- 1. Replace the original "SPECIFICATION" with the attached version.
- 2. Replace the original "FORM 00300 BID SHEET" with the attached version.
- 3. PLEASE BE ADVISED THAT THE BID DUE DATE HAS BEEN CHANGED TO WEDNESDAY, MARCH 27, 2024, AT 10AM IN ROOM A-231.

OPEN SHOP BID

SUSTAINABLE TREE IMPLEMENTATION PLAN

SPECIFICATIONS AND BID SHEET

1. Services Required

The College is requesting bids for Tree Installation as part of The New Jersey Department of Environmental Protection (DEP) Trees for Schools Program. This work will include Site Preparation, Tree Removal, Tree Planting, Irrigation, Site Restoration, Initial Maintenance, and Warranty Work. The term "Manager" shall mean the College's Manager, Supervisor, and/or his or her designated representative. The term "Landscape Consultant" shall mean the College's Consultant responsible for the preparation and execution of this bid, technical specifications, and the work herein.

2. Locations Where Services Are Required

The College requires the services at the following locations:

• Main Campus - 400 Paramus Rd, Paramus, NJ

3. Duration of Contract

The contract base term will be two (2) years: on or about March 11, 2024 through June 30, 2026.

4. Payment

Subject to the provisions of this contract, the College agrees to pay to the contractor and the contractor agrees to accept from the College as full and complete consideration for the performance of all its obligations under this Contract and as sole compensation for the Services performed by the contractor hereunder, a compensation calculated from the actual quantities of Services performed and the respective prices inserted by the contractor in the Bid Sheet(s), forming a part of this contract. All computations made by the contractor and all billing and billing procedures shall be done in conformance with the following procedures:

- a) For each of the Services required by this contract are performed by the contractor, the Lump Sum Price for the Services quoted by the bidder in the Bid Sheet (for the applicable contract year), as such amount may be adjusted pursuant to the provisions of this contract.
- b) Upon completion of the Services, payment will be tendered for Services made during completion of each section, as quoted in the Bid Sheet.
- c) All invoices must have a purchase number on the invoice with the date(s)

- d) The contractor must provide itemized supply invoices with their billing statements. Supplies must include all information in required bid sheet.
- e) In order to process payment, copy of work order indicating materials used and labor hours must be submitted immediately following completion.

No payment or acceptance of any work or any other act of omission of any representative of the College shall operate to:

- f) Release the Contractor from any obligation under or upon this Contract, or
- g) Stop the College from showing at any time that such payment, acceptance, act, or omission was incorrect, or
- h) To preclude the College from recovering (a) any monies paid in excess of those lawfully due or (b) for any damage sustained by the College.

In the event an audit of received invoices should indicate that the correct sum due the Contractor for the relevant billing period is less than the amount actually paid by the College, the Contractor shall pay to the College the difference promptly upon receipt of the College's statement thereof. The College may, however, in its discretion elect to deduct said sum or sums from any subsequent monthly payments payable to the Contractor hereunder."

5. Bidder Prerequisites

- a) Landscape work must be done by a firm specializing in landscape work.
- b) The Bidder shall have had at least five (5) years of continuous experience immediately prior to the date of submission of its bid providing landscape services in a commercial setting. The Bidder may fulfill this prerequisite if the Bidder can demonstrate to the satisfaction of the College that the persons or entities owning and controlling the Bidder have had a cumulative total of at least five (5) years of experience immediately prior to the date of the submission of its bid in the management and operation of a business actually engaged in providing these services to commercial or industrial accounts under contract during that time, or have owned and controlled other entities which have actually engaged in providing the above described services during that time period.
- c) During the time period in (b) above, the bidder or persons or entities owning and controlling the bidder, shall have satisfactorily performed or be satisfactorily performing under at least two (2) contracts requiring similar services of similar scope and cost to those required under this contract.
- d) The Bidder shall have earned in each of its last two (2) consecutive fiscal years, or in each of the last two (2) complete calendar years immediately preceding the opening of its bid, a minimum of \$600,000 annual gross income from the type of service required under this Contract. The Bidder shall not use a current or previous contract with the College as part of this prerequisite.
- e) Provide certificates of all insurances

f) Four (4) commercial references with years of Service at the sites and a contact person with phone number.

<u>Proof that the above prerequisites are met should be submitted with the bid. Failure to</u> include all of the above materials with the bid package will result in the rejection of the bid.

6. Management and Supervision

When onsite, the contractor shall assign specific personnel to receive and put into effect promptly all orders, directions and instructions from the Facilities Department of the College regarding the performance of the services specified in the Contractor.

The Contractor and their staff will be held accountable to the College's *Employee Code of Professional Conduct* (<u>https://bergen.edu/wp-content/uploads/Code-of-Conduct1723.pdf</u>). Violations may result in the removal of the Contractor and/or any of their staff.

The Manager reserves the right to require bidder to replace personnel or other employees assigned by bidder to perform the Services at the College if Supervisor or employee does not perform in compliance with the specifications or otherwise violates College policies or the law. If, in the opinion of the Manager, any personnel so assigned is performing the required functions unsatisfactorily, the contractor shall replace the employee within twenty-four (24) hours following the receipt of the request for such replacement.

Primary telephone and alternate phone numbers of the Supervisor shall be made available to the Manager for use in emergency notifications and shall be updated as necessary.

7. Materials, Equipment, and Supplies

The Contractor, in performing the required Services hereunder, shall furnish all labor, supervision, materials and equipment needed to provide Services.

The Contractor should provide an itemized list of equipment the contractor currently owns and will use in performance of this work. All equipment, materials, and supplies used in the performance of the Services required shall be used in accordance with the manufacturers' instructions.

The Contractor shall use only equipment, materials and supplies approved in advance by the Manager. The College reserves the right to purchase and provide materials and equipment to the contractor for installation. The contractor may propose additional equipment, materials, and supplies for the Manager's approval.

The Contractor shall provide all Safety Data Sheets (SDS) when/if necessary.

The Contractor and their on-site personnel are required to have cell phone capabilities for communication with the College at all times.

8. Employee Uniform and Appearance

The contractor agrees that its employees will present a neat, clean, and orderly appearance at all times. The contractor shall provide a distinctive uniform bearing a woven insignia of the contractor to each employee performing the Services listed, which shall be worn at all times when Contractor personnel are on-site. Contractor will be required to sign in/sign out daily when entering/leaving site.

9. Transportation

The Contractor shall provide for the legal transportation of its personnel, materials, and equipment around the various sites of work at the College. All Contractor's vehicles operated at the College in connection with this Contract shall be in good and safe operating condition and shall be permanently labeled on both sides on the vehicle(s) with the Contractor's name, address, and telephone number in contrasting lettering having a minimum dimension of three (3") inches high with one half inch (1/2") thick lines. Magnetic signs are not acceptable. All vehicles must be properly placarded with Public Safety decals displayed as-required by the College.

Parking is not allowed in the tunnel or at the loading dock. Contractor vehicles must be moved or relocated at the College's discretion. Any direction on parking provided by the Manager or Public Safety must be followed.

10. Safety Provisions

The contractor will exercise every precaution to prevent injury to workers and the public and damage to property. The contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Services. The contractor will use appropriate safety equipment and barriers to protect their work area at all times and must furnish evidence of a safety program for their employees that meet OSHA requirements.

11. Compliance

The contractor will be responsible for compliance with all federal, state, county and municipal

laws and regulations.

Damage that has been done or materials destroyed by the contractor will be the liability of the contractor and the cost of replacement shall be deducted from the invoiced amount accordingly.

12. Response Time

Contractor must respond to request for services by telephone within one hour. The actual arrival time is to be no later than two hours after request is received.

13. Personnel Requirements

The Contractor shall only use licensed, experienced, skilled, competent, and adequately trained personnel to perform the Work required hereunder.

14. Scheduling and Timing of Services – Project Timeline

Within thirty (30) days of contract award, the contractor will provide a computer-generated schedule for submission to the Manager describing the scheduling for all Services occurring in the calendar year. This will include the dates, time of day, areas, number of employees, and locations. The contractor shall submit any proposed changes to this schedule promptly to the Manager for approval. The Manager may make any changes to this schedule at any time.

The contractor will attempt to schedule services when student traffic is minimal. Generally, this will mean providing services on Fridays or outside of normal working hours of 9AM to 5PM.

The Manager must be contacted by email or phone call forty-eight (48) hours prior to each visit to any of the three College campuses.

The Manager shall have the right, at any time in their sole discretion, to increase or decrease any part of the services required and/or to add areas not described or remove areas or parts of areas which are described.

In the event of an increase or decrease in services, the Contractor's compensation will be adjusted to reflect such change in services utilizing the applicable price for such services as set forth in the pricing sheet. In the event of a decrease, the Contractor shall not be entitled to compensation for Work not performed.

This is a grant-funded project. Funding for this work is subject to applicable grant requirements and available funding to perform the above work. The scope of services may be reduced to align with funding available from the grant.

15. Scope of Services

These specifications relate to Site Preparation and Tree Installation at Bergen Community College. The Contractor shall be fully responsible for the initial Maintenance as specified herein of the plants, including the replacement of trees that die within the first 2 years after installation. The Contractor's price shall include but not be limited to the cost of all labor, insurance, equipment rental, tolls, travel time, vehicle usage, fuel, profit and all other associated costs associated with the Work.

- a) This is a grant-funded project. Funding for this work is subject to applicable grant requirements and available funding to perform the above work.
- b) It shall be the Contractor's responsibility to familiarize themselves with the site conditions found within each project area.
- c) Normal working hours shall be Monday to Friday, 7:00AM to 4:00PM. The Manager reserves the right to change these working hours at their sole discretion.
- d) For bidding purposes, a Plant list for each project area and a summary of Plants is included in Appendix A. Any deviation from the species or size of the plants listed must be submitted in writing and approved by the Landscape Consultant for the College.
- e) The Landscape Contractor under the supervision of the Landscape Consultant and Manager shall identity any current conditions that will impact planting, such as flooding, poor soil conditions, contamination, pedestrian circulation patterns, existing obstacles, etc.
- f) Utility mark outs by others, under the supervision of a manager.
- g) The existing irrigation system is to be identified, tested and extended in project areas 1(Entrance) and 3 (Student Quad) to support all new trees, plant material and lawn areas within those project boundaries.
- h) All new trees outside the irrigated project areas 1 & 3, will be provided with gator bags to be filled under the direction of the College's Manager by others.
- i) A pre-bid site assessment will be scheduled to provide Landscape Contractors with information regarding current conditions and to better understand the new scope of irrigation work. See appendix C for irrigation specifications.
- j) Any trees to be removed as determined by Project Area Planting Plans to be verified and clearly tagged in the field by Landscape Consultant and approved by Manager. The plans show (27) dead or diseased trees to be removed.
 - i. Areas of tree removal must be fenced as required to allow removal while protecting adjacent property and pedestrian circulation and safety.
 - ii. All dead, dying and diseased existing trees tagged by Landscape Consultant to be removed by Tree Removal Contractor.
 - iii. Existing stumps to be ground by Tree Removal Contractor. Wood Chips to be disposed of at the direction of the college and areas of disturbance are to be

rough graded. The Landscape Contractor will be responsible for adding topsoil as required in disturbed areas to achieve a 4" minimum depth and fine graded in preparation for seeding or mulching.

- k) Inspections
 - i. When all plant material has been selected and pre-tagged by the Landscape Contractor, the Landscape Consultant shall be notified in order to schedule the nursery inspection with a minimum of 3 days advance notice.
 - ii. The Contractor shall have located sufficient alternate choices to prevent loss of time in the event that some trees fail to meet the approval of the Landscape Consultant.
 - iii. All trees must be approved in the field by the Landscape Consultant before digging begins.
- I) Substitutions
 - i. The Contractor shall submit a base bid, as per the attached plan.
 - ii. It is the Contractor's responsibility to make every reasonable effort to find the material specified.
 - iii. It is the intent to eliminate post bid substitutions.
 - iv. In the event that the contract material has become unavailable, the Contractor may offer substitutions to the Landscape Consultant for consideration. If he does so, he must include price clarification for such substitutions. Any substitution must be approved in writing by the Landscape Consultant and Manager.
- m) Layout
 - i. Landscape contractor to stake (126) tree locations per plan. Locations to be reviewed and adjusted if needed by Landscape Consultant and Manager. Final locations to be approved by written sign-off.
- n) Soil Testing
 - i. When conditions detrimental to plant growth are encountered such as rubble fill, adverse drainage conditions or obstructions etc., the Contractor shall notify the Landscape Consultant immediately.
 - ii. To be completed by Landscape Contractor, if soil contamination or other problem such as poor soil structure or poor growth of existing plants is identified during field assessment. Results of soil testing to be reviewed by Landscape Consultant.
- o) Submittals to be sent to Landscape Consultant Evergreen Design
 - i. Certificates of Inspection from Nursery source as required
 - ii. Other data substantiating that materials comply with specified requirements
 - iii. Manufactures or vendors certified analysis for topsoil amendments such as compost and fertilizer materials shall be submitted to the landscape Consultant for review and approval.

- iv. Vendors certified statement for each seed mixture required, stating botanical and common names, percentage by weight and percentages of purity, germination and weed seed for each seed species shall be submitted to the landscape Consultant for review and approval.
- v. Written 2-year warranty agreement on all plant material
- p) Tree Planting Preparation
 - Prior to planting, Landscape Contractor to protect existing hardscape, trees, shrubs, & lawn. Snow fence shall be used to protect existing trees, silt fence shall be used to prevent soil erosion and to maintain clean hardscaped surfaces. Haybales, should be used around drain inlets as needed to prevent disturbed soil from entering the storm drainage system.
 - ii. Prior to planting, Landscape Contractor will strip the specified site locations of grass, existing mulch or existing plant materials, dispose of these materials offsite, and prepare adequate space for excavation.
- q) Tree Installation
 - i. Plant material to be selected by Landscape Contractor.
 - ii. Plant material to be approved by Landscape Consultant.
 - iii. Transported to be by provided by the Landscape Contractor.
 - iv. The Contractor shall provide freshly dug plant material.
 - v. Trees and shrubs shall not be bent or tied in such a manner as to damage bark, break branches or destroy natural shape. Damaged material will be rejected.
 - vi. Protective covering shall be provided during delivery.
 - vii. Roots of bare root material shall be protected during delivery and handling to guard against drying out and damage.
 - viii. The selection, inspection, and transportation of trees will be the responsibility of the landscape contractor. Any variation from the plant list in either size or species must be submitted to the College's Landscape Consultant for approval.
 - ix. Landscape contractor will confirm all trees and plant materials are purchased from an accredited and established nursery. Landscape Consultant to approve prior to Purchase order.
 - x. All plant material shall meet or, if indicated on the plant list, exceed the standards set forth in the current issue of the American Standard for Nursery
 - xi. Stock published by the American Association of Nurserymen (ANSI-Z60 1). Height, spread and caliper sizes shall be as indicated on the plant list.
 - xii. Landscape contractor will provide Landscape Consultant with Itemized Purchase Order (prior to) and Delivery ticket (post).
- r) Site Preparation
 - i. Site utilities will be marked out in each of the 4 project areas. The Landscape Contractor will be responsible for hiring a mark-out company to ensure all areas are properly marked prior to commencement of any work.

