TOWN *of*
WAKE FOREST

301 S. Brooks Street
Wake Forest, NC 27587
t 919.435.9400

www.wakeforestnc.gov

Request for Proposals # 10621
Street Tree Installation 2016-2017
Parks, Recreation & Cultural Resources Department
Urban Forestry Division
Wake Forest, NC

Issuing Agency: Town of Wake Forest
301 S. Brooks Street
Wake Forest, NC 27587

All Inquiries: Jennifer Rall
Urban Forestry Coordinator
jrall@wakeforestnc.gov
919.435.9565

Submittal Deadline: November 30, 2016 by 4:00 p.m.

OBJECTIVE:
The Town of Wake Forest Parks, Recreation and Cultural Resources Department is requesting sealed proposals for the installation of 72 trees on the Town of Wake Forest street rights-of-way and tree planting easements in various locations around town. The contract includes a one-year maintenance period and performance guarantee. The successful proposer shall provide all labor, materials, and equipment necessary to perform the requested work.

NON-MANDATORY PRE-PREPOSAL SITE VISIT MEETING:

There will be a non-mandatory PRE-PROPOSAL CONFERENCE on **Thursday the 10th of November, 2016 at 2:30 pm** in Conference Room 109 at the Wake Forest Town Hall located at 301 S. Brooks Street, Wake Forest NC 27587. Proposers wishing to submit are encouraged to attend this meeting. Please be on time.

DEADLINES FOR QUESTIONS
Proposers must submit written questions by email to jrall@wakeforestnc.gov no later than **12:00 p.m. noon on Monday, November 14, 2016** and should have **RFP # 10621 -Street Tree Installation 2016-2017** in the subject field. Questions after this time will not be accepted. An addendum sent to all Proposers attending the pre-proposal meeting will be distributed by noon on Wednesday, November 16, 2016. It is the Proposers responsibility to ensure that all addenda have been reviewed, printed, signed, and returned.

PROPOSALS:
Proposers are requested to submit two (2) copies of the proposal no later than **4:00 p.m. Wednesday, November 30, 2016**. Proposals submitted after the deadline will not be considered. All proposals must be submitted in the format listed below for uniformity and evaluation. Any additional charges for services must be explained in detail. Charges not included in the proposal will not be considered in the contract. The Proposer should include in the RFP their qualifications, which should include, but not limited to, previous work performed, current contracts, length of time of operation of the business, and any other special qualifications.

PROPOSAL SUBMISSION:
Return two (2) paper copies (only one (1) copy necessary if emailed) of the completed proposal, include RFP number on the envelope or in the email subject line to:

Attn: Jennifer Rall
Town of Wake Forest Parks, Recreation and Cultural Resources Dept.
301 S. Brooks Street
Wake Forest, NC 27587

Email: jrall@wakeforestnc.gov

All proposals must be submitted to the address or email above no later than the date as indicated below. Late proposals will be rejected.

IMPORTANT DATES

Requests for Proposals issued	Thursday, October 27, 2016
Pre-Proposal meeting	Thursday, November 10, 2016, 2:30 p.m.
Questions for clarification due	Monday, November 14, 2016, 12:00 p.m.
Proposals due	Wednesday, November 30, 2016 4:00 p.m.

EVALUATION OF PROPOSALS
The Wake Forest Board of Commissioners has established procedures to be followed in selecting professional services. Procedures, as established, are for the purpose of ensuring the Contractor is selected in a fair and uniform manner, that those selected for work are qualified and experienced. Applicants shall demonstrate their qualifications to satisfy the Scope of Services. The company's submittal shall address all aspects of the RFP and clearly express the company's understanding of the Town's specific requirements, indicating the company's personnel qualifications to conduct these services in a thorough and efficient manner.

The Town of Wake Forest will select from offering firms presenting complete submittals by 4:00 p.m. on November 30, 2016.

Selection will be based on:

- Company qualifications,
- Relevant municipal street tree maintenance experience,
- Relevant certifications and qualifications,
- Demonstration of understanding of the project description, scope of services and work to be performed,
- Schedule and cost estimated for identical tasks in the scope of services,
- Other relevant experience,
- Current or prior work in Wake Forest.

Contract negotiations will take place with the preferred applicant. If a contract cannot be negotiated, the negotiations will be terminated in writing and negotiations will begin with the next most qualified applicant. All applicants will be notified of the selection after a contract has been executed.

AWARD OF CONTRACT

An award of a single contract for work will be to the Proposer that offers the best overall proposal, including but not limited to: overall cost, references, experience, longevity, capital equipment and qualifications. The Town of Wake Forest reserves the right to reject any and all proposals, to consider alternatives, to waive irregularities, and to re-solicit submittals. All submittals must be valid for a minimum period of ninety (90) days after the date of the submission. The Town of Wake Forest makes no guarantees to any offering company until such time as the Town of Wake Forest approves the negotiated contract. The Town of Wake Forest reserves the right to reject any or all quotes and to make the award as deemed in the best interest of the Town of Wake Forest.

The company awarded the contract will be required to execute the Town of Wake Forest Service contract and return the required documents to the Town within seven (7) business days after notification of award of the contract. If the successful consultant fails to do so within this time, in addition to other remedies available to the Town, the Town reserves the right to reject the consultant's proposal and assign the contract to others.

Standard of Care

The Standard of Care applicable to these services shall be the degree of skill and diligence normally employed by contractors performing same or similar services in North Carolina at the time these services are performed.

Contract Completion

Under this contract, tree plantings must be completed **by March 31, 2017.** The contractor represents and agrees to maintain the plant material per instructions detailed in the Landscape Specifications of this document, until a final inspection is made on **March 31, 2018.**

Subcontracting/Resources

The contractor shall provide a list of available *resources* to complete the work. The Contractor shall verify in his or her proposal the number of personnel available to be allocated to this project. Any/All subcontractors shall be identified in the bid packet with credentials and work history included. The Town reserves the right to accept or reject the selection of subcontractors. Furthermore, all members of the contractor's firm furnished for this project must be experienced in the work and capable of properly performing specific duties described herein.

Certificate of Insurance

The successful contractor must furnish to the Town of Wake Forest a Certificate of Insurance, which includes 'additional insured' coverage, before the contract is awarded. This certificate should show current coverage in force, which must remain in force from initiation of bidding process through completion of the work. The Certificate of Insurance must meet or exceed the insurance requirements listed in this request for proposal package.

Penalties:

a. Failure to Begin Work: If the successful contractor fails to begin work as specified herein, the Town reserves the right to secure another firm other than the successful contractor to do the work. The successful contractor is to pay the Town the difference between the successful contractor's bid and the firm called in according to their bid proposal.

b. Damages: The contractor shall furthermore be responsible for and shall make good at its expense, any and all damages of whatever nature to persons or property – including trees – arising during the period of the contract caused by carelessness, neglect, or want of due precaution on the part of the contractors, its agents, employees, or workmen.

c. Unacceptable Work: If the contractor is found to have done work that does not meet the specifications of the contract, all corrective work shall be completed at the direction of the Urban Forestry Coordinator or her designee at no additional charge to the Town.

d. Work Stoppage: If the contractor is found through periodic inspection to have halted work during the course of the contract without prior approval, the Urban Forestry Coordinator or her designee will issue a written warning detailing the infraction. A third written warning will result in the termination of the contract, and actions will be taken commensurate with the "Failure to Begin Work" section listed above.

PROPOSAL SUBMITTAL INSTRUCTIONS

Company Qualifications

- Provide a brief overview of the company's history and organization. Include founding date, number of full-time and part-time employees and years of service with the company.
- Include the name of the company's contact person, telephone, fax number and email address.

