

Sketch No.	SKCE-A
Reference Drawing	-

Job #:	17211.00
Drawn by:	SM
Scale:	NTS
Date:	5/28/20

Project: ARLINGTON HIGH SCHOOL

Title: RAIN GARDEN SKETCH

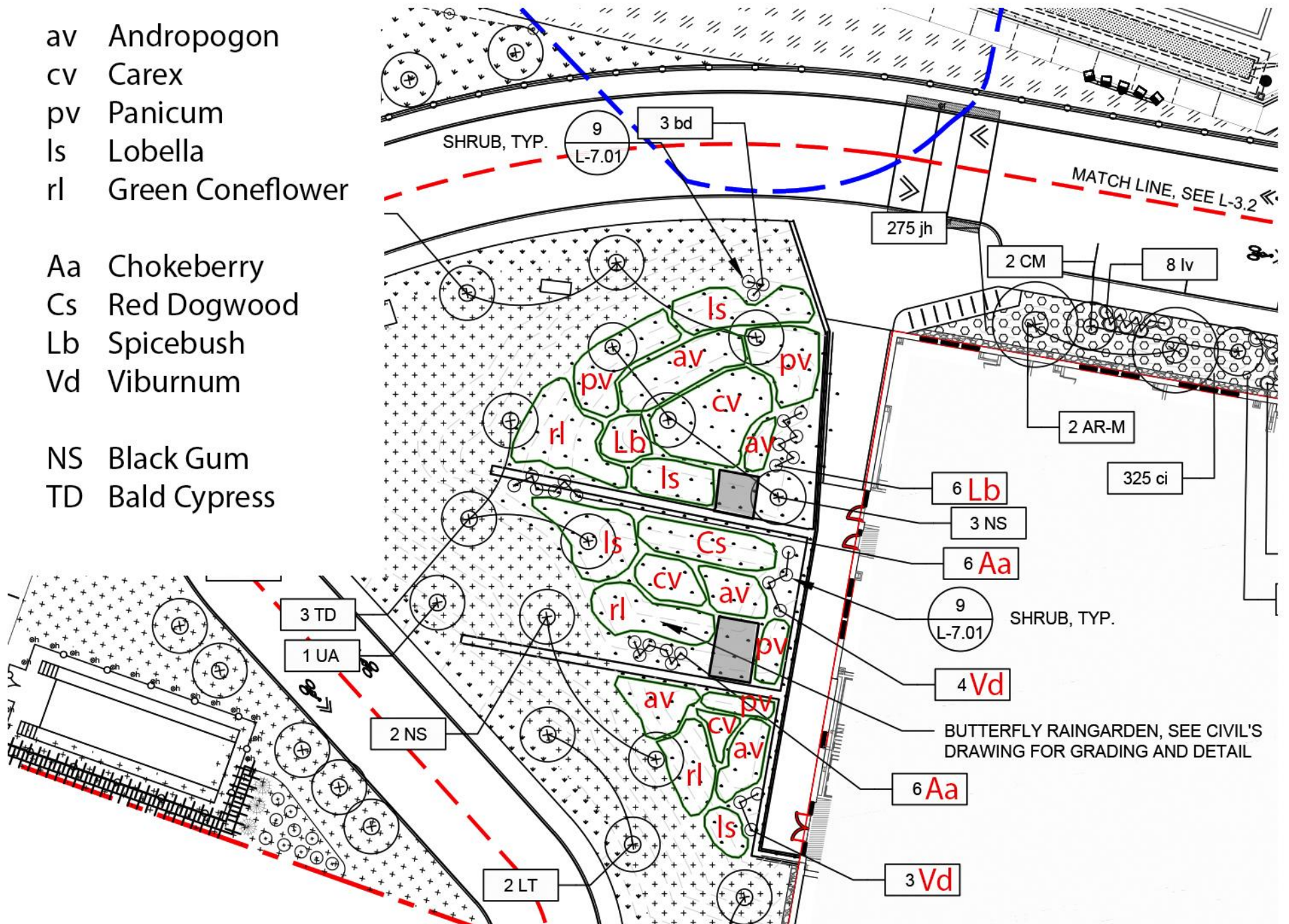
Samiotes Consultants Inc.
Civil Engineers + Land Surveyors
20 A Street
Framingham, MA 01701
T 508.877.6688
F 508.877.8349
www.samiotes.com