- ii. Dead trees will be removed, stumps ground and disturbed area rough graded.
- iii. Proposed tree locations will be staked and locations will be approved by Landscape Consultant and College Representative
- iv. Soil tests to be performed in each project if determined by the initial site assessment and results provided to the Landscape Consultant.
- v. Soil erosion control measures will be implemented at the perimeter of disturbed areas. i.e. silt fence, fabric, haybales as outlined in section o) Tree Planting Preparation.
- s) How Trees Will be Maintained After Delivery and Prior to Planting
 - i. Deliver trees after preparations for planting have been completed, and plant immediately. Trees delivered without Landscape Consultant's tags will be rejected
 - ii. If planting is delayed for more than 5 hours after delivery, set trees and shrubs in shade, protect from weather and mechanical damage, and keep roots moist by covering with mulch, burlap or other acceptable means of retaining moisture.
 - iii. Trees should be planted and watered in on the day of delivery where ever possible. The Landscape Contractor will coordinate with the Manager to find acceptable locations for water. Tree deliveries should be scheduled by the Landscape Contractor so that the quantities delivered can be installed within 48 hrs. When trees are delivered, they should be staged in a predetermined location (by Manager) with access to water in case of unforeseen delays. Deliveries and planting should take place on a schedule that is least disruptive to college activities. Ideally, on a Friday.
- t) The Planting Method
 - i. Provide trees that meet or exceed the American Association of Nurserymen standards ANSI-Z60.1.
 - ii. All Trees to be Balled and Burlapped unless otherwise approved by Landscape Consultant.
 - iii. The Contractor shall, in loading and unloading or handling plants, exercise the utmost care to prevent injuries to the branches or roots.
 - iv. The solidity of the root ball shall be carefully preserved. Plants delivered with broken root ball(s) will be rejected.
 - v. Per Plan Planting Hole to be 2-3X the size of the root ball. Backfill shall consist of at least 50% native soil and amended with topsoil and compost.
 - vi. Walls of tree pits shall be dug so that they are vertical, or sloping outward in heavy soils, and scarified. Excavation shall be slightly raised in the center to provide proper drainage.
 - vii. Per Plan Tree pits must be a minimum of 2' greater in diameter than the ball of the tree or the spread of its roots.

- viii. The depth of the tree pit shall be as deep as necessary to accommodate the ball of the tree so that it will not be necessary to raise or lower the tree to bring it to the required grade. Tree pits shell be deep enough to allow 1/8 of the ball of the tree to be above finished grade. Plants shall rest on undisturbed existing soil or well-compacted backfill.
- ix. When tree pits have been dug, the Contractor shall partially fill with water a representative number of pits in each area to determine that there is adequate percolation in the subgrade at each pit. If not, notify the Landscape Consultant immediately.
- x. Place tree in pit by carrying the ball and then lowering it into the pit. Never lift trees by their trunk or branches.
- xi. Set balled and burlapped (B&B) stock on bottom of pit, plumb and in the center of the pit, with the most desirable side facing the prominent view.
- xii. Cut and remove rope or wire from the top 50% of root ball and pull burlap back to the edge of the root ball. Remove as much burlap, woven products and twine as possible while <u>keeping integrity of the rootball</u>. All plastic or synthetic film must be removed from root ball. Cut all twine away from trunk.
- xiii. Tree pits shall be backfilled with a mix of native soil, topsoil and compost, and Roots[®] M-Roots[®] Fertilizer with Mycorrhizal Fungi if determined necessary by soil test.
- xiv. Trees must remain straight throughout backfilling.
- xv. Place backfill around base and sides of rootball, working each layer to settle backfill and eliminate air pockets and voids. When backfill is 2/3 completed, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Place final layer of backfill, tamp firmly and water again until no more water is absorbed.
- xvi. Never cover top of rootball with soil. Form a soil saucer above finished grade around the outer rim of tree pit
- xvii. Mulch top of rootball and saucer to a depth of 3" with shredded hardwood bark mulch. Do not place mulch against trunk.
- u) The Immediate Post-Planting Care, Including Irrigation, Hand Watering, Mulching, and Pruning.
 - i. All Trees should be thoroughly watered after installation
 - ii. The existing irrigation system is to be identified, tested and extended in project areas 1(Entrance) and 3 (Student Quad) to support all new trees, plant material and lawn areas within those project boundaries.
 - iii. All new trees outside the irrigated project areas 1 & 3, will be provided with gator bags which are to be filled by the Landscape Contractor 2 times per week for the initial 60 days after installation.

- iv. A pre-bid site assessment will be scheduled to provide Landscape Contractors with information regarding current conditions and to better understand the new scope of irrigation work. See appendix C for irrigation specifications.
- v. Mulch should be placed (per plan) no less than 3" in depth over tree pit. Do not pile mulch up against the trunk of the trees.
- vi. Pruning should be done as required for shape/consistently and <u>only after</u> <u>consultation with Landscape Consultant</u>
- vii. Treat, repair or replace damaged landscape work as directed by Landscape Consultant.
- viii. When landscape work is completed, including maintenance, Landscape Consultant will, upon request, make an inspection to determine acceptability.
- ix. Landscape work may be inspected for acceptance in parts agreeable to Landscape Consultant and College. When inspected landscape work does not comply with requirements, replace rejected work and continue specified maintenance until re-inspected by Landscape Consultant and Engineer and found to be acceptable. Remove rejected plantings and materials promptly from project site
- x. Any tree staking measures will take place under the direct supervision of a Bergen Community Manager. The Landscape Consultant and College will determine if staking is to take place.
- xi. Plastic mesh tree guards (4' Ht. Min) will be installed at each new tree, along with a Gator bag, where an underground irrigation system is not in place.
- v) Maintenance After 60-day initial period
 - i. Hand Watering All material shall be thoroughly watered using gator bags at one
 (1) week intervals throughout the summer, as follows by BCC representatives.
 - i. A hose without a nozzle should be inserted into the gator bag and filled 2 times per week when there is no rainfall. If there is no gator bag, nozzle should be inserted into the soil just beyond the root ball end water allowed to run at a moderate rate until it bubbles to the surface. Remove hose and place at a new location, diametrically opposite, and allow the water to run until the earth saucer is filled to the brim. If this water is absorbed before 15 minutes have If there is no gator bag used, the procedure should be repeated immediately, and again for as many times as necessary, until the saucer retains water for more than 15 minutes.
 - ii. During the month commencing with the third week in August and ending with the third week in September, the interval between waterings shall be extended to 2 weeks in order to allow the buds to harden. After the third week in September, watering shall be resumed on a weekly basis until frost.

- ii. Pruning
 - i. Prune, thin out and shape trees in accordance with standard horticultural practice.
 - Pruning shall be restricted to corrective pruning to improve form only. This includes structure, dead, damaged, diseased and/or conflicting branches.
 - iii. Do not cut main leader unless directed by Landscape Consultant to do so. Remove only injured or dead branches from flowering trees, if any.
 - iv. If side branches are cut to balance tree, make all cuts back to a lateral branch or bud.
 - v. Final pruning shall be done after trees are in place.
 - vi. Remove and replace excessively pruned stock resulting from improper pruning.
 - vii. Remove all tags, labels, strings and wire from tree unless otherwise directed by Landscape Consultant.
 - viii. After final pruning, apply anti-desiccant where appropriate using power spray to provide an adequate film over trunks, branches, stems, twigs and foliage.
- iii. Tree Fencing
 - i. Inspect trees for injury, improper pruning and insect infestation and take corrective measures before fencing.
 - ii. Install 4' ht. Plastic mesh tree guard to prevent "buck rub".
- *iv.* Tree Staking (Trees Under 6" Cal.) *TREES ARE ONLY TO BE STAKED AT THE DISCRETION OF THE LANDSCAPE CONSULTANT AND BERGEN COMMUNITY MANAGER.*
 - i. *If staking is approved by the college*, it shall be completed as soon as possible after planting of tree. Number of stakes shall be as shown on the tree staking detail on the drawings.
 - ii. Space cedar stakes evenly and vertically on the outside of the rootball and drive firmly into the ground. Stakes shall be driven at an angle and drawn inward to vertical.
 - iii. Cut pieces of hose long enough to loop around trunk or use arbor ties.
 - Place hose around trunk at the height required to provide optimum support. Thread the wire through the hose and pull both ends horizontally 2' beyond stake.
 - v. Twist the wires together starting at the rubber hose. Wind both ends of the wires around the stake twice then twist wire back on itself to hold securely. Cut off excess wire. Wire shall be 3" min. from the top of the stake.

- v. Tree Guying (Evergreen Trees) TREES ARE ONLY TO BE GUYED AT DISCRETION OF THE LANDSCAPE CONSULTANT AND BERGEN COMMUNITY MANAGER.
 - i. *If guying is approved by the college,* it shall be completed as soon as possible after planting of tree. Number of stakes shall be as shown on the tree staking detail on the drawings.
 - ii. Cut pieces of hose long enough to loop around trunk. (or Arbor Ties)
 - iii. Space steel angles evenly around, and 18" from the outside of tree pit and drive firmly into the ground allowing the end of the angle to project 6" above grade.
 - iv. Place hose around trunk just above lowest stout branch at 2/5 to 3/5 the height of the tree.
 - v. Twist the wires together starting et the rubber hose. Wind both ends of the wire through the hole in the steel angle and twist wire back on itself to hold securely. Cut off excess wire or tie.
- w) Maintenance
 - i. Maintenance shall begin immediately after planting.
 - ii. Contractor shall maintain trees until final acceptance by Landscape Consultant, but in no case less than 60 days after completion.
 - iii. Maintain trees by watering, pruning, cultivation and weeding as required for healthy growth in conformance with standard horticultural practice.
 - iv. Contractor shall restore planting saucers, tighten and repair stake and guy supports and reset trees as required.
 - v. Contractor shall restore or replace damaged wrappings.
 - vi. Spray trees as necessary to keep trees free of insects and disease
- x) Warranty
 - i. Contractor to provide replacement for any trees that die within 2 years of installation.

16. Extra Work

Additional services may be required during the contract at any college location. The scale and extent of these services will be provided by the Manager.

The Contractor will have forty-eight (48) hours to respond with a proposal to requests for additional services.

