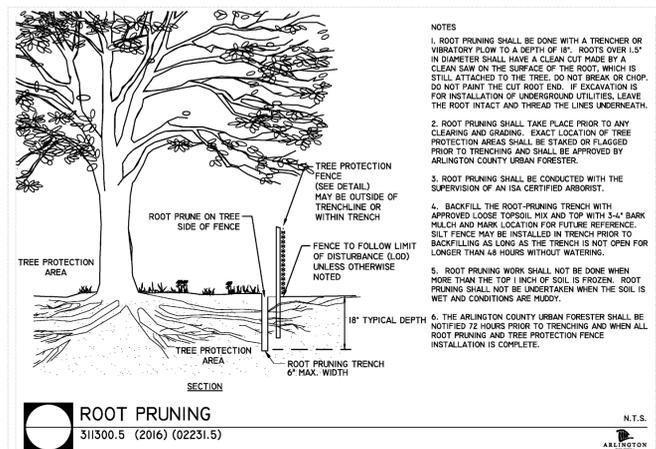
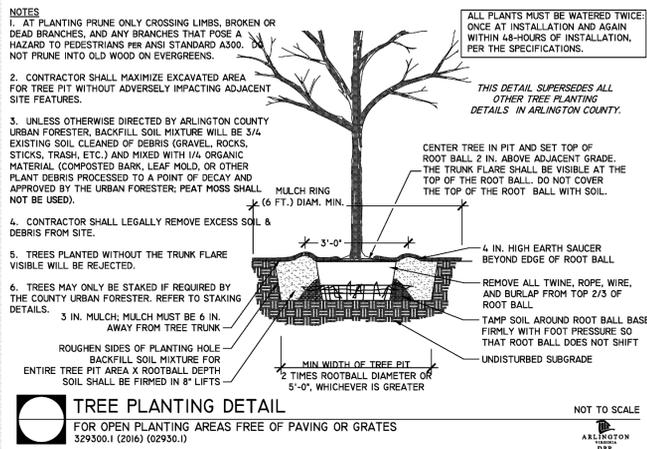
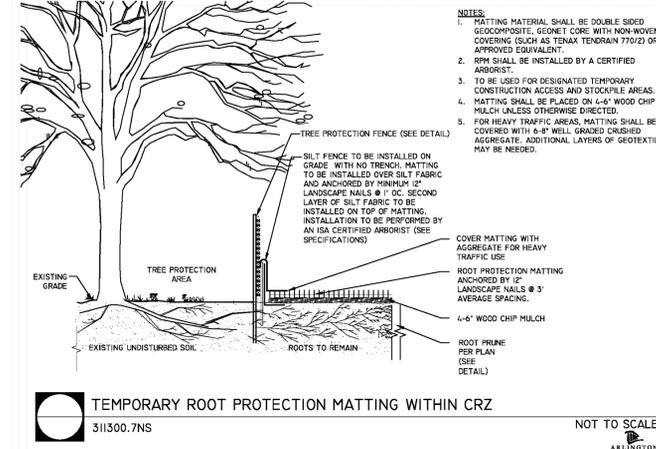
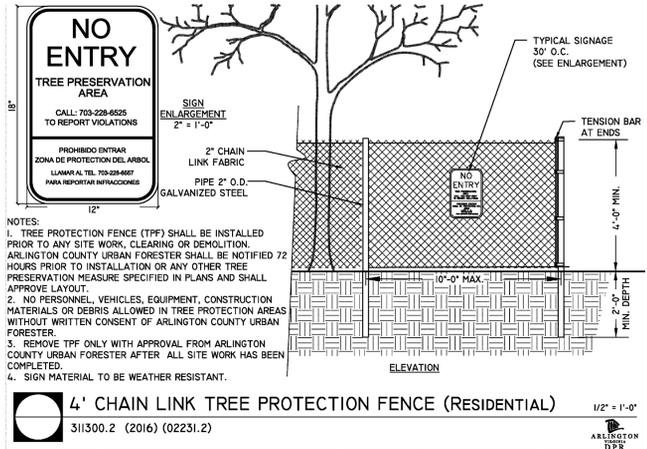