av Andropogon
 cv Carex
 pv Panicum
 ls Lobelia
 rl Green Coneflower

Aa Chokeberry
 Cs Red Dogwood
 Lb Spicebush
 Vd Viburnum

NS Black Gum
 TD Bald Cypress



ARLINGTON HIGH SCHOOL
 Arlington, MA

RAIN GARDEN PLANTING SKETCH

Plant Species Suitable for Use in Bioretention - Herbaceous Species														
Species	Moisture Regime		Tolerance						Morphology			General Characteristics		Comments
Scientific Name Common Name	Indicator Status	Habitat	Ponding (days)	Salt	Oil/Grease	Metals	Insects/Disease	Exposure	Form	Height	Root System	Native	Wildlife	
<i>Agrostis alba</i> redtop	FAC	Mesic-Xeric	1-2	H	-	H	H	Shade	Grass	2-3'	Fibrous Shallow	Yes	High	-
<i>Andropogon gerardi</i> bluejoint	FAC	Dry Mesic-Mesic	1-2	-	-	-	-	Sun	Grass	2-3'	Fibrous Shallow	Yes	High	-
<i>Andropogon virginicus</i> broomsedge	-	Wet meadow	1-2	L	-			Full sun	Grass	1-3'		Yes	High	Tolerant of fluctuating water levels and drought.
<i>Carex vulpinoidea</i> fox sedge	OBL	Freshwater marsh	2-4	L	-			Sun to partial sun	Grass	2-3.5'	Rhizome	Yes	High	-
<i>Chelone glabra</i>														
<i>Deschampsia caespitosa</i> tufted hairgrass	FACW	Mesic to wet Mesic	2-4	H	-	H	H	Sun	Grass	2-3'	Fibrous Shallow	Yes	High	May become invasive.
<i>Glyceria striata</i> fowl mannagrass, nerved mannagrass	OBL	Freshwater marsh, seeps	1-2	L	-			Partial shade to full shade	Grass	2-4'	Rhizome	Yes	High	-
<i>Hedera helix</i> English Ivy	FACU	Mesic	1-2	-	-	-	H	Sun	Evergreen ground cover	-	Fibrous Shallow	No	Low	-
<i>Hibiscus palustris</i>														
<i>Iris kaempferi</i>														

H High Tolerance

M Medium Tolerance

L Low Tolerance

FACU

FAC

FACW

OBL

Facultative Upland - Usually occur in non-wetlands, however, occasionally found in wetlands.

Facultative - Equally likely to occur in wetlands and non-wetlands.

Facultative Wetland - Usually occur in wetlands, however, occasionally found in non-wetlands.

Obligate Wetland - Occur almost always in wetlands

**Adapted from the Prince George's County Design Manual &
the Center for Watershed Protection for the use of bioretention in Stormwater Management**

Plant Species Suitable for Use in Bioretention - Herbaceous Species														
Species	Moisture Regime		Tolerance						Morphology			General Characteristics		Comments
Scientific Name Common Name	Indicator Status	Habitat	Ponding (days)	Salt	Oil/Grease	Metals	Insects/Disease	Exposure	Form	Height	Root System	Native	Wildlife	
<i>Lobelia siphilitica</i>														
<i>Lotus Corniculatus</i> birdsfoot-trefoil	FAC	Mesic-Xeric	1-2	H	L	H	H	Sun	Grass	2-3'	Fibrous Shallow	Yes	High	Member of the legume family.
<i>Onoclea sensibilis</i> sensitive fern, beadfern	FACW							Shade		1-3.5'			H	
<i>Pachysandra terminalis</i> Japanese pachysandra	FACU	Mesic	1-2	-	-	-	M	Shade	Evergreen ground cover	-	Fibrous Shallow	No	Low	-
<i>Panicum virgatum</i> switch grass	FAC to FACU	Mesic	2-4	H	-	-	H	Sun or Shade	Grass	4-5'	Fibrous Shallow	Yes	High	Can spread fast and reach height of 6'
<i>Vinca major</i> large periwinkle	FACU	Mesic	1-2	-	-	-	H	Shade	Evergreen ground cover	-	Fibrous Shallow	No	Low	Sensitive to soil compaction and pH changes.
<i>Vinca minor</i> common periwinkle	FACU	Mesic	1-2	-	-	-	H	Shade	Evergreen ground cover	-	Fibrous Shallow	No	Low	-
Indian grass														
Little bluestem														
Deer tongue														
Green coneflower														

H High Tolerance
M Medium Tolerance
L Low Tolerance

FACU Facultative Upland - Usually occur in non-wetlands, however, occasionally found in wetlands.
FAC Facultative - Equally likely to occur in wetlands and non-wetlands.
FACW Facultative Wetland - Usually occur in wetlands, however, occasionally found in non-wetlands.
OBL Obligate Wetland - Occur almost always in wetlands