Staff Qualifications

- Provide an organizational chart of key personnel to be assigned to the project.
- Provide resumes of key personnel assigned to the project, which demonstrates experience related to activities as described in the scope of work. Include qualifications and professional affiliations of the supervisors and field staff who would be assigned to this project.
- Provide the number and location of similar work projects completed in last 5 years
- Include any subcontractor information, including area of expertise.

Technical Approach

- Provide a detailed one-page proposal to include methods for tree planting and on-going maintenance.
- Please provide a list of available equipment for this project and access to specialized equipment which may be needed.

References

- Please provide at least two (2) customers (additional references are desirable) who have purchased and received contract services, and the project number or name of project in which similar installation work took place. Please include the following information:
  - Entity Type - City/County/State/Private
  - Date of Contract
  - Name/Title of Contact
  - Contact phone
  - Contact email
  - Detailed description of work
  - Total contract cost

The Town reserves the right to inspect the work described.

Pricing

- Please provide a cost for the described work listed in Proposed Cost Worksheet 1.
- Please clearly identify all assumptions built into the pricing proposal.

Other

- Provide proof of insurance coverage for General Liability in accordance with the limits identified on page GC-3 of the RFP document.
- Submittals should be limited to 10 pages.

RFP Selection Criteria:
The award will be made to the most responsive, responsible bidder. In evaluating whether a bidder is responsive and responsible, Town of Wake Forest staff may utilize some or all of the following criteria:

- Attendance at the pre-proposal meeting.
- Thoroughness of proposal submitted.
- Professional qualifications and experience of staff assigned in performing the work required.
- Familiarity with project and conceptual approach proposed to address those requirements.
- Quality of past performance on similar projects.
- Cost proposal and evidence of cost control effectiveness.
- References.

SCOPE OF WORK

This RFP is for the installation of 72 trees on Town of Wake Forest street rights-of-way and tree planting easements in various locations around town.

Bids are based on the cost of plant nursery stock, tree installation, and maintenance. Existing stumps at the replacement site shall be removed or ground by the contractor prior to installation.

All work shall be done by or under the supervision of an ISA Certified Arborist, registered Landscape Architect, or landscape professional approved by the Urban Forestry Coordinator.

SCOPE DETAILS

1. The Landscape Contractor shall provide all materials, equipment, tools and labor to complete the work described in the specifications for this project.

2. The total number of trees with associated costs for nursery stock, installation, and maintenance shall be indicated on the Exhibit A: Street Tree Installation Worksheet

3. The location and species of the individual planting sites shall conform to the attached Tree Replacement Spreadsheet in Exhibit A: Street Tree Installation Worksheet

A. STANDARDS

1. All tree installation work shall conform to the standards detailed in the following documents:
   a. American National Standards for Tree Care Operations, ANSI A300. American National Standards Institute, 11 West 42nd Street, New York, N.Y. 10036
   b. Appendices A & B 1-4 provided by Select Trees, Inc.

B. SUBSTITUTIONS

1. Any substitution for the listed plant material is prohibited without prior approval of the Urban Forestry Coordinator.

C. UTILITIES

1. The Landscape Contractor is responsible for the location of all underground utilities or facilities in the areas in which the work is to be performed. The Contractor shall notify ACLS/NOCUTS/ONE CALL and/or hire a private locator service for the purpose of discovery of underground utilities or facilities. The contractor shall be responsible for all damage to underground utilities caused in the course of the work described herein.

2. Any conflicts with the planting locations shall be brought to the attention of the Town prior to commencement of work in the area.

D. CONCEALED ELEMENTS

1. The discovery of concealed, underground elements unknown prior to bidding shall be dealt with at the time of discovery. The Contractor shall bid the project as unclassified with the understanding that some underground obstructions may be encountered. If rock is encountered in a tree yard, the contractor shall probe and locate the tree within a reasonable distance of the original location. The contractor shall notify the Urban Forestry Coordinator if field adjustments are needed.

E. WORKMANSHIP

1. All work shall be done by or under the supervision of an ISA Certified Arborist, registered Landscape Architect, or landscape professional approved by the Urban Forestry Coordinator.

2. The work on this project will be executed in accordance with the provided specifications.

3. The work shall be conducted in a safe and professional manner.

4. All areas disturbed during the installation shall be returned to the original condition prior to the close out of the project. Damage to the turf areas shall be repaired with grass similar to that damaged.

5. Coordinate with Urban Forestry Coordinator before performing any work to alert residents, including the need to close streets. All work shall be performed between 8:00 a.m. and 5:00 p.m., Monday through Friday, unless prior approval is given. No work is to be done on Town holidays without prior approval.

   All tree work shall be conducted in a manner as to minimize disruption of the public. If it is necessary to close a street during installation operations to insure public safety, the Urban Forestry Coordinator will be notified in advance of the day of work. On the day that the work is to be performed, the Police Department dispatcher will be notified so that emergency personnel can be informed of the closure. The Contractor is responsible to have vehicles moved during work.

6. All regulations stipulated by the Occupational Safety and Health Administration (OSHA) shall be adhered to during the course of the work.

F. SITE CONDITIONS

1. The Landscape Contractor shall be responsible for inspecting planting sites prior to bidding. The Contractor shall notify the Town of any apparent conflicts with the work prior to bidding or in the bid when submitted. Notification in the bid should be on a separate sheet and labeled POTENTIAL CONFLICT WITH THE WORK and any recommended changes should be noted with any additional changes in the price of the project as quoted.

2. Existing plant material encountered in the work areas which is <u>not</u> specifically scheduled for removal under this contract (i.e. - it appears near the location described as a site for a "replacement tree") is to be protected. Any damage to existing plant material or structures will be the responsibility of the Contractor to repair, replace or treat as needed to restore the element to its original condition.

3. Existing plant material encountered in the work areas which is specifically scheduled for removal under this contract (i.e., it appears in the location described as a site for a "remove and replace") is to be removed by Town of Wake Forest Tree Crew. All removals will be accomplished by town staff, removing and disposing of all but a four foot (4') high section of trunk to be used by the contractor as a lever to remove as substantial a portion of the rootball as possible. The trunk section and rootball are to be removed and disposed of by the contractor. In some locations the contractor will be responsible for grinding a stump that remains from a previous removal.

   a. The contractor is responsible for notifying the Urban Forestry Coordinator no less than two (2) weeks prior to the date that the material is to be planted at a specific site to allow for public notification and scheduling purposes. Notification shall be done via email to

jrall@wakeforestnc.gov and include specific location numbers per the contract spreadsheets.

b. Replacement sites where stumps are encountered that cannot be removed may have the replacement site shifted to either side of the stump at the discretion of the Urban Forestry Coordinator or representative staff.

4. Work sites shall be maintained in a safe and orderly condition at all times. There shall be no open holes left at the close of work. All work areas are to be protected from the public with barricades or other appropriate safety measures. Any holes left open overnight shall be covered, the cover anchored to the ground and the area protected with caution ribbon and barricades. The Contractor shall not leave any excavation, hole, or pit on the project unsecured. All holes, excavations, or pits shall be covered, fenced or adequately protected and secured to prevent pedestrians from accessing them when the workers are not on the job site. All areas of potential hazard shall be fenced, barricaded, or appropriately marked with other devices to insure adequate notice is provided to the facility users of potential danger.

G. CONTRACTOR RESPONSIBILITIES

1. **All trees must be planted by March 31, 2017**. The Contractor shall provide to the Town a Project Schedule Timeline of the number of days to complete this work in the Contractor's proposal. The Contractor shall be responsible for all work needed to properly execute this project. The Contractor shall be responsible for all permits required prior to commencing the work.

