizer schedule.]	9 (40Hx25W)
<b>Ginkgo</b>	<a href="#">Ginkgo biloba</a> (male)	yellow fall color	very hardy, difficult sites [MOWER: slow growing at first but then moderate rate; various university cooperative extensions]	10 (45Hx25W) "VT good"
Hawthorne, Fleshy	<i>Crataegus succulenta</i>	fruits/fall color	withstands drought	N
Hopthornbeam, American	<i>Ostrya virginiana</i>	handsome tree	winter tolerant; salt intolerant	N
<b>Hornbeam, American</b>	<a href="#">Carpinus caroliniana</a>	orange-red in fall	wet areas [MOWER: slow-growing; source: various university cooperative extensions; may be at edge of natural range <a href="#">northern edge of range (map)</a> ]	4 (25Hx25W)
Larch, American	<i>Larix laricina</i>	fine in masses	intolerant to drought and pollution	N
Locust, Honey	<i>Gleditsia triacanthos</i>	tolerant of urban conditions	scented cream-color flowers	N
Linden, American	<i>Tilia americana</i>	Broad conical tree	well drained soil	N
Linden, Crimean	<i>Tilia x euchlora</i>	bright green leaves	withstands drought	N
<b>Maple, Red</b>	<i>Acer rubrum</i>	fall color	intolerant to drought and pollution [MOWER: October Glory per Arbor Day Fdn: grows at a medium to fast rate, with height increases of anywhere from 13" to more than 24" per year.]	8 <a href="#">October Glory</a> (50Hx30W) "VT bad" [roots]
Maple, Three Flower	<i>Acer triflorum</i>	fine small specimen	requires well drained soil	N
Maple, Trident	<i>Acer buergeranum</i>	fall color	hardy, withstands drought	N
Oak, Pin	<i>Quercus palustris</i>		tolerates poorly drained soil	N
Oak, Scarlet	<i>Quercus coccinea</i>	fall color	requires well drained soil	N
Oak, Red	<i>Quercus rubra</i>	tall tree	high maintenance	N
Oak, Swamp White	<i>Quercus bicolor</i>		wet areas, intolerant of salt and pollution	N
London Plane Tree	<i>Platanus acerifolia</i>	exfoliating bark	tolerant of pollution and compaction; leaf - slow breakdown	N

COMMON NAME	LATIN NAME	INTEREST	CULTURAL NOTES	MILL PLAZA 12/1/21
Zelkova, Japanese	<i>Zelkova serrata</i>	handsome bark, architecture	hardy, well drained soil	N
ADD: Oak, English Oak	<a href="#"><i>Quercus robur f. fastigiata</i></a>		"Easily grown in average, medium, well-drained soils in full sun. Prefers moist well-drained loams, but adapts to a wide range of soil conditions." [MOBOT] [MOWER: acorns on pavement a safety concern for pedestrians?]	4 (40-70Hx 40-70W per MOBOT) "VT good"
ADD: Hackberry, Common	<a href="#"><i>Celtis occidentalis</i></a>		"Best grown in moist, organically rich, well-drained soils in full sun. Tolerates part shade. Also tolerates wind, many urban pollutants and a wide range of soil conditions, including both wet, dry and poor soils." [MOBOT] [MOWER: food source for birds and butterfly caterpillars]	5 (40Hx30W) "VT bad"
ADD: Maple, Freeman 'Armstrong'	<a href="#"><i>Acer x freemanii 'Armstrong'</i></a>	fastigate growth pattern; ...Fall color can be good in some years under optimum environmental conditions, but more often than not is an inferior yellowish orange. [MOBOT] Also see <a href="#">Oregon State Dept. of Horticulture</a> : fall color reportedly erratic, poor, yellow-orange. A female clone, so it produces fruit.	'Armstrong' will typically grow 40-60' (sometimes 70') tall with a very narrow, fastigate (branches erect) form. [MOBOT] [MOWER AND PARRY: Most references indicate typical height 50 to 70' or more feet. While these may survive in raised planters, they may not thrive. Pruning to maintain size may be required but has its limits. Another, smaller tree may be preferable. Alternating species may also help lessen vulnerability to problems affecting any given species.]	24 (40Hx15W) tree boxes (w/ grates) around Bldgs B & C

