

Urban & Community Forestry Program

Tree Planting and Establishment Plan Guidelines for Leafing Out Grants

June 1, 2024



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1. Introduction

The following are guidelines for the development and implementation of a Tree Planting & Establishment Plan in conjunction with an awarded NJ Forest Service Urban and Community Forestry (NJUCF) program Leafing Out Grant (LOG).

All LOG recipients must submit a Tree Planting & Establishment Plan in accordance with these guidelines and receive NJUCF approval prior to implementing any actions in that plan. Grantees may use up to \$10,000 of the grant for professional services including the design of the tree planting and establishment plan, as well as the supervision of the tree planting contract and work performed to implement the plan.

2. Tree Planting & Establishment Plan Components

All Tree Planting & Establishment Plans must be developed in accordance with the most recent treecare industry standards (e.g., [ANSI Z60.1 – American Standard of Nursery Stock](#), A300 – Tree Care Standards, Z133 - Arboricultural Safety Standards) for plant material, handling, shipping, planting/transplanting, and establishment.

The Tree Planting & Establishment Plan must have the following components:

I. Project Location Maps

The project location map(s) should clearly represent the project site to scale, delineating boundaries of the grantee's jurisdiction and the planned tree planting areas. Acceptable formats include but are not limited to:

- A. USGS Quad Map (1:24,000).
- B. Street Map – ensure that street names are clearly indicated.
- C. Municipal tax map.

II. Landscape Plan

A comprehensive landscape plan must include the following parts:

A. Planting Plan

Landscape drawings (Appendix A) must be provided for each site where the proposed tree planting is planned. The plan must clearly indicate where each tree will be located

and identifies each location by tree species. A detailed planting plan is preferred, but the applicant may submit a general site plan, as long as it clearly conveys the planting location(s) and number of trees per location.

B. Plant Schedule

Each plan must include a table detailing the scientific name, common name (including cultivar name if applicable), type of root package (bare root, container or ball and burlap – B&B), size (in accordance with the root package), and quantity of each tree species to be planted (Appendix B). Tree species that are fall dig hazards should be noted on the schedule. Fall dig hazards are trees that suffer severe die back or death through the winter if they are dug in the fall.

The trees selected for the planting should be appropriate for the planting location. Trees' mature height and shape, project longevity, sun and soil requirements, and salt tolerance should be considered when developing the plant list. Conflicts with the built environment should be minimized. This includes, but is not limited to, avoiding planting large trees under overhead wires, near underground utilities, near building foundations or walls, or using trees with nuts or large fruit near pedestrian areas.

Plans should include a list of alternate species, in case the desired species is not available at the time of planting.

Tree planting should include a diverse selection of trees species, ensuring resilience from pests and environmental conditions. The species diversity and selection needs to be justified in the planting plan. A good rule is to follow the 30/20/10 rule: In any community, no more than 30 percent of trees should be species within the same family, no more than 20 percent should be from the same genus, and no more than 10 percent should be the same species.

Sample landscape plans and plant schedules can be found in Appendix A and B.

III. Tree Planting & Establishment Specifications

Specifications for tree planting and establishment must be developed and submitted in conjunction with the landscape plan. Specifications must incorporate the most recent tree care industry standards (e.g. [ANSI Z60.1](#) and [A300](#)) for plant material, handling, shipping, planting/transplanting, and maintenance. The following components must be included in the tree planting and establishment plan.

A. Planting Preparation.

- i. Describe how trees will be selected, inspected, and shipped.
- ii. Describe how the site will be prepared prior to planting, including the identification of any potential conflicts on the site.
- iii. State the timing of the planting.
- iv. Describe how the trees will be maintained after delivery, prior to planting.

B. Tree Planting.

- i. Describe how the trees and the site will be prepared for planting.
- ii. Include tree planting diagrams(Appendix C).
- iii. Include information on who will plant the trees and how it will be determined if they've been planted properly.
- iv. Detail the method for guying, staking, if applicable.
- v. Describe the immediate post-planting care, including watering, mulching and pruning.

C. Tree Maintenance and Establishment.

- i. Detail the long-term establishment plan, including the work to be performed, the maintenance schedule, and the personnel responsible for carrying out the work.
- ii. Describe the corrective measures to be taken if necessary to ensure continued tree health.

Tree Planting and Establishment Recommendations:

General:

Trees should be free of damage as the result of handling or transportation. No substitution of plant material is allowed unless approved by NJUCF. All work should conform to accepted nursery and landscape practices and meet or exceed the industry standards (see additional resource section).

Layout:

All trees should be planted in the locations as shown on the plans supplied. All adjustments to the plan must be authorized by the NJUCF. All plans should be detailed such that someone could find the locations without a guide.

Nursery Stock:

Plant species should conform to those indicated on the site plan and planting list, and should follow standard scientific names, with horticultural names, when specific varieties will be used. All landscape nursery stock should conform to the standard specifications of The American Standard for Nursery Stock sponsored by the American Association of Nurserymen, Inc. All trees should be grown under climatic conditions similar to the job site for a period of not less than two (2) years immediately prior to this project. Trees being planted within municipal right of ways along streets should have a minimal caliper of 1.5" to reduce tree damage. It is recommended to use an average of 2½" caliper between 2"-3" caliper size class. In any other area a smaller caliper can be used. Provide justification for the caliper size of the material and how it will be protected if minimum of 1.5" is not possible.

Quality:

Plants should have the habit of growth that is normal for the species or cultivar and should be sound, healthy, vigorous, free from insects, plant diseases and injuries or damage of any nature. An altered growth habit to reduce conflicts with the surrounding environment or for street tree height is acceptable as long as it is in the planting plan, and well justified. All plants should be of the grades specified. Please be aware of fall dig hazards and salt tolerance when selecting trees to plant.

Bare root and de-balled trees should show full root growth in all directions out from the main stem. All poor and circling roots should be pruned before planting.

All plants must be state inspected and a copy of the "Certificate of Inspections" issued by the State Department of Agriculture at the point of origin must accompany shipments from each source.

Shipment, Delivery, Inspection and Acceptance:

The grantee should reserve the right to inspect all plant material at its point of origin. Acceptance at the nursery in which the plant is growing, prior to transplanting, should not preclude rejection at the site for just cause.

The plant material to be delivered should be covered with a tarp, protected from weather, and be adequately packed to avoid breakage, sun scald, windburn, desiccation and other damage during loading and shipment. All measures customary in good trade practices should be taken to keep the plants in good condition. Documentation on when the tree was dug, and how it was held at the nursery before shipment should be given to the grantee's professional and submitted to the NJUCF upon request. No plants should be planted until they have been inspected and approved on the site by the grantee's professional (hired contractor or qualified municipal employee).

