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# Dictionary of Standard Definitions for the Green Industry

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**2009-2010**

*A compilation of industry-consensus definitions from:*

**ANSI Z133.1-2006 Safety Requirements**

**ANSI A300 (Part 1)-2008 Pruning**

**ANSI A300 (Part 2)-2004 Fertilization**

**ANSI A300 (Part 3)-2006 Supplemental Support Systems**

**ANSI A300 (Part 4)-2008 Lightning Protection Systems**

**ANSI A300 (Part 5)-2005 Management**

**ANSI A300 (Part 6)-2005 Transplanting**

**ANSI A300 (Part 7)-2006 Integrated Vegetation Management**

**OSHA 29 CFR § 1910.269**

**ANSI Z60.1-2004 Nursery Stock**



**TREE CARE INDUSTRY ASSOCIATION**  
**ESTABLISHED 1938**

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2009-2010

## Foreword

This document provides industry-consensus definitions. The definitions are developed by groups of materially affected parties in accordance with accepted essential requirements for openness, balance, consensus and due process. This document is limited to only those definitions developed through groups accredited by the American National Standards Institute or by agencies of the U.S. federal government that promulgate standards.

Accreditation by ANSI ensures that the groups have met the Institute's essential requirements for openness, balance, consensus and due process. Consensus means substantial agreement has been reached. This signifies the concurrence of more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that an effort be made toward their resolution. The consensus groups included are:

## ANSI-accredited Standards Committee A300 (ASC 300)

### Secretariat: Tree Care Industry Association (TCIA)

ASC A300 develops the **ANSI A300 series of standards for performance of care and maintenance of trees, shrubs, and other woody plants**. This group is comprised of the following members:

- American Nursery and Landscape Association (ANLA)
- American Society of Consulting Arborists (ASCA)
- American Society of Landscape Architects (ASLA)
- Asplundh Tree Expert Company
- Bartlett Tree Expert Company
- Davey Tree Expert Company
- International Society of Arboriculture (ISA)
- National Park Service
- Professional Grounds Management Society
- Professional Land Care Network (PLANET)
- Society of Municipal Arborists (SMA)
- Tree Care Industry Association (TCIA)
- USDA Forest Service
- Utility Arborist Association

## **ANLA-accredited Horticultural Standards Committee**

### **Secretariat: American Nursery Landscape Association (ANLA)**

ANLA, by way of its Horticultural Standards Committee, develops the **American Standard for Nursery Stock - ANSI Z60.1** via a canvass-list method. ANLA's canvass list is comprised of the following groups:

Bailey Nurseries, Inc.	Horticultural Materials/Systems, Inc.
Bluemount Nurseries, Inc.	J Frank Schmidt & Son Co.
Blue Sterling Nursery	Joanne Kostecky Garden Design, Inc.
Brandywine Nurseries, Inc.	Louis' Flower Power Shops
Byers Wholesale Nursery, Inc.	Manor View Farm, Inc.
Campbell's Nursery & Garden Center	Meadow Lake Nursery Co.
Carlton Plants	Monrovia Growers, Inc.
Central Nurseries, Inc.	The Morton Arboretum
Certified Roses, Inc.	Princeton Horticultural Services
Concord Nurseries, Inc.	Sheridan Nurseries Limited
English Gardens Nursery	Southern Hills Country Club
Evergreen Nursery Co., Inc.	Stribling's Nurseries, Inc.
Glacier Nursery, Inc.	Swanson's Nursery Consulting, Inc.
Greenleaf Nursery Co.	Swede Valley, Inc.
Grow Northeast	Weeks Wholesale Rose Grower, Inc.
Gilmore Plant & Bulb Co., Inc.	University of Florida
Fisher Farms, LLC	Weston Nurseries, Inc.
Forrest Keeling Nursery	Wilson Nurseries, Inc.
Heartland Nursery Company	Zelenka Nursery, LLC
Hines Horticulture, Inc.	

## **ANSI-accredited Standards Committee Z133.1 (ASC Z133.1)**

### **Secretariat: International Society of Arboriculture (ISA)**

ASC Z133.1 develops the **ANSI Z133.1 Safety Standards for Arboriculture**

**Operations.** This group is comprised of the following members:

Altec Industries	Massachusetts Arborist Association
ArborMaster, Inc.	McCoy Tree Surgery
Arizona Public Service	National Insurance Programs
Aspen Tree Expert Co.	National Park Service
Asplundh Tree Expert Co.	North American Training Solutions
The F.A. Bartlett Tree Expert Co.	Penn Line Service
Buckingham Manufacturing Co.	H. Dennis P. Ryan III (Individual Member)
Davey Tree Expert Co.	SherrillTree
Tom Dunlap (Individual Member)	Sierra Moreno Mercantile Co.
Edison Electric Institute	Society of Municipal Arborists
Husqvarna	Tree Care Industry Association
International Brotherhood of Electrical Workers	U.S. Department of Labor - OSHA
International Society of Arboriculture	U.S.D.A. Forest Service
KS Services	Utility Arborist Association
Lewis Tree Service	Wright Tree Service
Lucas Tree Experts Company	Yale Cordage

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# A

**action threshold:** The maximum acceptable levels of plant density and height that initiates implementation of a control method. *ANSI A300 (Part 7)-2006 IVM*

**aerial devices:** Any one of the following types of vehicle-mounted apparatus used to elevate personnel to jobsites above ground: (1) extensible boom platform (2) aerial ladder (3) articulating boom platform (4) vertical tower (5) a combination of any of the above, as defined in ANSI A92.2 *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**affected employee:** An employee whose job requires him or her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him or her to work in an area in which such servicing or maintenance is being performed. *OSHA 29 CFR § 1910.269*

**air terminal:** The end of a lightning protection system that is intended to intercept lightning strikes. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

**amon-eye nut:** A drop-forged nut. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**anchor:** A cable-to-tree attachment. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**anchor-tree:** A tree used as an anchor in guying. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**anti-two block device:** A device consisting of a hollow weight sus-

ended from the boom nose or jib of log loaders, cranes, or related hoists by a chain. The weight hangs with hoist cable running through its center. An electromechanical switch mounted on the boom nose or jib is connected to the chain via a retractable steel cable. When contact is made with the suspended weight by the hook block or any other lifting device nearing the nose or jib, the anti-two block switch circuit is deactivated, and hoist up or telescope out is prevented. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**apex:** The point at which two saw cuts meet to form a notch. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**applicator:** A qualified person engaged in the application of materials such as, but not limited to, pesticides, growth regulators, and fertilizers. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**approved:** Acceptable to the federal, state, or local jurisdiction having enforcement authority. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**arboriculture:** The art, science, technology, and business of utility, commercial, and municipal tree care. *ANSI A300 (Part 1)-2008 Pruning ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**arborist:** 1. An individual engaged in the profession of arboriculture. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations* 2. An individual engaged in the profession of arboriculture who, through experience, education, and related training, possesses the competence to

provide for or supervise the management of trees and other woody plants. *ANSI A300 (Part 1, 2, 3, 4, 5, 6)*

**arborist climbing line:** A line designated to support the climber while aloft in a tree or attached to a crane, constructed according to specifications outlined in subsection 8.1.8. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**arborist saddle:** An arrangement of straps, fittings, and buckles or other elements in the form of a waist belt with a low attachment element or elements and connecting support encircling the legs, suitably arranged to support the body in a sitting position. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**arborist trainee:** An individual undergoing on-the-job training to obtain the experience and the competence required to provide for or supervise the management of trees and other woody plants. Such trainees shall be under the direct supervision of an arborist. *ANSI A300 (Part 1, 2, 3, 4, 5)*

