



The Town of Vienna

Tree Preservation and Planting Specifications Manual

The Town of Vienna Tree Protection, Preservation and Replacement Guide

The Town of Vienna recently celebrated another year as a “Tree City USA”. This distinction given to us by the Arbor Day Foundation acknowledges our commitment to urban forestry. Our commitment to our urban forest is solidified and strengthened by our protection of the residential tree canopy. The Town’s various departments work hard to create relationships with its citizens. In an effort to build upon those relationships this publication was created by a partnership between Town of Vienna Departments and the Community Enhancement Commission. The purpose of this publication is to serve as a guide for builders and homeowners, in conjunction with Town Code 18-251 and 18-252*, effective May 22, 2014, to protect and preserve the tree canopy of our community.

*Minimum tree canopy provided must be twenty percent at a maturity period of 20 years.

For questions and concerns please contact Sam Lilly, Urban Arborist - Town of Vienna Parks and Recreation Department (703)-255-6358 or slilly@viennava.gov

Created May 2014

Updated July 26, 2018

Landscape Plan Resources

LANDSCAPE PLAN/TREE PROTECTION CHECKLIST

The following is a checklist of items which need to be shown on a separate landscape plan*:

1. Project title listing project name, owner name and name of firm or individual preparing the plan.
2. Scaled base plan using current information from the site development plan depicting existing and proposed grades.
3. North arrow.
4. Graphic and Written Scale.
5. Graphic legend depicting existing vegetation and proposed conditions.
6. Location of all improvements shown on the site development plan.
7. Location of all existing and proposed utilities and sewers.
8. Location of all proposed sediment control devices.
9. Graphic depiction of all existing trees including location, types and size. All deciduous and evergreen trees of 4" DBH and greater, and all multi-stemmed trees 8' height or taller must be shown. All Town trees of 1.5" caliper and greater must be shown.
10. Graphic depiction of the accurate drip line canopy of all existing trees showing the extent of the critical root zone.
11. Clear designation and tabulation of all existing trees to be saved or preserved, removed or impacted, as well as any additional tree plantings required to meet the 20% lot coverage requirement.**
12. Proposed tree protection and preservation measures for all saved and impacted trees depicting, if necessary, root-pruning lines, protective devices and procedures including but not limited to fencing, boring, aeration, temporary special paving areas, retaining walls, etc.
13. All invasive plants and vines within tree save areas shall be controlled and removed from trees. This shall be noted on Tree Preservation Sheet.
14. General tree protection notes as per Town of Vienna standards.
15. Tree planting details as per Town of Vienna standards.
16. Certification (signed and sealed) by a licensed Landscape Architect in the Commonwealth of Virginia or ISA Certified Arborist.

* The Office of the Urban Arborist (703-255-6358) will review all landscape and tree preservation plans, and verify canopy coverage calculations.

**A 25% canopy coverage credit will be given for preserving existing canopy. A 25% coverage credit will be given for installation of an approved rain garden. (A 200 sq. ft. rain garden will contribute 50 sq. ft. toward canopy coverage)

Town of Vienna TREE PROTECTION PLAN NOTES

The following tree protection practices are to be followed. The information listed below is required on the landscape plan:

1. A pre-construction meeting shall be held on-site to explain protection measures to operators, construction supervisors, or contractor's representatives with the Town Arborist or their representative.
2. Contractor on the site shall stake clearing limits in order to facilitate location for trenching and fencing installation for tree protection.
3. No clearing or grading shall begin in areas where tree preservation measures have not been completed.
4. The use of heavy equipment is strictly prohibited within tree preservation areas to include the removal of unwanted trees. Structures, pads etc. shall be removed by hand.
5. The sequence of tree preservation measures, if required, shall be as follows:
 - a. Root pruning trenching;
 - b. Tree protection fencing;
 - c. Tree pruning and chemical treatment;
 - d. Aeration systems installed;
6. The preceding measures shall be directed in the field by the construction supervisor.
7. Tree protection fencing shall be maintained by the contractor for the duration of construction. No alteration shall occur without prior approval by a town representative.
8. Critical root zone shall be defined as 1.5' radius per 1" of DBH. DBH (Diameter at Breast Height) shall be measured at a height of 4.5' from highest point of ground at base of trunk.
9. The protection provided shall consist of fencing around the tree to the drip line and the areas enclosed kept free of all soil, equipment, and construction material storage, which includes final grading and landscaping efforts.
10. Root Pruning Requirements: Unless otherwise instructed by the Office of the Head Arborist, root pruning MUST be performed when the limits of disturbance fall within critical root zone of trees to be saved. Roots shall be pruned to a minimum depth of 12" at or before the LOD.
11. Trees that are determined by the Town Arborist to be in "Poor" condition shall not count towards canopy coverage calculations.
12. All pruning shall be done in accordance with the current American National Standards Institute (ANSI) A300 Pruning Standards. Climbing or tree spikes shall not be used to climb live trees unless the tree is being removed.