All bare root trees should be dug and shipped during tree dormant periods. The dormant period is after the first major frost after leaf-drop, and before the swelling of the buds. If bare root stock is to be held longer than two (2) days before shipping, or to be held one day after receiving shipment, storage method needs to be mentioned in the plan. The method that will be used to keep the roots moist and protected prior to planting must be mentioned in the plan. The roots must be kept moist and never allowed to dry out.

Any plant material or tree planting that does not conform to the specifications of the approved plan should be rejected by the grantee. Trees that do not conform in form and planting methods to the approved plan specifications may not be counted toward the survivorship threshold.

Time of Planting:

Planting operations should be performed within the planting season when weather and soil conditions are suitable and in accordance with the acceptable local practice. Trees should be planted during the following fall and spring seasons:

Fall	September–December
Spring	March–May

It is advisable to ensure that fall dig hazard species are identified and avoided in the schedule for fall planting.

Protection of Utilities:

The plan should cover utility conflicts and mitigation with the tree planting and future tree growth issues that may arise. Species and locations need to be selected to minimize utility/tree conflicts. The plan shall outline how to address conflicts found in the field, including identifying alternate sites as a solution. The plan should state who will be responsible for the one-call and utility mark-outs.

Planting Preparations:

Soil should be removed from the top of the root ball to expose the root flare if necessary. Prior to backfilling, B&B trees should have wire, burlap and twine removed from around the crown, trunk, root collar and at least the top two-thirds (2/3) of the root ball.

Planting:

Unless otherwise specified within the specifications, all work should conform to accepted arboricultural practices. Plants should be protected upon arrival at the site by being thoroughly watered and properly maintained until properly planted and watered. Unplanted stock should be "healed-in" a bed of material approved by the grantee's professional (hired contractor or qualified municipal employee) upon delivery to the site unless they will be planted within four (4) hours after delivery.

All trees should be planted in pits two (2) times the diameter of the root ball. The depth of the pits should be at the proper depth so that the root flare is at the level of the neighboring ground in a level planting area. When planting a tree on a slope, make sure the top of the root ball (after exposing the root flare) is at the same level as the highest point adjacent to the hole. The tree should be centered in the hole and then backfilled one-half the depth of the soil ball with topsoil. The backfill should be lightly but thoroughly tamped and well-watered. The remainder of the hole is then to be backfilled with topsoil to a depth that after settling will assure the tree will be at the same level it was previously growing at in the nursery. The tree should be well watered again before mulch is placed over the surface of the root ball.

Additional planting specifications:

Any planting specifications that go beyond the standard tree planting specifications must be listed, such as soil amendments, concrete removal, fencing, etc.

Guying and Staking:

Staking is not required. All plantings should note if the tree will be staked and wired or not. The installation of tree stakes and supporting materials should be done to those trees that the grantee's professional (hired contractor or qualified municipal employee) deems necessary after

planting. Tie materials should have some type of protection for the tree, with room for a minimum of 2 fingers to fit on the tension side of the tree ties. Damage to a planted tree from improper wiring may cause a tree to fail the establishment inspection. Material should be removed after one growing season and before the next spring. Materials must be removed before the final inspection.

Watering:

The plants should be thoroughly watered after planting. The plan must identify how future watering will be conducted and include contingencies for droughts or long dry periods.

Mulching:

All tree pits and planting beds should be mulched to a depth of 2"-3" with shredded hardwood bark mulch or compost. Mulch should be free of debris and placed around all plantings at the time of planting to a depth no higher than three inches (3"). Care should be exercised to keep mulch at least four inches (4") away from the trunk of the tree.

Pruning:

Any dead, diseased or damaged branches should be pruned. If the trees need any pruning the cut must follow industry standards and be kept to a minimum. Trees selected at the nursery must have fully sealed wounds and must not need pruning in order to meet specifications.

3. Tree Survivorship & Establishment Criteria

All trees must be healthy and established for a minimum of 6 months after planting. The Tree Planting & Establishment Plan must address the replacement of trees to satisfy this requirement. The following criteria are general conditions and characteristics used by NJUCF to determine that a tree is established. NJUCF makes the final determination on whether a tree is established.

- The terminal or topmost shoot, the central leader, of the tree is alive (species-specific characteristic).
- Two-thirds (2/3) or more of a tree's canopy is alive and healthy (a branch or shoot is dead when no live cambium is present in the stem).
- There are no major wounds on the trunk or root collar. A major wound occurs when one-third or more of the cambium is injured over the circumference of the bole.
- There is no major insect, disease or fungal infestation or affliction.
- Adventitious stems and/or roots are not present.
- There are no j-roots (bent up to form a J shape) or girdling (growing to encircle the trunk) roots.

Final payment under the grant will be contingent upon satisfaction of the establishment requirement.

4. Professional Plan Development Requirement

All Tree Planting & Establishment Plans should be prepared by a NJ Certified/Approved Forester, Licensed Tree Expert, Certified Arborist, licensed Landscape Architect, or other professional as appropriate. The professional's qualifications must be included with the plan submission.

5. Tree Planting Inspections

The purpose of NJUCF inspections is to ensure that the implementation of the tree planting grant is in accordance with the approved plan, and the required survivability threshold is attained.

NJUCF will perform a minimum of two (2) inspections to monitor the grantee's compliance with the approved tree planting and establishment plan. These inspections include:

1. **Initial Tree Quality and Planting Inspection** - This inspection verifies the planting of the required number of trees under the grant agreement, and that the trees meet the specifications for quality and planting in the approved plan. This inspection may take place throughout the delivery and installation of the trees.

NJUCF must be notified at least seven (7) business days prior to the anticipated start date for tree delivery and planting.

NJUCF must be notified in writing, within seven business days, by the grantee when the entire tree planting is complete. A final plant list based on the actual planting, and an as-built drawing indicating final planting locations must be provided to NJUCF (See Appendix E for an example of an as-built plan). NJUCF will issue a Notice of Planting Completion after all the required information is received, and the planting complies with the approved plan.

2. **Final Tree Establishment Inspection** - This inspection verifies whether the survivorship threshold for the grant was met or not. This inspection occurs not less than 6 months following the issuance of the Notice of Planting Completion. Final payment will only be made if the survivorship threshold is met.