**Adapted from the Prince George's County Design Manual &
the Center for Watershed Protection for the use of bioretention in Stormwater Management**

Plant Species Suitable for Use in Bioretention - Herbaceous Species														
Species	Moisture Regime		Tolerance						Morphology			General Characteristics		Comments
Scientific Name Common Name	Indicator Status	Habitat	Ponding (days)	Salt	Oil/Grease	Metals	Insects/Disease	Exposure	Form	Height	Root System	Native	Wildlife	
<i>Aronia arbutifolia</i> (<i>Pyrus arbutifolia</i>) red chokeberry	FACW	Mesic	1-2	H	—	H	M	Sun to partial sun	Deciduous shrub	6-12'	—	Yes	High	Good bank stabilizer. Tolerates drought.
<i>Clethra alnifolia</i> sweet pepperbush	FAC	Mesic to wet Mesic	2-4	H	—	—	H	Sun to partial sun	Ovoid shrub	6-12'	Shallow	Yes	Med	Coastal plain species.
<i>Cornus Stolonifera</i> (<i>Cornus sericea</i>) red osier dogwood	FACW	Mesic-Hydric	2-4	H	H	H	M	Sun or shade	Arching, spreading shrub	8-10'	Shallow	Yes	High	Needs more consistent moisture levels.
<i>Cornus amomum</i> silky dogwood	FAC	Mesic	1-2	L	—	—	M	Sun to partial sun	Broad-leaved	6-12'	—	Yes	High	Good bank stabilizer
<i>Euonymus europaeus</i> spindle-tree	FAC	Mesic	1-2	M	M	M	M	Sun to partial sun	Upright dense oval shrub	10-12'	Shallow	No	No	—
<i>Hamamelis virginiana</i> witch hazel	FAC	Mesic	2-4	M	M	M	M	Sun or shade	Vase-like compact shrub	4-6'	Shallow	Yes	Low	—
<i>Hypericum densiflorum</i> common St. John's wort	FAC	Mesic	2-4	H	M	M	H	Sun	Ovoid shrub	3-6'	Shallow	Yes	Med	—
<i>Ilex glabra</i> inkberry	FACW	Mesic to wet Mesic	2-4	H	H	—	H	Sun to partial sun	Upright dense shrub	6-12'	Shallow	Yes	High	Coastal plain species.
<i>Ilex verticillata</i> winterberry	FACW	Mesic to wet Mesic	2-4	L	M	—	H	Sun to partial sun	Spreading shrub	6-12'	Shallow	Yes	High	—

H High Tolerance
M Medium Tolerance
L Low Tolerance

FACU Facultative Upland - Usually occur in non-wetlands, however, occasionally found in wetlands.
FAC Facultative - Equally likely to occur in non-wetlands and wetlands.
FACW Facultative Wetland - Usually occur in wetlands, however, occasionally found in non-wetlands.
OBL Obligate Wetland - Almost always occur in wetlands.

**Adapted from the Prince George's County Design Manual &
the Center for Watershed Protection for the use of bioretention in Stormwater Management**

Plant Species Suitable for Use in Bioretention - Herbaceous Species														
Species	Moisture Regime		Tolerance						Morphology			General Characteristics		Comments
Scientific Name Common Name	Indicator Status	Habitat	Ponding (days)	Salt	Oil/Grease	Metals	Insects/Disease	Exposure	Form	Height	Root System	Native	Wildlife	
<i>Itea virginica</i> tassel-white, Virginia sweetspire	OBL	Mesic	1-2	M	-	-	M	Sun or shade	Broad-leaved, deciduous shrub	6-12'	-	Yes	Low	-
<i>Juniperus communis</i> "compressa" common juniper	FAC	Dry Mesic-Mesic	1-2	M	H	H	M-H	Sun	Mounded shrub	3-6'	Deep taproot	No	High	Evergreen
<i>Juniperus horizontalis</i> "Bar Harbor" creeping juniper	FAC	Dry Mesic-Mesic	1-2	M	H	H	M-H	Sun	Matted shrub	0-3'	Deep taproot	No	High	Evergreen
<i>Lindera benzoin</i> spicebush	FACW	Mesic to wet Mesic	2-4	H	-	-	H	Sun	Upright shrub	6-12'	Deep	Yes	High	-
<i>Myrica pennsylvanica</i> bayberry	FAC	Mesic	2-4	H	M	M	H	Sun to partial sun	Rounded, compact shrub	6-8'	Shallow	Yes	High	Coastal plain species.
<i>Physocarpus opulifolius</i> ninebark	FAC	Dry Mesic to wet Mesic	2-4	M	-	-	H	Sun	Upright shrub	6-12'	Shallow	Yes	Med	May be difficult to locate.
<i>Viburnum cassinoides</i> northern wild raisin	FACW	Mesic	2-4	H	H	H	H	Sun to partial sun	Rounded, compacted shrub	6-8'	Shallow	Yes	High	-
<i>Viburnum dentatum</i> arrow-wood	FAC	Mesic to wet	2-4	H	H	H	H	Sun to partial sun	Upright, multi-stemmed shrub	8-10'	Shallow	Yes	High	-
<i>Viburnum lentago</i> nannyberry	FAC	Mesic	2-4	H	H	H	H	Sun to partial sun	Upright, multi-stemmed shrub	8-10'	Shallow	Yes	High	-