**ascender:** A mechanical device used for climbing rope. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**authorized:** Designated by the entity that has care, custody, and control of the unit. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

## B

**back cut:** The cut made in a tree limb or trunk on the side opposite the intended direction of fall. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**balled and burlapped (B & B):** Plants established in the ground which have been prepared for transplanting by digging so that the soil immediately around the roots remains undisturbed. The ball of earth containing the roots of the plant is then bound up in burlap or similar fabrics. *ANSI Z60.1-2004 Nursery Stock*

**balled and potted (B & P):** Plants dug with a ball of earth and placed in a container in lieu of burlapping. *ANSI Z60.1-2004 Nursery Stock*

**balled and wrapped:** Plants established in the ground that have been prepared for transplanting by digging so that the soil immediately around the roots remains undisturbed. The ball of the earth containing the roots of the plant is then bound up. *ANSI A300 (Part 6)-2005 Transplanting*

**bare root (B.R.):** Harvested plants from which the soil or growing medium has been removed. *ANSI A300 (Part 6)-2005 Transplanting ANSI Z60.1-2004 Nursery Stock*

**belay:** Roping technique, managed by the ground person, to safeguard the arborist while climbing. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**biological control methods:** Control of vegetation using plants, animals, insects or pathogens. *ANSI A300 (Part 7)-2006 IVM*

**bond:** 1. An electrical connection between an electrically conductive object and a component of a lightning protection system that is intended to significantly reduce potential differences created by lightning currents. *ANSI A300 (Part 3)-2006 Supplemental Support Systems* 2. Electrical connection between a conductive object and a component of a lightning protection system intended to reduce electrical potential differences. *ANSI A300 (Part 4)-2008 Lightning Protection Systems* 3. The electrical interconnection of conductive parts designed to maintain a common electrical potential. *OSHA 29 CFR § 1910.269*

**bonding conductor:** A conductor that connects a tree support cable or metal conduit to the lightning protection system. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

**boxed:** A method for protecting roots that includes digging a trench, constructing and installing a box around the roots, and then using the box to lift, transport, and install the landscape plant. *ANSI A300 (Part 6)-2005 Transplanting*

**brace:** Lag- or machine-threaded rods installed in or through limbs, leaders, or trunks used to provide supplemental support. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**bracing:** The installation of a brace system. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**branch:** 1. A shoot or stem growing from a parent branch or stem. *ANSI A300 (Part 1)-2008 Pruning* 2. An outgrowing shoot, stem or twig that grows from the main stem or trunk. *ANSI Z60.1-2004 Nursery Stock*

**branch bark ridge:** The raised area of bark in the branch crotch that marks where the branch and parent stem meet. *ANSI A300 (Part 1)-2008 Pruning*

**branch collar:** The swollen area at the base of a branch. *ANSI A300 (Part 1)-2008 Pruning*

**branch conductor:** A conductor that connects an air terminal to a main conductor. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

**brush hog:** A heavy-duty rotary mower, normally pulled by a farm-type tractor, used for cutting and mulching brush. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**bucket:** A basket-type platform approximately 4 feet (1.22 m) high, which is attached to the end of the upper boom on an aerial device, providing a work platform for working aloft. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**bucking:** The act of sawing trees, limbs, or both, into smaller sections once they are on the ground. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**burlap:** A loose-weave fabric that is used to protect plant parts and/or add support to root balls during transplanting operations. *ANSI A300 (Part 6)-2005 Transplanting*

# C

**cable:** 1. Zinc-coated strand per ASTM A475, such as extra-high strength (EHS) and common-grade, 7-strand. 2. Stainless steel or galvanized wire rope, such as aircraft cable. 3. Single strand wire. 4. Synthetic-fiber rope or synthetic-fiber webbing. *ANSI A300 (Part 3)-2006 Supplemental Support Systems* 5. A conductor with insulation, or a stranded conductor with or without insulation and other coverings (single-conductor cable), or a combination of conductors insulated from one another (multiple-conductor cable). *OSHA 29 CFR § 1910.269*

**cable grip:** A mechanical device that temporarily grasps and holds a wire rope or strand cable during installation. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**cabling:** The installation of a cable system between leaders, limb, and branches within a tree to provide supplemental support. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**cable splicer:** A cast or stamped crimp-type connector used to connect conductors in either an end-to-end, side-by-side or Y configuration. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

**caliper:** In the landscape or nursery trade, this is the diameter of a tree, measured at a point 6 inches (15 cm) above the ground line if the resulting measurement is no more than 4 inches (10 cm). If the resulting measurement is more than 4 inches (10 cm), the measurement is made at a point 12 inches (30 cm) above the ground line. This is in con-

trast to the method used to measure caliper in the timber industry, which is to make the measurement at a point 4.5 feet (1.4 m) above the ground line, or the “diameter at breast height” (D.B.H.). *ANSI A300 (Part 6)-2005 Transplanting, ANSI Z60.1-2004*

**callus:** Undifferentiated tissue formed by the cambium around a wound. *ANSI A300 (Part 1)-2008 Pruning*

**cambium:** The dividing layer of cells that forms sapwood (xylem) to the inside and inner bark (phloem) to the outside. *ANSI A300 (Part 1)-2008 Pruning*

**cane:** A primary stem which starts at a point not higher than one quarter the height of the plant.

**cant hook:** A long-handled lever fixed with a blunt metal end to handle logs; includes a swinging, metal hook opposing the blunt end to create leverage. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**carabiner:** A connector generally composed of a trapezoidal or oval-shaped body with a closed gate or similar arrangement that may be opened to receive an object and, when released, automatically closes to retain the object. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**chemical control methods:** Control of vegetation through the use of herbicides, growth regulators or other pesticides. *ANSI A300 (Part 7)-2006 IVM*

**chemically treated burlap:** A fabric treated with chemical preservative that biodegrades at a very slow rate. *ANSI A300 (Part 6)-2005 Transplanting*



**chopping tool:** A wooden-, fiber-glass-, or steel-handled tool with a sharp, single- or double-edged steel head or blade mounted to it that is used to cut or split wood (for example, an ax or machete). *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**circuit:** A conductor or system of conductors through which an electric current is intended to flow. *OSHA 29 CFR § 1910.269*

**clamp-type (multi-use) connector:** A cast connector fitting that uses one or more bolts to secure the connection. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

**clean:** Selective pruning to remove one or more of the following non-beneficial parts: dead, diseased, and/or broken branches. *ANSI A300 (Part 1)-2008 Pruning*

**climbing hitch:** A hitch used for securing a tree climber to the climbing line, permitting controlled ascent, descent, and work positioning. Examples of climbing hitches include, but are not limited to, the tautline hitch, Blake's hitch, and the Prusik hitch. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**climbing spurs:** Sharp, pointed devices strapped to a climber's lower legs used to assist in climbing trees. (syn.: gaffs, hooks, spurs, spikes, climbers) *ANSI A300 (Part 1)-2008 Pruning*

**closure:** The process in a woody plant by which woundwood grows over a pruning cut or injury. *ANSI A300 (Part 1)-2008 Pruning*

**codominant branches/codominant leaders:** Branches or stems

arising from a common junction, having nearly the same size diameter. *ANSI A300 (Part 1)-2008 Pruning*

**collar:** The line of junction between the root of a plant and its stem or trunk. Also called "Root Collar." *ANSI Z60.1-2004 Nursery Stock*

**collected plant:** A plant that has been gathered from the wild or taken from an established landscape planting; not grown in a nursery. *ANSI Z60.1-2004 Nursery Stock*