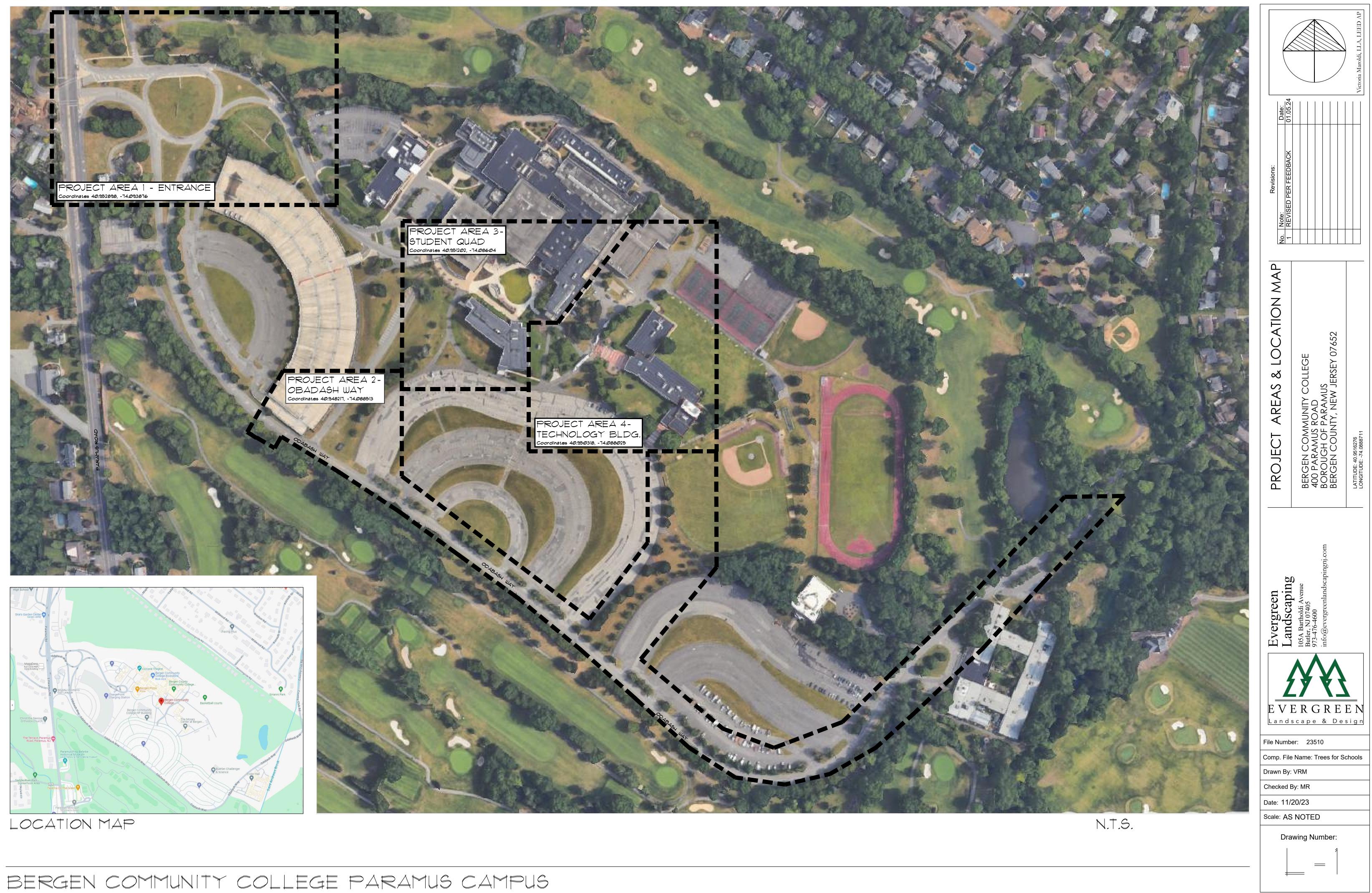
TREES FOR SCHOOLS DETAILED PLANTING PLAN SUMMARY TEMPLATE

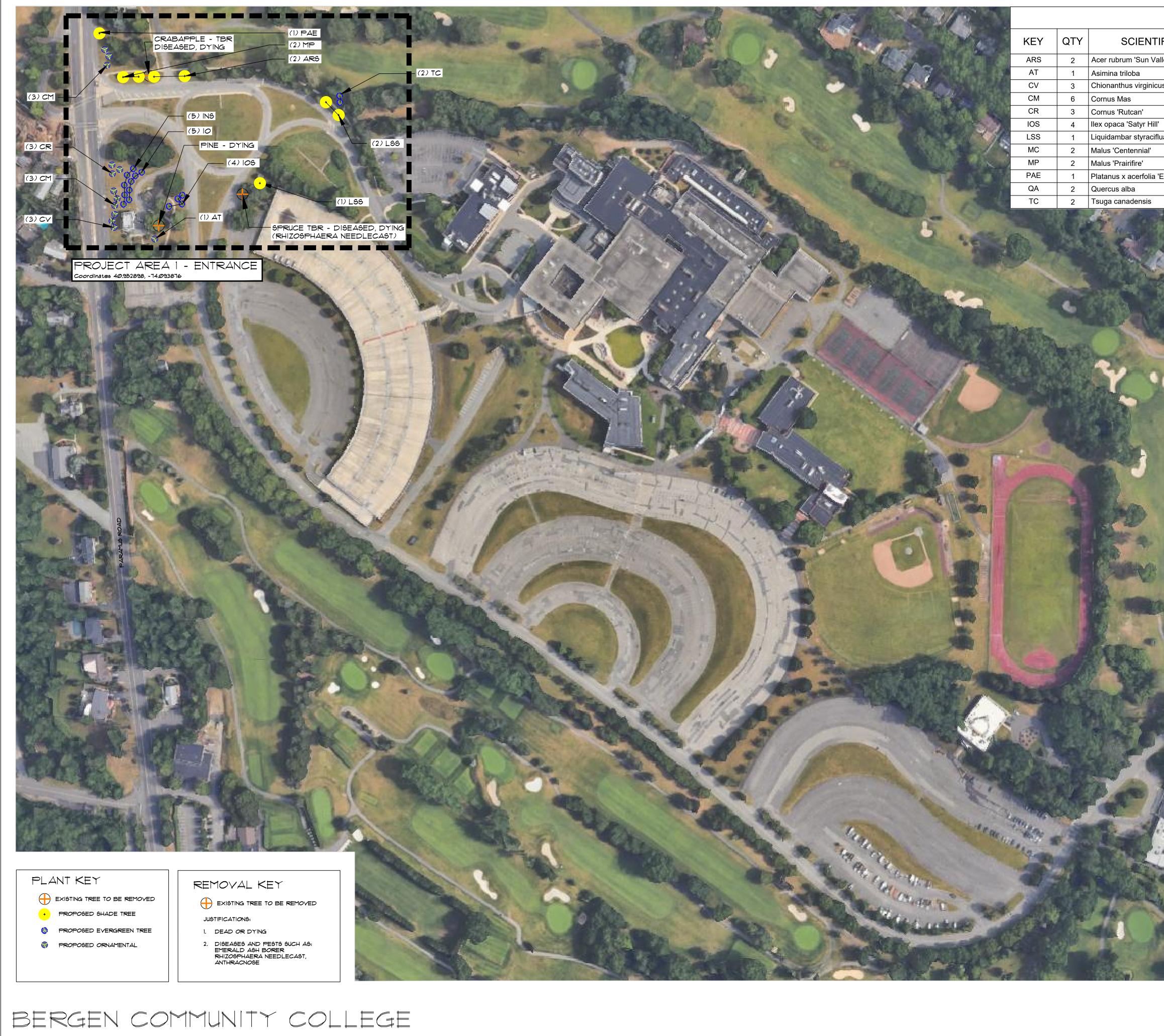
	Tree Species Selection				Quantity t	o be <u>Plan</u>	ted	Comments
Scientific Name	Common name (for cultivars incl. variety)	Type of planting material (e.g., B&B, container, bare root)	Size of planting material (e.g., 2 1/2" caliper, #15)	SITE 1 ENTRANCE	SITE 2 OBADASH WAY	SITE 3 STUDENT QUAD	SITE 4 TECHNOLOGY BLDG	
ACER RUBRUM 'SUN VALLEY'	SUN VALLEY RED MAPLE	B&B	2.5-3" CAL.	2				
ACER RUBRUM 'RED POINT'	RED POINT RED MAPLE	B&B	2.5-3" CAL.		5			
AMELANCHIER ARBOREA 'AUTUMN	AUTUMN BRILLIANCE RED							
BRILLIANCE'	MAPLE	B&B	7-8' HT.				3	
ASMINA TRILOBA	PAWPAW	B&B	1.5-2" CAL.	1				
CARPINIS CAROLINIANA	AMERICAN HORNBEAM	B&B	2.5-3" CAL.		4			
CERCIDIPHYLLUM JAPONICUM	KATSURA TREE	B&B	2.5-3" CAL.				3	
CERCIS CANADENSIS 'APPALACHIAN	APPALACHIAN RED							
RED'	REDBUD	B&B	2.5-3" CAL.		5			
CERCIS CANADENSIS 'HEARTS OF								
GOLD'	HEARTS OF GOLD REDBUD	B&B	2.5-3" CAL.		2			
CHIONANTHUS VIRGINICUS	WHITE FRINGE TREE	B&B	7-8' HT.	3				
CLADRASTIS LUTEA	YELLOWWOOD	B&B	2.5-3" CAL.		4			
CORNUS 'RUTCAN'	CONSTELLATION DOGWOOD PP7210	B&B	2-2.5" CAL.	3	2			
CRATAEGUS VIRIDIS	WINTER KING HAWTHORNE	B&B	2.5-3" CAL.		3			
GLEDITSIA TRICANTHOS INERMIS 'HALKA'	HALKA HONEYLOCUST	B&B	2.5-3" CAL.		6			
ILEX 'NELLIE STEVENS'	NELLIE STEVENS HOLLY	B&B	7-8' HT.	5				
ILEX OPACA	AMERICAN HOLLY	B&B	6-7' HT.	5				
ILEX OPACA 'SATYR HILL'	SATYR HILL AMERICAN HOLLY	B&B	8-10' HT.	4				
JUNIPERUS VIRGINIANA	RED CEDAR	B&B	7-8' HT.		3			
JUNIPERUS VIRGINIANA 'EMERALD	EMERALD SENTINEL RED							
SENTINEL'	CEDAR	B&B	6-7' HT.		2			
LIQUIDAMBAR STYRACIFLUA 'HAPPIDAZE'	HAPPIDAZE SWEETGUM	B&B	2.5-3" CAL.		2			
LIQUIDAMBAR STYRACIFLUA	SLENDER SILHOUETTE	200	2.5 5 CAL.		-			
'SLENDER SILHOUETTE'	SWEETGUM	B&B	2.5-3" CAL.			3		
MALUS 'CENTENNIAL'	CENTENNIAL CRABAPPLE	B&B	2-2.5" Cal.	2		-		
	DONALD WYMAN	200	2 2.5 00.	-				
MALUS 'DONALD WYMAN'	CRABAPPLE	B&B	2-2.5" Cal.				2	
MALUS 'PRAIRIFIRE'	PRAIRIFIRE CRABAPPLE	B&B	2-2.5" Cal.	2				

MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	B&B	6-7' HT.			1		
NYSSA SYLVATICA 'WILDFIRE'	WILDFIRE BLACK GUM	B&B	2-2.5" CAL.		1			
OXYDENDRUM ARBOREUM	SOURWOOD	B&B	2.5-3" CAL.		3			
PINUS RIGIDA	PITCH PINE	B&B	7-8' HT.				1	
PLATANUS X ACERFOLIA	EXCLAMATION LONDON							
'EXCLAMATION'	PLANE	B&B	2.5-3" CAL.		3			
QUERCUS ALBA	WHITE OAK	B&B	2.5-3" CAL.		2			
QUERCUS BICOLOR	SWAMP WHITE OAK	B&B	2.5-3" CAL.		6			
QUERCUS MACROCARPA	BUR OAK	B&B	2.5-3" CAL.		3			
QUERCUS PHELLOS	WILLOW OAK	B&B	2.5-3" CAL.		3			
STYPHNOLOBIUM JAPONICUM	JAPANESE PAGODA TREE	B&B	2.5-3" Cal.		3			
TAXODIUM DISTICHUM 'SKYWARD	SKYWARD LINDSLEY BALD							
LINDSLEY'	CYPRESS	B&B	8-10' HT.	1	2			
TILIA TOMENTOSA 'STERLING SILVER'	STERLING SILVER LINDEN	B&B	2.5-3" CAL.		2			
ULMUS AMERICANA JEFFERSON'	JEFFERSON AMERICAN ELM	B&B	2.5-3" CAL.		1			
ULMUS PARVIFLORA	LACEBARK ELM	B&B	2.5-3" CAL.		2			
TSUGA CANADENSIS	CANADIAN HEMLOCK	B&B	7-8' HT.	2				
	AMERICAN							
OSTRYA VIRGINIANA	HOPHORNBEAM	B&B	2-2.5" CAL.		2			
	CORNELIAN CHERRY							
CORNUS MAS	DOGWOOD	B&B	6-7' HT.	6				
GINKGO BILOBA	AUTUMN GOLD GINKGO	B&B	2-2.5" CAL.			3		
ILEX X ATTENUATA 'FOSTERI'	FOSTERS HOLLY	B&B	6-7' HT.				3	
	Totals			36	71	7	12	126

ALTERNATE Tree Species Selection							
Scientific Name	Common name (for cultivars incl. variety)	Type of planting material (e.g., B&B, container, bare root)	Size of planting material (e.g., 2 1/2" caliper, #15)				
PINUS SYLVESTRIS	SCOTCH PINE	B&B	7-8' HT.				
PINUS BUNGEANA	LACEBARK PINE	B&B	6-7' HT.				
PINUS THUNBERGIANA	JAPANESE BLACK PINE	B&B	6-7' HT.				
MALUS 'SUTYRAM'	SUGAR TYME CRABAPPLE	B&B	2-2.5" CAL.				
CERCIS AMERICANA	REDBUD - STRAIGHT SPECIES	B&B	2-2.5" CAL.				

*Identify and list above a few alternate species choices in case nurseries do not have your first choice selection available.



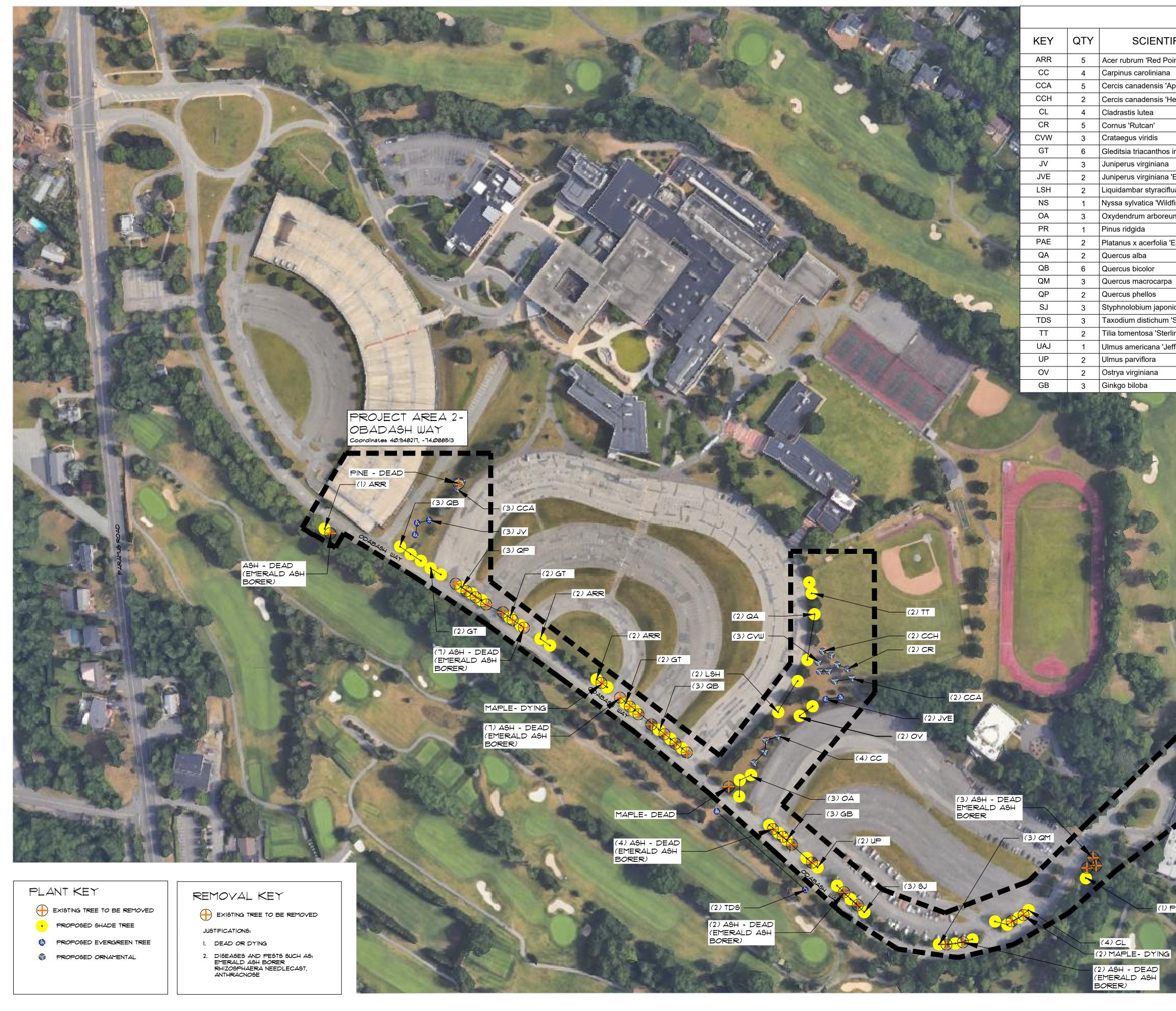


PLANTING PLAN - PROJECT AREA 1 - ENTRANCE

PLANT LIST	- PROJECT AREA 1		
IFIC NAME	COMMON NAME	SIZE	TYPE
alley'	Sun Valley Red Maple	2.5-3" Cal.	B&B
	Common Pawpaw	1.5-2" Cal.	B&B
cus	White Fringe Tree	7-8' Ht.	B&B
	Cornelian Cherry Dogwood	6-7'	B&B
	Constellation Dogwood PP7210	2-2.5" Cal.	B&B
'	Satyr Hill Holly	8-10' Ht.	B&B
iua 'Slender Silhouette'	Slender Silhouette Sweetgum	2.5-3" Cal.	B&B
	Centennial Crabapple	2-2.5" Cal.	B&B
	Prairifire Crabapple	2-2.5" Cal.	B&B
'Exclamation'	Exclamation London Plane Tree	2.5-3" Cal.	B&B
	White Oak	2.5-3" Cal.	B&B
	Canadian Hemlock	7-8' Ht.	B&B
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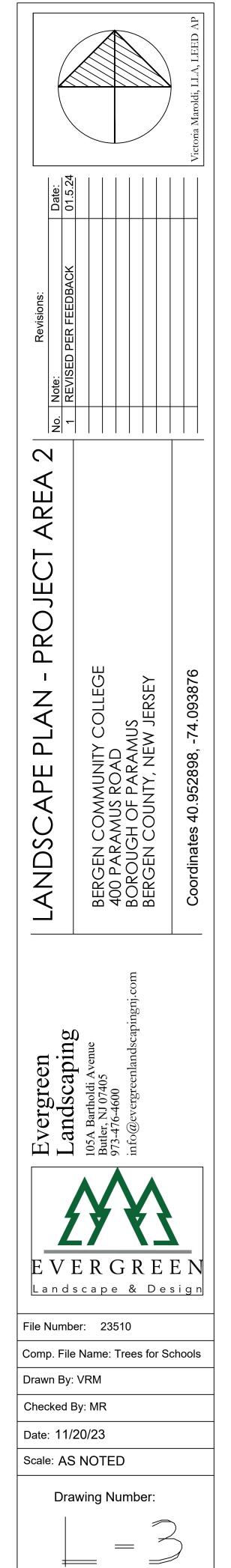


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BERGEN COMMUNITY COLLEGE PLANTING PLAN - PROJECT AREA 2 - OBADASH WAY