H High Tolerance

M Medium Tolerance

L Low Tolerance

FACU

FAC

FACW

OBL

Facultative Upland - Usually occur in non-wetlands, however, occasionally found in wetlands.

Facultative - Equally likely to occur in non-wetlands and wetlands.

Facultative Wetland - Usually occur in wetlands, however, occasionally found in non-wetlands.

Obligate Wetland - Almost always occur in wetlands.

**Adapted from the Prince George's County Design Manual &
the Center for Watershed Protection for the use of bioretention in Stormwater Management**

Plant Species Suitable for Use in Bioretention - Herbaceous Species														
Species	Moisture Regime		Tolerance						Morphology			General Characteristics		Comments
Scientific Name Common Name	Indicator Status	Habitat	Ponding (days)	Salt	Oil/Grease	Metals	Insect/Disease	Exposure	Form	Height	Root System	Native	Wildlife	
<i>Acer rubrum</i> red maple	FAC	Mesic-Hydric	4-6	H	H	H	H	Partial sun	Single to multi-stem tree	50-70'	Shallow	Yes	High	-
<i>Amelanchier canadensis</i> shadbush	FAC	Mesic	2-4	H	M	-	H	Partial sun	Single to multi-stem tree	35-50'	Shallow	Yes	High	Not recommended for full sun.
<i>Betula nigra</i> river birch	FACW	Mesic-Hydric	4-6	-	M	M	H	Partial sun	Single to multi-stem tree	50-75'	Shallow	Yes	High	Not susceptible to bronze birch borer.
<i>Betula populifolia</i> gray birch	FAC	Xeric-Hydric	4-6	H	H	M	H	Partial sun	Single to multi-stem tree	35-50'	Shallow to deep	No	High	Native to New England area.
<i>Fraxinus americana</i> white ash	FAC	Mesic	2-4	M	H	H	H	Sun	Large tree	50-80'	Deep	Yes	Low	-
<i>Fraxinus Pennsylvanica</i> green ash	FACW	Mesic	4-6	M	H	H	H	Partial sun	Large tree	40-65'	Shallow to deep	Yes	Low	-
<i>Ginkgo biloba</i> Maldenhair tree	FAC	Mesic	2-4	H	H	H	H	Sun	Large tree	50-80'	Shallow to deep	No	Low	Avoid female species-offensive odor from fruit.
<i>Gleditsia triacanthos</i> honeylocust	FAC	Mesic	2-4	H	M	-	M	Sun	Small caoped large tree	50-75'	Shallow to deep variable taproot	Yes	Low	Select thornless variety.
<i>Juniperus virginiana</i> eastern red cedar	FACU	Mesic-Xeric	2-4	H	H	-	H	Sun	Dense single stem tree	50-75'	Taproot	Yes	Very high	Evergreen
<i>Liquidambar styraciflua</i> sweet gum	FAC	Mesic	4-6	H	H	H	M	Sun	Large tree	50-70'	Deep taproot	Yes	High	Edge and perimeter; fruit is a maintenance problem.
<i>Nyssa sylvatica</i> black gum	FACW	Mesic-Hydric	4-6	H	H	H	H	Sun	Large tree	40-70'	Shallow to deep taproot	Yes	High	-

H High Tolerance
M Medium Tolerance
L Low Tolerance

FACU Facultative Upland - Usually occur in non-wetlands, however, occasionally found in wetlands.
FAC Facultative - Equally likely to occur in non-wetlands and wetlands.
FACW Facultative Wetland - Usually occur in wetlands, however, occasionally found in non-wetlands.
OBL Obligate Wetland - Almost always occur in wetlands.