## Recommended Small/Ornamental Trees

COMMON NAME	LATIN NAME	INTEREST	CULTURAL NOTES	MILL PLAZA 12/1/21
<b>Apple Serviceberry/ Shadbush</b>	<i>Amelanchier [arborea]</i>	white flowers, fall color	wet areas	9 <a href="#">Downy</a> (20Hx20W)
<b>Cherry</b>	<i>Prunus</i>	flowers	can be difficult to grow and maintain	N
<b>Crabapple, Donald Wyman</b>	<i>Malus spp. 'Donald Wyman'</i>	white flowers, red fruit	well drained soil	3 <a href="#">Snowdrift</a> (20Hx20W)
<b>Crabapple, Japanese Flowering</b>	<i>Malus floribunda</i>	pink-white flowers, yellow- red fruit	well drained soil	N
<b>Crabapple, Professor Sprenger</b>	<i>Malus spp. 'Professor Sprenger'</i>	beautiful tree, flowers, fruit	hardy	N
<b>Dogwood, various</b>	<i>Cornus various</i>	flowers, shape, fruit	withstands drought	N
<b>Lilac, Japanese Tree</b>	<i>Syringa reticulata</i>	beautiful flowers	most trouble free lilac	N
<b>Pagoda Tree, Japanese</b>	<i>Sophora japonica</i>	foliage and fragrant flowers	rich, well drained soils	N
<b>Pear</b>	<i>Pyrus</i>	beautiful white canopy in bloom	Well-drained soil in full sun to partial shade	N
<b>Plum, Canadian</b>	<i>Prunus nigra</i>	white flowers, red fruit	works in small spaces	N
<b>ADD: Eastern Redbud</b>	<a href="#">Eastern Redbud</a>		<i>["Easily grown in average, medium moisture, well- drained soils in full sun to part shade. Part shade is best in hot summer climates. Performs best in moderately fertile soils with regular and consistent moisture. <a href="#">MOBOT</a>]</i>	25 (20Hx20W)
<b>ADD: Mountain Stewartia</b>	<a href="#">Stewartia ovata</a>		<i>["Best grown in medium moisture, humusy, well- drained loams in full sun to part shade. Appreciates some afternoon shade in hot summer climates." <a href="#">MOBOT</a>]</i>	9 (25Hx25W)
<b>ADD: Birch, River Birth</b>	<i>Betula nigra 'Heritage</i> <a href="#">[MOBOT for 'Cully'</a> <a href="#">cultivar, not general]</a>		<i>"Easily grown average, medium to wet soils in full sun to part shade. River birch is perhaps the most culturally adaptable and heat tolerant of the birches. Prefers moist, acidic, fertile soils including semi-aquatic conditions, but also tolerates drier soils. Consider using soaker hoses and bark mulches to keep the root zones cool and moist. Adapts well to heavy clay soils...and will tolerate poor drainage." <a href="#">MOBOT</a>]</i>	3 (40Hx30W) "VT bad" [roots]