H. SPECIFICATIONS AND NON-CONFORMING WORK

1. The Contractor shall follow the procedures outlined in the specifications contained herein. Failure to do so in the view of the Urban Forestry Coordinator shall require the Contractor to remove the substandard work at no cost to the Town and redo the work until it meets the stated specifications.

I. INSURANCE

1. Contractor shall file with the Town of Wake Forest evidence of Workman's Compensation, Commercial General Liability, and Business Auto Liability. Limits of insurance shall be as follows: Minimum amounts of $1,000,000 in employer liability, statutory required amounts in Workman's Compensation, $1,000,000 Commercial General Liability, and $500,000 in Business Auto Liability. A certificate of insurance shall be filed with Randy Driver (Purchasing Manager, Town of Wake Forest) prior to award of contract. The Town of Wake Forest shall be listed and an additional insured under General Liability and also listed as a certificate holder. Such insurance shall be maintained throughout the term of this contract and may not be canceled without providing at least thirty (30) days advance notice of such cancellation to the Town of Wake Forest.

J. PROJECT TIME & NON-COMPLIANCE

1. Time of Completion: The Contractor shall commence work to be performed under this agreement on a date to be specified in writing from the Town, corresponding to ten (10) days after the Notice to Proceed, and shall fully complete all work hereunder by **March 31, 2017.**

2. Time Delay and Extensions: Any request for extension of time shall be made at least ten (10) days prior to the termination date **March 31, 2017** and will only be considered for putting

installation off until the next suitable planting date. This date will need to be submitted in written form and will be considered on a species basis by the Urban Forestry Coordinator. All maintenance and warrantee periods will commence from the date of the final walkthrough or March 31, 2017, whichever comes first.

3. Failure or Delay in Completing Work on Time: Time is an essential element of this Contract, and any delay in completing the work may inconvenience the public, interfere with the operations of the town, and demand additional time of Town staff. For these reasons, it is important that the work be completed on schedule. Should the Contractor fail to complete the work within the time stipulated in the contract, or within such extra time that may be allowed per the process detailed above, no payment will be made until the work is completed and accepted by the Town.

K. INDEMNIFICATION

1. The Contractor agrees to hold harmless and indemnify the Town of Wake Forest against any and all claims, suites, damages, costs, or legal expense as a result of bodily injury or property damages resulting from the negligence of the Contractor. All policies of insurance carried by the Contractor shall be written as primary policies, not contributing with and not in excess of insurance coverage which the Town of Wake Forest may carry.

L. E-VERIFY

The Contractor shall comply with the requirements of Article 2 of Chapter 64 of the NC General Statutes. Further, if the Contractor utilizes a subcontractor, the Contractor shall require the subcontractor to comply with the requirements of Article 2 of Chapter 64 of the NC General Statutes. The successful contractor will be required to submit a form verifying this statement before contract will be awarded.

M. IRAN DIVESTMENT ACT

Vendor certifies that; (i) it is not identified on the Final Divestment List or any other list of prohibited investments created by the NC State Treasurer pursuant to N.C.G.S. 143-6A-4; (ii) it will not take any action causing it to appear on any such list during the term of this Purchase Order, and (iii) it will not utilize any subcontractor to provide goods or services hereunder that is identified on any list. The successful contractor will be required to submit a form verifying this statement before contract will be awarded.

LANDSCAPE SPECIFICATIONS

A. GENERAL

1. These specifications include furnishing all materials, equipment, and labor necessary for the removal of existing plant material and planting of trees required to complete the work contained in the specifications.

2. Protection of existing features. During construction, protect all existing trees, shrubs, and other adjacent vegetation, site features and improvements, structures, and utilities encountered at the planting sites. Removal or destruction of existing plantings is prohibited unless specifically authorized by the Town, or noted on the specifications as “Remove and Replace” or “R&R”.

B. MATERIALS

1. Mulch, gravel, landscape fabric, soil, amendments, fertilizer, pest control and all other materials in these specifications shall be provided by the Contractor.

C. DETAILED TREE SPECIFICATIONS

1. Plants shall be obtained from the nurseries identified by the Town. Trees may be purchased from additional nurseries at the Urban Forestry Coordinator’s discretion. The Contractor is responsible for coordinating the transportation and delivery dates.

2. Trees shall be 15 gallon, unless otherwise specified by caliper. Plant material shall be inspected by the Urban Forestry staff prior to installation. The contractor will notify the Urban Forestry Coordinator on delivery days to approve the trees before the delivery truck leaves the site.

   Unless specifically noted, **all plants shall be of specimen quality**, exceptionally heavy, symmetrical, and so trained or favored in development and appearance as to be unquestionably and outstandingly superior in form, compactness, and symmetry. The lowest first branch shall be a minimum of 5-6’ above grade. Exceptions will be made for species that have prohibitive form and habit. They shall be sound, healthy, vigorous, well branched, and densely foliated when in leaf; free of disease and insects, eggs, or larvae; and shall have healthy, well-developed root systems. They shall be free from physical damage or other conditions that would prevent vigorous growth.

   Trees with multiple leaders, unless specified, will be rejected. Trees with a damaged or crooked leader, bark abrasions, sunscald, disfiguring knots, insect damage (including presence of fire ants), or cuts of limbs over 20 mm (3/4 in.) in diameter that are not at least 50% closed will be rejected.

3. Plants shall conform to the specifications noted in ANSI Z60.1-2014 American Standards for Nursery Stock.

4. Any substitution for the listed plant material is prohibited without prior approval of the Urban Forestry Coordinator.

5. **The root collar shall be apparent at surface of rootball, or the contractor will be responsible for removing excess soil from the top of the rootball in order to establish the correct grade per details in APPENDIX A.**

D. TRANSPORTATION AND STORAGE OF PLANT MATERIAL:

(*NOTE: No matter how good plant materials may be at a nursery, how that material is handled after it is dug is of critical importance.)*

1. The contractor is responsible for coordinating the transportation and delivery dates of trees from the nursery. In the event that trees cannot be planted immediately they shall be held at a facility provided by the Contractor.
    a. Plants must be protected at all times from sun or drying winds. Those that cannot be planted immediately on delivery shall be kept in the shade, well protected with soil, wet mulch, or other acceptable material, and kept well-watered. Plants shall not remain unplanted any longer than three days after delivery. Plants shall not be bound with wire or rope at any time so as to damage the bark or break branches. Plants shall be lifted and handled with suitable support of the soil ball to avoid damaging it.
2. Transportation to the planting site provided by the Contractor shall adhere to the following:
    a. If necessary branches shall be tied with rope or twine only, and in such a manner that no damage will occur to the bark or branches.
    b. During transportation of plant material, the contractor shall exercise care to prevent injury and drying out of the trees. Should the roots be dried out, large branches broken, balls of earth broken or loosened, or areas of bark torn, the Urban Forestry Coordinator may reject the injured tree(s) and order them replaced with same at no additional cost to the City and from the nursery of original purchase. All loads of plants shall be covered at all times with tarpaulin, canvas, or screen netting. Loads that are not protected will be rejected.

E. PLANTING METHODS

Must provide these specifications and/or APPENDICES A & B to field staff for installation.

1. Tree Planting: The Tree Planting Detail shown in Appendix A provides a general depiction of the work. A detailed planting detail shall be made available to field staff in both Spanish and English and available for reference on work vehicles throughout the period of installation.

2. Handling of the Trees: Rootballs are to be kept moist while in storage prior to planting. In transporting the trees from the contractor's holding area to the planting locations all trees shall be handled, secured, and covered to prevent damage from wind or vibration. Furthermore, trees shall not be thrown, dropped, or bounced off a truck or loader to the ground. Appropriate equipment shall be used to lift and **maneuver the trees by the root ball only.** Utilize a Bobcat or another type of mechanical loader with a boom arm(s), strapping/chain and/or hooks to maneuver, lift, and lower the tree by the root ball.