New Plantings

13. Newly planted trees shall be healthy and vigorous, and meet all ANSI Standards. All newly installed trees that are required by the Tree Conservation Plan, which in the opinion of the Town Arborist are dead or are not healthy, shall be replaced by the contractor.
14. New plantings shall be a minimum of 2.0"-2.5" caliper for deciduous trees and 6'-8' height for evergreens.
15. -A minimum of **TWO** different tree species will be required when planting 3-5 new trees on site.
-A minimum of **THREE** different tree species will be required for 6-9 new trees installed on site.
-A minimum of **FOUR** different tree species will be required for 10+ new tree plantings on site.
16. -"Large Shade Trees" shall be installed no closer than 30' on-center.
-"Medium Shade Trees" and "Medium Evergreen Trees" shall be installed no closer than 20' o.c.
-"Small Ornamental and Small Evergreen Trees" shall be installed no closer than 15' o.c.
17. Planting shall be done only within the following listed dates. Any tree planted outside of these planting seasons will be rejected by the Town Arborist upon inspection :
 - Spring Planting Season:** March 15 – May 30
 - Fall Planting Season:** September 15 - November 30
18. If not completed during the accepted planting seasons, a **Planting Season Waiver** will be required for trees/shrubs that must be installed for canopy coverage or other requirements as specified on the approved plans for final occupancy. Consideration and approval of a planting season waiver shall be at the discretion of the Head Arborist, or his/her designee.
19. If a **Planting Season Waiver** is granted, the applicant shall post a bond (cash or surety) covering any tree plantings required for canopy coverage for the site.

*To compute the bond for tree plantings the applicant shall use the latest Town of Vienna Tree Preservation and Planting Specifications Manual to compute cost for proposed trees for canopy coverage.

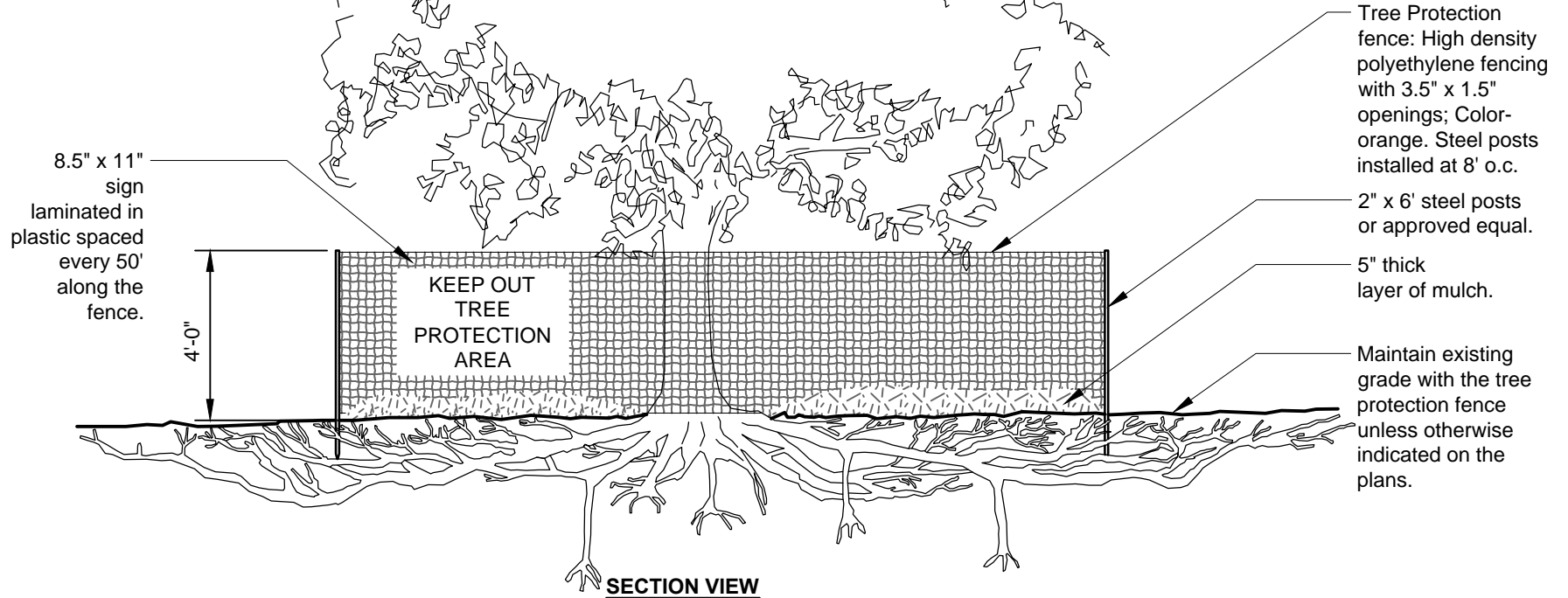
*If after the following planting season, required tree plantings are not provided, the owner / applicant will be notified and the entire bond will be forfeited to the Town; the Town will use the bond money to complete required tree plantings. Any additional charges for completing the plantings shall be borne by the applicant.