## Recommended Shrubs

All are deciduous except where otherwise noted

COMMON NAME	LATIN NAME	INTEREST	CULTURAL NOTES	Mill Plaza 12/1/21
Arrowwood	<i>Viburnum Dentatum</i>	flowers/fruit/fall color	withstands adverse city conditions	N
Azalea	<i>Azalea</i>	beautiful flowers	tends to be overused	N
Bayberry, Northern	<i>Myrica pensylvanica</i>	semi-evergreen	no serious insect or disease problems	N
Blueberry, Highbush	<i>Vaccinium corymbosum</i>	flowers/fruit/fall color, winter twigs	withstands adverse city conditions/ attractive to birds	N
Cotoneaster	<i>Cotoneaster</i>	flowers and fruit	moist, loamy, well-drained soils	N
<b>Cranberry, Highbush or Cranberrybush</b>	<i>Viburnum Trilobum</i> [newer name <a href="#"><i>opulus var. americanum</i></a> ]	showy white flowers, glossy red berries	generally free of insect and disease problems; attractive to birds	3
Dogwood, Panicked	<i>Cornus Racemosa</i>	flowers/fruit/colored stalks/fall color	will tolerate adverse city conditions	N
<b>Dogwood, Red Osier</b>	<a href="#"><i>Cornus Sericea</i></a>	red stems, white berries	tolerant of most adverse city conditions	1)
Elderberry	<i>Sambucus Canadensis</i>	white flowers, purple berries	tolerates adverse city conditions; attractive to birds.	N
Forsythia	<i>Forsythia</i>	yellow flowers in early spring; wild form	medium, well-drained soils	N
Holly	<i>Ilex</i>	Leaves, flowers, and berries	<u>evergreen</u> , useful to plant male and female near each other	
<b>Juniper</b>	<a href="#"><i>Juniperus communis</i></a>	depends on variety	<u>evergreen</u> , many varieties and forms	36 variety: common
Lilac	<i>Syringa</i>	beautiful fragrant flowers	well-drained soil in full sun	N
<b>Mountain Laurel</b>	<a href="#"><i>Kalmia Latifolia</i></a>	evergreen/flowers	<u>evergreen</u> [“Best grown in cool, moist, rich, acidic, humusy, well-drained soils in part shade. Mulch to retain moisture and keep root zones cool. Plants tolerate a wide range of light conditions (full sun to full shade), but are best in part shade (morning sun with early to mid-afternoon shade) in the St. Louis climate [similar to Durham]. Raised plantings should be considered in order to promote better drainage. Plants do not grow well in heavy clay soils.” <a href="#">MOBOT</a> ]	75
Rhododendron, Rosebay	<i>Rhododendron Maximum</i>	flowers/evergreen	<u>evergreen</u> . some pollution tolerance	native; but see below
<b>Spicebush</b>	<a href="#"><i>Lindera Benzoin</i></a>	yellow flowers/red fruits	no serious insect or disease problems	32
Viburnum, Sweet	<i>Viburnum Lentago</i>	flowers/fruit/fall color	tolerates adverse city conditions; select carefully due to pests	N



COMMON NAME	LATIN NAME	INTEREST	CULTURAL NOTES	Mill Plaza 12/1/21
Viburnum, Mapleleaf	<i>Viburnum Acerifolium</i>	fall color	withstands adverse city conditions; select carefully due to pests	N
Winterberry, Black Alder	<a href="#">Ilex Verticillata</a>	beautiful red berries in fall	cool, moist, acid soils; shade ok; relatively free of insect and disease; need male and female plants [MOWER: Many varieties; this one not specified; must have appropriate matching of sexes to attain berries]	15 not this variety
Witch Hazel	<i>Hamamelis virginiana</i>	lacy colorful blossoms	many varieties	N
Yew	<i>Taxus</i>	colorful fruit	<u>evergreen</u>	N
ADD: Rhododendron, White Catawba	<a href="#">Rhododendron catawbiense</a>		[“...best grown in acidic, humusy, organically rich, evenly moist, moisture-retentive but well-drained soils in part shade. Performs well with some morning sun but needs shady afternoon conditions. Tolerates close to full shade. Prefers cool summer temperatures. Roots must never be allowed to dry out.” <u>MOBOT</u> ] [MOWER: attractive to deer; dries out easily; burns in winter wind]	21
ADD: Button bush	<a href="#">Cephalanthus occidentalis</a>	[<< typo in name on plan]	[“Easily grown in moist, humusy soils in full sun to part shade. Grows very well in wet soils, including flood conditions and shallow standing water. Adapts to a wide range of soils except dry ones.” <u>MOBOT</u> ]	7
ADD: Sweetfern	<a href="#">Comptonia peregrina</a>		[“Easily grown in average, medium, well-drained soil in full sun to part shade. Adaptable plant that tolerates wet conditions and wind (including sheltered seashore areas), drought and a wide range of soils (prefers sandy, acidic loams, but tolerates poor soils). Does not transplant well. Once established, however, it can spread rapidly to form colonies.” <u>MOBOT</u> ]	10
ADD: Coastal Sweet Pepperbush	<a href="#">Clethra alnifolia</a>		[“Easily grown in average, medium to wet soils in full sun to part shade. Prefers part shade and consistently moist, acidic, sandy soils. Soils should not be allowed to dry out. Tolerates clay soils. Tolerates full shade. Promptly remove root suckers unless naturalized look is desired.” <u>MOBOT</u> ] [MOWER: dries out easily]	18
ADD: Leatherwood	<a href="#">Dirca palustris</a>		[“Best grown in organically rich, consistently moist, slightly acidic soils in part shade to full shade. Avoid dry soils. In full sun exposures, the foliage may bleach or burn and the fall color is less likely to be attractive.” <u>MOBOT</u> ]	2