3. Timing of Planting: Upon award of contract and Notice to Proceed, the Contractor shall complete the entire project by **March 31, 2017**. All trees shall be planted on the day they are taken to the job site.

4. Protection of Trees: The Contractor shall take every reasonable precaution to protect trees from mechanical, physical, or other injury (scarring, breaking limbs, damaging root ball).

5. Underground Utilities: The Contractor shall arrange for locating underground utilities. Where underground utilities are marked by the Utility Locating Service, the planting pit(s) shall be hand dug (only if doing so will not damage the underground utilities), or excavated with an air spade®, air knife®, or hydro-vac®. A back hoe, auger, or other equipment may be used at the Contractor's discretion however any damage to existing structures will be the responsibility of the

Contractor to repair, replace or treat as needed to restore the element to its original condition.

6. Obstructions Below Ground: If obstructions of rock or man-made items are encountered that are an impediment to planting at a designated site, the Contractor shall notify the Urban Forestry Coordinator immediately so that she can determine what field adjustments are needed.

7. Planting Locations: The attached Tree Replacement Spreadsheet in Exhibit A indicates the specified tree planting locations. **Planting sites are marked on the curb face with a white paint mark.** Trees are to be centered between the sidewalk and curb or within existing tree planting easements. A neon green tree planting location flag may also be present to indicate the preferred planting location. **For tree location questions,** contact Urban Forestry Coordinator Jennifer Rall (O) 919-435-9565 or (C) 919-795-1168.

8. Preparation of the B&B Rootball: Remove all burlap, lacing, and wire basket from at least the top 1/3 of the rootball. Discard material outside the planting hole. If the root flare is not evident at the top of the rootball, the contractor must remove the overlying soil from the rootball and expose the root flair to establish the appropriate top of the rootball for the purposes of digging the planting hole to the appropriate depth, and then the following guidelines must be followed:

   a. Determine the elevation of the root flare and ensure that it is planted at grade.
   b. If the root flare is less than (2 in.) below the soil level of the root ball, plant the tree at the appropriate level above the grade to set the flare even with the grade. **If the flare is more than (2 in) below grade at the center of the root ball** and the soil cannot be removed while maintaining the integrity of the rootball then **the tree shall be rejected.** The Urban Forestry Coordinator or representative staff shall be notified and document the tree for replacement by the nursery.
   c. Plants shall be set on flat-tamped or unexcavated pads at the same relationship to finished grade as they were to the ground from which they were dug. Plants must be set plumb and braced in position until soil has been placed and tamped around the base of the root ball. Improper compacting of the soil around the root ball may result in the tree settling or leaning. Trees shall be set so that they will be at the same depth and so that the root ball does not shift or move laterally one year later.

9. Planting Hole: All trees shall be planted so that the tops of the root balls are flush with, or no more than 2” above the existing surface grade of the planting sites. Every planting hole shall be dug the same depth (or slightly shallower) as the root ball so that the trees are planted flush with the existing soil grade.

   a. Tree pits: All soil must be excavated from the 4’x6’ space except for the compacted pedestal the root ball is to sit on.
   b. Tree lawns/medians: The planting hole shall be at least 2 feet wider in diameter than the root ball or 3-5 times the width of the root ball, whichever is larger. The bottom of the planting hole shall be compacted to prevent settling of rootball**.**

10. Preparation of the Container-grown Rootball: Remove plastic, paper, or fiber pots from containerized plant material. Pull roots out of root mat. Make sure root flare is visible as outlined in #8 of this section. Immediately after removing the container, install the plant such that the roots do not dry out. Pack soil around exposed roots while planting. Appropriate equipment shall be used to lift and **maneuver the trees by root ball only.**

11. Handling of B&B Trees: Lift plants only from the root ball using belts or lifting harnesses of sufficient width not to damage the root balls. Do not lift trees by their trunk or use the trunk as a lever in positioning or moving the tree in the planting area. Appropriate equipment shall be used

to lift and **maneuver the trees by the root ball only.** Utilize a Bobcat or another type of mechanical loader with a boom arm(s), strapping and/or hooks to maneuver, lift, and lower the tree by the root ball.

12. Root Shaving and Backfilling of Containerized Planting Material: Backfill shall be placed to avoid injury to tree roots and to fill air pockets. The backfill shall be added in 6-inch increments and tamped firmly but not excessively around the root ball. After 50% of backfill is applied the root ball must be shaved with a sharp shovel or spade. The shovel/spade shall be placed 1.5 inches from the edge of the container root ball and depressed to cleanly sever roots. Shaving shall be conducted on the entire circumference and depth of the root ball. Shavings shall remain in the planting hole after treatment. Fill with water and allow water to drain completely. Apply the remainder of the backfill and water thoroughly before applying mulch. During the process, any exposed or frayed roots shall be cut off cleanly. Do not place soil on top of root ball.

    a. Tree Pits: Backfill with 100% screened topsoil.
    b. Tree Lawns (green strips/medians): Backfill with existing soil and compost (humus)
        i. Backfill with the 75% native soil dug from the planting hole and 25% completely decomposed compost (humus). The backfill shall be broken or "chopped" up, loosened and mixed before placing back in the hole.

13. Excess Excavated Soil: No excess soil shall be left at the work site. Do not place excess soil on top of the rootball. All excess excavated soil shall be legally disposed of off-site.

14. Water Saucers or Berms: Water saucers or berms are not appropriate for trees planted in grate-covered tree pits, but are acceptable in median and tree lawn plantings. The water saucers shall be no more than 3" above finished grade.

15. Tree Watering When Planting: After 50% of the backfill is applied, fill with water and allowed to drain completely. Apply the remainder of the backfill. All root balls, soil in the planting holes, and soil in a 1' radius around the outer edge of the planting hole, shall be thoroughly soaked with water after the planting. The water shall be applied with a slow flow hose end nozzle, not a straight stream. The Contractor shall make, at his expense, whatever arrangements may be necessary to ensure an adequate supply of water to water the trees at the time of planting. The contractor shall also furnish all necessary hose, equipment, attachments, and accessories for the adequate watering of the trees at planting, as may be required to complete the work as specified.

16. Mulch: All trees in tree lawns shall be neatly mulched with hardwood mulch, **3 inches** deep. Mulch shall cover the rootball and the area 1 ½ feet beyond the planting hole. Mulch must be placed 3-6" from the root flare shall not be placed against the tree trunk. Where the root ball approaches the width of a tree lawn, the mulch can be applied as a square instead of a circle.

17. Staking and Guying: Trees shall not be staked and guyed unless they become unstable. Staking shall not interfere with pedestrian or vehicular traffic. In areas where stability is a concern stakes may be applied with approval from the Urban Forestry Coordinator (e.g., extremely windy areas next to buildings).

18. No Tree Wraps or Ties: Tree Wraps shall be removed and disposed of properly upon completion of installation. All other ties, flagging, labels, etc. shall be removed at the end of the warranty maintenance period.

F. LIMITED WARRANTY AND MAINTENANCE

1. The Contractor shall provide a one-year warranty including maintenance, in writing, upon

completion of this contract. Before the close of the warranty period the plant material shall be inspected on **November 15, 2017** and **January 15, 2018**. Necessary replacements shall be noted for installation. Final installations shall be completed by **March 31, 2018** and shall be covered by a one time, one-year warranty.

a. At the end of the first year replacement plant material shall be provided by the nursery or purchased by the Town unless the tree has died as a result of improper planting, maintenance, neglect, or violation of any specification noted within this document. The trees shall be installed by the contractor at no additional expense to the Town. Damage resulting from vandalism or acts of God shall not be replaced under this project but shall be righted or staked as needed if salvageable.