*Bond will be released upon a passing inspection by the Town Arborist.

Crown drip line or other limit of Tree Protection area. See tree preservation plan for fence alignment.

Notes:

- 1- See specifications for additional tree protection requirements.
- 2- If there is no existing irrigation, see specifications for watering requirements.
- 3- No pruning shall be performed except by approved arborist.
- 4- No equipment shall operate inside the protective fencing including during fence installation and removal.
- 5- See site preparation plan for any modifications with the Tree Protection area.



TREE PROTECTION

Central leader. (See crown observations detail).

Trunk caliper shall meet ANSI Z60 current edition for root ball size.

Root ball modified as required.

Round-topped soil berm 4" high x 8" wide above root ball surface shall be constructed around the root ball. Berm shall begin at root ball periphery.

Existing soil.

Slope sides of loosened soil.

Bottom of root ball rests on existing or recompacted soil.

3x widest dimension of root ball.

SECTION VIEW

Top of root ball shall be flush with finished grade.

Prior to mulching, lightly tamp soil around the root ball in 6" lifts to brace tree. Do not over compact. When the planting hole has been backfilled, pour water around the root ball to settle the soil.

Loosened soil. Dig and turn the soil to reduce compaction to the area and depth shown.

4" layer of mulch. No more than 1" of mulch on top of root ball. (See specifications for mulch).

Finished grade.

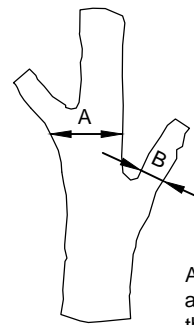
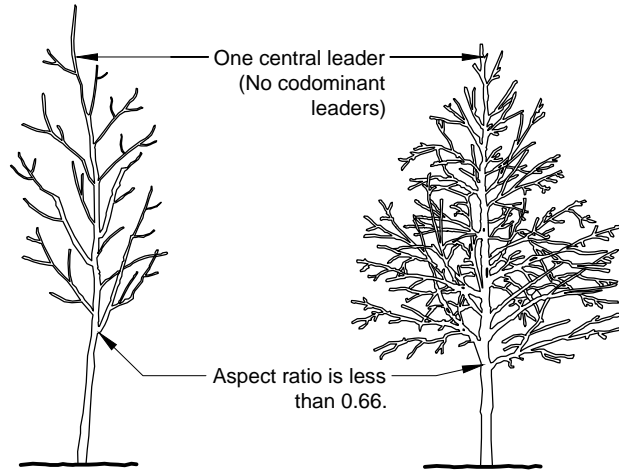
Notes:
1- Trees shall be of quality prescribed in crown observations and root observations details and specifications.

2- See specifications for further requirements related to this detail.