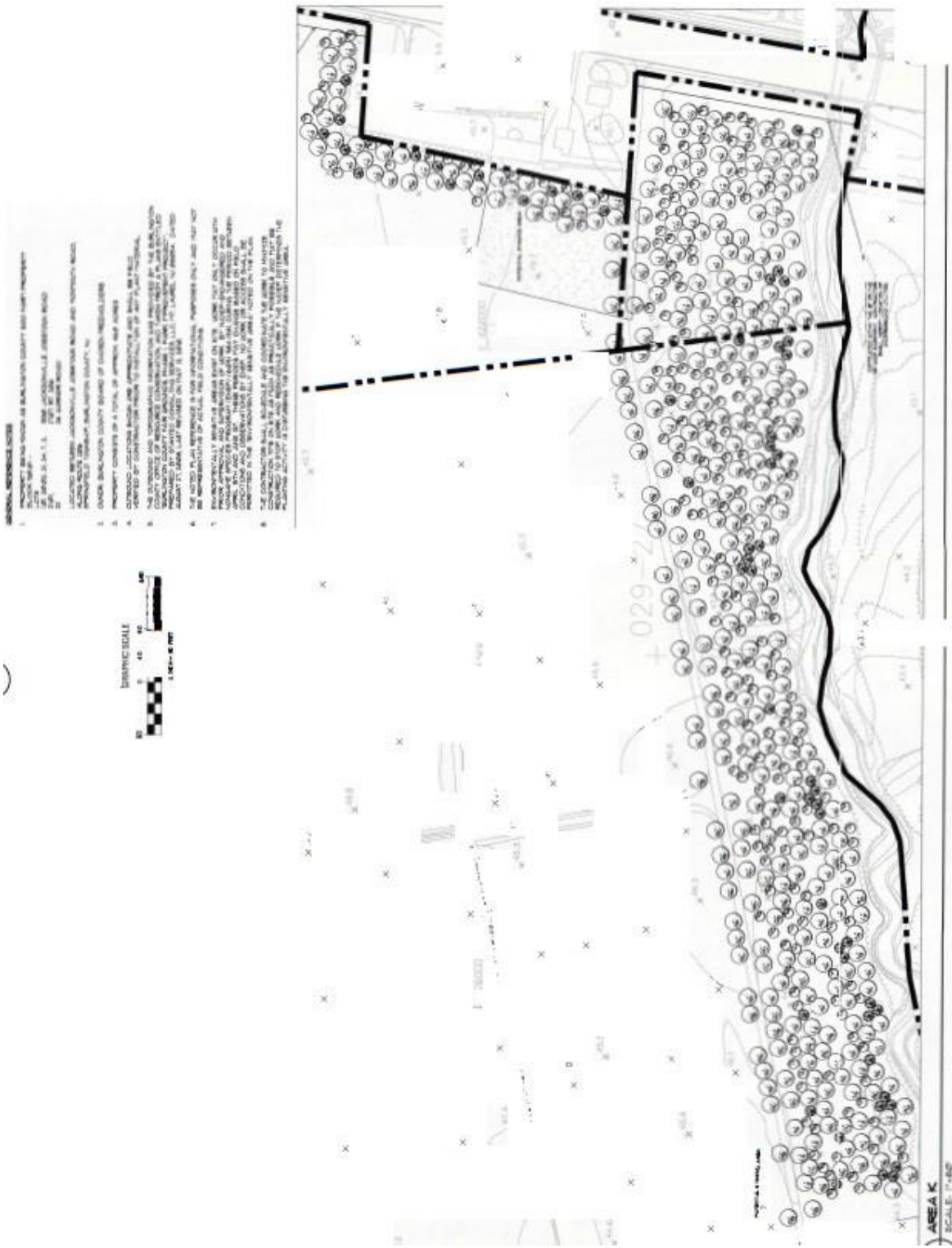
6. Tree Planting and Establishment Plan Submission Instructions

Tree Planting & Establishment Plans must be submitted and approved by NJUCF within six (6) months of the start of the work period, as defined in the Request For Proposal. Applicants should submit a complete plan, including all the elements in Section 2, well enough in advance of that date to allow NJCUF to review and comment.

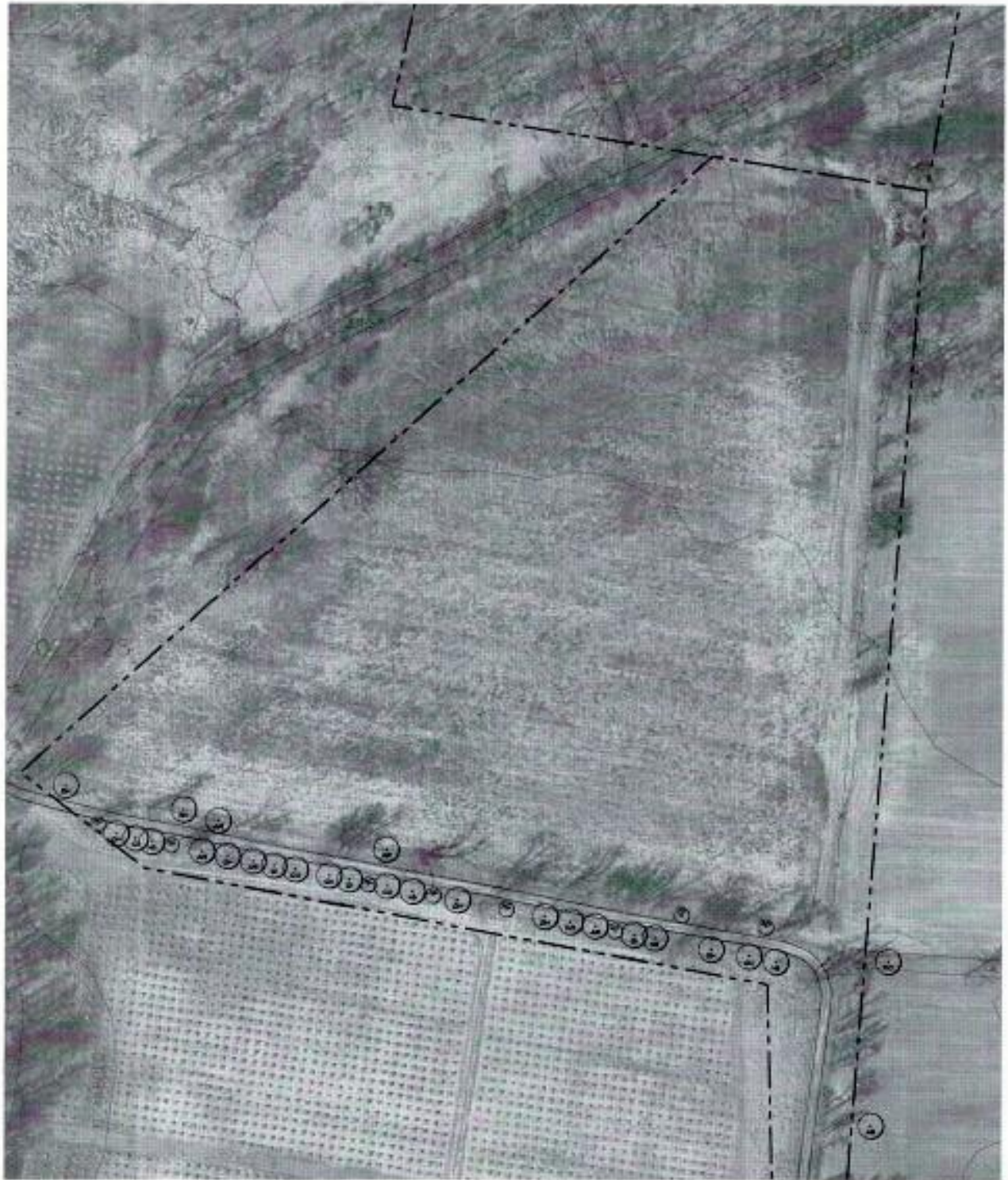
Electronic copy of the Tree Planting and Establishment plan should be submitted to:

Leafingoutgrant@dep.nj.gov

Appendix A – Sample Landscape Plans

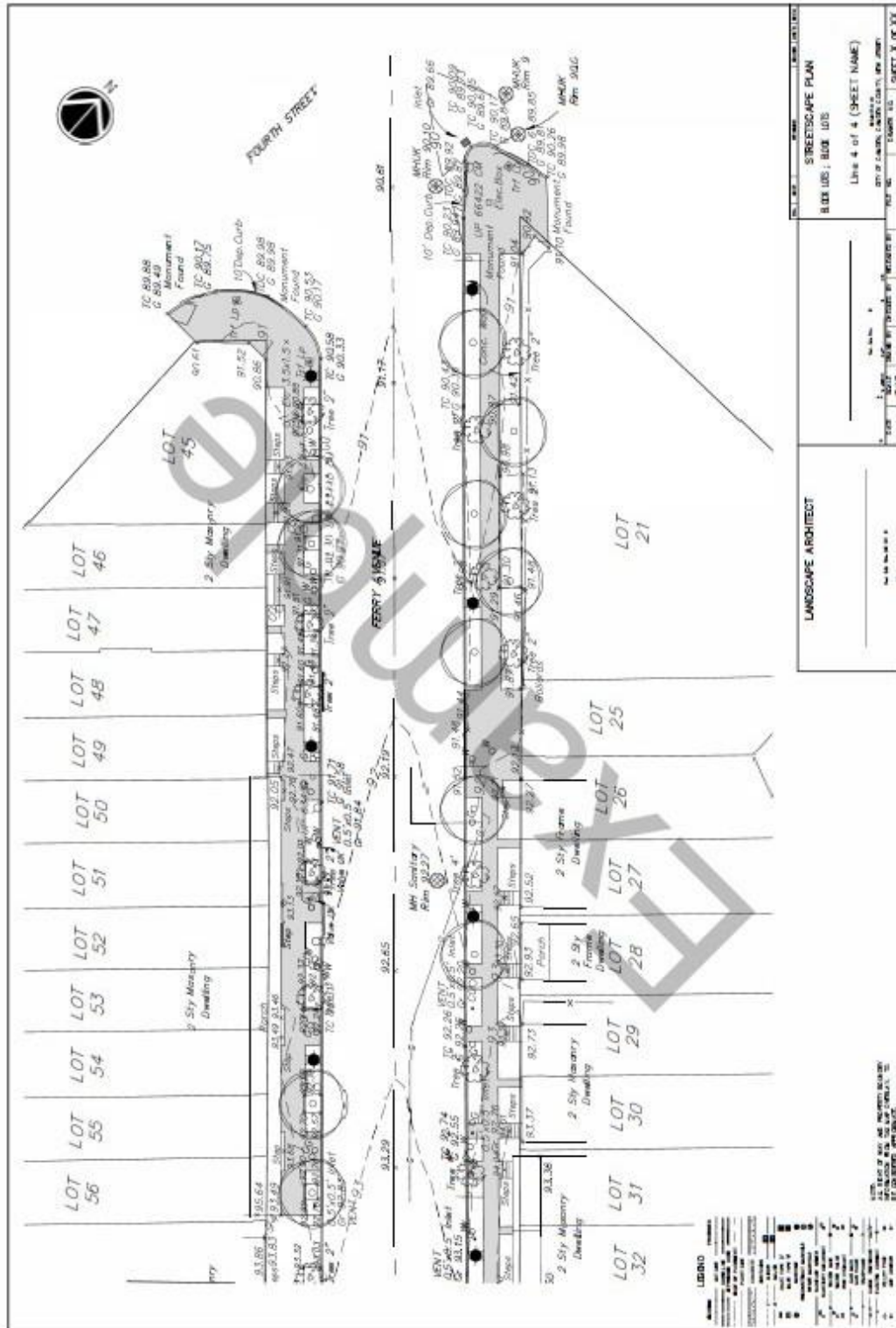


Sample Plan 1: Park planting/reforestation Landscape Drawing



1 PLANTING AREA A
SCALE: 1" = 50'

Sample Plan 2: Park planting on aerial photograph



Sample Plan 3: Streetscape Plan Landscape Drawing

Appendix B – Sample Plant Schedules

Example Plant Schedule Format

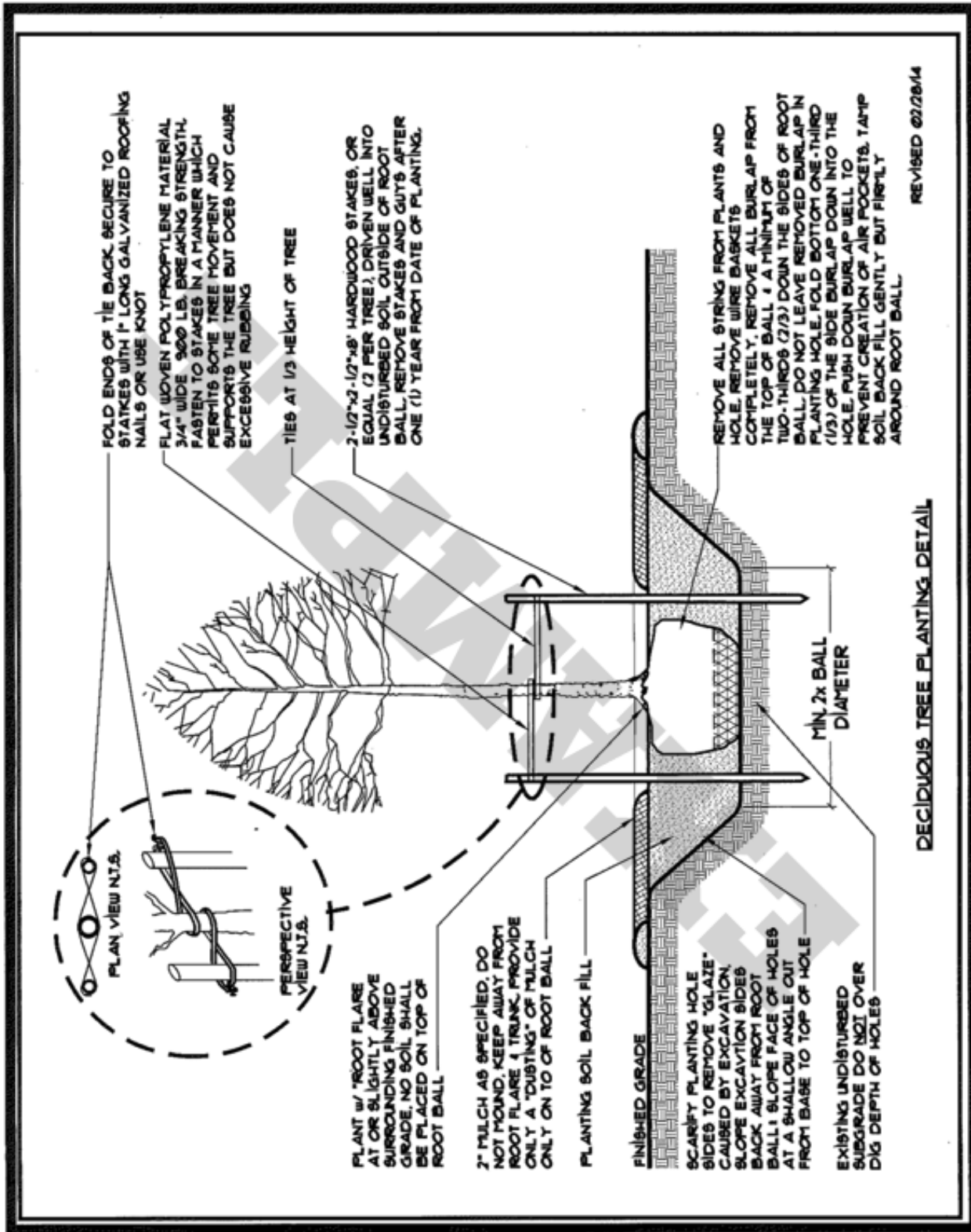
Key	Qty.	Scientific Name	Common Name	Size	Caliper	Root	Comments
AR	8	Acer rubrum "Red Sunset"	Red Sunset Red Maple	10'-12'	2" – 2 ½"	B&B	
CC	10	Cercis canadensis	Eastern Redbud	9'-10'	1" min.	B&B	Multi-stemmed
IO	5	Ilex opaca	American Holly	8'-10'	---	B&B	
QR	20	Quercus rubra *	Eastern Red Oak	10'-12'	2" – 2 ½"	B&B	No branching to 6'