G. POST-PLANTING MAINTENANCE

1. After the tree installation has been accepted by the Town, the contractor shall inspect and maintain the trees for a period of one year. A maintenance report shall be submitted bi-weekly to the Urban Forestry Coordinator or designee (Appendix C). Maintenance should include, but not be limited to: periodic watering, removal of any girdling tape, tying string, or residual trunk wrap, and re-establishing plumb in trees that have blown over or settled in at an angle.

2. Mulch shall be checked and replenished as needed and at the end of the maintenance period. Mulch shall be applied according to LS 4 Mulch in this document.

3. **Watering Instructions ** Very Important****

a. Commercially available water bags shall be provided by the Contractor for all trees.

b. Water bags shall be installed during the growing season and removed at the end of this period.

i. Water bags shall be checked at every visit that the emitters are clear and free of debris allowing water to flow through as designed.
ii. Water bags that are still full of water from the previous visit shall be emptied and refilled.
iii. The bag shall be lifted up at the trunk at each visit to remove trash, debris, or accumulation of soil or insects.
iv. The root ball shall be soaked for 3-5 minutes before re-filling the bag.
v. Use an adjustable hose end nozzle device to slow the flow onto the root ball to prevent disturbing soil and mulch on the root ball.

c. Watering volumes should be based upon delivery of 1” of moisture/week to the tree if precipitation does not meet that amount during the active growing season defined as **April 15th through October 15th**. This requires re-filling bags AND soaking the root ball at least twice per week during weeks where there is no rain.

d. Throughout that period a **watering report** (included in Maintenance Report) must be provided to the Town and emailed to the Urban Forestry Coordinator or designee on a biweekly basis.

e. The watering report template is included in Appendix C.
i. Include rainfall totals for any week NOT watered must be generated for the area. Only if verifiable rainfall totals exceed 1” in the previous week can the contractor justify suspending watering activities.

ii. Watering shall be verifiable by Town Urban Forestry staff either checking the crews at the time of their activity, or after the fact using moisture meters.
iii. Failure to adhere to these terms will result in the default of maintenance payments. Please note the Service Contract for retained compensation and security.

4. The Town of Wake Forest will assume responsibility for all upkeep or replacement of trees after the warranty and maintenance period.

H. INSPECTION AND ACCEPTANCE

1. Inspection: The contractor shall notify the Urban Forestry Coordinator one week prior to commencement of the work. Monitoring of the work will be done by Town Urban Forestry staff.

2. Inspection of the work to determine initial completion of planting activities will be made by the Urban Forestry Coordinator at the conclusion of the planting period upon the Contractor's written request. The request must be e-mailed to the Urban Forestry Coordinator at jrall@wakeforestnc.gov.

3. If trees are found in this inspection are deemed unacceptable by the Urban Forestry Coordinator, the Contractor shall be notified in writing that the damaged trees are to be replaced with same by the contractor at no expense to the Town, during the planting season at the Urban Forestry Coordinator's discretion. Initial acceptance of the work, and payment for the work, will not occur until after all unacceptable trees are replaced.

4. Trees shall be deemed "unacceptable" for the following reasons:
   a) Unauthorized substitution of material took place.
      a. Trees meant for location "x" planted in location "y"
      b. Trees specified in contract purchased by Contractor and substitutions planted without authorization.
   b) Defects and damage becomes evident at time of inspection, for example:
      a. Material is dead or dying from lack of water, poor drainage, pest, pathogen or poor handling pre and/or post planting.
   c) Trees not planted in accordance with specifications, for example:
      a. Wire basket / burlap left on rootball.
      b. Mulch piled too high, close, or deep.
      c. Root flare buried in rootball.
      d. Tree is planted above grade 2" or more.
      e. Tree settles in/out of plumb

5. Final Acceptance of plant material shall take place after the warrantee period is over and a final walk through has taken place with representatives of the contractor's firm and Urban Forestry staff present.

Proposed Cost Worksheet 1

1. BASE BID

Total Price for installing seventy-two (72) 1”-4” caliper trees with one year of maintenance in locations corresponding to the **Tree Installation Spreadsheet**:

$_____

BASE BID PER UNIT COST LIST: Bidder is to complete the following columns on this page: Specifications for installation of all material to conform to standards detailed within this document. Installed Cost shall include ALL WORK described in Proposal and incorporated documents.

Base Bid Material corresponds to Locations listed in Exhibit B “Tree Installation Spreadsheet” of this document.

A	B	C
PER TREE INSTALLATION COST (Including labor, equipment, & materials necessary for planting)	**TOTAL COST OF MAINTENANCE PER TREE FOR ONE (1) YEAR:**	**TOTAL COST PER TREE FOR BASE BID (A+B)**
$	$	$

BASE BID Total Cost (C)	**TOTAL NUMBER OF TREES: 72**	**TOTAL PROJECT COSTS**	$

ADDITIONAL CONTRACTOR'S CERTIFICATION

Acceptance of Terms

The undersigned CONTRACTOR has carefully examined the FORM CONTRACT, the GENERAL CONDITIONS, the SPECIAL PROVISIONS, the PLANS, and the SPECIFICATIONS, which are acknowledged to be a part of the PROPOSAL, and the PROPOSAL FORM, and has also carefully examined the area of the proposed work. The undersigned CONTRACTOR agrees to bind itself on award to it by the TOWN OF WAKE FOREST under this proposal, to execute within one (1) calendar week in accordance with such award, a CONTRACT, of which CONTRACT this proposal and such plans and specifications shall be a part, to provide all necessary machinery, tools, labor, and other means to do all work and to furnish materials, except as otherwise noted necessary to perform and complete the said PROJECT within the time limit specified below.

The undersigned CONTRACTOR understands that if this CONTRACT is awarded to them they must upon completion of this contract, or at any time requested, furnish to the PARKS AND RECREATION DIRECTOR of the TOWN OF WAKE FOREST, an exact itemized statement of North Carolina Sales Tax paid on materials, supplies, equipment and any other items charged to this CONTRACT.

In submitting this Proposal, the undersigned agrees that this bid will remain in effect for a period of 60 days following the acceptance of the proposals, that the undersigned agrees to enter into a Contract with the Owner, if awarded, on the basis of this Proposal, and that the undersigned agrees to complete the work in accordance with the Contract Documents.

Non-Collusion in Proposals

The Contractor specifically agrees to abide by all applicable provisions of Article 3 of Chapter 133 of the North Carolina General Statutes. By submission of this proposal, each contractor and each person signing on behalf of any contractor certifies, and in case of a joint proposal each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

(1) The prices in this proposal have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other contractor or with any competitor;

(2) Unless otherwise required by Law, the prices quoted in the proposal have not been knowingly disclosed by the contractor and will not knowingly be disclosed by the contractor prior to opening, directly or indirectly, to any other contractor or to any competitor; and

(3) No attempt has been made or will be made by the contractor to induce any other person, partnership, or corporation to submit or not to submit a proposal for the purpose of restricting competition.

Type of Business

The undersigned hereby represents that it is a _____ corporation, partnership, or an individual. If a corporation, the undersigned further represents that it is duly qualified as a corporation under the Laws of the State of North Carolina and it is authorized to do business in this State.