IFIC NAME	COMMON NAME	SIZE	TYPE
pint'	Red Point Red Maple	2.5-3" Cal.	B&B
l	American Hornbeam	2.5-3" Cal.	B&B
Appalachian Red'	Appalachian Red Redbud	2.5-3" Cal.	B&B
learts of Gold	Hearts of Gold Redbud	2.5-3" Cal.	B&B
	Yellowwood	2.5-3" Cal.	B&B
	Constellation Dogwood PP7210	2-2.5" Cal.	B&B
	Winter King Hawthorne	2.5-3" Cal.	B&B
inermis 'Halka'	Halka Honeylocust	2.5-3" Cal.	B&B
	Eastern Red Cedar	7-8' Ht.	B&B
'Emerald sentinel'	Emerald Sentinal Red Cedar	6-7 'Ht.	B&B
lua 'Happidaze'	Happidaze Sweetgum	2.5-3" Cal.	B&B
dfire'	Wildfire Black Gum	2-2.5" Cal.	B&B
um	Sourwood	2.5-3" Cal.	B&B
	Pitch Pine	7-8' Ht.	B&B
'Exclamation'	Exclamation London Plane Tree	2.5-3" Cal.	B&B
	White Oak	2.5-3" Cal.	B&B
	Swamp White Oak	2.5-3" Cal.	B&B
a	Bur Oak	2.5-3" Cal.	B&B
	Willow Oak	2.5-3" Cal.	B&B
nicum	Japanese Pagoda Tree	2-2.5" Cal.	B&B
'Skyward Lindsley'	Skyward Lindsley Bald Cypress	8-10' Ht.	B&B
'ling Silver'	Sterling Silver Linden	2.5-3" Cal.	B&B
efferson'	Jefferson American Elm	2.5-3" Cal.	B&B
	Lacebark Elms	2-2.5" Cal.	B&B
	American Hophormbeam	2-2.5" Cal.	B&B
	Autumn Gold Ginkgo	2.5-3" Cal.	B&B
AT THE REAL OF	A STATE OF A	Martin Martin	1-1-1



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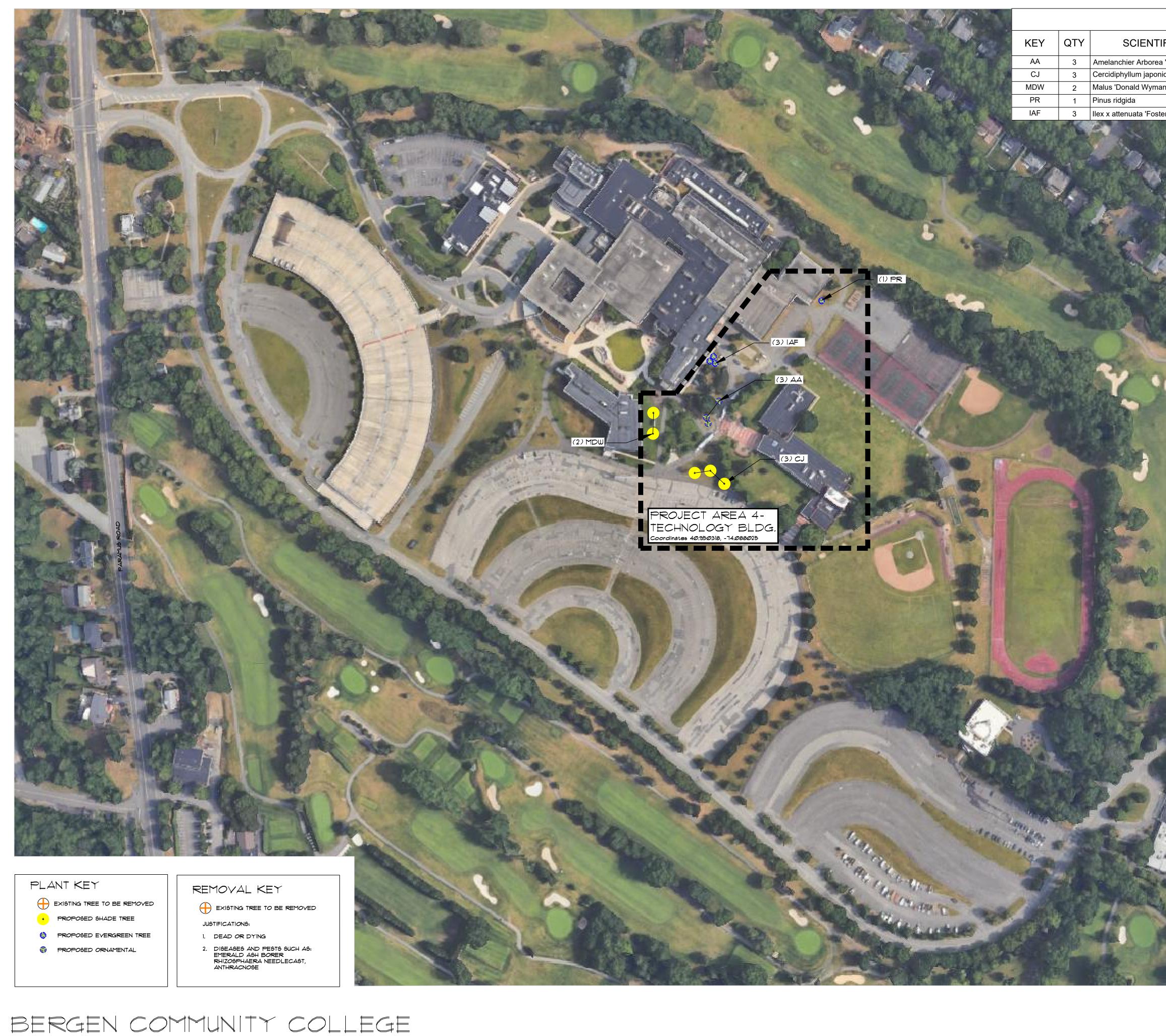
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ALL TREE LOCATIONS TO BE FIELD VERIFIED BY BCCC REPRESENTATIVE PRIOR TO PLANTING

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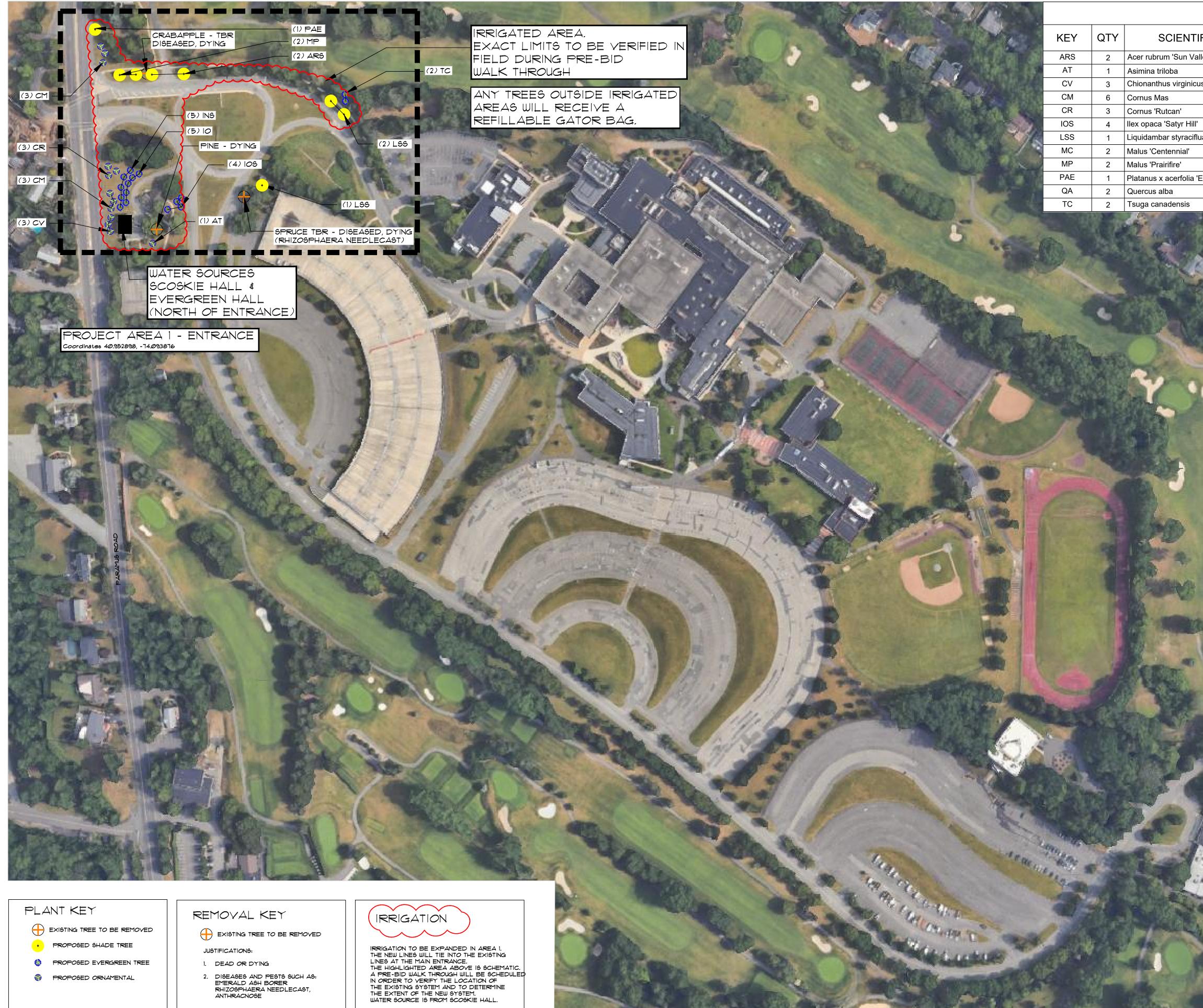


PLANTING PLAN - PROJECT AREA 4 - TECHNOLOGY BUILDING

C NAME	COMMON NAME	SIZE	TYPE
utumn Brilliance'	Autumn Brilliance Serviceberry	7-8' Ht.	B&B
m	Katsura Tree	2.5-3" Cal.	B&B
	Donald Wyman Crabapple	2-2.5" Cal.	B&B B&B
	Pitch Pine Fosteri Holly	7-8' Ht. 6-7'	B&B
	The second	1 B	



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- BERGEN COMMUNITY COLLEGE IRRIGATION PLAN - PROJECT AREA 1 - ENTRANCE

PLANT LIST	- PROJECT AREA 1		
IFIC NAME	COMMON NAME	SIZE	TYPE
alley'	Sun Valley Red Maple	2.5-3" Cal.	B&B
	Common Pawpaw	1.5-2" Cal.	B&B
cus	White Fringe Tree	7-8' Ht.	B&B
	Cornelian Cherry Dogwood	6-7'	B&B
	Constellation Dogwood PP7210	2-2.5" Cal.	B&B
'	Satyr Hill Holly	8-10' Ht.	B&B
iua 'Slender Silhouette'	Slender Silhouette Sweetgum	2.5-3" Cal.	B&B
	Centennial Crabapple	2-2.5" Cal.	B&B
	Prairifire Crabapple	2-2.5" Cal.	B&B
'Exclamation'	Exclamation London Plane Tree	2.5-3" Cal.	B&B
	White Oak	2.5-3" Cal.	B&B
	Canadian Hemlock	7-8' Ht.	B&B
5			-

Date: 01.5.24 РЕ К SED Note 2 T БA \sim \triangleleft \vdash \bigcirc Щ Ο Ř Δ ပ် Ц TION $\leq \mathbb{C}$ IRRIGA BERGEN (400 PAR/ BOROUG BERGEN (reen caping /ergr indsc Ε< EVERGREEN Landscape & Design File Number: 23510 Comp. File Name: Trees for Schools Drawn By: VRM Checked By: MR Date: 02/15/24 Scale: AS NOTED Drawing Number:

N.T.S.



- PROPOSED SHADE TREE
- PROPOSED EVERGREEN TREE

💎 PROPOSED ORNAMENTAL

REMOVAL KEY

- EXISTING TREE TO BE REMOVED JUSTIFICATIONS:
- I. DEAD OR DYING
- DISEASES AND PESTS SUCH AS: EMERALD ASH BORER RHIZOSPHAERA NEEDLECAST, ANTHRACNOSE

IRRIGATION



IRRIGATION TO BE EXPANDED IN AREA 3. THE NEW LINES WILL TIE INTO THE EXISTING MAIN LINE IN LAWN APPROXIMATELY 100' TOWARD THE HEALTH PROFESSIONS BUILDING. THE HIGHLIGHTED AREA ABOVE IS SCHEMATIC. A PRE-BID WALK THROUGH WILL BE SCHEDULED IN ORDER TO VERIFY THE LOCATION OF EXISTING INFRASTRUCTURE AND TO DETERMINE EXACT SCOPE OF NEW WORK.

BERGEN COMMUNITY COLLEGE

IRRIGATION PLAN - PROJECT AREA 3 - STUDENT QUAD

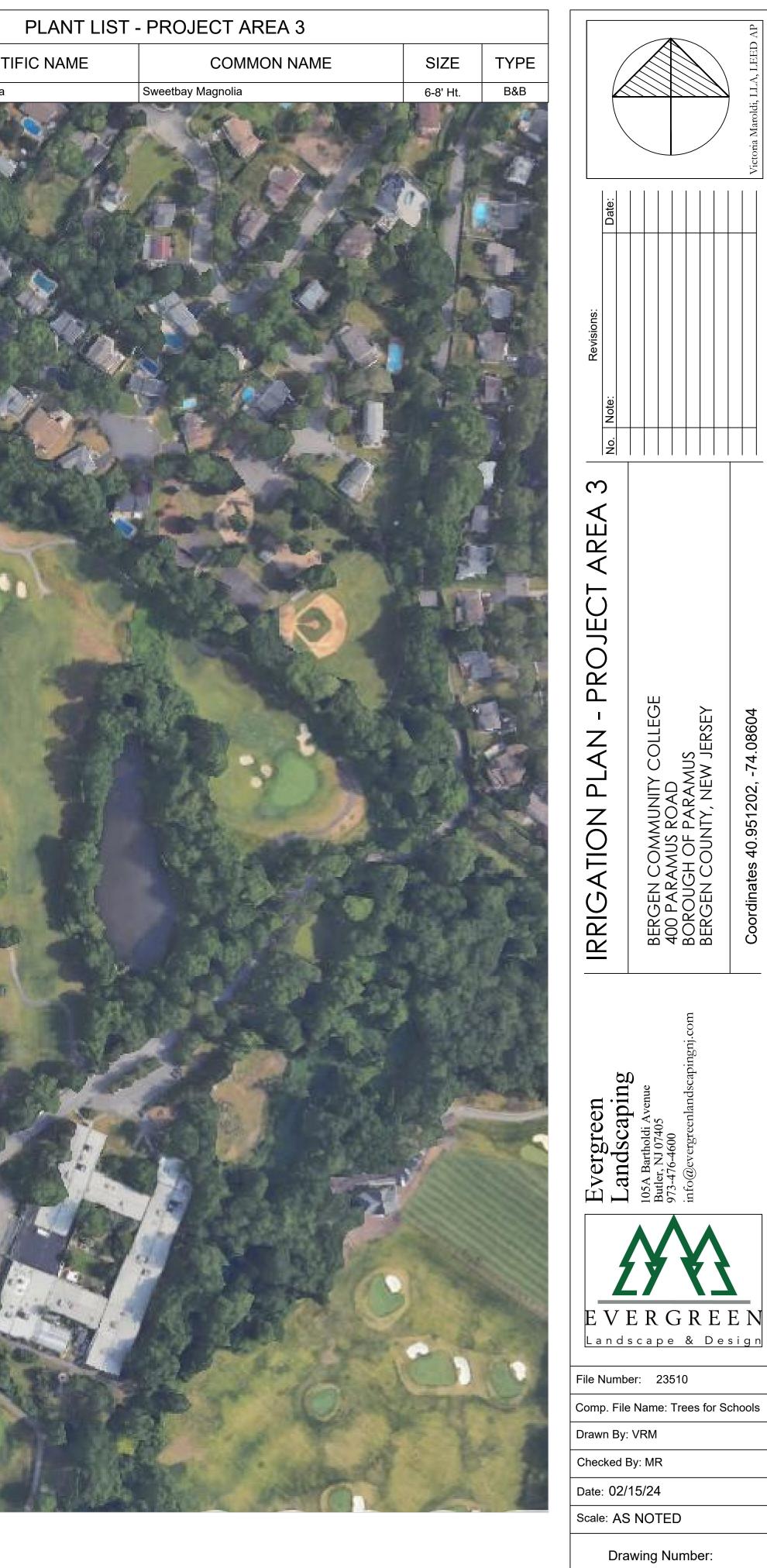
KEY	QTY	SCIENT
MV	1	Magnolia virginiana

- CEDAR - DYING

RRIGATED AREA. EXACT LIMITS TO BE VERIFIED FIELD DURING PRE-BID UALK THROUGH

ANY TREES OUTSIDE IRRIGATED AREAS WILL RECEIVE A REFILLABLE GATOR BAG.