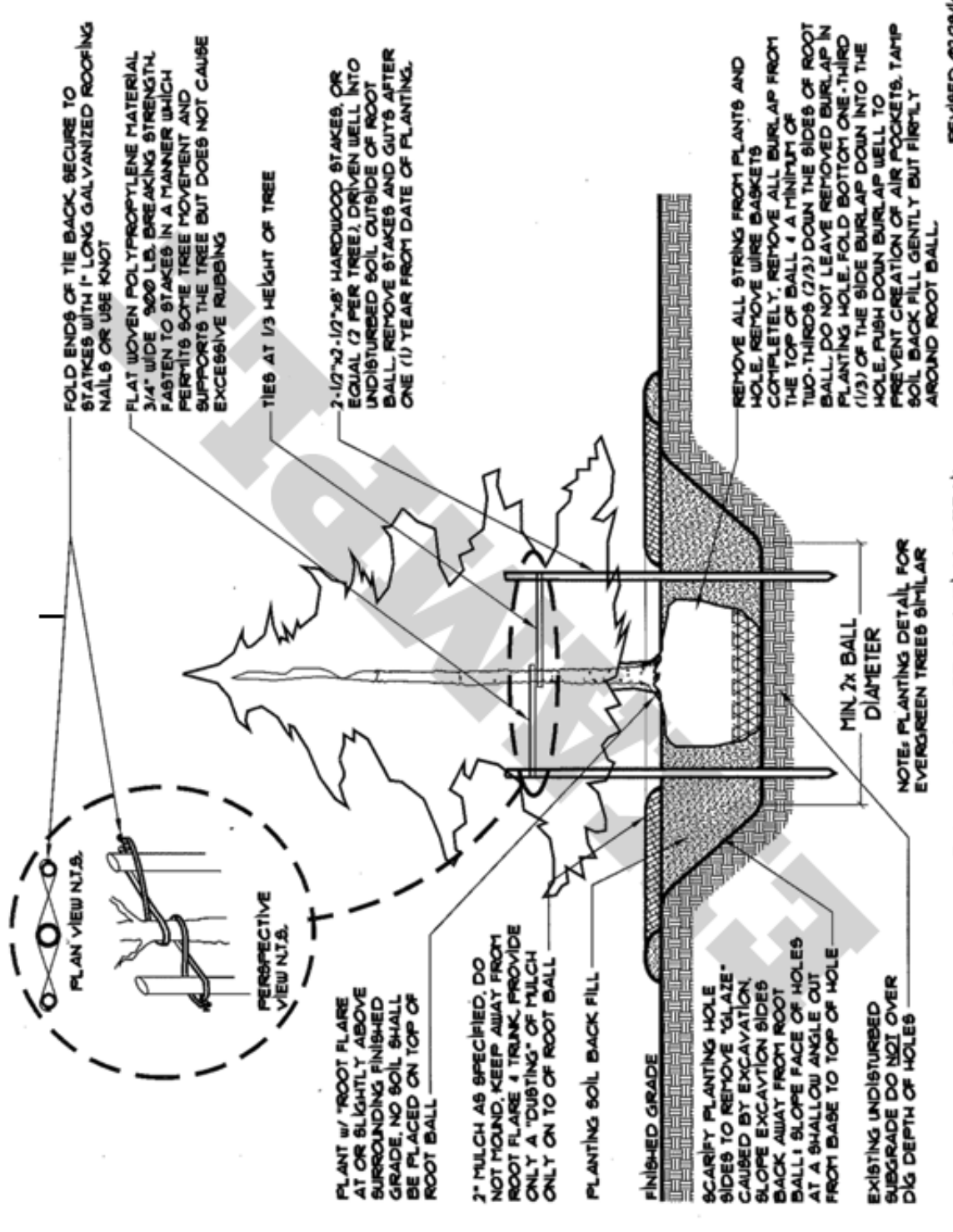
* Fall dig hazard: These species have a high risk of failure when dug in the fall