_____

Company Name and Address

_____

Authorized Signature and Date

_____ _____

Title Name of Project

Exhibits:
A: Species List
B: Town of Wake Forest Street Tree Installation FY16-17 Spreadsheet

Appendices:
A: Tree Planting Detail
B: Handling and Planting Instructions
C: Maintenance Form Report Template

EXHIBIT A

Species List

#Trees	Common Name	Species	Nursery	Size
7	Upright Hornbeam	Carpinus betulus 'Fastigiata'	Panther Creek	15 gal
3	Tokyo Tower Chinese fringetree	Chionanthus retusus 'Tokyo Tower'	Panther Creek	15 gal
1	Spring Fleecing Fringetree	Chionanthus virginicus 'Spring Fleecing'	Panther Creek	15 gal
25	Green Gable Black Gum	Nyssa sylvatica 'Green Gable'	Panther Creek	15 gal
25	Regal Prince® Oak	Quercus x Regal Prince	Panther Creek	15 gal
2	Emerald Arborvitae	Thuja occidentalis 'Emerald'	Panther Creek	15 gal
7	Green Vase Zelkova	Zelkova serrata 'Green Vase'	Panther Creek	15 gal
1	Princeton Elm	Ulmus americana 'Princeton'	Taylor's Nursery	4" cal
1	Chinese Pistache	Pistachia chinesis	Taylor's Nursery	4" cal

72

EXHIBIT B

Street Tree Installation Spreadsheet

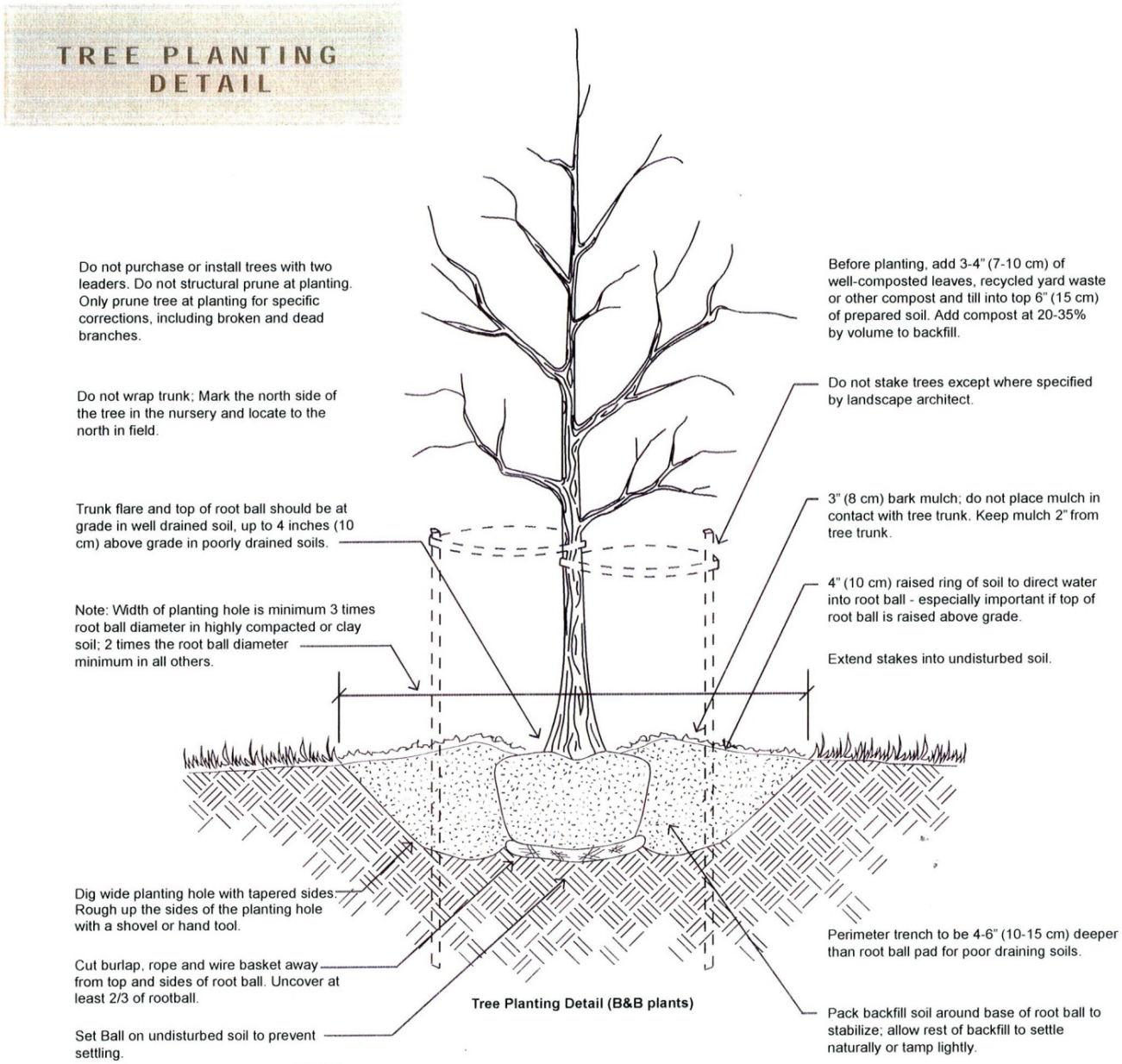
Street #	Street Address	Subdivison/ Business	Instructions	Species	#Trees	Size	Notes
1200	Clatter Av	Crenshaw Hall		Chionanathus retusus 'Tokyo Tower'	1	15G	
1132	Clatter Ave	Crenshaw Hall	Remove tree/stump	Chionanathus retusus 'Tokyo Tower'	1	15G	
1425	Loghouse St	Crenshaw Hall		Nyssa sylvatica 'Green Gable'	1	15G	
1012	Martin Bench Ct	Crenshaw Hall	Remove tree/stump	Carpinus betulus 'Fastigiata'	1	15G	
9309	Bramden Ct	Dansforth	Remove tree/stump	Nyssa sylvatica 'Green Gable'	1	15G	
9000	Linslade Way	Dansforth		Nyssa sylvatica 'Green Gable'	1	15G	
9101	Linslade Way	Dansforth	Remove tree/stump	Nyssa sylvatica 'Green Gable'	1	15G	
9040	Linslade Wy	Dansforth	Remove tree/stump	Nyssa sylvatica 'Green Gable'	1	15G	
9252	Linslade Wy	Dansforth	Remove tree/stump	Carpinus betulus 'Fastigiata'	1	15G	
620	Middle Bridge Rd	Deacon's Ridge	Remove tree/stump	Chionanthus virginicus "Spring Fleecing"	1	15G	
804	Old Magnolia Ln	Heath Ridge Village	Remove tree/stump	Carpinus betulus 'Fastigiata'	1	15G	
813	Old Magnolia Ln	Heath Ridge Village	Pull stump	Carpinus betulus 'Fastigiata'	1	15G	
300	Sugar Maple Ave	Heath Ridge Village	Remove tree/stump	Carpinus betulus 'Fastigiata'	1	15G	
309	Yellow Poplar Ave	Heath Ridge Village	Pull stump	Carpinus betulus 'Fastigiata'	1	15G	
981	Overlook Ridge Rd	Heritage 1 East		Nyssa sylvatica 'Green Gable'	1	15G	
1008	Overlook Ridge Rd	Heritage 1 East	Pull stump	Nyssa sylvatica 'Green Gable'	1	15G	
1017	Overlook Ridge Rd	Heritage 1 East	Remove tree/stump	Nyssa sylvatica 'Green Gable'	1	15G	