Table 9.4. Popular Native Plant Materials for Bioretention

Perennials/Herbaceous	Shrubs	Trees
Virginia Wild Rye ( <i>Elymus virginicus</i> )	Common Winterberry ( <i>Ilex verticillata</i> )	River Birch ( <i>Betula nigra</i> )
Redtop Grass ( <i>Agrostis alba</i> )	Inkberry ( <i>Ilex glabra</i> )	Red Maple ( <i>Acer rubrum</i> )
Swamp Milkweed ( <i>Asclepias incarnata</i> )	Sweet Pepperbush ( <i>Clethra alnifolia</i> )	Pin Oak ( <i>Quercus palustris</i> )
Switchgrass ( <i>Panicum virgatum</i> )	Wax Myrtle ( <i>Myrica cerifera</i> )	Willow Oak ( <i>Quercus phellos</i> )
Cardinal Flower ( <i>Lobelia cardinalis</i> )	Virginia Sweetstirpe ( <i>Itea virginica</i> )	Sweetgum ( <i>Liquidambar styraciflua</i> )
Common Three Square ( <i>Scirpus americanus</i> )	Swamp Azalea ( <i>Azalea viscosum</i> )	Black Willow ( <i>Salix nigra</i> )
Sensitive Fern ( <i>Onoclea sensibilis</i> )	Bulfinch Bush ( <i>Cephalanthus occidentalis</i> )	Grey Birch ( <i>Betula populifolia</i> )
Blue Flag ( <i>Iris versicolor</i> )	Black Haw ( <i>Viburnum prunifolium</i> )	Black Gum ( <i>Nyssa sylvatica</i> )
Woolgrass ( <i>Scirpus cyperinus</i> )	Indigo Bush ( <i>Amorpha fruticosa</i> )	Sycamore ( <i>Platanus occidentalis</i> )
Indian Grass ( <i>Sorghastrum nutans</i> )	Arrowwood ( <i>Viburnum dentatum</i> )	Green Ash ( <i>Fraxinus pennsylvanica</i> )
Marsh Marigold ( <i>Caltha palustris</i> )		Sweetbay Magnolia* ( <i>Magnolia virginiana</i> )
Joe Pye Weed ( <i>Eupatorium purpureum</i> )		Atlantic White Cedar ( <i>Chamaecyparis thyoides</i> )
Turk's cap lily ( <i>Lilium superbum</i> )		Bald Cypress* ( <i>Taxodium distichum</i> )
Bee Balm ( <i>Momarda didyma</i> )		Grey Dogwood ( <i>Cornus racemosa</i> )
Northern Sea Oats ( <i>Chasmanthium latifolium</i> )		Smooth Alder ( <i>Alnus serrulata</i> )
		Serviceberry ( <i>Amelanchier canadensis</i> )
		Redbud ( <i>Cercis canadensis</i> )
		Box Elder ( <i>Acer negundo</i> )
		Fringe Tree ( <i>Chionanthus virginicus</i> )

**Note:** Prior to selection, please consult bioretention plant lists for more detailed information regarding inundation, drought and salt tolerance for each species.  
\* most applicable to the coastal plain