Sample Plant Schedule: Multi-Park

PLANT LIST-NO NET LOSS REFORESTATION 2014 - QUANTITIES BY SITE											B.C. Resource Recovery Complex	B.C. DPW Section #2 Facility	B.C. Fairgrounds	B.C. Sod Farm Property	B.C. Crystal Lake Park	B.C. Kinkora Trail Segment	N. Burlington County Regional Campus	John Hyslop Elementary School	Menfield Top. Cem. Park	Civic and Athletic Club	BASE BID Plant Quantities	ALT. A Plantings at Various Bids Co. Sites	ALT. B Joint Bids McQuire Bids Ltd.(s) Bid	TOTAL BASE BID & ALTS. A & B Plant Quantities
KEY	BOTANICAL NAME	COMMON NAME	CAL.	HT.	ROOT COMMENTS																			
SHADE TREES																								
AA	<i>Acer glabrum</i> 'Flame'	Flame Amur Maple	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'	27																	
AF	<i>Acer rubrum</i> 'Frank Jr.'	Redpointe Red Maple	2'-2.5'	12'-14'	B&B	Uniform heads, headed to 6'		5	168	12														
AH	<i>Acer campestre</i>	Hedge Maple	2'-2.5'	10'-12'	B&B	Full Specimens, headed to 6'																		
AL	<i>Acer saccharum</i> 'Lagoy'	Lagoy Sugar Maple	2'-2.5'	12'-14'	B&B	Uniform heads, headed to 6'																		
AO	<i>Acer rubrum</i> 'Oxley Glory'	Oxley Glory Red Maple	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'		3	27				1	3										
AR	<i>Acer rubrum</i> 'Red Sunset'	Red Sunset Red Maple	2'-2.5'	12'-14'	B&B	Uniform heads, headed to 6'	59	31	20				5	10										
AS	<i>Acer saccharum</i> 'Green Mountain'	Green Mountain Sugar Maple	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'							1	7										
BN	<i>Betula nigra</i> 'Heritage'	Heritage River Birch		10'-12'	B&B	Full Specimens, 3 trunk minimum		7	40	2														
CH	<i>Carpinus caroliniana</i>	American Hornbeam	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'																		
CO	<i>Celtis occidentalis</i>	Common Hackberry	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'	27		4	25	12	3												
FP	<i>Fraxinus pennsylvanica</i> 'Patterson'	Patterson Green Ash	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'																		
GT	<i>Quercus laevis</i> 'Walker'	Walker Liveoak	2'-2.5'	12'-14'	B&B	Uniform heads, headed to 6'	19																	
LS	<i>Liquidambar styraciflua</i> 'Happy Dawn'	Happy Dawn Sweetgum	2'-2.5'	10'-12'	B&B	Full Specimens, headed to 6'	13	6	228	13														
LT	<i>Liriodendron tulipifera</i>	Tulip Tree	2'-2.5'	11'-13'	B&B	Full Specimens, headed to 6'																		
NS	<i>Nyssa sylvatica</i>	Blackgum	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'																		
PA	<i>Platanus acerifolia</i> 'Bloodgood'	Bloodgood London Plane Tree	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'		27	6	5														
PD	<i>Platanus occidentalis</i>	American Sycamore	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'		6	23	1														
QA	<i>Quercus acutissima</i>	Sawtooth Oak	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'																		
QB	<i>Quercus bicolor</i>	Swamp White Oak	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'																		
QC	<i>Quercus coccinea</i>	Scarlet Oak	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'		21																
QH	<i>Quercus phellos</i>	Willow Oak	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'	48	3	38	166														
QJ	<i>Quercus imbricaria</i>	Shingle Oak	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'	19																	
QP	<i>Quercus palustris</i>	Pin Oak	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'																		
QR	<i>Quercus rubra</i> (domestic)	Red Oak	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'	8																	
SR	<i>Syringia reticulata</i> ' Ivory Silk'	Ivory Silk Japanese Tree Lilac	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'																		
TT	<i>Tilia tomentosa</i> 'Sterling'	Sterling Silver Linden	2'-2.5'	12'-14'	B&B	Full Specimens, headed to 6'	37																	
ZS	<i>Zelkova serrata</i>	Green Vase Zelkova	2'-2.5'	12'-14'	B&B	Uniform heads, headed to 6'																		
EVERGREEN TREES																								
CL	<i>Cupressocyparis leylandii</i>	Leyland Cypress	8'-10'		CONT	Full Specimens, branched to the ground																		
JO	<i>Ilex opaca</i>	American Holly	6'-7'	B&B		Full Specimens, branched to the ground	31																	
JV	<i>Juniperus virginiana</i>	Eastern Red Cedar	7'-8'	B&B		Full Specimens, branched to the ground	48																	
PI	<i>Picea abies</i>	Norway Spruce	7'-8'	B&B		Full Specimens, branched to the ground	38	75	4	15	1													
PM	<i>Pseudotsuga menziesii</i>	Douglas Fir	7'-8'	B&B		Full Bodies	31																	
PS	<i>Pinus strobus</i>	Eastern White Pine	7'-8'	B&B		Full Specimens, branched to the ground																		
PT	<i>Pinus banksiana</i>	Japanese Black Pine	7'-8'	B&B		Full Bodies																		
TC	<i>Taxus canadensis</i>	Eastern Hemlock	7'-8'	B&B		Full Specimens, branched to the ground	37																	
TO	<i>Thuja occidentalis</i> 'Nigra'	Nigra American Arborvitae	6'-8'	B&B		Full Bodies	66																	
ORNAMENTAL TREES																								
AC	<i>Amalanchier canadensis</i>	Downy Shoalwood	7'-8'	B&B		Heavy, multi-stemmed specimens	4	2	5	47	16	7	12											
AG	<i>Amalanchier nankingensis</i> 'Autumn Brilliance'	Autumn Brilliance Serviceberry	7'-8'	B&B		Heavy, multi-stemmed specimens	34	9																
AM	<i>Amalanchier laevis</i>	Allegheny Serviceberry	2'-2.5'	12'-14'	B&B	Tree form, headed to 6'																		
CC	<i>Cercis canadensis</i>	Eastern Redbud	8'-10'	B&B		Heavy, multi-stemmed specimens		5																
CF	<i>Cornus florida</i> 'Cherokee Princess'	Cherokee Princess Flowering Dogwood	7'-8'	B&B		Full, Heavy Specimens	26	8																
CK	<i>Cornus kousa</i>	Kousa Dogwood	7'-8'	B&B		Full, Heavy Specimens																		
CM	<i>Cornus mas</i>	Cornelian Dogwood	7'-8'	B&B		Multi-stem, Heavy Specimens																		
CV	<i>Chionodoxa virginica</i>	Multi-stem Fragrant	6'-7'	B&B		Heavy, multi-stemmed Specimens	28																	
MA	Magnolia 'Donald Wyman'	Donald Wyman Crabapple	2'-2.5'	8'-9'	B&B	Full, Heavy Specimens																		
MY	<i>Magnolia virginiana</i>	Swamp Magnolia	7'-8'	B&B		Multi-stem, Heavy Specimens		4	47															
OC	<i>Prunus s. 'Oklahoma'</i>	Oklahoma Cherry	2'-2.5'		B&B	Uniform heads																		
SHRUBS																								
VD	<i>Viburnum dentatum</i>	Aronwood Viburnum	6'-8'	B&B		Full Plants, spaced approx. 5' O.C.	21	54																
VL	<i>Viburnum lentago</i>	Nannyberry Viburnum	6'-8'	B&B		Full Plants, spaced approx. 5' O.C.																		
VP	<i>Viburnum prunifolium</i>	Blackhaw Viburnum	6'-8'	B&B		Full Plants, spaced approx. 5' O.C.																		
VT	<i>Viburnum trilobum</i>	American Cranberry Viburnum	6'-8'	B&B		Full Plants, spaced approx. 5' O.C.																		
VR	<i>Viburnum rhytidophyllum</i> or <i>Viburnum x pragnae</i>	Leatherleaf Viburnum or Prague Viburnum	6'-8'	B&B		Full Plants, spaced approx. 5' O.C.	341	54																
OVERALL TREE TOTALS BY SITE							983	263	135	1813	93	35	149	59	17	85	3832	775	1063	5670				