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TREES FOR SCHOOLS MAINTENANCE TEMPLATE

	Activity/ description	At time of planting	Responsible Party (name, position)	Through Year 2*	Responsible Party (name, position)	After project period (Year 3 onwards)	Responsible Party (name, position)
Planting	New sites	Tree selection & planting apprroval on site by Victoria Maroldi/Evergreen and Responsbile Contracter	V. Maroldi/Evergreen	Check for disease or growth and recommend pruning/adjusted watering	V. Maroldi/ Evergreen Landscape&Design	Consultation as needed and where applies. Remedies to be discused between Representative of BCC or BCC Landscape Maintenance Contractor	Representative of BCC or BCC Landscape Maintenance Contractor
	Replacement plantings	Tree selection & planting apprroval on site by Victoria Maroldi/Evergreen and Responsbile Contracter		Replace dead trees w/in warranty period	V. Maroldi/ Evergreen Landscape&Design	Consultation as needed and where applies. Remedies to be discused between Representative of BCC or BCC Landscape Maintenance Contractor	Representative of BCC or BCC Landscape Maintenance Contractor
Watering	Describe method/frequency	(5-10+ gallons/tree)	Maintenance Contractor	As Weather Dictates - plan to be formulated with Irrigation Contractor and V. Maroldi/Evergreen Landscape&Design	V. Maroldi/ Evergreen Landscape&Design	As Weather Dictates - pla to be formulated with Irrigation Contractor and V. Maroldi/Evergreen Landscape&Design	Representative of BCC or BCC Landscape Maintenance Contractor
Mulching	II II	3-4" deep, >3" from trunk)	Maintenance	Annual Mulching, not to exceed 3" from trunk	BCC Landscape Maintenance Contractor	Annual Mulching, not to exceed 3" from trunk	BCC Landscape Maintenance Contractor
Pruning	Regular schedule	On install, only broken branches or extra leaders		(Light structural pruning Year 2* or 3)	V. Maroldi/Evergreen Landscape&Design	Every 3 years	Representative of BCC or BCC Landscape Maintenance Contractor
	Storm/emergency	only broken branches or extra leaders		As needed - only broken branches or extra leaders	V. Maroldi/ Evergreen Landscape&Design	As needed - only broken branches or extra leaders	Representative of BCC or BCC Landscape Maintenance Contractor
	Utility/street	only broken branches or extra leaders		As needed - only broken branches or extra leaders	V. Maroldi/ Evergreen Landscape&Design	As needed - only broken branches or extra leaders	Representative of BCC or BCC Landscape Maintenance Contractor
Inspection **		To be conducted by V. Maroldi/Evergreen Landscape&Design	V. Maroldi/Evergreen Landscape&Design	Weekly for first 3 months, then Monthly for remaining 21 months.To be conducted with V. Maroldi/Evergreen Landscape&Design and in coordination with BCC Landscape Mainteance Contractor	V. Maroldi/ Evergreen Landscape&Design	Every 6 months	Representative of BCC or BCC Landscape Maintenance Contractor

Entries in parentheses () are for guidance. Fill in cell with your specific activity description.

* Work done before the end of Year 2 (from date of planting) may be charged to this grant.

** Staff should inpsect trees regularly for health and damage (students may also help). If something looks wrong with a tree, call an arborist or Licensed Tree (LTE) expert for an (often complementary) opinion.

Appendix B – Landscape Installation – Technical Specifications

I-PLANTING SPECIFICATIONS

RELATED DOCUMENTS

1. Drawings and general provisions of the Contract, including General and Supplemental Conditions and the General Requirements, apply to work of this section.

SCOPE OF WORK

- Extent of landscape development work is shown on the drawings and in schedules. The Contractor shall supply all equipment, materials and labor to complete the "Landscape Work" as described, which includes the following:
 - a. Placing and Fine Grading the Topsoil
 - b. Seeding and Sodding
 - c. Planting
 - d. RELATED SECTIONS
 - e. Site Preparation
 - f. Earthwork
 - g. Site Concrete

REFERENCED STANDARDS

1. All plant material shall meet or, if indicated on the plant list, exceed the standards set forth in the current issue of the American Standard for Nursery Stock published by the American Association of Nurserymen (ANSI-Z60 1). Height, spread and caliper sizes shall be as indicated on the plant list

SUBMITTALS

CERTIFICATION

- 1. General
 - a. Certificates of Inspection as required
 - b. Other data substantiating that materials comply with specified requirements
- 2. Topsoil Amendments and Fertilizer
 - a. Manufactures or vendors certified analysis for topsoil amendments and fertilizer materials shall be submitted to the landscape Consultant for review and approval.
- 3. Seed
 - a. Vendors certified statement for each seed mixture required, stating botanical and common names, percentage by weight and percentages of purity, germination and weed seed for each seed species shall be submitted to the landscape Consultant for review and approval

LANDSCAPE SCHEDULE

1. Contractor shall submit proposed schedule indicating dates for selection. Tagging, digging, transportation, and installation of all plant material. Once schedule is accepted,

revise dates only as approved in writing by the Landscape Consultant after documentation of reasons for delays.

SUBSTITUTIONS

- 1. The Contractor shall submit a base bid as per plan
- 2. It is the Contractor's responsibility to make every reasonable effort to find the material specified.
- 3. It is the intent to eliminate post bid substitutions.
- 4. In the event that the contract material has become unavailable, the Contractor may offer substitutions to the Landscape Consultant for consideration. If he does so, he must include price clarification for such substitutions. Any substitution must be approved in writing by the Landscape Consultant.

QUALITY ASSURANCE

- 1. Landscape work must be done by a single firm specializing in landscape work
- 2. Source Quality Control
 - a. All trees must be tagged by the Landscape Consultant prior to digging.
 - b. General: Ship landscape materials with certificates of inspection required by governing authorities. Comply with regulations applicable to landscape materials.
 - c. Analysis and Standards (Topsoil Amendments): Package standard products with manufacturer's certified analysis for other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agriculture Chemists, wherever applicable.
- 3. Trees, Shrubs and Other Plant Material
 - All plant material shall meet or, if indicated on the plant list. exceed the standards set forth in the current issue of the American Standard for Nursery Stock published by the American Association of Nurserymen (ANSI-Z60.1). Height, spread and caliper sizes shall be as indicated on the plant list
 - b. Contractor shall provide healthy, vigorous stock grown in a recognized nursery in accordance with good horticultural practice and free of disease, insects, larvae, eggs and defects such as knots, sunscald, injuries, abrasions or disfigurement.
 - c. All plant material shall come from sources within the same USDA/ Agricultural Research Service Plant Hardiness Zone as is the Project Site and within 200 miles of the Project Site. Any material from sources outside this zone is not acceptable
 - d. Balled and Burlapped Material
 - e. Balled and burlapped plants shall be dug with firm rootball(s) free of noxious weeds. There shall be no excess soil on the top of the rootball(s) or around the trunk.
 - f. Ball sizes shall be accordance with American Association of Nurserymen Standards unless specifically noted.

- g. Container grown stock shall be used only when specified and shall conform to standard set forth in 1.07 C1: b:4
- h. 5 At least 10% of each variety of trees and shrubs shall be labeled with a securely attached, waterproof tag bearing legible designation of botanical and common name.
- 4. Quality, Size and Inspection
 - a. Caliper and Height Measurement
 - i. Balled and Burlapped Material
 - In size grading of single trunk trees, caliper shall take precedence over height
 - 2. Caliper of trunk shall be taken at 6" above the ground level for trees up to and including 4" caliper size, and 12" above the ground level for larger trees
 - 3. For multi-stemmed trees, at least one trunk must meet caliper size.
 - 4. In all cases, Contractor shall make every effort to meet <u>both</u> caliper and height standards specified on the plans and in the schedules. b Container Grown Stock
 - b. The Contractor shall furnish quantities necessary to complete the planting as shown on the plans
 - i. All plants shall equal or exceed measurements specified in the plant list which are the minimum acceptable.
 - ii. Plants shall be measured before pruning with branches in normal position. Necessary pruning shall be done at time of planting.
 - iii. When formal arrangements or consecutive order of trees or shrubs is shown, stock shall be selected for uniform height and spread and labeled by number to assure symmetry in planting.
 - c. When all plant material has been selected and pre-tagged by the Landscape Contractor. the Landscape Consultant shall be notified in order to schedule his nursery inspection with a minimum of 3 days advance notice
 - i. The Contractor shall accompany the Landscape Consultant on all inspections.
 - ii. The Contractor shall have located sufficient alternate choices to prevent loss of time in the event that some trees fail to meet with the approval of the Landscape Consultant.
 - iii. All trees must be approved in the field by the Landscape Consultant before digging begins.
- Field collected plant material shall not be used unless nursery grown stock is not available, and then only when authorized in writing by the Landscape Consultant. Collected stock shall have rootball(s) in accordance with American Association of Nurserymen Standards.

DELIVERY, STORAGE AND HANDLING

- 1. Packaged Materials
 - a. Deliver packaged materials in containers bearing weight. analysis and name of manufacturer.
 - b. Protect materials from deterioration during delivery and while stored at the site
- 2. Trees and Shrubs
 - a. The Contractor shall provide freshly dug plant material.
 - b. Trees and shrubs shall not be bent or tied in such a manner as to damage bark, break branches or destroy natural shape. Damaged material will be rejected
 - c. Protective covering shall be provided during delivery
 - d. Roots of bare root material shall be protected during delivery and handling to guard against drying out and damage.
 - i. Bare root plants, if specified, shall be puddled immediately after digging by immersing the roots in a thick mixture of clay and water so as to completely coat the roots.
 - e. All container grown plants shall be grouped and watered daily until planting
 - f. Deliver trees and shrubs after preparations for planting have been completed, and plant immediately. Trees delivered without Landscape Consultant's tags will be rejected
 - i. If planting is delayed for more than 5 hours after delivery, set trees and shrubs in shade, protect from weather and mechanical damage, and keep roots moist by covering with mulch, burlap or other acceptable means of retaining moisture.
 - g. Do not remove container grown stock from containers until planting time.
 - h. The Contractor shall, in loading and unloading or handling plants, exercise the utmost care to prevent injuries to the branches or roots.
 - i. The solidity of the rootball shall be carefully preserved Plants delivered with broken rootball(s) will be rejected.

PROJECT CONDITIONS

- 1. Contractor shall coordinate with Engineer's Phasing Schedule in order to proceed with. and complete, landscape work as rapidly as portions of the site become available (working within seasonal limitations for each kind of landscape work required).
- 2. Contractor shall determine location of underground utilities and shall perform work in a manner which will avoid possible damage, excavating by hand if required.
- 3. Grade stakes shall be maintained until their removal is mutually agreed upon by all parties concerned.
- 4. When conditions detrimental to plant growth are encountered such as rubble fill, adverse drainage conditions or obstructions etc., the Contractor shall notify the Landscape Consultant immediately
- Should planting of trees and shrubs occur after lawn work, lawn areas shall be protected and damage to lawns resulting from planting operations shall be promptly repaired

- 6. Cleanup and Protection
 - a. During landscape work keep pavements clean and working area in an orderly condition.
 - b. Protect landscape work and materials from damage due to landscape operations, operations by other contractors and trades, and trespassers.
 - c. Treat, repair or replace damaged landscape work as directed by Landscape Consultant.

INSPECTION AND ACCEPTANCE

- 1. When landscape work is completed, including maintenance, Engineer and Landscape Consultant will, upon request, make an inspection to determine acceptability.
- 2. Landscape work may be inspected for acceptance in parts agreeable to Landscape Consultant and Engineer, provided work offered for inspection is complete, including maintenance.
- 3. When inspected landscape work does not comply with requirements, replace rejected work and continue specified maintenance until re-inspected by Landscape Consultant and Engineer and found to be acceptable. Remove rejected plantings and materials promptly from project site.

WARRANTY

- 1. The Contractor shall guarantee all plant material installed under this Contract for a period of two (2) years after the Landscape Consultants' final acceptance of all planting at no additional cost to the Owner
- 2. The Contractor shall replace any trees, shrubs or plants that are dead or that are, in the opinion of the Landscape Consultant. unhealthy, unsightly or have lost their design value or natural shape because of dead branches, excessive pruning, or inadequate or improper maintenance. All the above-mentioned material will be removed immediately upon direction of the Landscape Consultant and replacement planting is to be done no later than the succeeding season

II - PRODUCTS

SOIL AMENDMENTS

- Lime: Material shall be ground or pulverized limestone which contains at least 50% total oxides, i.e. calcium oxide plus magnesium oxide. Limestone shall be ground to such fineness that at least 50% will pass through a 100-mesh sieve and 98-100% will pass through a 20-mesh sieve. Granular or pelletized lime may be used but it must follow the same specifications as above prior to being granulated or pelletized. Applications shall be determined by soil test recommendations, which shall be provided to the landscape Consultant.
- 2. <u>Aluminum Sulfate</u>: Commercial grade
- 3. <u>Peat Moss</u>: Type 1 sphagnum peat moss; finely divided with a pH of 3.1 to 5.0.
- 4. <u>Sedge Peat</u>: Decomposed peat containing no identifiable fibers.
- 5. <u>Leaf Compost</u>: Screened and free of trash.

- 6. <u>Pine Bark</u>: Potting grade pine bark with no particle size larger than 1/2" and less than 10% wood fiber
- 7. <u>Bone Meal</u>: Finely ground and with a minimum analysis of 2% nitrogen and 20% available phosphoric acid
- 8. <u>Sand</u>: Clean washed sand free of toxic materials.
- 9. <u>Perlite</u>: Conforming to the National Bureau of Standards PS 23.
- 10. <u>Vermiculite</u>: Horticultural grade, free of toxic substances.
- 11. <u>Sawdust</u> Rotted sawdust, free of chips, stones, sticks soil or toxic substances and with 7.5 pounds nitrogen uniformly mixed into each cubic yard of sawdust.
- 12. <u>Manure:</u> Well-rotted, stable or cattle manure containing not more than 25% by volume of straw, sawdust or other bedding materials and containing no chemicals or ingredients harmful to plants.