**combination burlap:** A fabric with both natural and synthetic fibers that biodegrades at a slow rate. *ANSI A300 (Part 6)-2005 Transplanting*

**conventional notch:** A directional felling cut into the side of a tree, facing the intended direction of fall and consisting of a horizontal face cut and an angle cut above it, creating a notch of approximately 45 degrees. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**conductor:** 1. A copper cable used in a lightning protection system intended to carry the lightning discharge to ground. *ANSI A300 (Part 4)-2008 Lightning Protection Systems* 2. A material, usually in the form of a wire, cable, or bus bar, used for carrying an electric current. *OSHA 29 CFR § 1910.269*

**connector clamp:** A device meeting ANSI/UL-96 standard, used to bond a conductor to a steel cable. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**conservation (retention):** The deliberate holding and protecting of existing forests, trees, shrubs, or plants during the developmental process. *ANSI A300 (Part 5)-2005 Management*

# D

**container:** A flat, pot, tub, etc., usually made of plastic, wood, ceramic, or metal, used to grow or hold one or more plants and which generally prevents the growth of roots beyond its side walls or bottom. (See grow bag). *ANSI Z60.1-2004 Nursery Stock*

**container grown plant:** A plant grown and marketed in a container (See pot in pot) *ANSI Z60.1-2004 Nursery Stock*

**crew leader:** The qualified arborist designated as the individual in charge of a specific job or group of workers. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**critical root zone:** The minimum volume of roots necessary for maintenance of tree health and stability. *ANSI A300 (Part 5)-2005 Management*

**croch:** (n.) Branch union; the angle formed by two branches in the tree. (v.) To place a line through a branch union. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**crown:** 1. Upper part of a tree, measured from the lowest branch, including all the branches and foliage. *ANSI A300 (Part 1)-2008 Pruning* 2. The leaves and branches of a tree measured from the lowest branch on the trunk to the top of the tree. *ANSI A300 (Part 6)-2005 Transplanting* 3. The portion of a tree comprising the branches. *ANSI Z60.1-2004 Nursery Stock*

**cultural control methods:** Control of vegetation through the establishment of compatible stable plant communities or the use of crops, pastures, mulching or other managed landscapes. *ANSI A300 (Part 7)-2006 IVM*

**danger tree:** A tree on or off the right-of-way that could contact electric supply lines. *ANSI A300 (Part 7)-2006 IVM*

**D.B.H.:** Acronym for diameter at breast height; diameter of a tree measured at 4.5 feet (1.3 m) above ground. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations ANSI A300 (Part 6)-2005 Transplanting*

**dead-end brace:** A brace formed by threading a lag-thread screw rod directly into the limb, leader, or trunk, but not through the side opposite the installation. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**dead-end grip:** A manufactured wire wrap designed to form a termination at the end of 1 x 7, left-hand lay cable that meets the specifications of ASTM A475 for zinc-coated strand. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**dead-end hardware:** Anchors or braces that are threaded directly into the limb, leader or trunk, but not through the side opposite the installation. Dead-end hardware includes but is not limited to: lag hooks, lag eyes and lag-thread screw rod. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**deadman control:** A safety switch, electrical or mechanical, that deactivates the equipment's function when released by the operator. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**decay:** The degradation of woody tissue caused by microorganisms. *ANSI A300 (Part 1)-2008 Pruning*

**deenergized:** Free from any electrical connection to a source of potential difference and from electric charge; not having a potential different from that of the earth. Note: The term is used only with reference to current-carrying parts, which are sometimes energized (alive). OSHA 29 CFR § 1910.269

**designated employee (designated person):** An employee (or person) who is designated by the employer to perform specific duties under the terms of this section and who is knowledgeable in the construction and operation of the equipment and the hazards involved. OSHA 29 CFR § 1910.269

**development impacts:** Site development and building construction related actions that damage trees directly, such as severing roots and branches or indirectly, such as soil compaction. ANSI A300 (Part 5)-2005 *Management*

**dielectric:** Nonconductive of electrical current. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**digging spade:** A specially designed shovel used to dig, shape and form a root ball. ANSI A300 (Part 6)-2005 *Transplanting*

**direct contact:** A direct contact is made when any part of the body touches or contacts an energized electrical conductor. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**direct supervision:** Direct supervision occurs when a qualified arborist or a qualified arborist supervisor is physically present on the jobsite. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**drop-starting:** The act of starting a chain saw by pushing the saw away from the body with one hand while simultaneously pulling on the starter cord handle with the other. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**dripline:** 1. A boundary on the soil surface delineated by the branch spread of a single plant or group of plants. ANSI A300 (Part 2)-2004 *Fertilization* 2. An imaginary line defined by the branch spread. ANSI A300 (Part 5)-2005 *Tree, Shrub and Other Woody Plant Maintenance*

**drum lace:** A specific pattern for tying that holds and supports the root ball when transplanting landscape plants with the balled and wrapped method. ANSI A300 (Part 6)-2005 *Transplanting*

# E

**electrical conductor:** Any overhead or underground electrical device capable of carrying an electric current, including communications wires and cables, power lines, and other such fixtures or apparatus. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**electrical hazard:** An object or situation that poses risk of injury or death due to direct or indirect contact with an electrical conductor. Where unguarded, energized electrical conductors are present, specific minimum approach distances based on the arborist's or worker's level of training, as set forth in this standard,

shall be followed. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**electrical supply lines:**

Conductors used to transmit electric energy and their necessary supporting and containing structures. *ANSI A300 (Part 7)-2006 IVM*

**electrical system owner/operator:**

An organization that operates or controls the transmission and/or distribution of electric power through electrical conductors. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**electric supply:**

Conductors used to transmit electric energy and their necessary supporting or containing structures. Signal lines of more than 400 volts are always supply lines, and those of less than 400 volts are considered as supply lines if so run and operated throughout. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**electric utility:**

An organization responsible for the installation, operation, or maintenance of an electric supply system. *OSHA 29 CFR § 1910.269*

**electric utility right-of-way:**

A corridor of land over which electric lines are located. The utility may own the land in fee, own an easement, or have certain franchise, prescription or license rights to construct and maintain lines. *ANSI A300 (Part 7)-2006 IVM*

**electrolytic couple:**

Contact between metals that are not galvanically compatible, causing an accelerated degradation (corrosion or oxidation) in the presence of moisture. Examples of these combinations are copper and zinc galvanization. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

**energized (alive, live):** Electrically connected to a source of potential difference, or electrically charged so as to have a potential significantly different from that of earth in the vicinity. *OSHA 29 CFR § 1910.269*

**energy (shock) absorber:**

A component of a climbing system whose primary function is to dissipate energy and limit deceleration forces that the system imposes on the body during fall arrest. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**energy source:**

Any electrical, mechanical, hydraulic, pneumatic, chemical, nuclear, thermal, or other energy source that could cause injury to personnel. *OSHA 29 CFR § 1910.269*

**espalier:**

The combination of pruning, supporting, and training branches to orient a plant in one plane. *ANSI A300 (Part 1)-2008 Pruning*

**establishment:**

The point after planting when a tree's root system has grown sufficiently into the surrounding soil to support growth and anchor the tree. *ANSI A300 (Part 1)-2008 Pruning*

**exposed:**

Not isolated or guarded. *OSHA 29 CFR § 1910.269*

**eye:**

A dormant bud on a corm, tuber, or root division from which a stem will develop when the corm or tuber is planted. *ANSI Z60.1-2004 Nursery Stock*

**eye bolt:**

A drop-forged, closed-eye bolt. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**eye-splice:**