Tree #	Botanical Name	Common Name	Size DBH (in)	Critical Root Zone (CRZ) Radius (ft)	Species Rating (%)	Condition %	Offsite or Shared	Removal	Tree Protection Fence	Root Prune	Root Matting	Hand Removal/ Selective Removal	Notes
Tree Survey Information Completed by Walter Phillips, Inc - Arborist Ben Schitter- ISA # MA-5385A # (18-086) 02/11/2019													
101	Prunus spp.	Ornamental Cherry	12"	12'	55%	66%		X					
102	Ulmus americana	American elm	13"	13'	53%	66%		X					
103	Cercis canadensis	Eastern redbud	16"	16'	73%	63%		X					
104	Amelanchier arborea	Downy serviceberry	12"	12'	80%	69%		X					
105	Cercis canadensis	Eastern redbud	12"	12'	73%	66%		X					
106	Lagerstroemia indica	Crape Myrtle	16"	16'	78%	69%		X					
107	Amelanchier arborea	Downy serviceberry	12"	12'	80%	66%	O		X				
108	Fraxinus pennsylvanica	Green ash	16"	16'	53%	63%	O		X				
109	Cornus florida	Flowering dogwood	5"	8'	60%	66%	O		X				
110	Cornus florida	Flowering dogwood	3"	8'	60%	66%	O		X				
111	Liriodendron tulipifera	Yellow-poplar	40"	40'	70%	63%	O		X	X			Twin
112	Fagus grandifolia	American beech	10"	10'	80%	66%	O		X	X			
113	Prunus spp.	Ornamental Cherry	13"	13'	55%	63%		X					
114	Carya spp.	Hickory	12"	12'	75%	72%	O		X	X			
115	Liriodendron tulipifera	Yellow-poplar	45"	45'	70%	66%		X					
116	Quercus alba	White oak	30"	30'	88%	63%		X					
117	Liriodendron tulipifera	Yellow-poplar	40"	40'	70%	63%		X					
118	Liriodendron tulipifera	Yellow-poplar	36"	36'	70%	66%		X					
119	Acer saccharinum	Silver maple	14"	14'	45%	56%		X					
120	Liriodendron tulipifera	Yellow-poplar	36"	36'	70%	66%		X					
121	Liriodendron tulipifera	Yellow-poplar	44"	44'	70%	66%		X	X				
122	Cornus florida	Flowering dogwood	3"	8'	60%	69%	O	X					
123	Cornus florida	Flowering dogwood	3"	8'	60%	69%	O	X					
124	Cornus florida	Flowering dogwood	4"	8'	60%	69%	O	X					
125	Liriodendron tulipifera	Yellow-poplar	36"	36'	70%	69%	S	X					
126	Juniperus virginiana	Eastern redcedar	5"	8'	75%	56%	O	X					
127	Liriodendron tulipifera	Yellow-poplar	30"	30'	70%	69%	O	X					
128	Quercus prinus	Chestnut oak	13"	13'	75%	66%		X					
129	Quercus rubra	Northern red oak	11"	11'	75%	63%		X					
130	Liriodendron tulipifera	Yellow-poplar	30"	30'	70%	63%		X					
131	Carya spp.	Hickory	12"	12'	75%	69%		X					
132	Prunus serotina	Black cherry	8"	8'	55%	50%		X					
133	Quercus rubra	Northern red oak	9"	9'	75%	50%		X					
134	Liriodendron tulipifera	Yellow-poplar	45"	45'	70%	66%	O	X					
135	Carya spp.	Hickory	7"	8'	75%	66%		X					
136	Liriodendron tulipifera	Yellow-poplar	28"	28'	70%	66%	O	X					
137	Liriodendron tulipifera	Yellow-poplar	30"	30'	70%	63%		X	X	X			
138	Liriodendron tulipifera	Yellow-poplar	28"	28'	70%	63%		X	X	X			
139	Liriodendron tulipifera	Yellow-poplar	28"	28'	70%	66%	O	X	X	X			
140	Juglans nigra	Black walnut	3"	8'	68%	66%		X	X	X			
141	Betula nigra	River birch	12"	12'	70%	63%	O	X					
142	Morus alba	White mulberry	10"	10'	30%	63%	O	X					

DBH = Diameter at Breast Height (measured 4.5 feet above ground)  
CRZ = Critical Root Zone = 1 foot radius per inch of tree diameter, trees over 30" DBH = 1.5 foot radius per inch of tree diameter  
CRZ values for trees with multiple stems were calculated based on methods outlined in the 9th edition of the Guide for Plant Appraisal, published by the L.S.A.  
Condition Ratings provided as percentages based on methods outlined in the 9th edition of the Guide for Plant Appraisal, published by the L.S.A.