FERTILIZER

- 1. All fertilizer shall be granular pills, packets or pellets with 35% to 80% of the total nitrogen in a slow-release form.
- 2. For trees, shrubs and groundcover: Fertilizer shall be complete with a minimum analysis of 10% nitrogen, 6% phosphorous and 4% potassium. Fertilizers with a ratio of 4-1-2 (i.e. 24% nitrogen, 6% phosphorous and 12% potassium} shall be used for woody plants.
- 3. For perennials, annuals and bulbs Fertilizer shall be a complete fertilizer that is slow released.
- 4. All fertilizers shall be uniform in composition, free flowing and suitable for application with approved equipment. Fertilizers shall be delivered to the site fully labeled according to applicable State fertilizer laws and shall bear the name, trade name or trade mark, and warranty of the producer.
- 5. Application rates shall be determined by soil test recommendations.

WEED CONTROL

- 1. Any herbicide used must be approved by Federal and State Authorities for use in this area.
- 2. Contractor shall submit brand name and content of broad-leafed herbicide to be used to Landscape Consultant for approval prior to any weed control applications.
- 3. Application rates shall be as appropriate for amount of weed control required and shall be as per manufacture s recommendations.
- 4. Contractor shall post warning flags in all areas treated with weed control.

MULCH

- 1. Shredded Hardwood Bark Mulch
- 2. Material shall be composted, double-shredded hardwood bark (or pine bark with less than 10% sapwood), dark brown in color, or approved equal.
- 3. Material shall be uniform in size, free of foreign matter and suitable for topdressing of trees, shrubs or perennials.
- 4. Samples shall be submitted to Landscape Consultant for approval prior to purchase and delivery.
- 5. Mulch for Seeded Areas
 - a. Straw shall be free of rot. mildew, noxious weed seeds and shall be small-grained,

such as wheat or barley.

- b. Cellulose fiber mulch shall consist of specially prepared cellulose processed into a uniform fibrous physical state The fiber mulch, including dye, shall contain no germination or growth inhibiting factors. The mulch material shall be manufactured and processed in such a manner that the cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch shall cover and hold seed in contact with the soil without inhibiting the growth of seedlings.
- 6. Prefabricated wood shaving mat shall be woven and may contain light weight plastic netting on one or both sides.
- 7. Stabilizing Materials
 - a. Mulch anchoring tool is a tractor-drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2".
 - b. Cellulose fiber may be used for anchoring straw The fiber binding shall be applied at a net dry weight of 750 pounds per acre. The cellulose fiber may be mixed with water. The mixture shall contain a maximum of 50 pounds of cellulose fiber per 100 gallons of water.
- 8. Liquid Mulch Binder
 - a. Binder shall be non-asphaltic liquid concentrate diluted with water forming a transparent, 3-dimensional, film-like crust permeable to air and water and containing no agents toxic to seed germination.
 - b. Applications of liquid mulch binder shall be heavier at the edges of mulched areas where wind catches the mulch.
 - c. Liquid mulch binder shall be applied uniformly at a rate of 6 gallon
- 9. Mulch Netting: Stake light weight plastic netting over the mulch according to manufacturer's recommendations. Stakes shall be driven to ground level or removed once seed is established.

GUYING AND STAKING

- 1. Stakes
- 2. Wood stakes shall be 3" diameter cedar, or approved equal. for vertical staking of trees. See tree staking detail for lengths and quantity of stakes
- 3. Wire (for guying and staking)
 - a. Tree staking wire shall be 12 gauge galvanized annealed steel, or approved equal, double strand, twisted.
- 4. Hose
 - a. Hose shall be corded rubber, uniform in color and not less than 1/2" inside diameter.

TREE WRAP

1. Tree wrap shall be of burlap, first quality, at least 8 oz. in weight

ANTI-DESICCANT

1. Anti-desiccant shall be emulsion type, film forming agent designed to permit transpiration but retard excessive loss of moisture from plants

2. Deliver in Manufacturer's fully identifiable containers and mix in accordance with Manufacturer's instructions

PLANT MATERIALS

- 1. Deciduous Trees
 - a. Provide trees of height and caliper scheduled or shown and with branching configuration recommended by ANSI-Z60.1 for type and species indicated.
 - b. Provide single stem trees except where otherwise specified.
 - c. Provide balled and burlapped material unless otherwise specified.
- 2. Shrubs
 - Provide shrubs of height and/or spread scheduled or shown and with not less than the minimum number of canes required by ANSI-260.1 for type and height indicated
 - b. Provide balled and burlapped material unless otherwise indicated.
- 3. Coniferous and Broadleaf Evergreens
 - a. Provide evergreens of sizes scheduled or shown and which meets or exceeds ANSI-260.1 standards
 - b. Dimensions specified indicate minimum spread for spreading and semispreading type evergreens, and height for other types of evergreens such as globe, cone, dwarf, pyramidal, broad upright and columnar.
 - c. Provide quality evergreens with well-balanced form complying with requirements for other size relationships to the primary dimension indicated.
 - d. Provide balled and burlapped material unless otherwise indicated
- 4. Container Grown Stock (Ornamental Grasses and Perennials)
 - a. Provide container grown material conforming to ANSI-Z60.1 specifications for container grown stock.
- 5. All plant material shall conform to standards set forth in 1.07: B:4 and 1.07: C.
- SEED
- 1. Lawn Seed
 - i. Provide fresh, clean, new-crop seed complying with tolerance for purity and germination established by the Official Seed Analysts of North America.
 - Lawn Seed shall be as supplied by National Seed Co. of NJ., New Brunswick, NJ (732) 247-3100 and shall contain the following: 80% Rebel 30, Rebel Jr. or Rebel III Tall Fescue
 - i. 80% Rebel Jr or Tall Fescue
 - ii. 10% Palmer II Perennial Ryegrass 10% Preakness
 - iii. 10% Kentucky Bluegrass
- 2. Seeding Rates shall be as follows
 - a. Seeding new lawns: 260 lbs./ac.

III - EXECUTION

SEEDING NEW LAWNS

- 1. Preparation of Subgrade
 - a. Work shall proceed only after rough grading has been completed and the subgrade

is within 2110 of 1' (2.5") of the final subgrade.

- b. If the subgrade area develops volunteer weed growth, the growth must be eliminated prior to seeding operations.
- c. Grades which have been previously established in conformance with the drawings shall be maintained in a true and even grade.
- d. Loosen subgrade of lawn areas to a minimum depth of 6". Remove all stones over 1", sticks, roots. rubbish and other extraneous matter. Limit preparation to areas which will be planted promptly after preparation. Subgrade shall be inspected and approved by Landscape Consultant and/or Engineer after tilling and prior to any spreading of topsoil.
- e. Limestone shall be spread and worked into the subsoil at an application rate determined by soil test analysis
- 2. Spreading of Topsoil
 - a. A minimum of 6" of topsoil shall be spread over prepared subgrade
 - b. Spread topsoil to the minimum depth required to meet lines, grades and elevations shown, after light rolling and natural settlement. Add specified soil amendments based upon the certified lab test results and mix (by disc or other mechanical means) thoroughly into the topsoil.
 - c. Spreading of topsoil shall be performed in such a manner that seeding can proceed with a minimum of additional soil preparation and tillage.
 - d. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets
 - e. Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in any condition that may otherwise be detrimental to proper grading and/or seeding.
 - f. Apply fertilizer at rates recommended by the certified lab test results and thoroughly mix into the topsoil.
 - g. Delay application of fertilizer if lawn planting will not follow within a few days
- 3. Fine Grading
 - a. Fine grade lawn areas to smooth even surface with loose, uniformly fine texture. Roll. rake and drag lawn areas. remove ridges and fill depressions as required to meet finished grades. Limit fine grading to areas which can be planted immediately after grading
 - b. Moisten prepared lawn areas before planting, if soil is dry. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create muddy soil condition.
- 4. Preparation of Unchanged Grades
 - a. Where lawns are to be planted in areas that have not been altered or disrupted by excavating, grading or stripping operations, prepare soil for lawn planting as follows:
 - b. Prior to preparation of unchanged areas, remove existing grass, vegetation and turf. Dispose of such material properly; do not turn over into soil being prepared for lawns.

- c. Till soil to a depth of 6" and apply soil amendments as recommended by soil test analysis. Remove high areas, fill in depressions and till soil to a homogeneous mixture of fine texture, free of lumps, clods, stones over 1/2", roots and other extraneous matter.
- d. Apply commercial fertilizer at rates recommended by the certified lab test results and thoroughly mix into top 4" of soil. Delay application of fertilizer if lawn planting will not follow within a few days.
- 5. Seeding
 - a. Prior to seeding operations, the Landscape Consultant and/or Engineer shall inspect and approve final grading and topsoil preparation.
 - b. Seeding shall be executed according to the following schedule: March 15 to May 15; August 15 to September 15. These periods may be extended or reduced according to prevailing weather conditions and approval by the Landscape Consultant Seeding shall also be executed as per growers. recommendations.
 - c. No seeding shall be done on frozen ground or when temperature is 32 degrees or lower
 - d. No seeding shall be permitted after a rain (unless surface of ground is loosened) or when the velocity of the wind exceeds a gentle breeze of 5 MPH. Extreme care shall be exercised during seeding and raking so that no change in grade is made and so that seed is not raked from one area to another.
 - e. Do not use wet seed or seed which is moldy or otherwise damaged in transit or storage
 - f. Sow seed using a spreader or seeding machine. Distribute seed evenly over entire area by sowing equal quantity in 2 directions at right angles to one another. Hydroseeding will not be permitted.
 - g. Sow not less than the quantity of seed specified or scheduled.
 - h. Rake seed lightly into the top 118" of soil, roll lightly and water with a fine spray.
 - i. Protect seeded areas against erosion by spreading mulching material after completion of seeding operations. Spread uniformly to form a continuous blanket of not less than 1 1/2" loose measurement over seeded areas.
 - j. Protect seeded slopes against erosion with erosion netting or other methods acceptable to the Landscape Consultant.
 - k. Anchor mulch with stabilizing material. Take precautions to prevent damage, or staining, of construction or other plantings adjacent to mulched areas.
 - I. In the absence of rain, the newly seeded areas shall be watered 2-3 times daily at 10:00 a.m., 12 00 p.m. and/or 2:00 p.m.
- 6. Maintenance of Seeded Lawns
 - a. Contractor shall maintain seeded lawns until final acceptance by the Landscape Consultant, but in no case less than 60 days after completion.
 - b. Contractor's responsibilities for maintenance are to be continuous to the time of final acceptance. There are to include, but not be limited to, the following:
 - c. Re-seeding of any bare areas
 - d. Proper and adequate watering Mowing operations shall include trimming around all obstacles, raking excessive grass clippings and removing debris from walks.

curbs and parking areas. Weed eaters shall not be used around plant material.

e. Edging of all sidewalks, curbs and other paved areas shall be performed once every other mowing. Debris from edging operations shall be removed and the areas swept clean.

SODDING (Where applicable)

- 1. Preparation of Subgrade (Follow procedure set forth in 3.01: A)
- 2. Spreading of Topsoil (Follow procedure set forth in 3.01: B)
- 3. Fine Grading (Follow procedure set forth in 3.01:C)
- 4. Preparation of Unchanged Grades (Follow procedure set forth in 3.01:D)

TREE PLANTING

- 1. No tree planting operations shall take place until placing of topsoil has been completed.
- 2. Locations of plant material shown on the plans are approximate. Contractor shall stake out existing utilities locations prior to staking to avoid conflicts. Final locations will vary from plan and shall be determined in the field under the direction of the Landscape Consultant
- 3. Contractor shall provide pre-marked, color-coded flags for all shade trees, evergreen trees end flowering trees, with abbreviations that correspond with the Plant List.
- 4. Landscape Consultant shall place the color-coded flags to indicate plant locations.
- 5. Contractor shall place trees above ground in accordance with the flagged locations. The Landscape Consultant may request the Contractor to move, turn or relocate the plant material at this time. Under no circumstances shall the Contractor pre-dig tree pits.
- 6. Upon final approval by the Landscape Consultant of tree placement, the Contractor shall paint a circle around the ball of the tree, move tree and excavate tree pit
- 7. Excavation of Tree Pits
 - a. Contractor to stake out existing utility locations prior to excavation.
 - b. Walls of tree pits shall be dug so that they are vertical, or sloping outward in heavy soils, and scarified. Excavation shall be slightly raised in the center to provide proper drainage.
 - c. Tree pits must be a minimum of 2' greater in diameter than the ball of the tree or the spread of its roots.
 - d. The depth of the tree pit shall be as deep as necessary to accommodate the ball of the tree so that it will not be necessary to raise or lower the tree to bring it to the required grade. Tree pits shell be deep enough to allow 1/8 of the ball of the tree to be above finished grade. Plants shall rest on undisturbed existing soil or well-compacted backfill.
 - e. Dispose of subsoil removed from planting excavations. Do not mix with planting soil or use as backfill.
 - f. When tree pits have been dug, the Contractor shall partially fill with water a representative number of pits in each area to determine that there is adequate percolation in the subgrade at each pit. If not, notify the Landscape Consultant

immediately.

- 8. Placing Trees
 - a. Place tree in pit by carrying the ball and then lowering it into the pit. Never lift trees by their trunk or branches.
 - b. Set balled and burlapped (B&B) stock on bottom of pit, plumb and in the center of the pit, with the most desirable side facing the prominent view.
 - c. Cut and remove rope or wire from the top 50% of rootball and pull burlap back to the edge of the rootball. Remove as much burlap, woven products and twine as possible. All plastic or synthetic film must be removed from rootball. Cut all twine away from trunk.
- 9. Backfilling Tree Pits
 - a. Tree pits shall be backfilled with topsoil mixture as specified in 2.03.
 - b. Trees must remain straight throughout backfilling.
 - c. Place backfill around base and sides of rootball, working each layer to settle backfill and eliminate air pockets and voids. When backfill is 2/3 completed, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Place final layer of backfill, tamp firmly and water again until no more water is absorbed.
 - d. Never cover top of rootball with soil.
 - e. Form a soil saucer above finished grade around the outer rim of tree pit
 - f. Mulch top of rootball and saucer to a depth of 3" with shredded hardwood bark mulch. Do not place mulch against trunk.
- 10. Pruning
 - a. Prune, thin out and shape trees in accordance with standard horticultural practice.
 - b. Pruning shall be restricted to corrective pruning to improve form only. This includes dead, damaged, diseased and/or conflicting branches.
 - c. Do not cut main leader unless directed by Landscape Consultant to do so. Remove only injured or dead branches from flowering trees, if any.
 - d. If side branches are cut to balance tree, make all cuts back to a lateral branch or bud.
 - e. Final pruning shall be done after trees are in place.
 - f. Remove and replace excessively pruned stock resulting from improper pruning.
 - g. Remove all tags, labels, strings and wire from tree unless otherwise directed by Landscape Consultant.
 - h. After final pruning, apply anti-desiccant where appropriate using power spray to provide an adequate film over trunks, branches, stems, twigs and foliage.
- 11. Tree Wrapping
 - a. Inspect trees for injury, improper pruning and insect infestation and take corrective measures before wrapping.
 - b. Burlap wrapping shall be spirally wound to the second branch, with 50% overlap.
 - c. Tie wrap at a minimum of 5 places including bottom, middle and top.
- 12. Tree Staking (Trees Under 6" Cal.)