A closed-eye termination. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

# F

**facility:** A structure or equipment used to deliver or provide protection for the delivery of an essential service, such as electricity or communications. *ANSI A300 (Part 1)-2008 Pruning*

**fall-arrest lanyard:** A rope or strap designed to be used with a full-body harness to limit maximum arresting force on a climber to 1,800 pounds (8 kN) in a fall. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**false crotch:** A system, other than a natural crotch, used to support an arborist climbing line. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**false crotch for rigging:** A pulley, block, sling, lashing, or metal ring affixed to a tree's leader or limb, through which a load line is passed, to lower or raise limbs or equipment. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**fan:** Descriptive term for the growth habit of certain perennial plants, such as iris and hemerocallis, which have no vertical stem because the leaves originate from the rhizome. *ANSI Z60.1-2004 Nursery Stock*

**fastener:** An attachment to secure a conductor to a tree. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

**fertilization:** The application of fertilizer to the soil or plant. *ANSI A300 (Part 2)-2004 Fertilization*

**fertilizer:** A substance containing one or more nutrients to be added to a plant or surrounding soil to supplement the supply of essential elements. *ANSI A300 (Part 2)-2004 Fertilization*

**fertilizer analysis:** The composition of a fertilizer expressed as a percentage by weight of total nitrogen (N), available phosphoric acid (P2O5), soluble potash (K2O), and other nutrients. *ANSI A300 (Part 2)-2004 Fertilization*

**fertilizer ratio:** The ratio of total nitrogen (N), available phosphoric acid (P2O5) and soluble potash (K2O); e.g., the ration of a 30-10-10 fertilizer is 3:1:1. *ANSI A300 (Part 2)-2004 Fertilization*

**field potted:** (See Balled and Potted). *ANSI Z60.1-2004 Nursery Stock*

**foam protection:** A pre-formed soft foam sheet, pad or pipe insulation. *ANSI A300 (Part 6)-2005 Transplanting*

**footlock:** To climb up a suspended rope by pulling with the hands and arms and pushing upward with the feet. The loose end of the rope is wrapped under the middle and over the top of one foot and is locked in place with pressure from the other foot. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**friction point:** The point at which the rope surface of the climber's hitch rubs against the climbing line. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**frond:** A leaf structure of a palm. *ANSI A300 (Part 1)-2008 Pruning*

# G

**girdling root:** A root that may impede proper development of other roots, trunk flare, and/or trunk. *ANSI A300 (Part 6)-2005 Transplanting*

**good working condition:** A term describing a piece of equipment that has no mechanical defects, has all guards in place, and is operated as intended by the manufacturer. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**grade:** a datum or reference level, specifically ground level. *ANSI A300 (Part 6)-2005 Transplanting 2.* A grade is a classification unit based on a specific size or size range, number of stems or canes, etc. For the purposes of this Standard, grade is not intended to describe quality, except for roses *ANSI Z60.1-2004 Nursery Stock*

**grounded:** Connected to earth or to some conducting body that serves in place of the earth. *OSHA 29 CFR § 1910.269*

**ground fault:** Any undesirable current path from a current-carrying conductor to ground. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**ground anchor:** A cable-to-ground attachment. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**grounded:** Connected to earth or to a conductive material that is connected to earth. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

**ground plate:** A copper plate used to form a ground terminal in shallow soils. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

**ground rod:** A copper-clad steel, solid copper, stainless steel, or stainless steel clad rod used to form a ground terminal. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

**ground-rod clamp:** A fitting that is specifically designed to connect a conductor to a ground terminal. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

**ground terminal:** The portion of a lightning protection system – such as a conductor, ground rod or ground plate – that is installed for the purpose of providing electrical ground. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

**grow bag:** Also called in-ground fabric bags. An in-ground fabric bag is a porous bag into which liner plants are placed for growing to landscape size. Root growth through the bag is restricted, resulting in a compact, fibrous root ball within the bag. For purposes of the American Standard for Nursery Stock, these are not containers unless used to grow plants above the ground. *ANSI Z60.1-2004 Nursery Stock*

**growth habit:** The mode or rate of growth, general shape, mature size, and branching structure of a plant, including the changes which take place seasonally during its life cycle (e.g., deciduous, flowering, fruiting, etc.). *ANSI Z60.1-2004 Nursery Stock*

**guarded:** 1. Covered, fenced, enclosed, or otherwise protected by suitable covers or casings, barrier rails or screens, mats, or platforms that have been designed by the electrical system owner/operator to minimize the possibility of dangerous approach or accidental contact by persons or objects under normal conditions. Also see unguarded. *ANSI*

Z133.1-2006 *Safety Requirements for Arboriculture Operations 2*. Covered, fenced, enclosed, or otherwise protected, by means of suitable covers or casings, barrier rails or screens, mats, or platforms, designed to minimize the possibility, under normal conditions, of dangerous approach or accidental contact by persons or objects. Note: Wires which are insulated, but not otherwise protected, are not considered as guarded. OSHA 29 CFR § 1910.269

**guy:** A steel cable or synthetic-fiber cable system installed between a tree and an external anchor to provide supplemental support. ANSI A300 (Part 3, 5)

**guying:** The installation of a guy system. ANSI A300 (Part 3)-2006 *Supplemental Support Systems*

## H

**handline:** A length of rope designated as a tool to leverage, lift, and hold tools, equipment, wood, or other objects; the proper rope strength is specified for each particular use. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**hazard tree:** A structurally unsound tree that could strike a target when it fails. As used in this clause the target of concern is electrical supply lines. ANSI A300 (Part 7)-2006 *IVM*

**heading:** The reduction of a shoot, stem, or branch back to a bud or to a lateral branch not large enough to assume the terminal role. ANSI A300 (Part 1)-2008 *Pruning*

**height:** Unless otherwise specified, the vertical distance between the

collar or ground line and the top of the stem, measured in the plant's natural position. Techniques for proper measurement are determined by the particular growth habit of the plant, and may not always extend to the tip of the stem. ANSI Z60.1-2004 *Nursery Stock*

**high-pressure excavation:** The removal or displacement of soil using pressurized air or water. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**Humboldt notch:** A directional felling cut into the side of a tree, facing the intended direction of fall and consisting of a horizontal face cut and an angled cut below it, creating a notch of approximately 45 degrees. A Humboldt cut is usually reserved for larger trees on steep slopes. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

## I

**implant:** A capsule or other device permanently inserted into the xylem. ANSI A300 (Part 2)-2004 *Fertilization*

**indirect contact:** Indirect contact is made when any part of the body touches any conductive object, including tools, tree branches, trucks, equipment, or other objects, that is in contact with an energized electrical conductor. Such contact can also be made as the result of communication wires and cables, fences, or guy wires being accidentally energized. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*



**installation site:** The location at which the landscape plant will be installed. *ANSI A300 (Part 6)-2005 Transplanting*

**insulated:** Separated from other conducting surfaces by a dielectric (including air space) offering a high resistance to the passage of current. Note: When any object is said to be insulated, it is understood to be insulated for the conditions to which it is normally subjected. Otherwise, it is, within the purpose of this section, uninsulated. *OSHA 29 CFR § 1910.269*

**integrated vegetation management (IVM):** A system of managing plant communities in which compatible and incompatible vegetation is identified, action thresholds are considered, control methods are evaluated, and selected control(s) are implemented to achieve a specific objective. Choice of control methods is based on effectiveness, environmental impact, site characteristics, safety, security and economics. *ANSI A300 (Part 7)-2006 IVM*