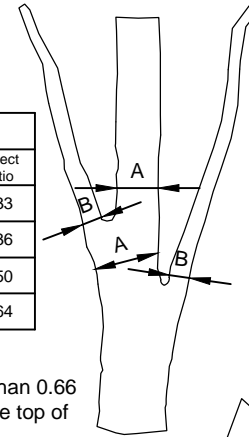


TREE w/ BERM (EXISTING SOIL NOT MODIFIED)

ACCEPTABLE

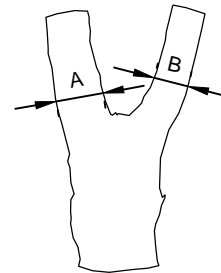
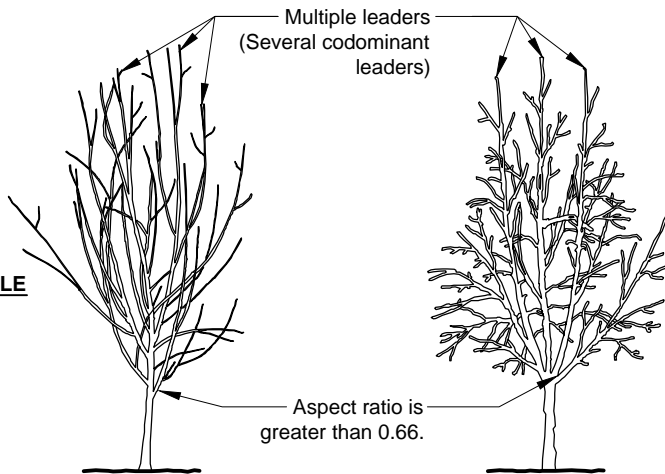


Example		
A	B	Aspect Ratio
1.50"	0.50"	0.33
2.50"	0.90"	0.36
2.0"	1.00"	0.50
2.50"	1.60"	0.64

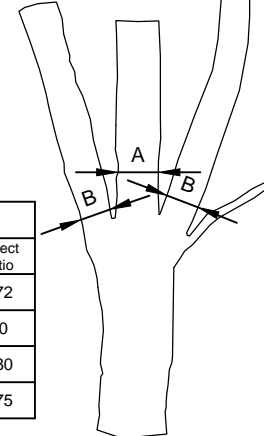


Aspect ratio of B:A less than 0.66 as measured 1" above the top of the branch union.

REJECTABLE



Example		
A	B	Aspect Ratio
2.50"	1.80"	0.72
2.0"	2.0"	1.0
2.50"	2.0"	0.80
4.0"	3.0"	0.75



Aspect ratio of B:A greater than or equal to 0.66 as measured 1" above the top of the branch union.

Notes:

1- Aspect ratio shall be less than 0.66 on all branch unions. Aspect ratio is the diameter of branch (B) divided by the diameter of the trunk (A) as measured 1" above the top of the branch union.

2- Any tree not meeting the crown observations detail may be rejected.

P-X

CROWN OBSERVATIONS - HIGH BRANCHED

URBAN TREE FOUNDATION © 2014
OPEN SOURCE FREE TO USE

APPROVED VIENNA TREE LIST

*These numbers have been developed by the Virginia Nursery & Landscape Association, in conjunction with the Virginia Tech Urban Forestry Department

Large Shade and Evergreen Trees: Crown Coverage Allowance (CCA) = 300 sq. ft.

Botanical Name	Common Name	Cultivar/Notes
<i>Acer rubrum</i>	Red Maple	'October Glory', 'Red Sunset'
<i>Acer saccharum</i>	Sugar Maple	'Bonfire', 'Commemoration', 'Legacy'
<i>Carya spp.</i>	Hickory species	Bitternut, Mockernut, Pignut, and Shagbark
<i>Celtis occidentalis</i>	Hackberry	
<i>Fagus grandifolia</i>	American Beech	
<i>Juglans nigra</i>	Black Walnut	
<i>Liquidambar styraciflua</i>	Sweetgum	'Rotundiflora'
<i>Liriodendron tulipifera</i>	Tuliptree	
<i>Pinus echinata</i>	Shortleaf Pine	
<i>Pinus strobus</i>	Eastern White Pine	
<i>Platanus occidentalis</i>	Sycamore	
<i>Populus deltoides</i>	Eastern Cottonwood	
<i>Quercus alba</i>	White Oak	
<i>Q. rubra</i>	Northern Red Oak	
<i>Q. coccinea</i>	Scarlet Oak	
<i>Q. phellos</i>	Willow Oak	
<i>Tilia americana</i>	American Linden	
<i>Ulmus americana</i>	American Elm	'Princeton', 'Liberty', 'Valley Forge', 'Delaware #2', 'New Harmony', 'Washington'

Medium Shade and Evergreen Trees: Crown coverage Allowance (CCA) = 200 sq.