- a. Staking shall be completed as soon as possible after planting of tree. Number of stakes shall be as shown on the tree staking detail on the drawings.
- b. Space cedar stakes evenly and vertically on the outside of the rootball and drive firmly into the ground. Stakes shall be driven at an angle and drawn inward to vertical.
- c. Cut pieces of hose long enough to loop around trunk.
- d. Place hose around trunk at the height required to provide optimum support. Thread the wire through the hose and pull both ends horizontally 2' beyond stake.
- e. Twist the wires together starting at the rubber hose. Wind both ends of the wires around the stake twice then twist wire back on itself to hold securely. Cut off excess wire. Wire shall be 3" min. from the top of the stake.
- 13. Tree Guying (Evergreen Trees)
 - a. Guying shall be completed as soon as possible after planting of tree. Number of stakes shall be as shown on the tree staking detail on the drawings.
 - b. Cut pieces of hose long enough to loop around trunk.
 - c. Space steel angles evenly around, and 18" from the outside of tree pit and drive firmly into the ground allowing the end of the angle to project 6" above grade.
 - d. Place hose around trunk just above lowest stout branch at 2/5 to 3/5 the height of the tree.
 - e. Twist the wires together starting et the rubber hose. Wind both ends of the wire through the hole in the steel angle and twist wire back on itself to hold securely. Cut off excess wire.
- 14. Maintenance of Tree Plantings
 - a. Maintenance shall begin immediately after planting.
 - b. Contractor shall maintain trees until final acceptance by Landscape Consultant, but in no case less than 60 days after completion.
 - c. Maintain trees by pruning, cultivation and weeding as required for healthy growth in conformance with standard horticultural practice.
 - d. Contractor shall restore planting saucers, tighten and repair stake and guy supports and reset trees as required.
 - e. Contractor shall restore or replace damaged wrappings.
 - f. Spray trees as necessary to keep trees free of insects and disease.
 - g. Watering All material shall be thoroughly watered at one (1) week intervals throughout the summer as follows:
 - i. A hose without a nozzle should be inserted into the soil just beyond the rootball end water allowed to run at a moderate rate until it bubbles to the surface. Remove hose and place at a new location, diametrically opposite, and allow the water to run until the earth saucer is filled to the brim. If this water is absorbed before 15 minutes have elapsed, the procedure should be repeated immediately, and again for as many times as necessary, until the saucer retains water for more than 15

minutes.

ii. During the month commencing with the third week in August and ending with the third week in September, the interval between waterings shall be extended to 2 weeks in order to allow the buds to harden. After the third week in September, watering shall be resumed on a weekly basis until frost.

SHRUB PLANTING

- 15. No shrub planting operations shall take place until placing of topsoil has been completed.
- 16. Contractor to locate all existing utilities prior to locating shrubs. Shrubs shall be located above ground in masses or hedges as directed by the Landscape Consultant Under no circums1ances shall Contractor pre-dig shrub pits
- 17. Following approval by the Landscape Consultant of shrub layout, Contractor shall be directed to plant shrubs.
- 18. Excavation for Shrubs
 - a. Pits (for single shrubs) and Trenches
 - b. Walls of shrub pits or trench shall be dug so that they are vertical, or sloping outward in heavy soils, and scarified. Excavation shall be slightly raised in the center to provide proper drainage.
 - c. Pits and trenches must be a minimum of 1' greater in diameter than the ball of the shrub or the spread of its roots.
 - d. The depth of the pit or trench shall be as deep as necessary to accommodate the ball of the shrub so that it will not be necessary to raise or lower the shrub to bring it to the required grade. Shrub pits shall be deep enough to allow 1/8 of the ball of the shrub to be above finished grade. Plants shall rest on undisturbed existing soil or well-compacted backfill.
 - e. Dispose of subsoil removed from planting excavations. Do not mix with planting soil or use as backfill.
 - f. When shrub pits have been dug, the Contractor shall partially fill with water a representative number of pits in each area to determine that there is adequate percolation in the subgrade at each pit. If not, notify the Landscape Consultant immediately.
- 19. Preparation of Planting Beds
- 20. For shrub mass planting, the entire bed subgrade shall be tilled 6" deep. Remove any stones over 1•, sticks, roots, rubbish and any other extraneous matter. If the soil is heavy day and silt, organic matter should be added based upon soil test recommendations.
- 21. Placing Shrubs
 - a. Place shrub in pit by carrying by the rootball and lowering into pit.
 - b. Remove containers from all container grown shrubs and slash the edges of the rootball from top to bottom, at least 1" deep, making 4-5 cuts. The slashing of roots may not be required for containers pre-treated with copper coating.
 - c. Set shrub straight and in the center of the pit with the most desirable side facing the prominent view.

- d. Cut and remove rope or wire from the top 50% of rootball and pull burlap back to the edge of the rootball. Remove as much burlap, woven products and twine as possible. All plastic or synthetic film must be removed from rootball. Cut all twine away from canes.
- 22. Backfilling Shrub Pit
 - a. Follow procedure set forth in 3.03:1.
- 23. Pruning
 - a. Prune out any dead or broken branches.
 - b. Prune hedges as directed by Landscape Consultant.
 - c. Final pruning shall be done after shrubs are in place.
 - d. Remove all tags, labels, strings and wires from shrubs unless otherwise directed by Landscape Consultant.
 - e. Remove and replace excessively pruned or malformed stock resulting from improper pruning.
 - f. After final pruning, apply anti-desiccant where appropriate, using power spray to provide an adequate film over trunks, branches, stems, twigs and foliage.
- 24. Maintenance
 - a. Follow procedure as set forth in 3.03: N.
- PLANTING GROUNDCOVER AND PERENNIALS
 - 1. Preparation of Planting Beds
 - 2. The entire bed subgrade shall be tilled 8" deep. Remove any stones over 1", sticks, roots, rubbish and any other extraneous matter.
 - 3. Dig beds not less than 8" deep and mix with soil amendments and fertilizer as recommended by soil test analysis.
 - 4. Spread planting soil mixture to a minimum depth required to meet lines, grades and elevations shown, after light rolling and settlement as follows:
 - 5. Place approximately 1/2 the total amount of planting soil required and work into the top CF the loosened subgrade to create a transition layer.
 - 6. Place remainder of planting soil.
 - 7. Mulch entire planting bed with 2" shredded hardwood bark mulch.
 - 8. Placing Plants
 - 9. Before planting, biodegradable pots shall be split and non-biodegradable pots shall be removed. Root systems of all potted plants shall be split or crumbled.
 - 10. Plants shall be installed so that the roots are surrounded by soil below the mulch.
 - 11. Potted plants shall be set so 1hat the top of the pot is even with finished grade.
 - 12. Roots of bare root plants shall be covered to the crown.
 - 13. The entire bed shall be thoroughly watered.
 - 14. Treat the mulched and planted bed with a pre-emergent herbicide only as directed by the Landscape Consultant. Apply only when foliage is dry to prevent foliar burn.

APPENDIX C-IRRIGATION SYSTEM

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Extend existing underground sprinkler system in Project Areas 1 & 3 as described in bid package. Work includes:
 - 1. All permits and related inspections
 - 2. Controllers, enclosures and control wire.
 - 3. Fall winterization and spring start-up service.
 - 4. Excavation and backfilling related to underground sprinkler system work.
 - 5. Install all plumbing and electrical work to comply with all local building code requirements
 - 6. Testing of all mains, laterals, fittings, sprinkler heads, quick coupler valves, control valves and controllers.
 - 7. Associated interior and exterior plumbing and electrical work, including controller connections and accessories to complete the system
 - 8. Include a minimum of two (1) full days to review the operation of the irrigation system with owners' representative once the system is 100% operational.
 - 9. The underground sprinkler system shall be constructed using the sprinkler heads, valves, piping, fittings, controllers, wiring and accessories of the sizes and types as shown on the drawings and per this specification.

1.02 RELATED WORK

A. Install irrigation mainline piping prior to installation of subgrade drainage system. (if applicable)

1.03 QUALITY ASSURANCE

A. The contractor shall coordinate the work related to this contract with the

work of other trades.

- B. Construct the system to grade and in conformance to areas and locations designated on the drawings.
- C. Excavating, backfilling and compacting operations: Comply with earthwork requirements and as specified.
- D. Installer's qualifications: Minimum of five (5) years' experience installing underground sprinkler systems of comparable size.
 - 1. Underground sprinkler system work shall be performed only by experienced workmen familiar with sprinkler system installation work under the supervision of a qualified experienced superintendent.
- E. All materials shall be supplied from a single source distributor.

1.04 SUBMITTALS

- A. Submit five (5) copies of manufacturer's product data and installation instructions for approval for each of the system components including all sprinkler heads, automatic valves, controllers, and quick coupling valves.
- B. Submit shop drawings:
 - 1. Include piping layout and details illustrating location and types of sprinkler heads, valves, and control systems. Show sprinkler head coverage.
- C. Provide sprinkler system record drawings upon irrigation system acceptance. All record documents shall be bound into notebooks and shall include the following:
 - 1. Include written instructions for future service and maintenance.
 - 2. Include instruction sheets and parts lists covering all operating equipment.
 - 3. Submit as-built drawings.
 - 4. Maintain record drawings current with actual construction on a daily basis during system installation.

5. Provide a reproducible irrigation system record drawing showing sprinkler heads, valves, drains, piping layout, controllers, quick coupler and automatic valves. Final payment shall not be made for this work without the receipt of an accurate as-built drawing.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Store and handle materials to prevent damage and deterioration.
- B. Deliver plastic piping in bundles, packaged to provide adequate protection of pipe ends, both threaded and plain.
- C. Deliver irrigation system components in manufacturer's original undamaged and unopened containers with labels intact and legible.
- D. Provide secure, locked storage for valves, sprinkler heads and similar components that cannot be immediately replaced, to prevent installation delays.

1.06 GUARANTEE

- A. Guarantee shall include responsibility for removal and replacement of work, which conceals underground sprinkler system work.
- B. Guarantee underground sprinkler system against defects in workmanship and materials for one (1) year from date of acceptance.
- C. Guarantee includes contractor returning to the site for fall winterization and spring start-up service.
- D. Guarantee that all trenches and other disturbed areas shall be free from heaving and/or settling by more than one-quarter (1/4") inch. If necessary, adjust the grade, re-grade the trench and re-seed. This no settlement guarantee shall extend over the entire one (1) year guarantee from date of acceptance.

PART 2 – PRODUCTS

2.01 GENERAL MATERIALS

A. the contractor shall use materials compatible with the existing system. Materials that deviate from the existing system, other than specified shall be permitted only after written application by the contractor and written approval by the owner's representative.

B. All material to be incorporated in this system shall be new, without flaws or defect and of quality and performance. All material overages at the completion of the installation are the property of the contractor and are to be removed from site.

2.02 MATERIALS

A. Pipe and Fittings

- 1. All pipe damaged or rejected because of defects shall be removed from the site at the time of said rejection.
- 2. Primer and solvent for use with PVC pipe to conform to ASTM D2564. Primer to be purple in color. Solvent to be appropriate for pipe and fitting type and weather conditions.
- 3. All PVC pipes two and one-half (2-1/2") inches diameter and smaller shall be SDR 21, Class 200 PVC solvent weld.
- 4. Mainline pipe size three (3") inch and larger shall be SDR 21 Class 200 PVC ring tite (gasket) pipe.
- 5. Fittings for PVC pipe sizes three (3") inch and larger shall be constructed of ductile iron with gasket joints with a minimum working pressure of 200 PSI, Harco or approved equal.
- 6. Fittings for PVC pipe sizes two and one-half (2-1/2") inches and smaller shall be ASTM D2466 Schedule 40 PVC molded fittings suitable for solvent weld.
- 7. All piping shall be ASTM D2241, rigid, unplasticized polyvinyl chloride, extruded from virgin parent material. Provide pipe homogeneous throughout and free from visible cracks, hole, foreign materials, blisters, wrinkles and dents.
- 8. Provide pipe continuously and permanently marked with manufacturer's name or trademark, size, schedule, and type of pipe, working pressure at seventy-three (73) degrees Fahrenheit and National Sanitation Foundation (NSF) approval. Cover pipe during storage.

- 1. Accepted Manufacturers
 - a. Toro
 - b. Rain Bird
 - c. Hunter

C. Sprinkler Heads – Long Range

- The full or part-circle sprinklers shall be a gear driven rotary type. The sprinkler shall be of a pop-up design with an overall height of 8-1/2", a body diameter of 2-1/2", a cap diameter of 3-3/8" and a pop-up stroke of 4". The sprinkler shall be mounted at finish grade and shall have a 1" NPT or BSP female threaded inlet. The sprinkler shall be capable of covering up to a 52' radius at 60 pounds per square inch pressure with a discharge rate of 10.2 gallons per minute. Water distribution shall be via two (2) nozzles that thread into a 2" diameter nozzle turret. The dual color-coded nozzles shall elevate 4" when in operation.
- 2. The body and cap of the sprinkler shall be injection molded from ABS, a non-corrosive, impact-resistant, UV-resistant, heavy-duty plastic material. The cover and nozzle top shall be injection molded from Alcryn, a synthetic rubber, and be capable of providing excellent impact resistance. The sprinkler shall be available with a plastic or stainless-steel riser. The sprinkler shall have a plastic filter screen sized to prevent entry of foreign material into the nozzle. All components shall be removable from the top of the sprinkler case via a snap ring retention method.
- 3. The sprinkler shall have a single-piece riser/body seal that regulates flutings during pop-up and retraction to clear any debris from around the riser and a heavy-duty stainless-steel spring to ensure positive retraction. Rotation shall be accomplished by a water lubricated planetary gear-drive assembly driven by a variable reversing stator that maintains a constant speed of rotation with all nozzles. The variable reversing stator shall require no adjustments when changing nozzles.
- 4. The sprinkler shall incorporate an anti-vandal arc memory feature that allows the nozzle to be turned beyond its watering borders without incurring any internal damage. If turned beyond its watering borders, the sprinkler shall automatically return to the previously set arc. The sprinkler shall have a standard rubber cover available in black, or lavender for effluent water use applications.