**interfering branches:** Crossing, rubbing, or upright branches that have the potential to damage tree structure and/or health. *ANSI A300 (Part 1)-2008 Pruning*

**internode:** The area between lateral branches or buds. *ANSI A300 (Part 1)-2008 Pruning*

## J

**job briefing:** 1. The communication of at least the following subjects for arboricultural operations: hazards associated with the job, work procedures involved, special precautions, electrical hazards, job assignments, and personal protective equipment. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations* 2. The communication of at least the following subjects for arboricultural operations: work specifications, hazards associated with the job, work procedures involved, special precautions, electrical hazards, job assignments, and personal protective equipment. *ANSI A300 (Part 1)-2008 Pruning*

## K

**kilonewton (kN):** The measurement of force, abbreviated as kN. Equal to 224.8 pounds. Example: 24.02 kilonewtons equals 5,400 pounds. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**kilovolt (kV):** The term for 1,000 volts, abbreviated as kV. Higher voltages are generally given as kilovolts. Example: 12.5 kV (12,500 volts) and 19.9 kV (19,900 volts). *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*



# L

**ladder:** A two-, three-, or four-legged structure that utilizes vertical side legs with cross sections uniformly placed between the side legs to be used as steps; available in wood, aluminum, or fiberglass; used to ascend to and descend from a height. Also see tripod/orchard ladder. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**lag eye:** A lag-thread, drop-forged, closed-eye anchor. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**lag hook (J-hook):** A lag-thread, J-shaped anchor. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**lag-thread:** A coarse screw thread designed for self-tapping into wood. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**lag-thread hardware:** Anchors or braces with lag-threads. Lag-thread hardware includes, but is not limited to, lag eyes, lag hooks, and lag-thread screw rod. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**lag-thread screw rod:** A lag-thread, steel rod used for dead-end and through-brace installations. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**landscape plants:** Trees and woody shrubs. *ANSI A300 (Part 6)-2005 Transplanting*

**lanyard:** A component of a climbing system consisting of a flexible line of rope, wire rope, or a strap that generally has a connector at each end for connecting the body support to a fall arrester, energy absorber, anchorage

connector, or anchorage. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**lateral branch:** A shoot or stem growing from another branch. *ANSI A300 (Part 1)-2008 Pruning*

**leader:** A dominant, typically upright, stem – usually the main trunk. There can be several leaders in one tree. *ANSI A300 (Part 1)-2008 Pruning*

**leg protection:** Personal protective equipment intended to reduce the risk of injury to the legs during chain-saw operations. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**lifting chain, certified:** A chain certified for a rated load capacity. *ANSI A300 (Part 6)-2005 Transplanting*

**lifting sling, certified:** A sling certified for a rated load capacity. *ANSI A300 (Part 6)-2005 Transplanting*

**lifting strap, certified:** A strap certified for a rated load capacity. *ANSI A300 (Part 6)-2005 Transplanting*

**line clearance:** The pruning, trimming, repairing, maintaining, removing, treating, or clearing of trees or the cutting of brush (vegetation management) that is within 10 feet (3.05 m) of electric supply lines and equipment; vegetation management work performed by qualified line-clearance arborists or qualified line-clearance arborist trainees for the construction or maintenance of electric supply lines and/or the electric utility right-of-way corridor. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**line-clearance tree trimmer:** An employee who, through related train-

ing or on-the-job experience or both, is familiar with the special techniques and hazards involved in line-clearance tree trimming. Note 1: An employee who is regularly assigned to a line-clearance tree-trimming crew and who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training and who is under the direct supervision of a line-clearance tree trimmer is considered to be a line-clearance tree trimmer for the performance of those duties. Note 2: A line-clearance tree trimmer is not considered to be a “qualified employee” under this section unless he or she has the training required for a qualified employee under paragraph (a)(2)(ii) of this section. However, under the electrical safety-related work practices standard in Subpart S of this Part, a line-clearance tree trimmer is considered to be a “qualified employee.” Tree trimming performed by such “qualified employees” is not subject to the electrical safety-related work practice requirements contained in 1910.331 through 1910.335 of this Part. (See also the note following 1910.332(b)(3) of this Part for information regarding the training an employee must have to be considered a qualified employee under 1910.331 through 1910.335 of this part.) OSHA 29 CFR § 1910.269

**line-clearance tree trimming:** The pruning, trimming, repairing, maintaining, removing, or clearing of trees or the cutting of brush that is within 10 feet (305 cm) of electric supply lines and equipment. OSHA 29 CFR § 1910.269

**lion’s tailing:** The removal of an excessive number of inner and/or lower lateral branches from parent branches. Lion’s tailing is not an acceptable pruning practice. ANSI A300 (Part 1)-2008 Pruning

**live crown ratio:** Crown height relative to overall plant height. ANSI A300 (Part 1)-2008 Pruning

**loop anchor:** A synthetic fiber termination that serves as an anchor. ANSI A300 (Part 3)-2006 Supplemental Support Systems

## M

**machine thread:** A fine screw thread designed for fittings (such as nuts). ANSI A300 (Part 3)-2006 Supplemental Support Systems

**machine-threaded rod:** A machine-thread, steel rod used for through-brace installations. ANSI A300 (Part 3)-2006 Supplemental Support Systems

**macronutrient:** Nutrient required in relatively large amounts by plants, such as nitrogen (N), phosphorus (P), potassium (K) and sulfur (S). ANSI A300 (Part 2)-2004 Fertilization

**manual land clearing:** The removal of trees, shrubs, and vines using chain saws or other cutting tools where there are no structures or objects that need to be avoided and pull lines are not used to pull or drop a tree and/or trunk to the ground. ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations

**main conductor:** A conductor that connects the main air terminal and the ground terminal. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

**maintenance cycle:** Planned length of time between vegetation maintenance activities. *ANSI A300 (Part 7)-2006 IVM*

**manual control method:** control of vegetation using hand-operated tools. *ANSI A300 (Part 7)-2006 IVM*

**maul:** A heavy-handled hammer, sometimes made with a single edge, used to drive wedges or split wood. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**mechanical control methods:** Control of vegetation using equipment-mounted saws, mowers or other devices. *ANSI A300 (Part 7)-2006 IVM*

**mechanical pruning:** A pruning technique where large-scale power equipment is used to cut back branches. *ANSI A300 (Part 1)-2008 Pruning*

**medium:** A mixture of two or more ingredients such as soil, peat moss, perlite, ground bark, sand, etc., in which a container plant has been grown. *ANSI Z60.1-2004 Nursery Stock*

**method:** A procedure or process for achieving an objective. *ANSI A300 (Part 1)-2008 Pruning*

**minimum approach distance:** 1. Safe working distances from overhead electrical conductors as defined in Tables 1 and 2 of this standard. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations* 2. The closest distance an employee is permitted to approach an energized or a grounded object. *OSHA 29 CFR § 1910.269*

**micronutrient:** Nutrient required in relatively small amounts by plants, such as iron (Fe), manganese (Mn), zinc (Zn), copper (Cu) and boron (B). *ANSI A300 (Part 2)-2004 Fertilization*

**multiple ground system:** A ground terminal composed of two or more ground rods or copper ground plates. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

## N

**natural burlap:** A material that is 100 percent biodegradable. *ANSI A300 (Part 6)-2005 Transplanting*

**non-selective management:** Methods used to control vegetation within a prescribed area without regard to retaining compatible vegetation. *ANSI A300 (Part 7)-2006 IVM*

**nursery stock:** Plants grown in or obtained from a nursery. *ANSI Z60.1-2004 Nursery Stock*

**nutrient:** Element or compound required for growth, reproduction or development of a plant. *ANSI A300 (Part 2)-2004 Fertilization*

