

SECTION 01 56 39

TREE PROTECTION AND TEMPORARY WOOD TREE GUARD

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Requirements for tree protection
- B. Tree replacement due to contractor negligence

1.02 RELATED REQUIREMENTS

- A. 01 14 00 - Work Restrictions

1.03 DESCRIPTION OF WORK

- A. This specification provides for furnishing all labor, materials and equipment, together with all work incidental thereto, required for the preservation and protection of existing trees, as per the Contract Documents. ALL TREE PRESERVATION WORK SHALL RUN CONCURRENTLY WITH THE REMOVAL AND INSTALLATION OF ALL MATERIAL FOR THE LENGTH OF THE CONTRACT.
- B. As part of this Contract, the Contractor shall provide and install temporary wooden tree guard enclosures around trees within the Work areas, according to provisions and requirements listed in this Section.

1.04 GENERAL PROVISIONS

- A. All trees (unless otherwise noted) are to be preserved and will be marked by the Contractor (BEFORE THE GENERAL CONTRACTOR STARTS ANY DEMOLITION OR CONSTRUCTION WORK) with a ribbon which reads "CAUTION" in bold black letters which can be read from a distance of 100 feet.
- B. There shall be no stockpiling/storage of fill, removals or any construction materials within the Critical Root Zone (CRZ) (note: Critical Root Zone extends a minimum of 4' beyond the drip line of a tree) of any existing tree to be preserved at anytime before, during and after the construction period. This also includes parking any personal vehicles and equipment not directly associated with the days activities. If the Contractor violates this stipulation, he shall, at his own expense, remediate any and all soil compaction utilizing the methodology approved by NYCHA/Authority. (See General Conditions sections 24 and 54.)
- C. All protective wooden tree guards (see drawings and a portion of this specification) shall be in place before any excavation takes place.
- D. No roots greater than two (2) inches in diameter shall be cut without permission from NYCHA/Authority.
- E. In the event that a tree may be injured or the Contractor is unsure how to go about working around a tree or trees he shall contact NYCHA's Representative to get additional direction or permission to remove a tree or cut roots larger than two inches in diameter, store material and equipment within the CRZ, adjusting tree protection, or resolve other conflicts that arise as a result of the contract.
- F. Trees that are removed shall have the resultant stump(s) ground down to a distance between 6"-12" below final grade.
- G. Trees that are injured or damaged as the result of contractor negligence (by accident or lack of adherence to this specification) and can be saved, as determined by the NYCHA, shall be deep root fertilized and/or watered AT THE CONTRACTOR'S EXPENSE using the following formulations and specifications:
- H. Tree Fertilization Specifications:

	<u>Material</u>	<u>Active Ingredients (%)</u>	<u>Form</u>	<u>Rate</u>
1.	Dogget XL310	30-10-10	Powder	1 lb./100 gal.
2.	Adams Earth Soil	0-2-4	Liquid	1 gal./100 gal.

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- Amendment
- 3. Ectomycorrhizal Fungal Inoculant Powder 16 oz/100 gal.
- 4. Bio-Pak Powder As Per Manufacturer
 - a. Depth of injection shall be 6"-8" deep and in a 2' x 2' on-center grid over the entire Critical Root Zone. The amount of fertilizer per injection site shall be 1 qt. Work shall be performed by an approved company with a current ISA Certified Arborist on staff.