Appendix C – Sample Tree Planting Diagrams





FOLD ENDS OF TIE BACK, SECURE TO STAKES WITH 1" LONG GALVANIZED ROOFING NAILS OR USE KNOT

FLAT WOVEN POLYPROPYLENE MATERIAL 3/4" WIDE, 500 LB. BREAKING STRENGTH, FASTEN TO STAKES IN A MANNER WHICH PERMITS SOME TREE MOVEMENT AND SUPPORTS THE TREE BUT DOES NOT CAUSE EXCESSIVE RUBBING

TIES AT 1/3 HEIGHT OF TREE

2-1/2"x2-1/2"x8' HARDWOOD STAKES, OR EQUAL (2 PER TREE), DRIVEN WELL INTO UNDISTURBED SOIL OUTSIDE OF ROOT BALL. REMOVE STAKES AND GUTS AFTER ONE (1) YEAR FROM DATE OF PLANTING.

PLAN VIEW N.T.S.

PERSPECTIVE VIEW N.T.S.

PLANT W/ ROOT FLARE AT OR SLIGHTLY ABOVE SURROUNDING FINISHED GRADE. NO SOIL SHALL BE PLACED ON TOP OF ROOT BALL

2" MULCH AS SPECIFIED. DO NOT MOUND. KEEP AWAY FROM ROOT FLARE & TRUNK. PROVIDE ONLY A "DUSTING" OF MULCH ONLY ON TO OF ROOT BALL

PLANTING SOIL BACK FILL

FINISHED GRADE

SCARIFY PLANTING HOLE SIDES TO REMOVE "GLAZE" CAUSED BY EXCAVATION. SLOPE EXCAVATION SIDES BACK AWAY FROM ROOT BALL. SLOPE FACE OF HOLES AT A SHALLOW ANGLE OUT FROM BASE TO TOP OF HOLE

EXISTING UNDISTURBED SUBGRADE DO NOT OVER DIG DEPTH OF HOLES

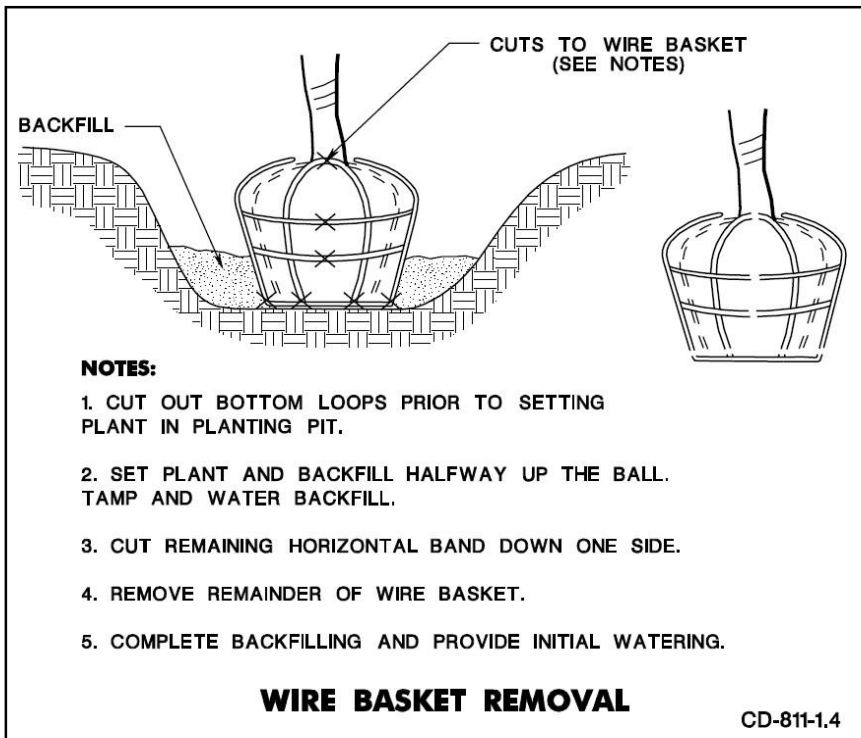
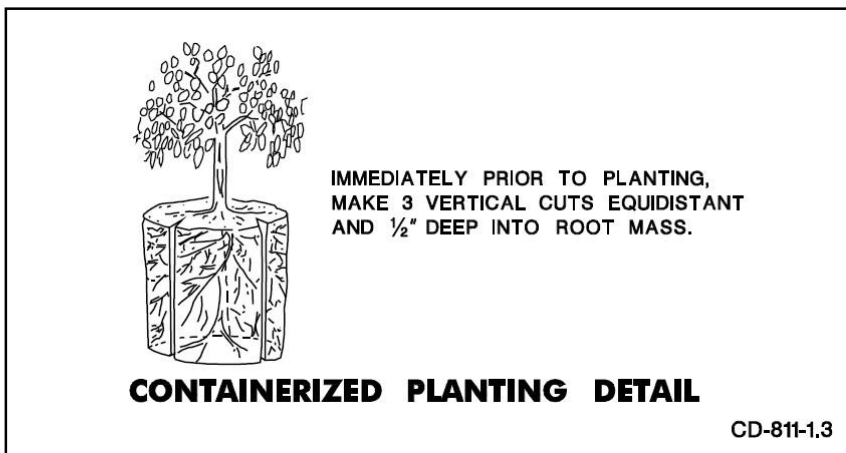
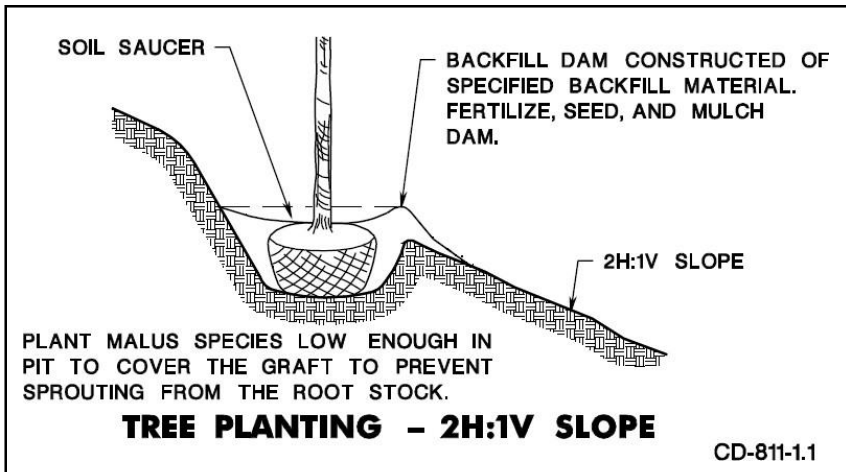
REMOVE ALL STRING FROM PLANTS AND HOLE. REMOVE WIRE BASKETS COMPLETELY. REMOVE ALL BURLAP FROM THE TOP OF BALL & A MINIMUM OF TWO-THIRDS (2/3) DOWN THE SIDES OF ROOT BALL. DO NOT LEAVE REMOVED BURLAP IN PLANTING HOLE. FOLD BOTTOM ONE-THIRD (1/3) OF THE SIDE BURLAP DOWN INTO THE HOLE. PUSH DOWN BURLAP WELL TO PREVENT CREATION OF AIR POCKETS. TAMP SOIL BACK FILL GENTLY BUT FIRMLY AROUND ROOT BALL.