## O

**open-face notch:** A directional felling cut into the side of the tree, facing the intended direction of fall and consisting of two cuts creating a notch greater than 70 degrees. *ANSI*

Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**outrigger:** Built-in device used to stabilize cranes, aerial devices, and similar equipment. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

## P

**parent branch or stem:** A tree trunk or branch from which other branches or shoots grow. *ANSI A300 (Part 1)-2008 Pruning*

**peen:** The act of bending, rounding or flattening the fastening end(s) of through-hardware for the purpose of preventing a nut from “backing-off.” *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**peeling:** The removal of dead frond bases without damaging living trunk tissue at the point they make contact with the trunk. (syn.: shaving) *ANSI A300 (Part 1)-2008 Pruning*

**percolation test:** As used in this standard, a field test conducted to determine water infiltration rate. *ANSI A300 (Part 6)-2005 Transplanting*

**petiole:** A stalk of a leaf or frond. *ANSI A300 (Part 1)-2008 Pruning*

**phase:** Any current-carrying conductor that has an electric potential other than ground (ground is assumed to be 0 volts). *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**phase to ground:** The electric potential (voltage) between a con-

ductor and ground. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**phase to phase:** The electrical potential (voltage) between two conductors, each having its own electric potential relative to ground. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**planting:** Installing a plant in the landscape. *ANSI A300 (Part 6)-2005 Transplanting*

**plug:** A cylinder of medium in which a plant is grown. The term is generally used to describe seedlings and rooted cuttings that have been removed from the container but with the medium held intact by the roots. *ANSI Z60.1-2004 Nursery Stock*

**pollarding:** Pruning method in which tree branches are initially headed and then reduced on a regular basis without disturbing the callus knob. *ANSI A300 (Part 1)-2008 Pruning*

**pot in pot:** A method of container-grown nursery production whereby a container is placed into another larger container which has been placed in or on the ground, surrounded by soil or mulching material, to aid in weed control and fertilization processes, maintain a more constant media temperature, and prevent the plant from being blown over by winds. *ANSI Z60.1-2004 Nursery Stock*

**processed balled plant:** A plant dug bare root, while dormant, to which a moist growing medium is added around the roots to form a ball designed to sustain plant growth. *ANSI Z60.1-2004 Nursery Stock*

**protective material:** Fabric or device used to limit injury to any portion of the landscape plant during preparation

and transplanting operations. ANSI A300 (Part 6)-2005 *Transplanting*

**primary conductor:** Any conductor, including aluminum, copper, or aluminum conductor steel reinforced (ACSR), that is bare, covered, or insulated, with a nominal voltage above 750 volts. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**propping:** The installation of a prop to provide supplemental support. ANSI A300 (Part 3)-2006 *Supplemental Support Systems*

**proximity:** An area within 10 feet (3.05 m) of energized overhead electrical conductors rated 50 kV phase-to-phase or less. For overhead electrical conductors rated more than 50 kV phase to phase, the distance is increased  $\frac{1}{16}$  inch (1.6 mm) for each additional kV. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**pruning:** The selective removal of plant parts to meet specific goals and objectives. ANSI A300 (Part 1)-2008 *Pruning*

**Prusik knot:** A sliding friction knot, as in a work-positioning lanyard. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**Prusik loop:** An endless loop of rope used to fashion a Prusik knot. The endless loop may be spliced or knotted with, at minimum, a double fisherman's knot. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**prop:** Rigid support placed between a trunk, limb or branch and the ground. ANSI A300 (Part 3)-2006 *Supplemental Support Systems*

## Q

**qualified arborist:** An individual who, by possession of a recognized degree, certification, or professional standing, or through related training and on-the-job experience, is familiar with the equipment and hazards involved in arboricultural operations and who has demonstrated ability in the performance of the special techniques involved. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**qualified arborist trainee:** An individual undergoing on-the-job training under the direct supervision of a qualified arborist. In the course of such training, the trainee becomes familiar with the hazards and equipment involved in arboricultural operations and demonstrates ability in the performance of the special techniques involved. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**qualified crane operator:** An individual who, by reason of a recognized credential or professional standing, or through related training and on-the-job experience, is familiar with the equipment and hazards involved with arboriculture crane operations and who has demonstrated competence in operating a crane and performing the special techniques involved. ANSI Z133.1-2006 *Safety Requirements for Arboriculture Operations*

**qualified employee (qualified person):** One knowledgeable in the construction and operation of the electric power generation, transmission, and distribution equipment involved, along with the associated hazards. Note 1: An employee must have the training required by para-

graph (a)(2)(ii) of this section in order to be considered a qualified employee. Note 2: Except under paragraph (g)(2)(v) of this section, an employee who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training and who is under the direct supervision of a qualified person is considered to be a qualified person for the performance of those duties. *OSHA 29 CFR § 1910.269*

**qualified line-clearance arborist:**

1. An individual who, through related training and on-the-job experience, is familiar with the equipment and hazards in line clearance and has demonstrated the ability to perform the special techniques involved. This individual may or may not currently be employed by a line-clearance contractor. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations ANSI A300 (Part 1)-2008 Pruning*

**qualified line-clearance arborist trainee:**

An individual undergoing line-clearance training under the direct supervision of a qualified line-clearance arborist. In the course of such training, the trainee becomes familiar with the equipment and hazards in line clearance and demonstrates ability in the performance of the special techniques involved. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations ANSI A300 (Part 1, 2)*

**qualified personnel:** An individual who, by reason of training and experience, has demonstrated the ability to safely perform assigned duties and, where required, is properly licensed in accordance with federal, state, or local laws and regulations. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**quick-acting connector:** Hose connectors in a hydraulic or pneumatic system designed to allow rapid connection or disconnection without leakage when the system is pressurized. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

# R

**raise:** Pruning to provide vertical clearance. *ANSI A300 (Part 1)-2008 Pruning*

**reduce:** Pruning to decrease height and/or spread. *ANSI A300 (Part 1)-2008 Pruning*

**remote area:** As used in the utility pruning section of this standard, an unpopulated area. *ANSI A300 (Part 1)-2008 Pruning*

**restoration:** Pruning to redevelop structure, form, and appearance of topped or damaged trees. *ANSI A300 (Part 1)-2008 Pruning*

**right-of-way reclamation:** Reestablishing IVM on a right-of-way that is not currently managed to the full extent of its easement or ownership rights and intended purpose. Conditions on a right-of-way in need of reclaiming include tall, dense amounts of undesirable vegetation, and electric supply lines that are inaccessible. Reclamation usually involves initial non-selective methods of mowing or hand-cutting, or broadcast application of herbicides. *ANSI A300 (Part 7)-2006 IVM*

**root ball:** 1. The root mass of a tree or shrub after digging or removal

from a container. *ANSI A300 (Part 6)-2005 Transplanting 2.* The intact ball of earth or growing medium containing the roots of a nursery plant. *ANSI Z60.1-2004 Nursery Stock*

**root collar:** 1. The transition zone between the trunk and the root system. *ANSI A300 (Part 6)-2005 Transplanting 2.* (See collar) *ANSI Z60.1-2004 Nursery Stock*

**root flare or trunk flare:** The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk. *ANSI Z60.1-2004 Nursery Stock*

**root pruning:** 1. The cutting of roots to meet specific goals and objectives. *ANSI A300 (Part 6)-2005 Transplanting 2.* The systematic pruning of roots of nursery plants growing in the field, in order to stimulate branching of roots and the production of fibrous roots. *ANSI Z60.1-2004 Nursery Stock*