**Adapted from the Prince George's County Design Manual &
the Center for Watershed Protection for the use of bioretention in Stormwater Management**

Plant Species Suitable for Use in Bioretention - Herbaceous Species

Species	Moisture Regime		Tolerance						Morphology			General Characteristics		Comments
	Indicator Status	Habitat	Ponding (days)	Salt	Oil/Grease	Metals	Insects/Disease	Exposure	Form	Height	Root System	Native	Wildlife	
<i>Platanus acerifolia</i> London plane-tree	FACW	Mesic	2-4	H	—	—	M	Sun	Large tree	70-80'	Shallow	No	Low	Tree roots can heave sidewalks.
<i>Platanus occidentalis</i> sycamore	FACW	Mesic-Hydric	4-6	M	M	M	M	Sun	Large tree	70-80'	Shallow	Yes	Med	Edge and perimeter; fruit is a maintenance problem; tree is also prone to windthrow.
<i>Populus deltoides</i> eastern cottonwood	FAC	Xeric-Mesic	4-6	H	H	H	L	Sun	Large tree with spreading branches	75-100'	Shallow	Yes	High	Short lived.
<i>Quercus bicolor</i> Swamp white oak	FACW	Mesic to wet Mesic	4-6	H	—	H	H	Sun to partial sun	Large tree	75-100'	Shallow	Yes	High	One of the faster growing oaks.
<i>Quercus coccinea</i> scarlet oak	FAC	Mesic	1-2	H	M	M	M	Sun	Large tree	50-75'	Shallow to deep	Yes	High	—
<i>Quercus macrocarpa</i> bur oak	FAC	Mesic to wet Mesic	2-4	H	H	H	M	Sun	Large spreading tree	75-100"	Taproot	No	High	Native to Midwest.
<i>Quercus palustris</i> pin oak	FACW	Mesic-Hydric	4-6	H	H	H	M	Sun	Large tree	60-80'	Shallow to deep taproot	Yes	High	—
<i>Quercus phellos</i> willow oak	FACW	Mesic to wet Mesic	4-6	H	—	—	H	Sun	Large tree	55-75'	Shallow	Yes	High	Fast growing oak.
<i>Quercus rubra</i> red oak	FAC	Mesic	2-4	M	H	M	M	Sun to partial sun	Large spreading tree	60-80'	Deep taproot	Yes	High	—
<i>Quercus shumardii</i> Shumard's red oak	FAC	Mesic	2-4	H	H	H	M	Sun to partial sun	Large spreading tree	60-80'	Deep taproot	No	High	Native to Southeast.

H High Tolerance
M Medium Tolerance
L Low Tolerance

FACU Facultative Upland - Usually occur in non-wetlands, however, occasionally found in wetlands.
FAC Facultative - Equally likely to occur in non-wetlands and wetlands.
FACW Facultative Wetland - Usually occur in wetlands, however, occasionally found in non-wetlands.
OBL Obligate Wetland - Almost always occur in wetlands.

Adapted from the Prince George's County Design Manual & the Center for Watershed Protection for the use of bioretention in Stormwater Management

Plant Species Suitable for Use in Bioretention - Herbaceous Species														
Species		Moisture Regime		Tolerance					Morphology			General Characteristics		Comments
Scientific Name Common Name	Indicator Status	Habitat	Ponding (days)	Salt	Oil/Grease	Metals	Insects/Disease	Exposure	Form	Height	Root System	Native	Wildlife	
<i>Sophora japonica</i> Japanese pagoda tree	FAC	Mesic	1-2	M	M	—	M	Sun	Shade tree	40-70'	Shallow	No	Low	Fruit stains sidewalk.
<i>Taxodium distichum</i> bald cypress	FACW	Mesic-Hydric	4-6	—	—	M	H	Sun to partial sun	Typically single stem tree	75-100'	Shallow	Yes	Low	Not well documented for planting in urban areas.
<i>Thuja occidentalis</i> arborvitae	FACW	Mesic to wet Mesic	2-4	M	M	M	H	Sun to partial sun	Dense single stem tree	50-75'	Shallow	No	Low	Evergreen
<i>Zelkova serrata</i> Japanese zelkova	FACU	Mesic	1-2	M	M	—	H	Sun	Dense shade tree	60-70'	Shallow	No	Low	Branches can split easily in storms.

H High Tolerance
M Medium Tolerance
L Low Tolerance

FACU Facultative Upland - Usually occur in non-wetlands, however, occasionally found in wetlands.
FAC Facultative - Equally likely to occur in non-wetlands and wetlands.
FACW Facultative Wetland - Usually occur in wetlands, however, occasionally found in non-wetlands.
OBL Obligate Wetland - Almost always occur in wetlands.

**Adapted from the Prince George's County Design Manual &
the Center for Watershed Protection for the use of bioretention in Stormwater Management**