

**CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC UTILITIES**

**SUPPLEMENTAL SPECIFICATION 1603
TREE AND VEGETATION PROTECTION FOR GREEN INFRASTRUCTURE PROJECTS**

DATED JANUARY 10, 2020

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TREE AND VEGETATION PROTECTION FOR GREEN INFRASTRUCTURE PROJECTS

1603.01 Description. Protect trees and other plantings as necessary from construction activities and trim and prune trees impacted by construction activities.

Trees, tree roots and limbs included within the construction limits of the project shall be protected against injury or damage during the course of Work. Special attention shall be paid to branches, trunks, and roots during construction.

The Contractor shall follow the most recent edition of the “American National Standards Institute” (ANSI) A300 standards in effect at the time the contract is executed, which are the generally accepted industry standards for tree care practices. Any work involving tree care shall be supervised by an “International Society of Arboriculture” (ISA) certified arborist.

Any trees damaged or destroyed due to Contractor negligence shall be treated or removed at the Contractor’s expense. The Contractor shall, at the Contractor’s expense, replace the destroyed trees per the City’s Tree Protection and Mitigation Policy as a part of the Work.

The standards can be found for reference at the Department of Recreation and Parks Forestry Section at:

Department of Recreation and Parks, Forestry Section
1533 Alum Industrial Dr. W.
Columbus, Ohio 43209
614-645-6640

Or can be purchased online.

1603.02 Applicable Standards

- A. City of Columbus CMSC (current standards)
 - 1. Section 201: Clearing and Grubbing
 - 2. Section 655: Tree Protection
 - 3. Section 666: Pruning Existing Trees

- B. American National Standards Institute (ANSI) /Tree Care Industry Association
 - 1. ANSI A300
 - 2. ANSI Z133.1

1603.03 Protection

- A. All trees and vegetation shall remain and be protected unless designated otherwise by the City Forester or his/her designee or Engineer.

- B. Trees and vegetation shall be protected from injury and damage to braches, trunks, roots or soil compaction from all construction operations by erecting suitable barriers.
 - 1. All trees designated for preservation shall be protected with substantial fence, frame or box not less than four feet high. As a minimum, tree protection fencing shall be located to protect 75 percent of the critical root zone (CRZ) or the edge of the drip line, whichever has a wider diameter surrounding the trunk. The CRZ equals one foot of radius for each 1 inch of diameter breast height (DBH). DBH is measured 4.5 feet

above the ground. Protection fencing shall be installed before commencing site work or preparation work and maintained throughout the full construction period.

2. Wood fence posts shall be 2-inch by 4-inch by 6-feet long. Posts shall be spaced 12-feet maximum. Install posts a minimum of 2-feet in depth. Provide a 1-inch by 4-inch wood stringer along the top of the protection enclosure. Stringers shall be secured to the wood posts. Attach orange nylon or polypropylene type fence to the posts to form the enclosure. Metal chain link fencing is also acceptable. Posts to be 6-feet long and diameter to be 2-1/2-inches, metal chain link fencing fabric shall be 4 feet in height.
 - a. An alternative post/stringer fence system may be submitted to the Engineer for approval.
 3. Any damage that may occur to the barricades shall be repaired or replaced to the original specifications within 24 hours of the damage occurring.
- C. Interfering branches may be removed when acceptable to the City Forester or his/her designee. All tree pruning and removal must be done in accordance to ANSI A300 and ANSI Z133.1 standards and per CMSC Section 666 and 655. Pruning work shall be reviewed and approved by the City Forester prior to the work being performed. The Contractor performing the work must be a professional tree care company with an "International Society of Arboriculture" (ISA) certified Arborist on staff to supervise the on-site crew.
- D. Conduct clearing operations in a safe manner as described in ANSI Standard Z133, per CMSC Section 201 and in accordance with the International Society of Arboriculture requirements in order to prevent falling trees from damaging trees and vegetation designated to remain, damaging work being constructed and threatening the safety of employees and others.
- E. Construction materials, excavation debris, liquids, chemicals, fuel, equipment or vehicles shall not be stockpiled, stored, dumped or parked within the critical root zone of trees or under the drip line of the trees.
- F. Do not operate heavy equipment within the critical root zone or under the drip line of existing trees. Where limited site access requires equipment operation within the critical root zone or under the drip line of existing trees, as determined by the City, the City may approve use of temporary paving materials such as plywood, lumber, rubber matting or rubber tires to prevent compaction of tree roots.
- G. Open trenches within the critical root zone are not acceptable.
- H. Where grade change is required within the root zone of a tree, a sufficient residual root zone to provide for the health of the trees shall remain undisturbed and protected by either a dry well or retaining wall if the grade is to be raised or lowered per CMSC Section 655.
- I. Fires are not permitted within the critical root zone of any tree.

1603.04 Method of Measurement. The City will measure tree protection by the number of linear feet of tree protection fencing is in place, completed, and accepted.

1603.05 Basis of Payment

The City will pay for clearing and grubbing under Item 201 and tree pruning under Item 666. The City will pay for accepted quantities at contract price as follows.

Item	Unit	Description
1603	Linear Feet	Tree Protection Fencing