- BEFORE ANY GRADING, DEMOLITION, OR OTHER DISTURBANCE, TREE PROTECTION NEEDS TO BE INSTALLED PER PLAN, AND INSPECTED BY AN ARLINGTON COUNTY PARKS AND RECREATION URBAN FORESTER. EROSION AND SEDIMENT CONTROLS ARE INSPECTED BY THE DEPARTMENT OF ENVIRONMENTAL SERVICES.
- PLANTS SHALL BE FURNISHED AND INSTALLED AS INDICATED, INCLUDING ALL PLANTS, MATERIALS, AND EQUIPMENT.
- PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS, WELL-DEVELOPED DENSELY FOLIATED BRANCHES, AND VIGOROUS ROOT SYSTEMS; AND BE FREE FROM DEFECTS AND INJURIES.
- PLANTS SHALL BE PLANTED ON THE DAY OF DELIVERY IF/WHEN PRACTICAL. IN THE EVENT THAT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT STOCK NOT PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE-DAY PERIOD AFTER DELIVERY. ANY PLANTS NOT INSTALLED DURING THIS PERIOD SHALL BE REJECTED, UNLESS OWNER AND CONTRACTOR PROVIDE OTHERWISE BY WRITTEN AGREEMENT. ALL PLANTS KEPT ON SITE FOR ANY PERIOD OF TIME SHOULD BE WATERED AND CARED FOR USING ANSI A300 STANDARDS.
- PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE ROOT BALL ONLY.
- PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOP SOIL THAT IS IN MUDDY OR FROZEN CONDITION. LAWNS, TREES AND SHRUBS SHALL BE INSTALLED BETWEEN 03/15 AND 06/15 OR BETWEEN 09/15 AND 12/01. IF A PROJECT COMPLETION IS OUTSIDE OF THIS PLANTING PERIOD, CONTACT THE ARLINGTON COUNTY URBAN FORESTER TO OBTAIN A DEFERRAL OR APPROVAL FOR PLANTING OUT OF SEASON.
- NO PLANT, EXCEPT GROUNDCOVERS, SHALL BE PLANTED WITHIN TWO FEET OF A SIDEWALK.
- TREES AND SHRUBS SHALL BE PLANTED IN HOLES TWO TO THREE TIMES AS WIDE AND TO THE DEPTH OF THE ROOT BALL.
- PLANTS SHALL BE PLANTED IN IN SITU SOIL THAT IS THOROUGHLY WATERED.
- SET ALL PLANTS PLUMB AND STRAIGHT SET AT SUCH LEVEL THAT NORMAL OR NATURAL RELATIONSHIP BETWEEN THE PLANT AND THE GROUND SURFACE WILL BE ESTABLISHED. LOCATE THE PLANT IN THE CENTER OF THE PIT.
- INJURED ROOTS SHALL BE PRUNED TO CLEAN ENDS BEFORE PLANTING WITH CLEAN, SHARP TOOLS. THE LEADER OF TREES SHALL NOT BE CUT BACK.
- PRESERVED AND PLANTED TREES MUST BE INSPECTED AND APPROVED BY A DEPARTMENT OF PARKS AND RECREATION URBAN FORESTER.
- ALL DISTURBED AREAS SHALL BE TREATED WITH 4" TOP SOIL OR COMPOST AND SEEDED IN ACCORDANCE WITH PERMANENT STABILIZATION METHODS INDICATED ON SOIL EROSION AND SEDIMENT CONTROL SHEET AND/OR LANDSCAPE PLAN.

**TREE CONSERVATION NOTES AND DETAILS**

**WALTER L. PHILLIPS INCORPORATED** ESTABLISHED 1945

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Landscape Architects • Arborists  
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**ARLINGTON, VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL SERVICES**

4219/4221 LORCOM LANE  
THE PROPERTY OF R.A. PHILLIPS  
GRADING PLAN  
4219/4221 LORCOM LANE, ARLINGTON, VIRGINIA 22207

SCALE: NONE DRAWN CR CHECKED TP/BKW  
SUBMITTED DATE 03/05/2019  
05/07/2019  
06/24/2019  
07/17/2019

APPROVED DATE  
DIRECTOR OF ENVIRONMENTAL SERVICES

SHEET: C-1202