Botanical Name	Common Name	Cultivar/Notes
<i>Betula nigra</i>	River Birch	'Dura-heat', 'Heritage'
<i>Carpinus caroliniana</i>	American Hornbeam	
<i>Castanea dentata</i>	American Chestnut	
<i>Castanea pumila</i>	Alleghany Chinkapin	
<i>Cladastrus kentukea</i>	American Yellowwood	
<i>Gymnocladus dioicus</i>	Kentucky Coffeetree	'Espresso'
<i>Ilex opaca</i>	American Holly	
<i>Juniperus virginiana</i>	Eastern Redcedar	
<i>Magnolia virginiana</i>	Sweetbay Magnolia	
<i>Nyssa sylvatica</i>	Black Gum	
<i>Ostrya virginiana</i>	Ironwood	
<i>Oxydendrum arboreum</i>	Sourwood	
<i>Pinus virginiana</i>	Virginia Pine	
<i>Quercus stellata</i>	Post Oak	
<i>Quercus marilandica</i>	Blackjack Oak	
<i>Sassafras albidum</i>	Sassafras	

Small Ornamental and Evergreen Trees: Crown Coverage Allowance (CCA) = 100 sq. ft.

Botanical Name	Common Name	Cultivar/Notes
<i>Amelanchier arborea</i>	Downy Serviceberry	
<i>Amelanchier x grandiflora</i>	Hybrid Serviceberry	'Autumn Brilliance', 'Majestic', 'Coles Select', 'Snowcloud'
<i>Cercis canadensis</i>	Eastern Redbud	
<i>Chionanthus virginicus</i>	White Fringe Tree	
<i>Cornus florida</i>	Flowering Dogwood	
<i>Cotinus obovatus</i>	American Smoketree	
<i>Crataegus spp.</i>	Hawthorn	
<i>Hamamelis virginiana</i>	Witch Hazel	
<i>Halesia tetraptera</i>	Carolina Silverbell	
<i>Viburnum prunifolium</i>	Blackhaw	

2018-19 Tree Pruning, Removal Stump Grinding and Fencing Fees*

Tree Diameter	Pruning	Removal
12" > 18" dbh	\$344.00	\$544.00
18" > 24" dbh	\$444.00	\$1,344.00
24" > 30" dbh	\$444.00	\$1,344.00
30" > 36" dbh	\$584.00	\$1,344.00
36" > 42" dbh	\$524.00	\$1,344.00
42" > 48" dbh	\$644.00	\$1,544.00
48" & larger dbh	\$674.00	\$1,744.00

Stump Grinding cost per hour \$84.44

Stump Grinding cost per inch \$3.44

Increase for Emergency Service 24%

Tree Protection Fencing = \$6.12 per Linear Foot

2018-19 Tree Purchase, Planting, Watering and One-Year Warranty Fees*

(All landscape materials should be warranted by supplier for one-year from date of installation and include installation.)

Shrubs

Height	Size	Cost
12"	2 gallon	\$ 45.44 EA
18"	3 gallon	\$ 57.40 EA
24"	5 gallon	\$ 77.73 EA

Trees-Deciduous

Size	Cost
1.0 to 1.5" caliper	\$ 286.99 EA
1.5 to 2.0" caliper	\$ 406.56 EA
2.0 to 2.5" caliper	\$ 538.10 EA
2.5 to 3.0 caliper	\$ 813.12 EA
3.0 to 3.5 caliper	\$ 1,076.19 EA

Evergreens

Size	Cost
5 to 6' in height	\$ 251.11 EA
6 to 8' in height	\$ 454.39 EA
8 to 10' in height	\$ 801.17 EA
10 to 12' in height	\$ 1,076.19 EA

*For purposes of filling out Tree Bond