D. Remote Control Valves

- 5. The remote-control valve body and bonnet shall be constructed of 33% glass-filled nylon (GFN) and stainless steel and have a maximum pressure rating of 220 PSI. The diaphragm shall be made of double-beaded, fabric- reinforced rubber to retain flexibility and provide maximum sealing throughout its area. The diaphragm assembly shall be fully serviceable, held together with stainless-steel components and plastic components. All parts shall be serviceable from the top of the valve without removing the valve from the line. The valve may be installed at any angle without affecting valve operation. All other internal parts shall be made of plastic, brass and stainless steel to ensure corrosion resistance.
- 6. The valve shall have an internal manual downstream bleed to prevent flooding of the valve box and be capable of operation by hand. The valve shall have an external bleed for system flushing. The valve shall have a self-cleaning, stainless-steel metering (externally removable) system. The valve shall have a manual flow control with a hand-operated, rising-type flow-control stem with a control wheel/handle. The flow control shall be adjustable down to zero flow.
- 7. For 1" models, friction loss at 40 GPM shall not exceed 7.2 PSI on electric valves. For 1-1/2" models, friction loss at 100 GPM shall not exceed 14.4 PSI on electric valves. For 2" models, friction loss at 180 GPM shall not exceed 8.05 PSI on electric valves. For 3" models, friction loss at 300 GPM shall not exceed 10.1 PSI on electric valves. The burst pressure safety rating shall be 750 PSI. The valve must open or close in less than one minute at 220 PSI without water hammer.
- 8. The valve shall have a plastic solenoid, which is fully encapsulated and have a captured hex plunger and spring. The solenoid will have a removable retainer for servicing of the spring and plunger. The plunger shall be on a stainless-steel solenoid seat for longer life. The 24 V a.c. solenoid shall open with a 22.5 V a.c. minimum at 220 PSI. At 24 V a.c. average inrush, current shall not exceed 0.40 amps. Average holding current shall not exceed 0.20 amps.
- 9. The valve shall have a built-in, Schrader-type valve for attaching a pressure gauge to verify downstream pressure. The valve shall be able to field retrofit with an optional pressure-regulating module, EZReg², which can be factory or field-installed or serviced under pressure. The valve shall

have a forward-flow design to ensure more precise regulation when used with a pressure regulator.

10. Pressure Regulating Electric Models: The pressure regulator, EZReg?, shall be of dial design to permit visual setting of pressure with or without

the valve being operated or the use of a pressure gauge. The regulator shall be of a screw-in type and shall regulate precisely over a 5-100 PSI range with maximum inlet pressure of 220 PSI. The regulator shall maintain the set pressure within +/- 3 PSI (with a 10-PSI differential between inlet and outlet). The valve shall be developed, manufactured, qualified and released in the USA. The valve shall come with a 5-year trade warranty.

E. Control Wire and Connections

- 1. Low voltage wire connectors to be made using wire nuts and 3M DBY/DBR connectors or approved equal.
- 2. One hundred and twenty (120) volt or heavier splices made underground to be made using wire nuts and 3M brand DBY.
- 3. Control wire shall be Type; UL approved for direct burial. Conductor to be single strand soft annealed copper, jacket to be PVC or polyethylene.
- 4. Twenty-four (24) volt control wire to be a different color for each control timer and shall be size fourteen (14) or larger. Common wire to be white in color and shall be size twelve (12) or larger. Run a minimum of one (1) common per control timer. Do not connect ground wires from different controllers.

F. Control System

 The field satellite controller shall use modular solid-state control technology and be capable of automatic, semi-automatic and manual operations. It shall be housed in a locking, weatherproof, pedestaltype

enclosure constructed of plastic or heavy-gauge painted, stainless steel with corrosion-resistant finish inside and out. Access to all wiring connections

is through a locking door. Four bolts shall secure the pedestal to the concrete pad.

- The controller shall be capable of operating with an input voltage of 115/230 V a.c. (+/- 10%), 50/60 Hz. Each station shall be capable of delivering 0.75 amperes (18 VA) at 24 V a.c. per station. Each station shall have built-in surge protection. The controller shall be capable of operating multiple stations for a total output current of 3.2 amperes (72 VA) at 24 V a.c.
- 3. The controller shall have three modes of operation: central, stand-alone and off. Time-of-day, day-of-week, programming and operational status shall be shown in two large LCD displays. While operating in stand-alone mode, the controller shall have a 12/24-hour real-time clock.
- 4. The controller shall have 16 independent irrigation programs. Each program shall have the ability to be scheduled independently in a 14-day calendar or one-to 29-day interval mode. Each program shall have 12 starts times, up to three repeat cycles and a programmable soak time of zero to 59 minutes.
- 5. The controller shall have 16 stations minimum with the ability to run each station from one minute to eight hours and 59 minutes in one-minute increments. It shall be expandable to a maximum of 64 stations using eight-station modules. Each station may be assigned independently to any or all of the 16 irrigation programs. Station run time shall be independent for each irrigation program.
- 6. The controller shall have a program-adjust feature that allows the independent adjustment of each irrigation program from 10% to 250% in 1% increments. The adjustment by program may be set to OFF to prevent run time changes for programs intended for non-irrigation use. The controller shall have a global adjust feature that additionally adjusts all programs from 10% to 250% in 1% increments.
- 7. The controller shall have a manual start feature that allows a program to be run in normal or syringe mode. Syringe mode run time may be specified in minutes (1 to 30) or as a percentage (10% to 99%) of normal station run time. When a program is running (automatic or manually started), the controller will display the currently running program, the currently running station and time left for the running station. The controller shall have a multi-manual cycle that allows the simultaneous operation of one to six stations with independent station

run times. The multi-manual run time may be set for one to 59 minutes.

- 8. The controller shall use a high-energy lithium battery (not included) for real-time clock retention in the event of a power failure. The controller shall maintain the real-time clock for 90 days when the lithium battery is installed or 30 minutes of no battery is used. Program data shall be stored in non-volatile memory that will be retained faithfully for a minimum of ten years without power.
- 9. All electronic componentry shall be conformal coated in order to support visual diagnostics for field repair. The controller shall have a front cover lock that locks only when engaged and shall not lock automatically with each closure.
- 10. The controller shall not require the use of armored cable or looping communication cable.
- 11. The controller shall offer optional enhanced surge protection for all outputs, input power, communications and the pump and common.
- 12. When operating in the central mode, the controller shall be capable of two- way communications with the SitePro, Network LTC (up to 32 stations) and TouchNet for Network LTC Plus central controllers. It shall receive, store and send all commands generated by the central, including current time and day. It shall upload to the central: 1) satellite status, 2) program content and 3) failure sensing.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine final grades and installation conditions. Do not start underground sprinkler system work until finished grades are established and unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Layout and stake the location of each pipe runs and all sprinkler heads and sprinkler valves. Obtain owner's representative's acceptance of layout before excavating.

3.03 EXCAVATING AND BACKFILLING

- A. Excavating shall be considered unclassified and shall include all materials encountered, except materials that cannot be excavated by normal mechanical means. Excavate trenches of sufficient depth and width to permit proper handling and installation of pipe and fittings. Excavate to depths required to provide two (2") inch depth of earth fill or sand bedding for piping when rock or other unsuitable bearing material is encountered.
- B. All mainline and continuously pressurized pipe is to be installed using open trenches. Lateral pipe may be installed by "plowing" if soil conditions permit and soils do not contain gravel, rock, construction debris or other potentially damaging material.
- C. The top ten (10") inches of backfill shall be topsoil, free of rocks, subsoil or trash. Any special soil mixture shall be replaced to the original condition it was prior to irrigation installation.
- D. Fill to within six (6") inches of final grade with approved excavated or borrows fill materials free of lumps or rocks larger than two (2") inches in any dimension.
- E. Provide approved fine grained earth fill or sand to a point four (4") inches above the top of pipe, where soil conditions are rocky or otherwise objectionable.
- F. Fill to match adjacent grade elevation with approved earth fill material. Place and compact fill in layers not greater than eight (8") inches in depth.

3.04 UNDERGROUND PIPE

- A. All mainline and contiguously pressurized pipes are to be installed using open trenches.
- B. Allow glued joints to set at least twenty-four (24) hours before pressure is applied to the system.
- C. Store pipe such that it is protected from oil and grease and from prolonged exposure to sunlight and excessive heat.
- D. Minimum depth of cover over lateral pipe shall be ten (18") inches and over mainline pipe shall be twenty-four (24") inches.
- E. Install plastic pipe in accordance with manufacturer's installation instructions.
- F. Where mainline pipe crosses piping related to the subgrade system drainage, the mainline piping shall go over the subgrade drainage, provided the mainline pipe is not installed with less than eighteen (18") inches of cover. Otherwise install mainline pipe at twenty-four (24") inches buried depth, beneath drainage system.

3.05 SPRINKLER INSTALLATION

- A. Install fittings and sprinkler heads in accordance with manufacturer's instructions, except as otherwise indicated.
- B. Set sprinkler heads perpendicular to finished grades, except as otherwise indicated and positioned to prevent contact with grounds maintenance equipment. Locate sprinkler heads to assure proper coverage of indicated areas. Do not exceed sprinkler head spacing distances indicated.
- C. Flush piping with full head of water and install heads after hydrostatic test is completed.

3.06 VALVE INSTALLATION

- A. Electric valve installation shall be as indicated on the drawings. All electrical and manual valves shall be enclosed in a minimum ten (10") inch width valve box. Add extensions as required to prevent soil settlement around the valve. Set box flush with finish grade and aligned with adjacent boxes and/or adjoining site work.
- B. Install valve access boxes on a suitable base of gravel to provide a level foundation at proper grade and to provide drainage of the access box. Support box with block or notch box to protect pipe under box.

3.07 FLUSHING AND TESTING

- A. The sprinkler main shall be tested under normal water pressure for a period of twelve (12) hours.
- B. If leaks occur, repair and repeat the test. Give the owner's representative twenty-four (24) hours' notice prior to testing.
- C. Adjustment of the sprinkler heads and automatic equipment shall be done by the contractor upon completion of installation to provide optimum performance. The contractor shall make minor adjustment during the guarantee period.
- D. After all new sprinkler piping are in place and connected for a given section and all necessary division work has been completed, and prior to the installation of sprinkler heads, all control valves shall be opened and a full head of water used to flush out the system.
- E. Testing of the system shall be performed after completion of each section or completion of the entire installation. Any necessary repairs shall be made, at the contractor's expense, to put the system in good working order before the owner shall make final payment.

BIDDER'S NAME: _____

Bidders must complete this Bid Sheet and the "DETAILED PLANTING PLAN BID SHEET" included below in its entirety.

FORM 03000 BID SHEET TREE REMOVAL & LANDSCAPE PLANTING

1.	Site Pro	eparation						
	а.	Utility Mark-Outs (Coordinate with BCC)		\$				
	b.	Protective Fencing		\$				
	c.	Tree Removal	\$					
	d.	Stump Grinding		\$				
	e.	Restoration (Fine Grading and Seeding)	Grading and Seeding)					
	f.	Irrigation	\$					
		EPARATION TOTAL (ADD A, B, C, D, E, AND F)	\$					
2.	Tree In	stallation						
	g.	Layout	\$					
	h.	Planting		\$				
	i.	Mulching		\$				
	j.	Tree Guards / Gator Bags		\$				
	TREE IN	ISTALLATION TOTAL (ADD G, H, I, AND J)	\$					
1. Maintenance								
	k.	60 Day (min)		\$				
	I.	Watering (by others after 60 days)		\$				
	m.	(2) Year Warranty		\$				

BERGEN COMMUNITY COLLEGE **400 PARAMUS ROAD PARAMUS, NJ 07652** TREE IMPLEMENATION PLAN **PUBLIC BID NO. P-2388** ADDENDUM # 1 MARCH 13, 2024 BIDDER'S NAME: \$_____ MAINTENANCE TOTAL (ADD K, L, AND M) BASE BID (Add Items 1, 2, and 3, above) \$ BASE BID IN WRITING_____ NOTE: This is a grant-funded project. Funding for this work is subject to applicable grant requirements and available funding to perform the above work. NAME OF BIDDER ADDRESS _____ CITY ______ STATE _____ ZIP _____ TELEPHONE FAX EMAIL ADDRESS_____ REPRESENTED BY (PLEASE PRINT NAME) AUTHORIZED SIGNATURE_____DATE:_____DATE:_____

NOTE:

- 1. If doing business under a <u>trade name, partnership or a sole proprietorship</u>, you must submit the Bid under exact title of the trade name, partnership, or proprietorship, and the Bid must be signed by either the <u>owner</u>, or a <u>partner</u> and <u>witnessed</u> by a <u>notary public</u>.
- 2. If a <u>Corporation</u>, the Bid must be signed by the <u>President</u> or <u>Vice President</u> and <u>witnessed</u> by a <u>Corporate Secretary</u> (corporate title must be exact) and <u>affix corporate</u>

BIDDER'S NAME: _____

- 3. **<u>seal</u>**. If a Corporate Secretary does not exist, President or Vice President's signature shall be witnessed by a Notary Public.
- 4. Other persons <u>authorized</u> by <u>corporate resolution</u> to execute agreements on its behalf may also sign the Bid Documents. <u>Copy of a resolution must accompany the bid</u>.
- 5. The person who signs this Bid form **<u>must also</u>** sign the **<u>Non-Collusion Affidavit</u>**.
- 6. You <u>cannot</u> witness your own signature.

FOR BCC USE ONLY

DATE ______

TIME_____

OPENED BY:	

WITNESS:_____

THIS FORM MUST BE RETURNED WITH YOUR BID

DETAILED PLANTING PLAN BID SHEET												
Tree Species Selection	Quantit y to	Average Cost per Tree										
Common name (for cultivars incl. variety)	Total (ALL SITES)	Protective Fencing	Tree Removal & Stump Grinding	Restoration	Irrigation	Layout	Planting & Mulching	Tree Guards/Gat or Bags	Maintenan ce (60 Day, Watering, and 2-Year Warranty)	Cost per Tree	Cost For All Trees	
SUN VALLEY RED MAPLE	2	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
RED POINT RED MAPLE	5	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
AUTUMN BRILLIANCE RED	3	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
PAWPAW	1	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
AMERICAN HORNBEAM	4	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
KATSURA TREE	3	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
APPALACHIAN RED REDBUD	5	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
HEARTS OF GOLD REDBUD	2	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
WHITE FRINGE TREE	3	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
YELLOWWOOD	4	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
CONSTELLATION DOGWOOD PP7210	5	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
WINTER KING HAWTHORNE	3	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
HALKA HONEYLOCUST	6	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
NELLIE STEVENS HOLLY	5	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
AMERICAN HOLLY	5	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
SATYR HILL AMERICAN HOLLY	4	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
RED CEDAR	3	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
EMERALD SENTINEL RED CEDAR	2	\$	\$	\$	\$	\$	\$	•	\$	\$	\$	
HAPPIDAZE SWEETGUM	2	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
SLENDER SILHOUETTE SWEETGUM	3	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	

CENTENNIAL CRABAPPLE	2	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
DONALD WYMAN						
CRABAPPLE	2	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
PRAIRIFIRE CRABAPPLE	2	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
SWEETBAY MAGNOLIA	1	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
WILDFIRE BLACK GUM	1	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
SOURWOOD	3	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
PITCH PINE	1	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
EXCLAMATION LONDON						
PLANE	3	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
WHITE OAK	2	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
SWAMP WHITE OAK	6	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
BUR OAK	3	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
WILLOW OAK	3	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
JAPANESE PAGODA TREE	3	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
SKYWARD LINDSLEY BALD						
CYPRESS	3	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
STERLING SILVER LINDEN	2	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
JEFFERSON AMERICAN						
ELM	1	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
LACEBARK ELM	2	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
CANADIAN HEMLOCK	2	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
AMERICAN						
HOPHORNBEAM	2	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
CORNELIAN CHERRY						
DOGWOOD	6	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
AUTUMN GOLD GINKGO	3	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
FOSTERS HOLLY	3	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$
Totals	126	\$ \$	\$ \$	\$ \$	\$ \$	\$ \$