COMMON NAME	LATIN NAME	INTEREST	CULTURAL NOTES	Mill Plaza 12/1/21
<b>ADD: Fothergilla, dwarf fothergilla</b>	<a href="#">Fothergilla gardenii</a>		<i>["Best grown in moist, acidic, organically rich, well-drained soils in full sun to part shade. Best flowers occur in full sun, but plants appreciate some afternoon shade in hot and dry summer climates. Performs well in sandy loams. Avoid heavy soils. Plants may spread by root suckers to form colonies if suckers are not promptly removed." <a href="#">MOBOT</a>]</i>	64
<b>ADD: Inkberry</b>	<a href="#">Ilex glabra</a>		<i>["Easily grown in average, medium to wet soils in full sun to part shade. Adaptable to both light and heavy soils. Tolerates wet soils. Prefers rich, consistently moist, acidic soils in full sun. Good shade tolerance, however. Avoid neutral to alkaline soils. Inkberries are dioecious (separate male and female plants). Female plants need a male pollinator in order to produce the berry-like drupes that are characteristic of the species and cultivars." <a href="#">MOBOT</a>]</i>	23

## Recommended Shrubs and Trees For Screening/Buffering

*All are evergreen except where noted otherwise*

COMMON NAME	LATIN NAME	HEIGHT (in feet)	GROWTH RATE	CULTURAL AND USE NOTES	Mill Plaza (12/1/21)
<b>Arborvitae, Eastern</b>	<a href="#"><i>Thuja occidentalis</i></a>	30 - 50	Moderate	Tolerates wide range of conditions; can also function as low hedge; prunes and tops well	9 (30Hx10W)
<b>Boxwood</b>	<i>Buxus</i>	3 - 5	Slow	<u>Shrub.</u>	N
<b>Cedar, Red</b>	<a href="#"><i>Juniperis virginiana</i></a>	50 - 75	Slow	High wildlife value.	12 <i>Burkii</i> (15Hx5W) "VT good"
<b>Cedar, Western Red</b>	<i>Thuja plicata</i>	Up to 65	Moderate	Moist, fertile, well-drained soil	N
<b>Euonymus</b>	<i>Euonymus</i>	3 - 6	Moderate/ Rapid	<u>Shrub.</u> Deciduous but dense	N
<b>Fir, Douglas</b>	<i>Pseudotsuga menziesii</i>	75 - 100	Moderate	High wildlife value. Don't mix with Colorado Spruce	N
<b>Forsythia</b>	<i>Forsythia</i>	5 - 8	Rapid	<u>Shrub.</u> Deciduous, wild form	N
<b>Hemlock, Canadian</b>	<i>Tsuga canadensis</i>	75 - 100	Slow/ Moderate	Needs high moisture; low salt tolerance	N
<b>Juniper</b>	<i>Juniperus</i>	3 - 10	Rapid	<u>Shrub.</u> Many varieties.	SEE ABOVE
<b>Lilac</b>	<i>Syringa</i>	3 - 10	Moderate	<u>Shrub.</u> Deciduous.	N
<b>Pine, Austrian (Black Pine)</b>	<i>Pinus nigra</i>	20 - 40	Moderate	Tolerates salt & city conditions; susceptible to disease	N
<b>Pine, Eastern White</b>	<i>Pinus strobus</i>	75 - 100	Moderate	Prefers acid soil. High wildlife value.	N
<b>Pine, Japanese Black</b>	<i>Pinus thurgiana</i>	60 - 80	Moderate	Tolerates salt	N
<b>Pine, Red</b>	<i>Pinus resinosa</i>	50 - 100	Moderate	Tolerates droughty conditions.	N
<b>Pine, Scotch</b>	<i>Pinus sylvestris</i>	30 - 60	Rapid/ Moderate	Prefers acid soils; tolerates droughty conditions.	N
<b>Privet</b>	<i>Ligustrum</i>	6 - 12	Rapid	<u>Shrub.</u> select evergreen, noninvasive variety	N
<b>Spirea</b>	<i>Spiraea</i>	2 - 6	Moderate/ Rapid	<u>Shrub.</u> Deciduous but the brush is dense	N
<b>Spruce, Colorado</b>	<i>Picea pungens</i>	75 - 100	Slow	Prefers acid soil. Don't mix with Douglas Fir	N
<b>Spruce, Norway</b>	<a href="#"><i>Picea abies</i></a>	50 - 75	Moderate	Many cultivars available; attractive form	7 (25Hx20W)
<b>Spruce, White</b>	<i>Picea glauca</i>	50 - 75	Slow	Prefers acid soil.	N
<b>Viburnum</b>	<i>Viburnum</i>	5 - 8	Moderate/ Rapid	<u>Shrub.</u> Deciduous	SEE ABOVE
<b>Yew</b>	<i>Taxus</i>	3 - 8	Slow	<u>Shrub.</u>	N
<b>ADD: Balsam Fir var. Columnaris'</b>	<i>Abies balsamea</i> 'Columnaris'				3 (35Hx15W) [not at MOBOT]