**root zone:** The volume of soil containing the roots of a plant. *ANSI A300 (Part 5)-2005 Management*

**rural area:** As used in the utility pruning section of this standard, a sparsely populated place away from large cities, suburbs, or towns but distinct from remote areas. *ANSI A300 (Part 1)-2008 Pruning*

## S

**saddle, arborist:** (See arborist saddle.) *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**salt index:** A measure of the salt concentration that fertilizer produces in the soil solution. The higher the salt index, the more likely that plant damage will occur. *ANSI A300 (Part 2)-2004 Fertilization*

**scaffold branch:** A primary branch that forms part of the main structure of the crown. *ANSI A300 (Part 1)-2008 Pruning*

**secondary nutrient:** Nutrient required in moderate amounts by plants, such as calcium (Ca) and magnesium (Mg). *ANSI A300 (Part 2)-2004 Fertilization*

**secured (object):** Made firm or tight; fastened. Example: The load is secured to the truck. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**secured (person):** When an arborist is safeguarded from unintended movement by utilizing a climbing system that is attached to the arborist and connected to a tree or other stable support. Examples of being secured include, but are not limited to, (a) being tied in, (b) using a work-positioning lanyard, (c) being on belay, and (d) ascending the arborist climbing line using the foot-lock technique while utilizing a Prusik loop or ascenders. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**selective management:** Methods used to target specific vegetation within a prescribed area while retaining compatible vegetation. *ANSI A300 (Part 7)-2006 IVM*

**shall:** As used in this standard, denotes a mandatory requirement. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations ANSI A300 (Part 1, 2, 3, 4, 5, 6, 7)*



**shoot:** Stem or branch and its leaves, especially when young. *ANSI A300 (Part 1)-2008 Pruning*

**should:** As used in this standard, denotes an advisory recommendation. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations ANSI A300 (Part 1, 2, 3, 4, 5, 6, 7)*

**site survey:** A map showing relevant, existing site features and vegetation on a site proposed for development. *ANSI A300 (Part 5)-2005 Management*

**slow-release fertilizer:** A fertilizer containing plant nutrients in a form that delays availability for plant uptake and use after application, or that extends availability to the plant. *ANSI A300 (Part 2)-2004 Fertilization*

**snap hook:** Commonly called a self-locking or double-locking rope snap. The locking type (required by this standard for climbing) has a self-closing, self-locking gate that remains closed and locked until intentionally opened by the user for connection or disconnection. A captive eye is an integral part of a snap hook but is independent of the hook and gate portion. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**soil amendment:** Any material added to soil to alter its composition and structure, such as sand, fertilizer or organic matter. *ANSI A300 (Part 6)-2005 Transplanting*

**soil anchor:** A device, buried, or otherwise inserted into the ground to which a guy is attached. *ANSI A300 (Part 6)-2005 Transplanting*

**soil modification:** Physically or chemically altering soils to improve conditions such as pH, drainage or

aeration. *ANSI A300 (Part 2)-2004 Fertilization*

**specifications:** A document stating a detailed, measurable plan or proposal for provision of a product or service. *ANSI A300 (Part 1, 3, 4, 7)*

**specifications, industry-standard:** Details that set result-orientated expectations for the manufacture of a specific product or provision of a specific service, written in compliance with industry-consensus standards. *ANSI A300 (Part 5, 6)*

**spotter:** A person within voice and visual communication of the driver and located in a position to view the area in which the vehicle (unit) is backing to help ensure that the backing operation is, and will remain, safe. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**spread:** A term used to indicate the horizontal width of a shrub or the crown of a tree. Techniques for proper measurement are determined by the particular growth habit of the plant, and may not always be the maximum distance between any two branch tips. *ANSI Z60.1-2004 Nursery Stock*

**spreader bar:** An apparatus used to spread the lifting chain or strap to avoid damage to the root ball and crown. *ANSI A300 (Part 6)-2005 Transplanting*

**sprouts:** New shoots originating from epicormic or adventitious buds, not to be confused with suckers. (syn.: water-sprouts, epicormic shoots) *ANSI A300 (Part 1)-2008 Pruning*

**standards, ANSI A300:** 1. Performance parameters established by industry consensus as a rule for the measurable plan or proposal for provision of a product or



service. *ANSI A300 (Part 7)-2006 IVM 2*. The performance parameters established by industry consensus as a rule for the measure of extent, quality, quantity, value or weight used to write specifications. *ANSI A300 (Part 1, 3, 4)*

**standards, industry-consensus:** A set of parameters developed by a group of materially affected parties in accordance with accepted essential requirements for openness, balance, consensus and due process. The parameters provide the minimum requirements and recommendations for manufacture of products, provision of services, or safety. *ANSI A300 (Part 5, 6)*

**step potential:** The voltage between the feet of a person standing near an energized grounded object. It is equal to the difference in voltage, given by the voltage distribution curve, between two points at different distances from the electrode. A person could be at risk of injury during a fault simply by standing near the grounding point. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**stem:** A woody structure bearing buds, foliage, and giving rise to other stems. *ANSI A300 (Part 1)-2008 Pruning*

**structural pruning:** Pruning to improve branch architecture (6.2). *ANSI A300 (Part 1)-2008 Pruning*

**stub:** Portion of a branch or stem remaining after an internodal cut or branch breakage. *ANSI A300 (Part 1)-2008 Pruning*

**subordination:** Pruning to reduce the size and ensuing growth rate of a branch or leader in relation to other branches or leaders. *ANSI A300 (Part 1)-2008 Pruning*

**subsurface application:** The application of dry or liquid fertilizer below the soil surface. *ANSI A300 (Part 2)-2004 Fertilization*

**sucker:** Shoot arising from the roots. *ANSI A300 (Part 1)-2008 Pruning*

**suitability for conservation:** A rating system that combines tree health and structure with species tolerance to development impacts. *ANSI A300 (Part 5)-2005 Management*

**supplemental support system:** A system designed to provide additional support or limit movement of a tree or tree part.

**synthetic burlap:** A material that is not biodegradable. *ANSI A300 (Part 6)-2005 Transplanting*

## T

**tackle blocks and pulleys:** Equipment used in most tree situations to take a strain rather than move a load. Critical components of the system are the appropriate ropes, blocks, and, especially, the lock or connecting link. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**taut:** Tightened to the point of eliminating visible slack. *ANSI A300 (Part 3, 4)*

**tensiometer:** An instrument for determining the moisture soil content of soil. *ANSI A300 (Part 6)-2005 Transplanting*

**termination:** A device or configuration that secures the end of a cable to the anchor in a cabling or guying installation. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**termination hardware:** Hardware used to form a termination. Termination hardware includes, but is not limited to, dead-end grips and thimbles used in eye-splice configurations. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**termination knot:** Any knot suitable for rope termination; includes, but is not limited to, double fisherman's loop (scaffold hitch), anchor hitch, and buntline hitch. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**thimble:** An oblong galvanized or stainless steel fitting with flared margins and an open-ended base. *ANSI A300 (Part 3, 6)*

**thin:** Pruning to reduce density of live branches. *ANSI A300 (Part 1)-2008 Pruning*

**throwline:** A small, lightweight line with a weighted end used to position a climber's rope in a tree. *ANSI A300 (Part 1)-2008 Pruning*