1029	Overlook Ridge Rd	Heritage 1 East	Remove tree/stump	Nyssa sylvatica 'Green Gable'	1	15G	
1148	Overlook Ridge Rd	Heritage 1 East		Nyssa sylvatica 'Green Gable'	1	15G	
317	Dimock Way	Heritage 1 North	Pull stump	Nyssa sylvatica 'Green Gable'	1	15G	
1112	Fanning Dr.	Heritage 1 North	Pull stump	Quercus x Regal Prince	1	15G	Along Sterns Wy.
1228	Fanning Dr.	Heritage 1 North	Pull stump	Quercus x Regal Prince	1	15G	Along Fanning Dr.
	Friendship Chapel Rd	Heritage 1 North	Pull stump	Pistachia chinesis	1	4" caliper	Across from school parking lot
1304	Heritage Heights Ln	Heritage 1 North	Pull stump	Quercus x Regal Prince	1	15G	
1312	Heritage Hills Wy	Heritage 1 North	Remove tree/stump	Nyssa sylvatica 'Green Gable'	1	15G	
1100	Heritage Knoll Dr	Heritage 1 North	Remove tree/stump	Quercus x Regal Prince	1	15G	
1101	Heritage Knoll Dr	Heritage 1 North	Remove tree/stump	Quercus x Regal Prince	1	15G	
1108	Heritage Knoll Dr	Heritage 1 North	Remove tree/stump	Quercus x Regal Prince	1	15G	
1102	Hobblebush Wy	Heritage 1 North		Quercus x Regal Prince	1	15G	
500	Lolley Ct	Heritage 1 North	Remove tree/stump	Zelkova "Green Vase"	1	15G	
436	Otway Rd	Heritage 1 North	Pull stump	Quercus x Regal Prince	1	15G	
500	Otway Rd	Heritage 1 North	Remove tree/stump	Nyssa sylvatica 'Green Gable'	2	15G	
509	Otway Rd	Heritage 1 North	Pull stump	Quercus x Regal Prince	1	15G	
1309	Plunket Dr	Heritage 1 North	Pull stump	Quercus x Regal Prince	1	15G	
305	Stearns Way	Heritage 1 North	Pull stump	Quercus x Regal Prince	1	15G	
317	Stearns Way	Heritage 1 North	Pull stump	Quercus x Regal Prince	1	15G	
412	Stearns Way	Heritage 1 North	Pull stump	Quercus x Regal Prince	1	15G	
924	Sweet Olive Ct	Heritage 1 West	Pull stump	Nyssa sylvatica 'Green Gable'	1	15G	

4108	Alpine Clover Dr	Heritage 2 South		Quercus x Regal Prince	1	15G	
4225	Alpine Clover Dr	Heritage 2 South	Pull stump	Quercus x Regal Prince	1	15G	
3801	Crimson Clover Ave	Heritage 2 South	Remove tree/stump	Zelkova "Green Vase"	1	15G	
3812	Crimson Clover Ave	Heritage 2 South	Remove tree/stump	Zelkova "Green Vase"	1	15G	
3816	Crimson Clover Ave	Heritage 2 South	Remove tree/stump	Zelkova "Green Vase"	1	15G	
3824	Crimson Clover Ave	Heritage 2 South	Remove tree/stump	Nyssa sylvatica 'Green Gable'	2	15G	
3832	Crimson Clover Ave	Heritage 2 South	Remove tree/stump	Nyssa sylvatica 'Green Gable'	2	15G	
1004	Desert Marigold Ct	Heritage 2 South	Remove tree/stump	Zelkova "Green Vase"	1	15G	
929	Evening Snow St	Heritage 2 South	Remove tree/stump	Quercus x Regal Prince	1	15G	
1004	Evening Snow St	Heritage 2 South	Remove tree/stump	Quercus x Regal Prince	1	15G	
4224	Fawn Lily Dr	Heritage 2 South		Nyssa sylvatica 'Green Gable'	1	15G	
1116	Golden Star Way	Heritage 2 South	Pull stump	Zelkova "Green Vase"	1	15G	
4024	Heritage View Tr	Heritage 2 South	Pull stump	Zelkova	1	15G	
4104	Heritage View Tr	Heritage 2 South	Remove tree/stump	Nyssa sylvatica 'Green Gable'	1	15G	
1017	Marshall Farm St	Heritage 2 South	Remove tree/stump	Nyssa sylvatica 'Green Gable'	1	15G	
928	Shasta Daisy Dr	Heritage 2 South	Remove tree/stump	Quercus x Regal Prince	1	15G	
1001	Shasta Daisy Dr	Heritage 2 South	Remove tree/stump	Quercus x Regal Prince	2	15G	
1116	Shasta Daisy Dr	Heritage 2 South	Pull stump	Quercus x Regal Prince	1	15G	
1120	Shasta Daisy Dr	Heritage 2 South	Remove tree/stump	Quercus x Regal Prince	1	15G	
1121	Shasta Daisy Dr	Heritage 2 South	Remove tree/stump	Quercus x Regal Prince	1	15G	
244	Highgate Cir	Highgate Park	Pull stump	Chionanathus retusus 'Tokyo Tower'	1	15G	

5604	Clearsprings Dr	Majestic Oaks	Pull stump	Quercus x Regal Prince	1	15G	
2808	Margots Ave	Margots Pond	Remove tree/stump	Quercus x Regal Prince	1	15G	
836	Pineview Dr	Pineview Estates	Pull stump	Thuja occidentalis 'Emerald'	2	15G	
1600	Gracie Girl Way	Saddle Run	Remove tree/stump	Nyssa sylvatica 'Green Gable'	2	15G	
1541	Lindenberg Sq	Thornrose	Remove tree/stump	Carpinus betulus 'Fastigiata'	1	15G	
320	S. Franklin St		Pull stump	Ulmus america 'Princeton'	1	4" caliper	
555	S. Main St		Pull stump	Nyssa sylvatica 'Green Gable'	1	15G	

APPENDIX A Tree Planting Detail (Provide copy to field staff)



Tree Planting Detail (B&B plants)

NOTES

1. Where several trees will be planted close together such that they will likely share root space, till in soil amendments to a depth of 4-6" (10-15cm) over the entire area.
2. For container grown trees, use fingers or small hand tools to pull the roots out of the outer layer of potting soil; then cut or pull apart any roots circling the perimeter of the container.
3. During the design phase, confirm that water drains out of the soil; use lowered planting hole depth and design alternative drainage system as required.
4. Thoroughly soak the tree root ball and adjacent prepared soil several times during the first month after planting and regularly throughout the following two summers.
5. The planting process is similar for deciduous and evergreen trees.

APPENDIX B Handling and Planting Instructions (Provide to field staff)

(Correction: Mulch 3” depth, Root flare shall be at grade & no higher than 2”)

CAUTION

USE EXTREME CAUTION WHEN HANDLING TREES. USE A CHAIN CRADLE OR STRAP CRADLE ATTACHED TO ROOT BALL TO UNLOAD & MOVE TREES.

STRAPPING AND WIRE BASKET CAN BREAK OR LOOSEN. NEVER MOVE, LIFT, OR HANDLE BY ATTACHING TO OR BY PUTTING PRESSURE ON THE TRUNK.

STAND CLEAR AT ALL TIMES!

BE CERTAIN YOUR EQUIPMENT, INCLUDING STRAPS AND CHAIN CRADLES, IS RATED FOR THE WEIGHTS YOU ARE LIFTING.