**Addition by Robin Mower: These shrubs are not shown in Appendix B**

**SHRUBS shown on the December 1, 2021 “RESTORATION PLAN”**

*(for the 75-foot wetland upland buffer strip to College Brook; see lower left portion of Sheet C-702) | Data is not provided by Colonial Durham Associates; all species shown require moisture (so appropriately sited) but are not tolerant of drought, and 3 species are poorly tolerant of salt (“salinity tolerance: low”)*

COMMON NAME	LATIN NAME	HEIGHT (in feet)	GROWTH RATE	CULTURAL AND USE NOTES	Mill Plaza (12/1/21)
<b>American hazelnut</b>	<a href="#">Corylus Americana</a>	10–16’ x 8–13’ W shrub		Susceptible to Eastern filbert blight. <a href="#">[MOBOT]</a>   Salinity tolerance: none <a href="#">[USDA]</a>	restoration plan
<b>Witch hazel, American witchhazel</b>	<a href="#">Hamamelis virginiana</a>	15–20’ H x 15–20’ W shrub		Best flowering in full sun. Prefers moist, acidic, organically rich soils. Tolerates heavy clay soils. <a href="#">[MOBOT]</a>   Salinity tolerance: none <a href="#">[USDA]</a>	restoration plan
<b>Black chokeberry</b>	<a href="#">Photinia melanocarpa</a> [aka, <a href="#">Aronia melanocarpa</a> ]	3 to 12’ H shrub		...grows well in full sunlight, but is moderately tolerant of shade. ...It is not drought-tolerant. <a href="#">[USDA / NRCS]</a> [PHOTINIA is outdated name; <a href="#">now referred to as ARONIA</a> ]   browsed by deer   <a href="#">Salt-tolerant Species</a> (Greenbelt Plant Center, NYC)	restoration plan
<b>Gray dogwood</b>	<a href="#">Cornus racemosa</a>	info varies: 6 ft; 10 to 15’ H x 10 to 15’ W shrub   4 to 10 ft high as a shrub and up to 27 ft tall as a small tree		frequently planted for its showy flowers and fruits and colorful fall foliage...spreads rapidly by growing suckers... will also serve to control erosion near ponds or embankments. <a href="#">[NC Extension]</a>   Can be particularly useful because of its ability to grow in poor soils. <a href="#">[MOBOT]</a>   Its small white berries grow on short red stems that remain most of the winter providing contrasting color against the snow. An excellent shrub for a visual screen or landscape border. Grey stems with auburn colored fall leaves. Not a preferred deer browse. Height up to 8 ft. <a href="#">[UWisconsin]</a>   ...thickly branched, slow growing dogwood seldom more than 6 feet high at maturity.   Salinity tolerance: none <a href="#">[USDA]</a> and <a href="#">UMaine Coop Ext]</a>	restoration plan