**through-brace:** A brace formed by installing through-hardware into a limb, leader or trunk completely through the side opposite the installation. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**through-hardware:** Anchors or braces that pass completely through a limb, leader or trunk. Through hardware includes but is not limited to: eye-bolts, lag-thread screw rods and machine-threaded rods. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**tied in:** The term that describes an arborist whose climbing line has been run through a natural or false crotch attached to an arborist's saddle and completed with a climbing

hitch or mechanical device, permitting controlled movement and work positioning. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**tool lanyard:** Short line or strap used to secure a tool while working aloft. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**topping:** Reduction of tree size using internodal cuts without regard to tree health or structural integrity. Topping is not an acceptable pruning practice. *ANSI A300 (Part 1)-2008 Pruning*

**transplanting:** The process of relocating an existing plant in the landscape. *ANSI A300 (Part 6)-2005 Transplanting*

**tripod/orchard ladder:** A three-legged ladder that utilizes the third leg to form a tripod to stabilize itself among orchard trees and/or shrubs. It is recommended for use on turf for better stability and to avoid slippage of the legs. Not recommended for use on hard surfaces. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**tracing:** The removal of loose, damaged tissue from in and around the wound. *ANSI A300 (Part 1)-2008 Pruning*

**tree inventory:** A comprehensive list of individual trees providing descriptive information on all or a portion of the project area. *ANSI A300 (Part 5)-2005 Management*

**tree protection zone:** A space above and below ground within which trees are to be retained and protected. *ANSI A300 (Part 5)-2005 Management*

**tree protection zone barriers:**

Devices such as fencing, berms, or signage installed to limit access to tree protection zones. *ANSI A300 (Part 5)-2005 Management*

**tree resource evaluation:** A document or site plan describing the tree resources on the site, with information provided from an inventory or survey such as: tree species, size, location, condition, plant community, structure, health and population estimate. *ANSI A300 (Part 5)-2005 Management*

**tree spade:** Equipment used to transplant large trees. *ANSI A300 (Part 6)-2005 Transplanting*

**tree support system:** A support system used to provide supplemental support to leaders, individual limbs, and/or the whole plant. *ANSI A300 (Part 4)-2008 Lightning Protection Systems*

**tree survey:** A description of trees within all or a portion of the project area based on defined criteria, such as representative sampling or tree size. *ANSI A300 (Part 5)-2005 Management*

**tree wrap:** Material installed on a tree trunk to protect it from injury. *ANSI A300 (Part 6)-2005 Transplanting*

**trunk:** 1. The main woody part of a tree beginning at and including the trunk flare and extending up into the crown from which scaffold branches grow. *ANSI A300 (Part 1)-2008 Pruning*  
2. That portion of a stem or stems of a tree before branching occurs. *ANSI Z60.1-2004 Nursery Stock*

**trunk flare:** 1. The area at the base of the plant's trunk where the stem or trunk broadens to form roots. 2. The area of transition between the

root system and trunk (syn.: root flare). *ANSI A300 (Part 1, 6) 3.* (See root flare). *ANSI Z60.1-2004 Nursery Stock*

**trunk injection:** The process of injecting a liquid into the plant. *ANSI A300 (Part 2)-2004 Fertilization*

**turnbuckle:** A drop-forged, closed-eye device for adjusting tension. *ANSI A300 (Part 3, 6)*

## U

**urban/residential areas:**

Populated areas including public and private property that are normally associated with human activity. *ANSI A300 (Part 1)-2008 Pruning*

**utility:** A public or private entity that delivers a public service, such as electricity or communications. *ANSI A300 (Part 1)-2008 Pruning*

**utility space:** The physical area occupied by a utility's facilities and the additional space required to ensure its operation. *ANSI A300 (Part 1)-2008 Pruning*

**understock, or rootstock:** The term used to describe that part of a plant, including the collar and roots, on which another variety has been budded or grafted. *ANSI Z60.1-2004 Nursery Stock*

**unguarded:** Not guarded from approach or contact with electrical conductors. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

# V

**vegetation, compatible:**

Vegetation that is desirable and/or suitable to the intended use of the site. *ANSI A300 (Part 7)-2006 IVM*

**vegetation, incompatible:**

Vegetation that is undesirable, presents a safety hazard or is unsuitable to the intended use of the site. *ANSI A300 (Part 7)-2006 IVM*

**vegetation, manager:** An individual engaged in the profession of vegetation management who, through appropriate experience, education, and related training, possesses the competence to provide for or supervise an integrated vegetation management program. *ANSI A300 (Part 7)-2006 IVM*

**volt:** A unit of electric potential difference between two points. Lower-voltage systems are generally expressed in terms of volts; for example, 120 volts or 240 volts. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**voltage:** The effective (rms) potential difference between any two conductors or between a conductor and ground. Voltages are expressed in nominal values unless otherwise indicated. The nominal voltage of a system or circuit is the value assigned to a system or circuit of a given voltage class for the purpose of convenient designation. The operating voltage of the system may vary above or below this value. *OSHA 29 CFR § 1910.269*

**vista/view prune:** Pruning to enhance a specific view without jeopardizing the health of the tree. *ANSI A300 (Part 1)-2008 Pruning*

**water-insoluble nitrogen (WIN):**

Nitrogen not readily soluble in cold water. *ANSI A300 (Part 2)-2004 Fertilization*

# W

**wedge:** A piece of material with two sides meeting at an angle; used to raise or split objects by applying a driving force, such as with a hammer. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**wheel chock:** Wedge-shaped block manufactured or employer approved to prevent unintentional movement of vehicle. Wheel chocks are placed in front of or in back of a vehicle's tires or tracks. If necessary, the chocks can be placed both in front and in back of the tires or tracks. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**whip:** A young tree without branches. In some species and grades, spurs may be present. *ANSI Z60.1-2004 Nursery Stock*

**Whorl:** The arrangement of three or more buds, leaves, flowers, or twigs at the same node. *ANSI Z60.1-2004 Nursery Stock*

**wire basket:** A balled and wrapped method (see balled and wrapped) using a pre-fabricated wire mesh basket for support of the root ball. *ANSI A300 (Part 6)-2005 Transplanting*

**wire-wrapped:** A balled and wrapped method (see balled and wrapped) using wire or a wire mesh for support of the root ball. *ANSI A300 (Part 6)-2005 Transplanting*

**wire rope clamp:** A clamp consisting of a “U” bolt, saddle plate and fastening nuts. *ANSI A300 (Part 3)-2006 Supplemental Support Systems*

**worker:** An individual involved in an arboricultural operation, such as ground operations, equipment operations, and removal operations. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**working load:** Limiting load values derived from the minimum breaking strength of a cord or rope divided by the design factor. For example, given a minimum breaking strength of 10,000 pounds (44.48 kN) and a

design factor of 10:

$10,000/10 = 1,000$  (working load, in pounds)

Or, given a minimum breaking strength of 10,000 pounds (44.48 kN) and a design factor of 5:

$10,000/5 = 2,000$  (working load, in pounds)

*ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**working-load limit:** The working load that must not be exceeded for a particular application as established by a regulatory or standards-setting agency (see working load under Additional Terms, below). *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**work-positioning system:** An arborist climbing system designed to be used under tension to support the arborist or other worker on an elevated vertical surface, such as a tree limb, and allow him or her to work with both hands free. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**workline:** Rope used for lifting, lowering, or guiding limbs or equipment, or both, into or out of the tree. *ANSI Z133.1-2006 Safety Requirements for Arboriculture Operations*

**wound:** An opening that is created when the bark of a live branch or stem is cut, penetrated, damaged, or removed. *ANSI A300 (Part 1)-2008 Pruning*

**woundwood:** Partially differentiated tissue responsible for closing wounds. Woundwood develops from callus associated with wounds. *ANSI A300 (Part 1)-2008 Pruning*





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