MIN. 2x BALL DIAMETER

NOTE: PLANTING DETAIL FOR EVERGREEN TREES SIMILAR

EVERGREEN TREE PLANTING DETAIL

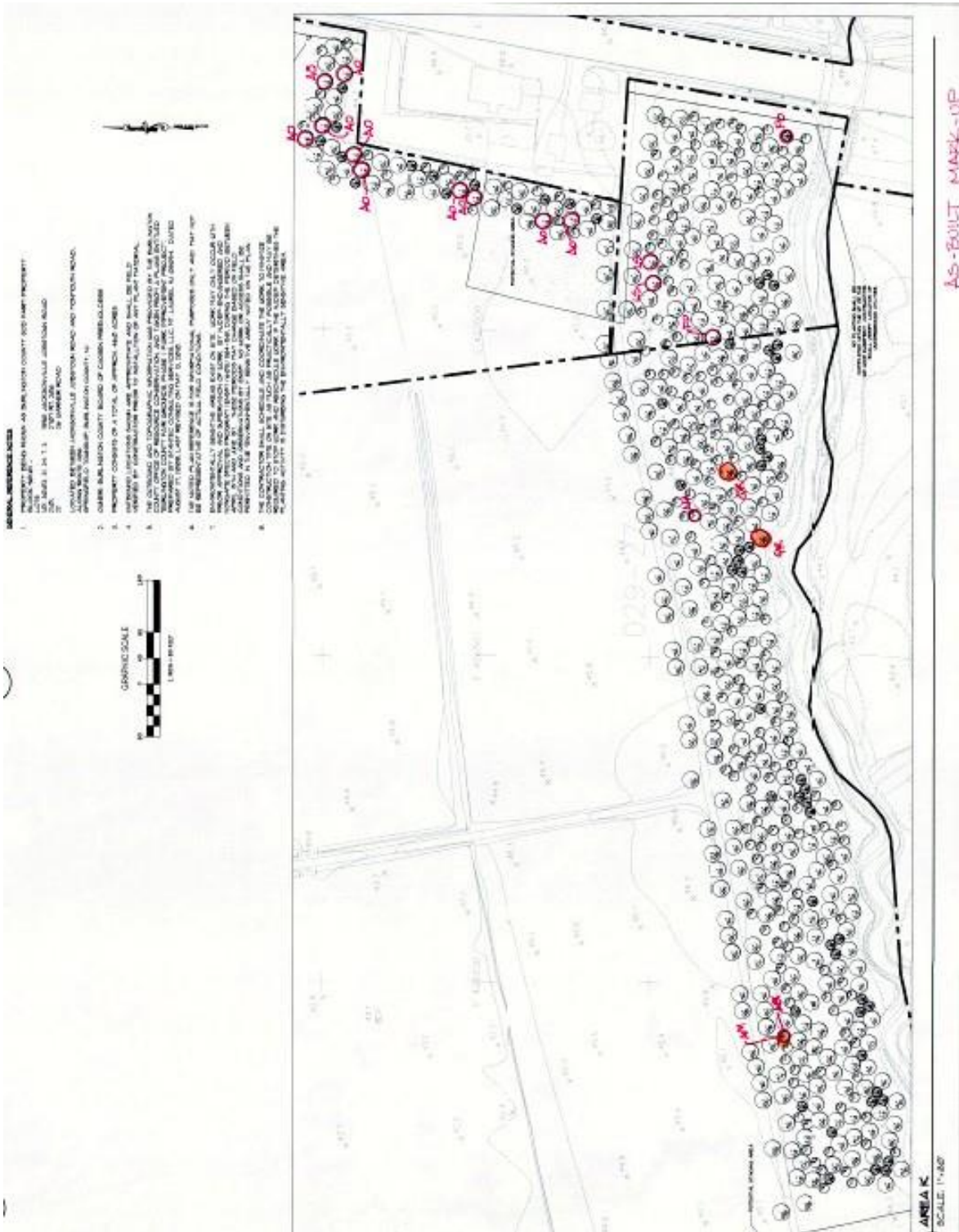
REVISED 02/28/14



Appendix D – Example Establishment Plan

Description of Work	Timing	Comments	Responsible Person/ Department
Tree watering	Throughout	As needed, especially during dry periods. Continue until ground freezes	Contractor
Stake removal	After 1 year		Contractor
Mulching	Throughout	Refresh and replace as needed	Contractor
Inspect for disease or insect problems	Annually	Start approximately 1 year after planting	Project Manager
Apply pesticides/herbicides		If annual inspection	Contractor
Monitor health & vigor	Annually	Start approximately 1 year after planting	Project Manager
Replace dead trees	After 1 year	At direction of Project Manager. Planting should take place within 3 weeks of annual inspection. Follow planting guidelines	Contractor
Prune	After 1 year	Remove no more than ¼ of foliage in one season. Retain lower branches.	Contractor
Fertilize	After 3 years	If needed	DPW

Appendix E – Sample As-Built Plan



Additional Resources

ANSI A300 (Parts 1-9). Available from the Tree Care Industry Association.
[Link currently unavailable – Standards under revision]

ANSI Z60.1 – American Standard for Nursery Stock. 2014. American Nursery and Landscape Association.
Available electronically at:
[American Nursery Stock Standards - AmericanHort](#)

Do I remove root ball packing materials? What do the experts say? by Michael Kuhns, Extension Forestry Specialist, Utah State University and Brook Lee, Community Forester, Utah Division of Forestry, Fire & State Lands
[Do I Remove Root Ball Packing Materials? | Forestry | Extension | USU](#)

New Jersey Forestry and Wetlands Best Management Practices Manual. New Jersey Forest Service.
http://www.state.nj.us/dep/parksandforests/forest/nj_bmp_manual1995.pdf

New Jersey Tree Foundation
Nitrees.org

Urban Tolerant & Utility Friendly Tree List
[Printable Resources – New Jersey Tree Foundation](#)