- I. If a tree dies or certain death is imminent, as the result of contractor negligence and as determined by NYCHA/Authority, the Contractor will be back charged the value of the tree or trees, including the cost of complete removal of the tree and resultant stump, six (6) inches below finished grade. NYCHA/Authority will determine the value of the casualty by utilizing the formula below:
 - 1. Trunk Formula - This method is used when the plant is too large to be replaced. This value uses the cost of replacing the largest locally available plant and adjusting it for the size difference, the condition and location of the appraised tree.
 - 2. Appraised Value = Basic Value x Condition x Location
 - 3. Basic Value = Replacement Cost + (Basic Price x [TA(A) - TA(R)] x Species)
 - 4. Condition = A rating of the tree's structure and health and based on 100 percent.
 - 5. Location = The average for the tree's Site, Contribution and Placement and based on 100 percent.
 - 6. Replacement Cost = The cost to purchase and install the largest locally available and transportable Tree in the area.
 - 7. Basic Price = The cost per square inch of trunk area of a replacement tree measured at the height prescribed by the American Nursery Standards.
 - 8. TA(A) = Trunk Area at 4.5 feet above the ground of the appraised tree.
 - 9. TA(R) = Trunk Area at 6 inches or 12 inches above the ground of the replacement tree.
 - 10. Species = The rating for a particular species and based on 100 percent.
- J. Soil Compaction Remediation - Spoke & Wheel trenching - (Utilizing an Airspade™) a 6"x 6" trench shall be excavated radially starting at the base of a tree and extending to the edge of the Critical Root Zone (CRZ). Each trench shall be connected by a 6"x6" trench that will demarcate the outer edge of the Critical Root Zone. The minimum amount of the CRZ trench shall be 40% of the total area of the CRZ. The trenches shall then be filled with either compost or dehydrated manure (to be determined by NYCHA/Authority). Work shall be performed by an approved company with a current ISA Certified Arborist on staff.
- K. No trench shall be dug within five (5) feet of a trunk without first notifying the NYCHA's Representative/Authority's Representative.
- L. When mulch (wood chips) is recommend to reduce soil compaction it shall be applied (over Geo-textile fabric) to a minimum depth of 4" (and maintained at 4") in areas where light vehicle and equipment traffic is expected, and to a minimum depth of six (6) inches (and maintained at 6") in areas where heavy vehicles (six wheels or more) are expected to traverse the Critical Root Zone. The area to be mulched shall be demarcated with 4 foot snow fence. If the fence is continually being damaged or knocked down then the Contractor shall use the NYCHA/Authority Tree Preservation specification at no additional cost to the Authority.
- M. Soil Compaction Remediation - (Spoke & Wheel Trenching) Utilizing an Airspade™, a 6" x 6" trench shall be excavated radially starting at the base of a tree and extending to the edge of the Critical Root Zone (CRZ). Each trench shall be connected by a 6" x 6" trench that will demarcate the outer edge of the Critical Root Zone. The minimum amount of the CRZ trench shall be 40% of the total area of the CRZ. The trenches shall then be filled with either compost or dehydrated manure (to be determined by NYCHA/Authority).
- N. Other Tree Maintenance and planting specifications that shall be followed include the following:
 - 1. American Association of Nurserymen (ANA) **Z60.1-1996** (or most current version), American Standard for Nursery Stock. Available from the American Association of

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Nurserymen, 1250 I Street, N.W., Suite 500, Washington, DC, 20005, Fax: (202) 789-1893, Phone: (202) 789-2900.

- a. American National Standards Institute, Inc., **ANSI A300-1995** (or most current version) Tree Care Operations - Tree, Shrub, and Other Woody Plant Maintenance - Standard Practices. Can be purchased at www.ansi.org.
 - b. American National Standards Institute, Inc., **ANSI A300-(part 1)-2001** (or most current version) Tree Care Operations - Tree, Shrub, and Other Woody Plant Maintenance - Standard practices (Pruning). Can be purchased at www.ansi.org.
 - c. American National Standards Institute, Inc., **ANSI A300-(part 2)-1998** (or most current version) Tree Care Operations - Tree, Shrub, and Other Woody Plant Maintenance - Standard practices-Part 2 Fertilization). Can be purchased at www.ansi.org.
 - d. American National Standards Institute, Inc., **ANSI A300-2000** (or most current version) Tree Care Operations - Tree, Shrub, and Other Woody Plant Maintenance - Standard practices-Part 3-(support systems and cabling, bracing, and guying). Can be purchased at www.ansi.org.
 - e. American National Standards Institute, Inc., **ANSI 60.1-1996** (or most current version) American Standard for Nursery Stock. Can be purchased at www.global.ihs.com.
2. If a conflict does arise between one of the standards listed above and the NYCHA specifications listed here, it will be the Contractor's responsibility to CONTACT NYCHA/Authority before proceeding with any work, to get clarification.
 3. All applications of pesticides and tree growth regulators shall be done as per the manufacturer's recommendation and the most current N.Y State Dept of Environment Conservation (www.dec.state.ny.us/website/dshh/pesticide/pesticide) regulations at the time of application.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 GENERAL - Temporary Wood Tree Guard

- A. Wooden posts shall be set to the proper indicated depths in the earth as shown on the Detail. They shall be set plumb and properly aligned. After posts have been set in place, wood rails shall be fastened to the posts. Nails shall be galvanized as sized as per the Detail.
- B. It is the Contractor's responsibility to protect and maintain the Work at all times until final acceptance of the Work by the Authority.

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