THESE INSTRUCTIONS ALSO AVAILABLE IN SPANISH

HANDLING AND PLANTING INSTRUCTIONS

CLOSELY FOLLOWING THESE INSTRUCTIONS SHOULD PROMOTE HEALTHY TREE GROWTH & SHOULD PREVENT THE FOLLOWING CHALLENGES FROM OCCURING:

- DEFOLIATION / HOLDING BROWN LEAVES
- FORMATION OF TRUNK-GIRDLING ROOTS
- SECONDARY PESTS (INSECTS / DISEASE)
- TRUNK & CANOPY DAMAGE
- LEANING TREES / LOOSE ROOT BALLS
- POOR HEALTH, LACK OF VIGOR, DECLINE OR DEATH

A. UNLOADING, HANDLING, AND STAGING

1. STAGING SYSTEMS SHOULD BE PREPARED IN ADVANCE TO ADEQUATELY HOLD TREES ABOVE GROUND FOR OPTIMUM TREE HEALTH PRIOR TO PLANTING. MANY TIMES, EVEN WITH THE BEST PLANNING & COORDINATION, TREES CANNOT BE PLANTED WHEN THEY ARE DELIVERED.

2. USE EXTREME CAUTION WHEN HANDLING TREES. USE A CHAIN CRADLE OR STRAP CRADLE ATTACHED TO THE ROOT BALL TO UNLOAD & MOVE TREES. STRAPPING & WIRE BASKETS CAN BREAK OR LOOSEN. NEVER MOVE, LIFT, OR HANDLE BY ATTACHING TO OR BY PUTTING PRESSURE ON THE TRUNK. BE VERY CAREFUL NOT TO DAMAGE OR SCAR TRUNKS & BRANCHES.

3. PRIOR TO UNLOADING, PROPER MOISTURE SHOULD BE MAINTAINED IN ROOT BALLS. TRUCKS SHOULD BE STAGED IN THE SHADE PRIOR TO UNLOADING. UNLOADING TIME SHOULD BE NO MORE THAN TWO HOURS PER TRUCK.

4. IMMEDIATELY AFTER UNLOADING (NO MORE THAN ONE HOUR AFTER UNLOADING), STAND THE TREES UP. THIS WILL REDUCE THE RISK OF SUN SCALD. PROPERLY STAGED TREES ARE STANDING, UNTIED, & SPACED.

5. REMOVE THE CARDBOARD TRUNK PROTECTOR WITHIN 48 HOURS OF TREES BEING STOOD UPRIGHT TO REDUCE THE RISK OF DAMAGE.

6. MONITOR MOISTURE IN THE ROOT BALL BY PROBING THE SOIL WITH A SOIL PROBE & MANAGE SUPPLEMENTAL IRRIGATION ACCORDINGLY. BE CAREFUL NOT TO OVER OR UNDER IRRIGATE.

7. DURING COLD WEATHER PERIODS, ROOT BALLS MUST BE PROTECTED FROM FREEZING TEMPERATURES.

THESE INSTRUCTIONS ALSO AVAILABLE IN SPANISH

HANDLING AND PLANTING INSTRUCTIONS

B. PLANTING

1. BEFORE PLANTING, REMOVE ANY PLASTIC WRAP & ANY CIRCLING ROOTS FROM THE ROOT BALL. HANDLE TREE ONLY BY ROOT BALL & BE CERTAIN YOUR EQUIPMENT, INCLUDING STRAP & CHAIN CRADLES, ARE RATED FOR THE WEIGHT YOU ARE LIFTING.

2. EXCAVATE PLANTING HOLE AT LEAST TWO TIMES THE DIAMETER OF & 2" SHALLOWER THAN THE ROOT BALL.

3. PLACE ROOT BALL AT A LEVEL WHERE THE TRUNK FLARE WILL BE 2" ABOVE SURROUNDING FINISHED GRADE AFTER SETTLING.

4. MAINTAIN THE TREE IN A STRAIGHT & PLUMB POSITION WHILE BACKFILLING TO NO MORE THAN 1/2 THE DEPTH OF THE ROOTBALL.

5. SATURATE THE PLANTING HOLE WITH WATER AFTER BACKFILL IS 1/2 COMPLETE TO AID REMOVAL OF AIR FROM THE BACKFILL.

6. AFTER INITIAL BACKFILL, WATERING, & THE TREE IS PLUMB, THEN COMPLETE BACKFILL, SATURATE PLANTING HOLE & ADJUST ROOT BALL (IF NECESSARY) TO MAKE TREE STRAIGHT & PLUMB.

7. AFTER ABOVE ITEMS HAVE BEEN COMPLETED, REMOVE:
   A. THE SYNTHETIC STRAP,
   B. ANY CARDBOARD PACKAGING,
   C. THE TOP PORTION OF THE WIRE BASKET DOWN TO & INCLUDING THE FIRST HORIZONTAL RING,
   D. THE BURLAP FROM THE TOP PORTION OF THE ROOT BALL.

8. COMPLETE THE BACKFILL & THOROUGHLY SATURATE WITH WATER TO AID REMOVAL OF AIR FROM THE BACKFILL.

9. AFTER BACKFILL HAS SUBSTANTIALLY SETTLED & THE TREE IS STRAIGHT & PLUMB, STAKE TREE TO PROVIDE STABILITY UNTIL ROOT SYSTEM IS THOROUGHLY ESTABLISHED. CHECK STAKING AS NEEDED TO MAKE SURE TRUNK DAMAGE DOES NOT OCCUR & THAT TREE AND ROOT BALL ARE STABLE.

10. MULCH THE AREA OVER THE ROOT BALL TO A DEPTH NO DEEPER THAN 1 1/2" TO 2". KEEP ALL MULCH AWAY FROM THE TRUNK FLARE.

THESE INSTRUCTIONS ALSO AVAILABLE IN SPANISH

HANDLING AND PLANTING INSTRUCTIONS

C. POST-PLANTING CARE

1. MULCH THE AREA OVER THE ROOT BALL TO A DEPTH NO DEEPER THAN 1 1/2" TO 2". KEEP ALL MULCH AWAY FROM THE TRUNK FLARE. REMOVE ANY OLD MULCH BEFORE APPLYING NEW MULCH.

2. MONITOR MOISTURE IN THE ROOT BALL BY PROBING THE SOIL WITH A SOIL PROBE & MANAGE SUPPLEMENTAL IRRIGATION ACCORDINGLY. BE CAREFUL NOT TO OVER OR UNDER IRRIGATE.

3. COMPLETELY REMOVE ALL STAKING SYSTEMS AT THE APPROPRIATE TIME TO PREVENT TRUNK & STEM DAMAGE.

4. TREES SHOULD BE MONITORED FOR BORING INSECTS FOR THE FIRST YEAR AFTER INSTALLATION. PREVENTIVE PESTICIDE APPLICATIONS ARE RECOMMENDED DURING THE ESTABLISHMENT PERIOD.

5. IF FOR ANY REASON TREES NEED STRAIGHTENING AFTER THE ABOVE PROCESS, TREES CAN BE STRAIGHTENED BY CAREFULLY DIGGING OUT AROUND THE ROOT BALL, ATTACHING SEAT BELT STRAP TO THE PART OF THE WIRE BASKET THAT IS STILL INTACT AROUND THE ROOT BALL, AND LIFTING. NEVER PULL, PUSH, OR PUT PRESSURE ON THE TRUNK. WHILE IT IS NOT IDEAL FROM A COSMETIC PERSPECTIVE, IT IS BEST FOR THE HEALTH OF THE TREES TO WAIT UNTIL DORMANCY TO STRAIGHTEN TREES. THE STAKING ON THESE TREES SHOULD BE RE-ADJUSTED AFTER STRAIGHTENING THE TREES.

THESE INSTRUCTIONS ALSO AVAILABLE IN SPANISH

APPENDIX C: Maintenance Report Template

MAINTENANCE REPORT: TOWN OF WAKE FOREST LANDSCAPE INSTALLATION

PROJECT NAME:

	One sheet per project per week				
	Treatments:	Gallons	Cu.Yds	Y/N	Y/N
DATE	Street/Median section	Water	Mulch	Pruning	Remove Staking
	Rainfall Totals for Weeks NOT Watered:				